

Established 1840.

THE

Seventieth Year.

Southern Planter

A MONTHLY JOURNAL

DEVOTED TO

Practical and Progressive Agriculture, Horticulture,
Trucking, Live Stock and the Fireside.

OFFICE: 28 NORTH NINTH STREET, RICHMOND, VIRGINIA.

THE SOUTHERN PLANTER PUBLISHING COMPANY. - - - - Proprietors.
J. F. JACKSON, Editor.

Vol. 70.

FEBRUARY, 1909.

No. 2.

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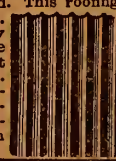
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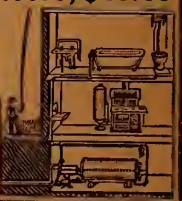
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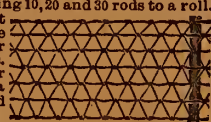
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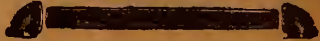
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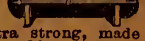
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Tillage and pasturage are the two breasts of the State.—SULLY.

70th Year.

RICHMOND, VA., FEBRUARY, 1909.

No. 2.

Subscribe Now!

The months of February and March are all that remain of what is known as the "Subscription Season." After that time farmers are generally so busy that they do not have time to give much attention to solicitations for subscriptions. We are, therefore, making this our last appeal for a continued co-operation in our subscription campaign, which we launched in November. We are gratified and profoundly thankful for the liberal response made to our former appeals. The rate at which subscriptions are coming in exceed all past records with us. There are yet, however, thousands of farmers in the South Atlantic States who should read the Southern Planter and will do so if their attention is called to the matter. Our subscription price, 50 cents, is certainly only a nominal cost and then, in addition, we have arranged a number of combinations that reduce even this small cost and, in some cases, wipe it out altogether. We mean by this this in taking other publications through our office you not only save the cost of our publication, but are relieved of the trouble of correspondence and save an additional sum besides. We again call attention to a page of liberal offers and our standing clubbing list elsewhere in this issue, and further suggest that if any papers or magazines are wanted and are not mentioned in these lists, simply write us stating what you want and we will name you a low price on it.

We have reserved over a thousand copies of our January issue in order to start new subscriptions with the first number of the volume and the year.

THE SOUTHERN POULTRY GUIDE.

"The Southern Poultry Guide," or forty years with poultry, written by our staff poultry correspondent, Mr. Cal Husselman, is, without any exception, the most practical book ever published on the subject. The price of the book (150 pages, with numerous illustrations) is \$1.00. We are going to give the Southern Planter free to every person who will remit \$1.00 for a copy of this book.

MONTHLY HINTS FOR THE FARM, GARDEN AND ORCHARD.

We have also had Professor W. F. Massey to write us a booklet of over sixty pages, called "Monthly Hints for Farm, Orchard and Garden," for every month in the year. It is full of valuable information for every farmer and trucker in a crisp and concrete form, written in Mr. Massey's well-known practical style and based on his own personal experience. The book is sold at fifty cents. We will, however, give a copy free to each subscriber or person who will send fifty cents for his subscription.

A FARMER'S ACCOUNT BOOK.

We have also secured a supply of a new Farmers' Account Book, which is the simplest book of this kind we have ever seen. We will give a copy of this book to each subscriber who pays \$1.00 for a three years' subscription to the Southern Planter and send ten cents to cover postage.

Farm Management.

WORK FOR THE MONTH.

When we wrote our article "Work for the Month" for the January issue (21st December last), we remarked upon the wonderful spring-like character of the weather. We had barely got the matter on the press when we had for the time of the year an almost unprecedented snow storm; for fourteen hours the snow fell continuously over all the State and covered the ground to the depth of fifteen inches. The fall was not accompanied with severe cold, but sufficient frost was in the air to keep the snow on the ground for more than a week, though the ground itself was but little frozen. Following the snow we had, in the early part of January, a sleet storm which did great damage over a limited section of the Eastern part of the State, breaking down trees and buildings with the weight of the ice coated upon them. Since this passed away the weather has been mild and dry and the land is now in condition to plow except upon the river low grounds. Farmers, we are glad to say, are at last awakening to the importance of utilizing the fall and winter months in plowing land intended to be cropped. We have scores of letters from farmers all over this and adjoining States saying that all or great part of the land they intend to crop this year is already plowed and only waiting the time when it can with advantage be worked and prepared for the seeding of the crop. We have been for years urging this system on the attention of our readers, and it is gratifying to us to know that heed is being taken by so many to what we have said. It is true that there are still thousands who have not yet put a plow into the land since the wheat land was prepared in the fall. To these we would say, you have thrown away a golden opportunity of increasing the productive capacity of your farm at no cost beyond that of the labor involved, and that you have at the same time wasted grain and long feed in the maintenance of your teams for which they have made no return and that to day the teams are worse unfitted for the labor they will have to do than if they had been steadily working during the winter. During the fall and winter months the team can do a much harder day's work with less wear and tear upon it than at any other season of the year and the work done at that time in the way of plowing and breaking is much more effective of good to the land than that done at any other season. What nearly all land in the South needs is deeper breaking with the plow and subsoil plow so that the soil which is still practically virgin can be brought up to and mixed with the surface soil and there be exposed to the ameliorating influence of the sun, the air, the frost and the rain. These all working together fit the natural plant food in the soil for the sustenance of crops and the deep breaking makes of the subsoil a reservoir to hold the moisture needed to insure successful crop growth during the hot weather. This deep breaking brings up from below practically a new farm with all its latent possibilities of plant production to take the place of the one which has been giving up its plant food, for in many cases here in Virginia nearly 200 years, and that largely without any artificial help

until within the past few years. The new farm thus brought up is in nearly all cases rich in the mineral elements needed for crop production, but they are largely in an unavailable condition. They need exposure to the action of the elements and this for a considerable time to fit them for plant food, and the winter and early spring months are the time when this exposure is most effective for good. Until they have been so exposed and aerated they cannot become the home of that microbic life upon which most largely depends the crop productive capacity of the soil. Land without microbic life in it is "dead land," and dead land will never produce living crops profitably. This microbic life cannot exist in land in which the air and water cannot circulate, and such land is almost invariably more or less acid or sour, and a sour condition of soil is fatal to microbic life. Whilst the admission of air into the soil and the drainage of water out of it will slowly correct this acid or sour condition, the true remedy for it is the application of lime. All our land needs lime. It has been the means of regeneration of the soils of Pennsylvania and Maryland and it will do the same for our lands. We have been for years urging this upon our readers and at last our iteration and reiteration of the subject has compelled attention. More lime is now being used on the land in this State than ever before in its history and those who have used it all bear testimony to the good effects. We have had a long personal experience in the use of lime and never knew it fail to give results. These results are not always immediately apparent, but they eventually are seen. It should be applied after the land is plowed and at the rate of at least one ton to the acre and twice or three times this quantity will not be an excessive application. But use a ton to the acre at least and then you will correct the acidity and the microbic life will have an opportunity to begin its good work. You will no doubt want to know how this microbic life is to be introduced into the land. Humus in the soil is essential to its life, and with the introduction of humus the life will begin. The best way to begin this introduction is to spread some farm yard manure or other decayed vegetable matter on the land, even if it be only a ton or two to the acre, and work it in lightly and then to sow a humus making crop like cowpeas on the land and you will soon get all the life needed to revivify the land. If the land is to be planted in corn, let the peas be seeded in the corn at the last working and then sow crimson clover amongst the peas after the corn is cut, and in the spring following turn the whole crop down and the microbic life in the land will multiply and flourish and the crop producing capacity of the land will rapidly increase even without the use of commercial fertilizer, though it is usually advisable to use some acid phosphate on the land for a few years to ensure the growth of the legumes until the natural supply of phosphoric acid in the soil becomes available through the action of the vegetable acids of the crops turned under and the working of the microbes in the soil. You cannot get this microbic life in the soil by the application of commercial fertilizers. The best

they can do towards this end is to provide sufficient plant food to produce a crop worth turning under. Do not delay the beginning of this deep plowing, as it is essential that the new soil brought to the surface should have all the exposure to the weather possible before being seeded in any crop. If it has not this exposure it will not produce a satisfactory crop the first year. If circumstances are such that you cannot do this deep plowing not later than the middle of March, then do not attempt it this year, but plow only an inch or two deeper than previously plowed and break the subsoil and leave it in the bottom of the furrow to be turned up at the next plowing in the fall. This breaking of the subsoil, however, is very essential, as it will enable the soil to hold the necessary moisture for the best doing of the crop and will permit any excess of moisture to drain away. Do not turn the furrows completely over, but leave them on edge so that the new and old soil can be better mixed in the process of working the land for the crop. Do not plow when the land is so wet that the soil will not leave the mould board in a crumbly condition, nor when there is frost in the land.

The location of the different crops should be determined as soon as possible so that the land required for each be prepared and fitted for seeding in proper time. This brings up the question of rotation of crops, which is one of the most important in the whole farm economy. The neglect of a proper system of rotation in the past is one great cause of the poverty of our lands and its introduction now will be one of the quickest and surest means of their recuperation, and also the first step in the way of saving in the great outlay for fertilizer, now one of the heaviest drains upon our farmers.

Rotation of crops as a means of maintaining the fertility of land has in the past mainly rested upon the principle that one class of crops calls for and denudes the land of one kind of plant food whilst another class draws heavily upon other elements of fertility and permits of the recuperation of the supply of the fertility withdrawn in excess by the former crop. Where only one crop or one class of crops, like cereals, are grown continuously, the result is an unbalancing of the plant food in the soil and hence a failure sooner or later in production. Whilst there is no doubt that there is great force in this reasoning, as is evident from practical results everywhere, except it may be in rich bottom land subject to overflow, where the deposit of new soil on the land at frequent intervals keeps up the balance of plant food, yet recent research has given considerable support to the theory that plants have a toxic or poisonous effect on the land and that the production for several years in succession on the same land of the same crop will so fill the soil with these poisonous exudations as to render it incapable of producing this crop profitably and hence compel the planting of some other crop of a different family upon which this poisonous element has no injurious effect. Whichever may be the true explanation of the effect of a one-crop system of farming the conclusion is certain that it results sooner or later in failure and that the only way in which fertility can be maintained and profitable crops be produced is a system of rotation which shall

each year bring upon the land a different crop and preferably a crop of a different family. Grain should follow grass, and clover and the legumes—peas and clover—follow the grain and roots and vegetables follow the legumes and these be succeeded by the grasses and clovers. Two cereal or grain crops should not follow each other without a recuperating crop, like peas or clover, intervening, nor should one root crop like Irish potatoes Rutabagas, turnips, or beets, be succeeded by a like crop. Wherever the system of rotation has been strictly enforced you find fertile land and great crops and this is one cause of the large yields per acre produced in England. In that country an occupier of land who fails to observe the strict course of rotation laid down by the owner is required to quit. There we find an average yield per acre of thirty-two bushels of wheat over the whole country, and like great yields of other crops which in itself is an abundant evidence of the soundness of a system of rotation. Wherever the system has been established here we find like good results. Whether the rotation should be a long one or a short one depends greatly on the character of the land and local markets, and must be decided by the farmer himself. Usually, on a light soil, a short rotation, say of three years, is best, whilst on a heavy soil a rotation extending over five or six or even seven years is often the best, as these lands are more costly to work under arable cultivation, and produce grass and clover crops much more successfully than the light lands, and the extra cost of their cultivation has to be recouped out of the hay and pasture produced. Now is the time to start a proper rotation suited to the soil, locality and crops to be produced, and we would urge that attention be given to the subject and a system be started which will give a different crop on each field each year from that grown the previous year. In this way bigger crops can be produced at less cost, the work of the farm be more equally distributed, the variety of products be greater and the risk of failure of crops be reduced. It is a rare season when every crop is a failure. With the advantages we possess in our long seasons, we can practically secure the benefit of a long system of rotation in half the time that our Northern friends can do, as we can grow a recuperating legume crop in the same year as a sale crop, and this advantage ought not to be lost sight of in starting a rotation. In this way the area of land to be worked can be reduced, and intensive rather than extensive farming be done. It is the big crop on the small area which makes the profit.

The question of the fertilizer which will be required for the production of the crops to be grown is a matter calling for immediate attention so that the goods may be ordered and be on hand when needed and thus no delay happen in the seeding of the crop. This question of fertilizer is a serious one for Southern farmers. Over \$100,000,000 worth of commercial fertilizer is used by the farmers of this country each year, and a very large proportion of this is used in the South. We believe it is well within the truth to say that one-fourth of this results in no profit to the farmer. This is not because these commercial fertilizers do not contain the necessary elements of fertility, but because they are not mixed properly to meet the re-

quirements of the soil and crops, or are not used properly. In several recent issues and in this one the proper **compounding of fertilizers** to meet the needs of different crops and soils has been fully discussed, and if our readers have followed these articles carefully they should be now in a position to go into the market and buy their fertilizers intelligently and save money in doing so. Whilst there is no doubt much less reliance placed by farmers, now on mere names of brands of fertilizers than formerly, and more men buy on the analysis than on the name, there is yet room for great improvement in this respect. Always remember that there is nothing in the name which will make the crop grow; it is all in the analysis shown on the bag. If this does not show that the goods contain the plant food in the proportions required by the soil and crop, the name will not make the result satisfactory. A very large percentage of the mixed goods sold are of very low grade probably more than half the mixed goods sold in the South are 2-8-2 goods or proportions near these figures. To buy these low grades is to waste money. Two per cent. of ammonia and 2 per cent. of potash used at the rate of 200 or 300 pounds of the goods to the acre, cannot possibly be of any advantage to the crop. What can four pounds of ammonia or four pounds of potash spread over an acre of land do towards making a crop grow? And yet, the putting of these small quantities of these elements in the goods enables the maker to charge more for them, and the farmer pays this and gets no return for his money. It is the phosphoric acid—the 8 per cent.—which helps the crop, and this being so, why not buy just a plain acid phosphate and get it for less money and thus be able to use it more plentifully. Phosphoric acid is no doubt the mineral element most largely needed in our lands. The ammonia the farmer can produce for himself by growing cowpeas, crimson clover and the vetches and the potash, except for Irish potatoes and tobacco is rarely needed in our lands East of the Blue Ridge. The use of lime on the land will make sufficient of that already in the land available for the best growth of all staple crops. Then why buy these two ingredients? Farm yard manure ought to be the basis of all the fertilizer used and ought to be the main reliance of every farmer. It can be usefully supplemented by phosphoric acid, as it lacks this element to be a properly balanced fertilizer. The use of forty or fifty pounds of acid phosphate with each ton of manure will make it nearly twice as effective as a crop producer. Farmers will persist in saying that they cannot get the farm yard manure. This is because they do not try sufficiently. Wherever a pair or two of horses and a few cows and calves or feeding steers are kept and a few hogs, if they are properly fed and bedded, enough manure can be made which, with the addition of the acid phosphate we have suggested, will suffice to cover the average area of land planted in corn on a farm where that quantity of stock is kept, and this will give a better crop than the use of any mixed fertilizer which can be bought and will be used profitably, whilst mixed fertilizers can rarely be used with profit on staple crops. The place where these fertilizers can be used profitably is on crops like tobacco, Irish potatoes and other truck crops, where the relative value is high in proportion to the crop raised. On these crops, when the proper propor-

tions of the ingredients used is observed to meet the requirements of the crop and the soil, they can be used with profit if there be in the land a sufficient supply of humus to make it sufficiently retentive of moisture to make the fertilizer available. The richer the land is in humus, the more effective will be the fertilizer. Nitrate of soda can frequently be used with advantage as a top dressing on grain crops and grass land intended to be mown. It should be applied at the rate of 75 to 100 pounds to the acre after the crop commences to grow in the spring and will often pay well used in this way. In our next issue we propose to write fully on fertilizing for the tobacco crop.

Oats or oats and Canada peas may be sown this month if the land can be got into good order. The fall is the proper time to seed oats in the South if the best results are to be obtained, but oats seeded in February on land well prepared will usually make a fair crop unless the hot weather sets in very early. Much of this spring seeded crop is used for a hay or forage crop and cut before the seed ripens and makes excellent feed. If the crop can be got in early in the month, the Virginia Gray Winter oat may be sown with a fair prospect of success, but later than this the Texas Rust-Proof is more to be relied upon. The Burt and the Appler, two newer varieties, may be sown in March, as they are more quickly maturing, but they will not make the yield that the Gray Winter or the Texas Rust-Proof will. The Burt is the quickest maturing variety, but the oats are very light. Prepare the land well, and if not in a state of good fertility apply 250 or 300 pounds of acid phosphate per acre, sow two or two and a half bushels of seed to the acre, and cover well. Drilling the seed is better than broadcast sowing, as it can then be put well down into the ground, and this is essential if the crop is to make the best yield, as the plant is a cold climate plant and wants to grow in cool land. A top dressing of nitrate of soda applied at the rate of 75 or 100 pounds to the acre after the crop has commenced to grow freely will greatly add to the yield usually. In the mountain sections of the Southern States oats may be seeded up to the end of March.

Oats and Canada peas sown together make an excellent early grazing crop for hogs and sheep, and a good hay crop if cut just as the peas begin to ripen. This is a cold climate crop and to succeed in the South should not be sown later than the end of this month east of Piedmont Virginia and in Eastern North Carolina. In the mountain sections the crop may be sown in March. The peas should be first drilled in or sown broadcast, if a drill is not available, and should be covered to the depth of four or five inches. Sow at the rate of one and a half to two bushels to the acre. The oats should then be sown at the rate of one or one and a half bushels to the acre and be well harrowed in. The crop will be ready for grazing by the middle or end of April or early in May and can be cut for hay in May or June. It must be got off the land before the warm weather sets in or mildew will soon destroy it. The crop can then be succeeded by a cowpea crop and thus two good forage crops can be got off the land before time to sow a fall or winter corn crop.

An experiment made last year by Messrs. T. W. Wood

& Sons, Seedsmen, of this city, demonstrated that it is possible to grow two crops of oats in one year on the same piece of land if the fall is a fine, late one. The winter oat crop seeded in September will come off in time to allow of a spring or summer seeded oat crop to mature after it. There is, of course, some risk of the second crop not germinating and growing off well in the summer and also of cold weather coming on too early to permit of its maturing, but the two crops have been grown. It may be tried experimentally, but we would not advise more than this as yet. It is much safer to follow the first crop with cowpeas or cowpeas and sorghum, or with a millet crop, any of which are to be relied upon to mature and make a profitable crop.

Rape may be sown this month for a grazing crop for hogs and sheep. The land should be prepared finely, as the seed is very small, and if not rich, should have either some manure or fertilizers worked in. Acid phosphate and potash is the best fertilizer to use, say 250 pounds of acid phosphate and 50 pounds of muriate of potash per acre. The crop may be sown either in drills two feet six inches apart to allow of cultivation, or broadcast. It makes the heaviest crop sown in drills and cultivated once or twice. Sow two or three pounds of seed to the acre in drills, or four or five pounds broadcast. Sow the Dwarf Essex variety. This crop is only a grazing crop. It cannot be made into hay or be put into the silo. It is a splendid food for hogs and sheep and lambs.

Grass and clover not sown in the fall, which is the best time, may be sown this month and the next. Where the seed is to be sown on a fall seeded grain crop, the grain crop should be harrowed over first to break the crust and freshen the land. This harrowing will help the grain crop considerably. Use a sharp toothed harrow. Sow the grass and clover seed immediately after the harrowing and again run the harrow over, and then, if the land is dry enough, roll it. If the land is not in a good state of fertility, a top dressing of bone meal at the rate of 300 or 400 pounds to the acre harrowed in, with the seed will help materially to secure a stand. Sow two bushels of grass seed to the acre and eight or ten pounds of mixed red clover and alsike. For a meadow sow a mixture of orchard grass, tall meadow oat grass, red top and meadow fescue. For a pasture add to these Virginia blue grass. Where the grass is to be seeded on land not already sown with a grain crop, sow the grass and clover seed alone and you will be much more certain to secure a stand and will get a crop to cut in the fall, which will not be the case if you sow grain with it. The land should be well and deeply prepared and should be made rich with manure and fertilizer, and a light dressing of lime worked into the land after it is plowed will help materially. After the lime is applied and harrowed in, let lay for a week before applying manure or fertilizer. Then work these in using 300 or 400 pounds of bone meal or acid phosphate per acre with the manure, if you have it. Sow the quantity and variety of seed mentioned above, harrow in and roll.

Top dress wheat and winter oats with farm yard ma-

nure, if you can spare it. Spread thinly with a manure spreader, a few tons will cover an acre sufficiently to greatly help the crop.

A top dressing of manure will also greatly help in a meadow intended to be mown. With the manure mix acid phosphate at the rate of forty or fifty pounds to the ton, and it will greatly increase the yield of hay.

Tobacco plant beds should be burnt as soon as possible, and should then be worked fine to the depth of two or three inches, and a good dressing of a rich plant bed fertilizer be applied and the seed be sown and rolled in. Provide good drainage around the bed and cover at once with plant bed muslin to keep out the bugs, or they will take the plants as soon as they appear.

SOME COMMENTS ON THE JANUARY ISSUE. Fertilizers.

Editor Southern Planter:

I think that Mr. Hicks overlooks the fact that the phosphoric acid and potash in the clover all came from the soil, while the larger part of the nitrogen came from the air, so that in his calculation for fertilizing the corn crop he is losing this phosphoric acid and potash in his estimate of the needs of the corn crop. Of course, if the clover is returned to the soil the corn will get this potash and phosphoric acid, but if we deduct it in the fertilizer we will be decreasing the amount in the soil. Hence we should look to the demands of the corn crop for phosphoric acid and potash without reference to that in the clover, which came from the soil. In a soil abounding in phosphorus and potassium, Mr. Hick's formula would work all right, but if, as is the general rule, the legumes are removed for hay, we must look to the manure to be returned for most of the nitrogen, while there will be a loss of potash and phosphorus. But in most of our old soils there is an actual deficiency in these mineral elements, and it seems to me that the most profitable use for the phosphoric acid and potash is in the encouragement of the legume crop, thus getting more forage and more manure-making. The New York Station demonstrated that the early potato crop could only use certain amounts of the three plant foods, and said that the Long Island potato growers were using an unnecessary amount. But when the formula of the Station was used alongside the old formula of the potato growers, it was seen that the growers were wiser than the doctors, and their unnecessary amount was more profitable than the formula worked out in the laboratory. While the legumes will certainly give us a great deal of nitrogen, the most profitable use for them is as food for stock, getting the feeding value before returning it to the soil. We need more manure making from good forage in the South than figuring out fertilizer formulas by the analysis of the crops, for these will seldom work out in field practice.

Deep Preparation.

T. P. H. shows briefly and to the point the value of deep preparation of the soil. With a deep bed of loose soil to hold the water instead of letting it run down hill and make gullies, one can work a corn or a cotton crop

with little summer rain, for with shallow and constant cultivation he can conserve the water that the soil gets in the winter and early spring, after the same manner that the dry farming does in the arid West. And yet, we find that a Southern agricultural college professor has been trying to persuade the farmers that deep plowing and subsoiling are not only needless, but damaging. Fortunately, the Southern farmers downed him with their experiences. They have learned better and the improving farmers are not going to hark back into the old ruts.

Plows.

It seems after all that the disc plow will plow sod and trashy land. I am glad to know this, though, personally, I have had hardly any experience with disc plows, and, like Mr. Ruffin, thought that they were not made for this sort of plowing. And that team of Mr. Ruffin's! The hardest day's work I ever did was with a team of that sort, with an old Pratt and Davis plow, and, with that long team and heavy plow, I was about as tired a man as ever worked. I have found that for general purposes three heavy mules abreast is an easier team to manage and can do about the same work as four hitched tandem. I hope the experiences given with the disc plow will help Mr. Ruffin.

Corn Cultivation.

Mr. Grizzard is evidently "sot in his ways." Doubtless, his horses will eat the salted hay with relish, but all the same it does not help the curing. I had rather let the horses have salt than to interfere with the proper curing of my hay by salting it. But as to the corn, what is the advantage of cutting off its feeding roots and putting a strain on the plant to form more? "The advantage of one row of corn borrowing and returning plant food from another row" is that the plant is in its normal and most thrifty condition, and any root pruning of any plant is a check to its growth and development. Cutting off the only part of a corn plant's roots that are getting food from the soil certainly stops for a time at least the getting of food by the cut roots, and the formation of more root hairs is a tax on the energy of the plant which should be better devoted. If fertilizers are put in the furrow the roots soon get past it, and if the rows can reach over and borrow what is left in another so much the better for the crop. Mr. Jackson has well shown the results of root pruning. Then we may go further and show by experiments that have been made at a number of Southern stations that the common practice of topping and stripping is labor thrown away, for the loss of corn will usually pay more than the value of the fodder saved, and the farmer has his labor for nothing.

Lime.

This is a perennial subject. Mr. Stockwell has found that lime will not make poor land rich. But lime can be made an important thing in the improvement of our lands if used judiciously. Mr. Stockwell is right in thinking bone meal too expensive. I had rather get the phosphoric acid needed in acid phosphate, slag meal or floats. Using the Thomas slag as a means for encouraging the growth of the legumes, one will get about all the lime needed and get it in a very nice form, for aside from

the per centage of phosphoric acid contained in the slag the remainder is all lime and iron oxide. Land that is deficient in humus is seldom helped at once by liming, but after one has gotten the legumes to grow well he can use lime to advantage, and as—the Thomas slag is sold on the basis of its phosphoric acid content, we can get the lime practically free of cost. If the tariff revisers will be wise enough to put this slag on the free list it will be of great advantage to our farming, since the most of it is imported. But what the steel trust will have to say is another question. since tariffs are usually made to suit those who are benefitted by them, and not for the people in general.

Pure Bloods.

Mr. Gates is a man after my own heart. He does not believe in dual-purpose cows, and neither do I. If I wanted a bird dog I would certainly not get a bull dog, for while he may be a good watch dog, that big nose would never trail a covey of birds. If one's interest is in milk and butter he should have the best possible machine for making milk and cream, and if he wants the best beef he will never top the market with a Jersey steer. Just to the extent that a beef breed animal is developed into dairy character to that extent it is a poorer beef animal. There has been a little discussion as to whether the "Dod-dies" will give milk enough to raise a calf, but that is not so important as the fact that they top the beef market more frequently than other breeds. They are built that way. And when a man who is interested in beef ridicules the Jerseys and says that the calves are worthless I have only to say that from a dairyman's point of view the calves are no object except for raising more and better cows. The dairyman cannot afford to lose \$50 worth of milk for the sake of a \$5 calf for veal.

W. F. MASSEY.

IMPROVING A FARM.

Editor Southern Planter:

I have a long letter from a young man who writes that he has engaged to manage a large farm in the Southern Piedmont cotton section for a man of means, who is a lawyer and not a farmer. "He has tried for years to manage the farm with negro tenants, mostly old family servants and their descendants, with the usual results of gullied fields and abandoned broom sedge. . . . Through a mutual friend he learned that I was looking for a place to go into stock and grain farming, and I have contracted with him for a year, the contract to be extended indefinitely if we agree. We have gotten tools and team together, and I shall plow the corn land as soon as practicable with a three-horse disc plow, following with a subsoiler. The soil is mainly reddish with a red clay subsoil. while parts are grey and lighter, with some loose rocks. . . . How, when and how much shall I fertilize and how far apart? Shall sow to peas and follow with grain.

The land for cowpeas is grey cotton land. What fertilizer for the peas. Shall plant an acre in sweet and one in Irish potatoes. Have sown five acres in rye for pasture, but it was sown late and is just coming up. Will it amount to much? Have fine fertile bottom land that I wish to get into Bermuda grass for stock next

year. The owner never read a farm paper in his life, but knows that he has been on the wrong track. I am used to Southern conditions, and have lived six years in Cuba, and though I know you are a busy man I hope that you will advise me."

This is about the gist of half a dozen sheets of letter paper. The young man has evidently undertaken a large contract to improve a Piedmont farm of 1,200 acres. It reminds me very much of the time when I undertook a similar job with the same number of acres. But, like all Southern men, the first question is what fertilizer and how much. Our Southern farmers have gotten into a notion that the only way to grow crops is to use commercial fertilizer for their direct production. In the case before me our friend is obliged to show some results at once, seeing that he has made a conditional contract. He is right in the preparation of that land for corn, only do not turn it too deep at once, but let the subsoiler do most of the deepening now. The making of a deeper loose bed for the retention of the rain will of itself have a decided influence on the production of corn this year. While in all the experiments I have made I have found that it seldom pays to use a complete fertilizer on corn at the average price of the crop, nevertheless, in this case, I would start with some fertilizer and endeavor to get that land into a regular rotation, and grow forage for feeding. You do not say whether you intend to grow cotton at all. While you are right in trying to make a grass and stock farm in that section I do not think that any man in a cotton growing section should ignore the cotton crop. I would put the roughest of the land into a permanent pasture, but I would not put Bermuda on the fertile bottoms. On these I would use the hay-making grasses to better advantage, and make a permanent upland pasture of Bermuda. On the bottoms I would sow a mixture of grasses for hay. Sow ten pounds of tall meadow fescue, five pounds red top and ten pounds of tall meadow oat grass per acre. This will be liberal seeding, and the seed should be sown in early spring, either alone or with a small seeding of oats. I would prefer to sow the grass seed alone. After sowing the grass seed I would scatter ten pounds of red clover per acre and go over with a smoothing harrow.

Now, as to the corn, I would use this season a mixture of 1,000 pounds of acid phosphate, 700 pounds of cotton seed meal, and 300 pounds of muriate of potash to make a ton, and of this use 400 pounds per acre broadcast. After the corn is up I would apply alongside it 100 pounds of nitrate of soda per acre to give it a send off. Plant the corn in four-foot rows and two feet apart in the row. This has been found the most profitable distance in North Carolina. Harrow the corn over before coming up, and as soon as up go over with a weeder both ways, and then use the riding cultivator with two mules and cultivate as level and shallow as practicable. While the application of the fertilizer will increase the crop, I do not think that when you get to making more manure it will be profitable to use commercial fertilizers on the corn crop. I would suggest that you adopt a strict rotation for all your upland, devoting the bottoms to hay altogether. Sow peas among the corn and cut the corn off at the ground and cure in shocks, and disc the peas

down and sow either wheat or winter oats, without re-plowing the land. Keeping the dead pea vines near the surface where they will act as a winter protection will be better. Follow this wheat crop with cow peas to be mown for hay, and disc the stubble and work in 400 pounds of acid phosphate and twenty-five pounds of muriate of potash, and seed to wheat or oats again. Follow this crop with peas again and sow crimson clover on the stubble. Turn this clover in spring for cotton and cultivate as advised for the corn, and in fall sow crimson clover among the cotton. During the winter haul out all the manure made from the feeding of the peas, cotton seed meal (which you can get in exchange for seed) and corn stover, and plow all under for corn in the spring and then repeat the rotation. After you have gotten so far along with the stock that you can make manure enough to cover the entire corn field with manure you will have the farm right where you can increase the crops rapidly. Stick to the rotation and you will in a few years find that the only commercial fertilizer you will need to buy will be acid phosphate and potash to apply to the peas, leaving the peas and the manure to do the rest. A well manured corn field will certainly grow a fine crop of small grain after the corn with the aid of peas in the corn, and the liberal use of acid phosphate on the wheat will give you a good crop of peas after the small grain. I believe that winter oats will be more profitable, especially on a stock farm, than wheat, as you will need the oats in any event, and by making the stock and the cotton the sale crops you can make more from the other products by feeding. In short, I would put everything but the cotton into a more saleable shape than by selling the raw products. I would use the corn largely for ensilage, the oats fed in the sheaf and the hay also fed either to beef cattle or dairy cows as is most profitable, and would try to make more cotton per acre than was ever made in that neighborhood. Leaving out the cotton crop, this is just about what I have done on a large stock farm and made it pay from the start. Forage making and stock feeding are the foundation of all rational farm improvement.

W. F. MASSEY.

THE KIND OF PLOW TO COVER GREEN MANURING CROPS, AND THE KIND OF GREEN MANURING CROPS TO COVER.

Editor Southern Planter:

The Syracuse Plow Company is right in recommending plows of larger capacity than such as are in common use in the South for turning down green manuring crops. However, a plow that cuts ten inches and turns an inch or two wider is large enough to do good work with two average Southern horses or mules hitched to it, provided the crop is combed down with a spike harrow the way it is to be plowed. The old No. 2 "Dixie" did tolerably good work, but it was too clumsy and the mold board did not reach far enough over the furrow for just that kind of work. The "shin" of the "Oliver" is too abrupt to do such work well. But a plow built on the lines of the "Syracuse" steel beam, one horse, No. 457, and made large enough to cut ten inches, would be just the thing, and I have several times thought I would ask the Syracuse Plow Company to make such a plow for turning down

green manuring crops or for any purpose requiring a broad, shallow furrow turned over flat as when a clean surface rather than a deep loosening of the soil is the object.

With the class of work I have in mind a rolling coulter or a disc is not to be thought of much less a "jointer." Take, for instance, a rank growth of rye and sand vetch or a heavy growth of Wonderful peas or Velvet beans. No plow, no matter how large, could cover such until they were first harrowed down. Then it is essential that such a mass be covered as shallow as possible. To work at all, a jointer would have to go as deeply as it would be right to run even the plow itself. For were it possible to use a jointer in such a tangled mass of vines without choking, the depth the plow would have to go, would be ruinous as the green vegetation would surely sour in warm weather. In the interest of morality, the fewer contraptions like a jointer or a weed hook you have on a plow the better; for turning down a rank growth of vines in summer is patience-trying work at best. In a word, the plow for such a purpose ought to have a long, low shin, a very ample mould board reaching well over the furrow, an extra high standard and deep throat, as with a steel beam, so it will turn and carry over a shallow slice of soil and place it bottom upwards over the mass of vegetation and not choke. A revolving coulter or a disc would be lifted out of the ground by vines such as I have described. I know some people will take issue with me about turning down such fine feed and call it waste and say it would be better to mow it and cure it and haul it into the barn and feed it out and haul back the manure and spread it evenly, etc., etc. To which I answer, no; not while such a poor class of labor as we have demands \$1 or even \$1.25 per day and the poor white acres demand humus. It took years to rob these fields of their vegetable matter and no half-way measures or half-hearted effort will restore it. Better wait until the land is fertile again before removing anything found. It pays no farmer to cultivate poor land. The restoration of humus to the soil is the whole "law and the prophets" and the "gospel" too of farming here in the South.

JOSHUA FRANKLIN.

Moseley Co., Ala.

FERTILIZER PROBLEMS.

Editor Southern Planter:

Your correspondent from New Kent, Mr. H. T. Faunt Le Roy, has asked some questions which may be more properly referred to the political economist than the practical farmer, who deals with conditions as they are, without much thought of the welfare of future generations.

The question as to the necessity of applying mineral fertilizers or eventually facing an exhausted farm has been answered by many writers in the affirmative, yet the inquirer has only to enlarge his view point, and consider a moment to see that such a position is untenable.

This world of ours has been producing vegetation for many years. We have written history to that effect covering about four thousand years, and deposits of coal made from vegetable growths which ante-date written

history many, many generations, and yet, we have only to abandon land where rainfall and sunshine are combined in the proper proportions for nature to resume her sway, and cover it with vegetation. It is also true that were we to depend upon the phosphoric acid and potash supplied by our mines for all the grain and hay and fruit and vegetables annually consumed on the earth, it would require millions of men to mine and manufacture it, and all the railroads and steamships now in the world would be inadequate for the transportation. It must be evident, then, that there is constantly going on in the ground some disintegration of soil particles, which always has and probably ever will continue to furnish phosphoric acid and potash in certain limited but well defined quantities. That these quantities differ on different soils, and in differing constituents mark the distinction between poor and fertile land as so frequently pointed out in this Journal.

What, then, is the use of commercial fertilizer other than nitrogen? It seems that nature has endowed most lands with the foregoing attributes in sufficient quantity to offset the loss of the mineral elements entailed by the growth of vegetation naturally adopted to the soil and climate, or, if you please, the vegetation has adapted itself to the ability of the soil to render its accumulations of minerals available, with the help of the sunshine, the rain, the dew, and frost, but, as a general thing, this gentle annual offering of fertility is insufficient to meet the demands of civilized man, who brings to them only the aid of the elements, and his plow, harrow and cultivation, thus hastening nature's process, and enabling him by judicious seeding to greatly augment any natural production, and finally by the direct application to the land of any one or more of the constituent chemicals which experience has proven to have fallen behind the others in their power to yield to the afore mentioned treatment.

This is the theory generally held by agriculturists, and of the many elements entering into plant nutrition, carbon, hydrogen, oxygen, nitrogen, potassium, magnesium, phosphorus, iron, sulphur and chlorine, three stand out pre-eminently as those which nature soonest tires of furnishing—nitrogen, phosphorous and potassium—and these it is the province of the manufacturer of fertilizers to supply in such form as to be readily soluble in water or in the juices of the plant.

That the application of these principles has brought success to many farmers in the Eastern part of the United States is true, and he owes a debt of gratitude to those whose labors and observations have led to this result, but how much greater will be his obligation to the man who discovers the reason that causes some soils to render their stores more liberally than others and to point out the means whereby the poorer lands may be permanently transformed or stimulated into the production which now only characterizes the most favored areas.

Some work along this line is being done by the Bureau of Soils in Washington, D. C., and while the results obtained have not reached a stage of practical application as yet, some evidence has been discovered which would seem to prove that the application of fertilizer does not materially alter the composition or proportion of actual plant

food, but acts rather as a re-agent to bring about a more favorable environment for the growth of cultivated crops.

Further evidence leads to the conclusion that plants during their growth excrete matter which is deleterious to the production of future crops of similar character, but is not objectionable to plants of a dissimilar family, and thereby explains the benefit derived from a rotation of crops which had formerly been explained by supposing that different plants drew upon the land for different chemical constituents, a position which was not borne out by the chemist, so far as phosphorus and potassium are concerned, because all plants, whether cereal or legume, annual or perennial, are shown by analysis to depend largely upon these elements for their proper development.

Perhaps it is too soon to make any prophesy relative to results which our Secretary of Agriculture has barely alluded to in his annual report. In the meantime the Bureau will have the best wishes of every patriot, whether he be a farmer or otherwise, and its reports will be eagerly anticipated and carefully studied by every intelligent tiller of the soil.

I was much interested in the query of "X" as to the possibility of producing some artificial substitute for stable manure, and while Professor Massey has probably given him the best advice as to the economical restoration of the fertility lacking in his soil, it may be that he has missed the point of the inquiry, and in that case the last word remains to be said. As I understand, "X" is a merchant, and has taken up agriculture more as a recreation than a business, in which case what he is after is immediate results rather than profitable ones. That he will eventually want to see the balance coming on the right side of the ledger is probable, but many men of means, who buy a run down farm to gratify the inherited tendency to get back close to nature and the soil, which is happily present in every well balanced mind, cares very little about immediate profit, being content to charge up the losses of the first few years to capital invested in the land.

To such a man I would say that the thing can be done in many localities without entailing any great cost other than the labor involved in procuring the humus. Stable or ordinary barnyard manure analyses: Nitrogen, .49 per cent; phosphoric acid, .32 per cent.; potash, .43 per cent., and such a combination can be made at the cost of \$2.11 per ton for chemicals plus the additional cost of the humus-making materials in several ways, perhaps the most simple of which would be as follows:

61 1-4 lbs. 16 per cent. nitrate of soda=9.8 lbs. of nitrogen, or .49 per cent.

40 lbs. 16 per cent acid phosphate=6.4 lbs. phosphoric acid, or .32 per cent.

17 1-5 lbs. 50 per cent. muriate of potash=5.6 lbs. potash, or .43 per cent.

1,881 11-20 lbs. woods mould

making one ton of manure analyzing .49 per cent. nitrogen, .32 per cent. phosphoric acid, and .43 per cent. potash.

I have suggested woods mould because, where forests are available, it is the cheapest as well as one of the best sources from whence to obtain humus. Prior to the war I am credibly informed that some of the planters here in Tidewater who owned large numbers of slaves would keep a man and a horse busy all the winter hauling the

accumulation from the forests to the fields, simply for its value as a humus former, and I suppose for the nitrogen it formed during decomposition, and its value as a covering for the bare soil in winter as well.

In composting the fertilizer in question any form of refuse vegetable matter, such as chaff, hay seed, pine shatters, leaves, or, in fact, any vegetable matter of little or no value would answer the purpose, the preference given to woods mould, being due to the fact that it is already partly decomposed.

If "X" is located in a locality where cotton seed meal is cheap, a compost made with that would be even better than the one suggested, for cotton seed meal analyzing nitrogen .7, phosphoric acid .2, and potash, .3 would need only a slight addition of phosphoric acid and potash to form the bases of a compost not only closely approximating barnyard manure in analysis, but also in its rendering of its constituents to the plant by decomposition rather than by direct absorption through being dissolved by the first rain. Dried blood combined with acid phosphate and potash would also form an excellent source from whence to derive nitrogen for a compost of this character. In fact, either of the last, or any organic source of nitrogen would be better than nitrate of soda for this purpose.

With cotton seed meal analyzing 7-2-3, "X" would need to combine as follows: 148 lbs. cotton seed meal, 22½ lbs. 16 per cent. acid phosphate, 8 lbs. 50 per cent. muriate of potash, 1,831½ lbs. woods mould.

With dried blood analyzing nitrogen 10, phosphoric acid 5, he will need practically: 100 lbs. dried blood, 10 lbs. 14 per cent. acid phosphate, 17 1-5 lbs. muriate of potash, 1,872 4-5 woods mould.

I do not think there can be any question as to the power of such a compost to increase the yield of corn, oats, or hay, whether or not it would be profitable would depend upon the character and cost of the woods mould, and the price for which the product could be sold. Here in this county there is hardly a place where the former may not be had for the asking in unlimited quantities, the cost consisting in the labor of gathering and transportation only.

PERCIVAL HICKS.

Mathews Co., Va.

FROM PLANTING TO FARMING.

Editor Southern Planter:

It seems hard for the man who has been producing crops on his farm to sell as raw products to be convinced that he can change in part even to live stock production and then by the sale of finished products build up his soil and at the same time secure cash wherewith to pay his farm and family expenses.

We agree that it requires a greater amount of thought to handle live stock than is required of the farmer to simply make crops for sale. Any business that spells success requires more thought than a business that leads to failure, either partial or complete, and any one who has made a careful study of farming conditions all over America will admit that the section or individual farmer that is practicing the sale of products in their raw state is making a partial failure in that the soil—the foundation of the farming business—is slowly, but no less surely, becoming less fertile, and any business that leads to deteri-

oration of the plant or capital in which the business is conducted is unbusiness-like, to say the least. The majority of the farmers of our section are coming to realize this fact, I believe. But, as I have said, they fail to see how the change may be made as more or less capital and some time is needed to bring about the change and they are, the great majority of them at least, living right up to their present income. Something must be done, however, as all will admit, I am sure, that having a soil decreasing in fertility one or two things must happen. Either the farmer must be content with less income year by year, or more acres must be brought into use, and as the latter cause cannot be followed from the fact that our land is pretty well taken up at this time, only the former course seems open to the farmer, and this is not to be thought of for a moment by the bright American farmer. He is looking forward to a better living year by year rather than being content with less than he is now receiving. The writer has considered the question pretty thoroughly and has come to the conclusion that with the ordinary poor crop farmer the start in live stock should be made with hogs and cowpeas as the basis, and as time goes on, add a few head of good cattle. The cowpea is, I believe, our greatest soil improver. It is also one of the best forage and grain crops for growing pigs and has the farther advantage of being a quick grower. All the above points recommend this plant to the poor farmer as his best source of food supply. Then the pig is a rapid mover also. Start him off well by April 1st and by the last of August, when the first early peas are ready to turn into he will, be a good big fellow, ready to make good use of the crop, and if a little grass and clover can be supplied to add variety to his ration, he will, by the first of November, be ready to finish off with a month's feeding on corn. This corn, we believe, should be fed to him right out in a field of late peas that have been saved for use at this time; for our experience leads us to think that pigs that have been allowed their freedom all the season do better to continue right along in that way than they do when taken up and confined in a pen. Then, the late peas they secure, furnish in the most economical manner the protein the young growing hogs require to make their most rapid gains on the corn feed. Then, too, the manure made is left in the fields where it can be saved to much better advantage than it can be in any ordinary cheap pen. We know the main drawback to the hog-feeding business is the difficulty experienced in saving the manure resulting from the feeding of rich concentrated food. Let the poor crop farmer purchase a few good sows in March and he can have their produce in the market by the time he could have grown a sale crop on the same land and gotten that ready to market. He will have had his land growing a leguminous crop which fed off on the land has increased the fertility thereof and added a vast quantity of humus thereto, and when through he will find also that he has more hard dollars in his pockets from the sale of the pork than he would have received from the crops or corn or cotton he could have produced on the same amount of land. When the time comes that the farmer is able to handle some cattle on his farm also the profits will be still greater, as the cows will utilize the fodder and pea vines that the hogs cannot use. When this time comes we will

hear more of the joys of real farming and less of "distressed cotton" and poor soil. But let the farmer start out with the right quality of stock. Let him beware of the little "dumpy" sow that has a very hard time to produce even three or four little runts of pigs. Get the big, roomy sow, long, thick and deep, with an udder like the keel of a fast-sailing yacht. Then he will be assured of from eight to ten pigs from each sow, and they will be large, growthy fellows a month old when they are born. A small permanent pasture of good grass will be needed for these sows and each should have a little conical shaped house that she may call all her own. Keep the pigs growing from the start on a little shipstuff, corn, crimson clover, rye, and vetch, if you have it, and when the peas and corn have done their work in the fall you will be astonished that you hadn't been into the hog business long ago, supplying the splendid markets we have all over the South. We think mighty well of the hog on "Sunny Home Farm," along with the cattle and sheep. A. L. FRENCH.
Rockingham Co., N. C.

AN ORANGE COUNTY (N. Y.) FARMER.

Editor Southern Planter:

Mr. Rupert C. Hart is one of the successful young farmers of Orange county, New York, who believes that farm life offers plenty of scope for a young man to show the stuff that is in him. He has a beautiful farm within a quarter of a mile of the Station of East Walden which, from the neat and well kept appearance, proclaims it to be the home of a man in love with his business. The spacious lawn is shaded by a beautiful sycamore tree which is probably 200 years old and is in such perfect condition that it bids fair to be a landmark of the country for the next 200 years.

Mr. Hart believes in diversified farming and intensive culture, which he gives to all his crops, and his large yields testify to the correctness of this system. He makes a specialty, however, of dahlias and potatoes. He has many acres of dahlias, which he grows for the wholesale trade, and when they are in bloom it is a sight well worth coming miles to see.

On both of the above crops, as well as on his hay fields, he has obtained especially good results from a high potash fertilizer, such as a 4 per cent. nitrogen, 6 per cent. phosphoric acid, and 10 per cent. potash. In order to settle the matter and find out just what his soil needed, he decided to conduct an experiment with fertilizer on potatoes. He took three plots of land of as nearly equal fertility as possible. On one he used no fertilizer at all, on the other a mixture of phosphoric acid, nitrogen and potash, while the last received the same amount of phosphoric acid and nitrogen, but no potash.

In spite of the very unfavorable season, the results were very decisive. The unfertilized plot gave 10 bushels of potatoes, the plot without potash 120 bushels, while where the complete fertilizer with potash was used the yield was 155 bushels per acre, a gain of 35 bushels, and as he sold them at \$1.00 per bushel, it meant \$35.00 for the use of about \$3.00 worth of potash, or a net gain of \$32.00 per acre.

Next year he intends to conduct the same experiment on alfalfa, using in addition lime. To show that on his

soil lime is necessary for the best development of the alfalfa plant, he wrote the letters "l i m e" about three feet wide and ten feet high on one field, using lime to make the letters, and these letters were very apparent from the highway all through the season by the ranker growth of the plants.

Every farmer should experiment in this way, until he is satisfied that he is using the most economical fertilizer mixture on his crop and that he is not throwing money away by buying materials which are not needed on his land.

C. F. MARSH.

ACID PHOSPHATE AND FERTILIZER PROBLEMS.

Editor Southern Planter:

On page 1060 of December, 1908, number, Mr. Hicks, in discussing fertilizers, protests against the use of acid phosphate as used in Tidewater: firstly, because they use too much, and secondly, because, in the presence of lime in the soil, the acid phosphate tends to unite with the lime to form an insoluble compound. Is this latter a correct statement? If so, is there any practical method of ascertaining whether or not there is lime in the soil? Also, if it is known that there is lime present, in what shape is it possible to supply phosphorous that will not produce this reaction, and thus occasion a useless outlay of money? If this statement of Mr. Hicks is correct, and the addition of phosphoric acid in this shape tends to neutralize the alkalinity of the soil by absorbing the lime, is the addition of potash the proper way to restore it? The addition of more lime would seem to be only a further waste of money, unless some other form of phosphoric acid does not possess this tendency to unite with lime.

And yet, Mr. Hicks, later in the same article, recommends the use of a fertilizer containing phosphoric acid, and in his article, page 7, of the January number, figures on "acid phosphate" to fertilize crimson clover without taking into consideration this tendency for acid phosphate to unite with lime. In the case of the mixed fertilizer, the phosphoric acid may not be in the shape of acid phosphate, but in the latter case he specifically says "acid phosphate."

I do not feel myself competent to intelligently criticize, and am only asking for information, but it would seem that Mr. Hicks' two articles were inconsistent, for if his statement in the December number is correct he has failed to take account of it in the January calculation.

I was just preparing to write you, asking your advice in regard to fertilizing crimson clover for land to be devoted to garden crops, when the January number arrived, with Mr. Hicks' article on this question which, although he does not actually say so, I take to be authority for the feasibility and advisability of adopting this course, but which does not quite hit my case, because of the different use to which my land will be put, and which also leaves me in doubt on the acid phosphate question, because of Mr. Hicks' previous statement as to its action in the presence of lime.

Prior to last year this land had been uncultivated for ten years at least. Last year it was used for garden crops with practically no fertilizer, and gave fair returns. I planted inoculated crimson clover about October 1st, and while it has started up very thickly, it has grown but very

little. I am not enough of a farmer to know whether this lack of growth during the winter is the usual condition, or due to lack of fertility of the soil, and as, of course, I wish to turn this growth under early in the spring, I am anxious to get as much growth as possible.

I had practically decided that I would get, separately, phosphoric acid and potash and, dividing my land into two pastures, use on one part a mixture of these two with the phosphoric acid largely in excess, and on the other part a mixture with potash largely in excess, and would then expect the results to tell me which my land needed most. Is this idea correct? But then comes the question as to the best form in which to get these two fertilizers. Mr. Hicks has scared me as to acid phosphate, which leaves bone as about the only other practical source of phosphoric acid, and T. W. Wood & Sons' catalogue says that bone "should be covered or incorporated with the soil as applied to prevent escape of ammonia, which, of course, I cannot do; while Dreer's catalogue says that it is "excellent for restoring and quickening grass plots," etc., which would seem to indicate that it was proper to use as a top dressing. In this connection I am led to believe from an article in another magazine, which describes bone as an "insoluble" that it is only through its decay that it becomes available. Is this correct? Another question: Is either bone meal or ground bone treated in any way. If not, is the difference due only to the fineness? The article above mentioned says that one bushel of bone treated with one-third its weight of H₂O₅ gives better results than four bushels of bone dust. I suppose this puts it into a form immediately soluble. Is this correct? If so, is it practicable.

For potash, there seems to be three practical sources: ashes, kainit and muriate. The above mentioned article puts unleached hardwood ashes first, speaks highly of the other two, but says that the muriate contains chloride, which is liable to injure some root crops, as potatoes and onions, so I should prefer not to take any such chances. Can you tell me what is actual per cent. of available potash in unleached ashes? I should then be in a position to know which was the cheaper per pound of potash, and should, of course, use that one, unless you can tell me of some objection to its use.

I shall be greatly obliged if you will give me at your earliest convenience all the help you can to straighten me out on the questions. They are comparatively new to me, and so I am a seeker of information who is very much interested in this subject, and enjoy very much the articles in the Southern Planter, both by the editor and the contributors.

A. W. CHASE.

As this enquiry arose out of one of Mr. Hicks' valuable articles, we submitted the same to him with a request that he would reply to it. The following is his reply:

In regard to the queries of Mr. Chase, forwarded by you to me for reply, I would say that here in the Tidewater, on our alluvial soils, we have long been confronted by the fact that large, and often repeated applications of acid phosphate, while successful in promoting the growth of peas and clover during the initial stages, will, if continued, gradually bring about a condition of the soil very unfavorable to the growth of the latter. That this was

due to the direct accumulation of sulphuric acid (H_2SO_4) was the first conclusion of our most observing farmers, but when one considers that in the manufacture of acid phosphate the custom is to unite phosphate of lime, wherein the phosphorous is combined with two or more molecules of lime in such proportion as to cause, in the resulting mixture a combination of phosphoric acid, with one part of lime, and the formation of gypsum (CA, SO_4) from the residue, such a theory becomes at once untenable, for gypsum is a material which is commonly used throughout the Northern States to promote the growth of clover, and has presumably much the same action as lime upon the soil, setting free potash and promoting alkalinity. The point I was trying to emphasize, and which called forth the query of Mr. Chase is this:

That we are, as a general rule, applying far more available phosphoric acid to our soils than the requirements of the crop, as shown by chemical analysis, would indicate to be necessary, and where we apply phosphoric acid enough to produce, let us say, twenty bushels of wheat per acre, and find our crop to yield only fifteen bushels, that twenty-five per cent. of the phosphoric acid must have been wasted, which would not have been the case had our soils contained potash, and nitrogen enough to grow the twenty bushels of wheat. Now, if phosphorous is the principle element lacking in this soil, and this seems to be true, it by no means follows that because a little is good, a great deal must be better for in this case applications of acid phosphate proportionate to the needs of the crop could probably be supplied indefinitely with beneficial results, but when we apply it at the rate of 300 pounds per acre, while the available potash and nitrogen can only balance about 100 pounds, 200 pounds lies in the soil seeking to form insoluble phosphates in combination with any lime with which it may come in contact, thus causing us to lose the benefit of the acidulation of the rock, as well as to rob our soils of what little free lime they may contain.

I have heard it urged in reply to this, that it is possible to get an increase of crop yield by doubling the amount of phosphate applied, over that indicated by analysis, and this is often true, but a little reflection will show that when this is the case it must be due to either one of two conditions, neither of which is compatible with sound business policy:

First. The phosphoric acid applied must revert, (that is, unite with lime to form an insoluble compound) before the plant can use it, in which case provided one-half is lost in this way your phosphoric acid is costing you ten cents a pound instead of five cents.

Second. The increase of yield must be due to the chemical action of the gypsum in setting free potash, or in promoting alkalinity. Were we sure of the first, we would at once seek some other source of phosphoric acid, preferably an organic one, because such matter is more readily capable of chemical combination, as organic sources of phosphoric acid all depend upon decomposition to render them susceptible to change, which is a process so slow that the plant can, in most cases, take it up quite as fast as it is offered. Were we sure of the second alternative, and did we desire it, we would, of course, apply lime, or gypsum direct, for it can be purchased much

cheaper in that form than when combined with phosphoric acid.

It would seem that the laudable efforts of farmers to enrich their lands through excessive applications of acid phosphate are, in the end, more than wasted. In fact, the true use of commercial fertilizers is not to permanently enrich the soil, (that can only be done by deep plowing; drainage where necessary, and the formation of humus), but to supply a temporary deficiency of one or more elements in as nearly as possible the exact proportion in which they are lacking, and so used, I do not believe there will be any unfavorable result from the use of acid phosphate, no matter how long continued.

So much for acid phosphate. Now as regards the presence of lime in the soil, I know of no way to determine this, other than by chemical analysis. Soil alkalinity may be tested with litmus paper, to distinguish it from soil acidity, but this is of no practical value. All the alluvial soils of Tidewater Virginia that I have subjected to test have shown acid reactions, although some of them were growing clover and even alfalfa. The truth of the matter seems to be that a slight acidity will not prevent the growth of legumes, but a large degree of acidity will, and as yet we have no quantitative test, the litmus paper only serving as a qualitative one.

Mr. Chase's proposition is a wise and practical one, if he desires to test the needs of his soil. I would advise him to divide his field of crimson clover into four pieces, of equal area; apply to No. 1 150 pounds of 16 per cent. acid phosphate; to No. 2, 100 pounds of 48 per cent. muriate of potash; to No. 3, 150 pounds of acid phosphate, and 100 pounds of muriate of potash combined; No. 4, no fertilizer. Do this at his earliest convenience, and when spring has come and gone he will have a pretty good idea of the needs of his particular soil in these constituents. Should he desire to grow potatoes or tobacco on any of this land, the sulphate of potash should be substituted for the muriate. It analyzes about the same per cent. of potash, but is free from the chlorine, which prejudicially affects the quality of the tobacco. I would not advise the purchase of bone meal or any form of phosphorous combined with nitrogen as an application to legumes, although I have seen it used to advantage and profit in growing red clover hay as a sale crop. The true purpose of the legume is to save the farmer the expense of purchasing commercial nitrogen, and while in some cases it may be necessary to have a little in order to carry the young plants along to the stage of providing their own, and in others where hay commands a high price, the result may be financially profitable, yet the practice is not to be commended. In no case where a good stand is already secured to produce a crop for turning under, would I apply anything but phosphorous and potassium. Yes, you are correct in saying that the phosphoric acid in bone meal, like that in all other organic sources, becomes available only through decay. Raw bone meal is untreated chemically, but is, of course, treated mechanically when it is ground. It contains two and a half to four and a half per cent. of nitrogen when pure, hence its greater cost per ton, and greater value. Dissolved bone is raw bone treated with sulphuric acid, just as the acid phosphate is, it should contain two to three per cent. of nitrogen, and

fifteen to seventeen per cent. of phosphoric acid, and is no better than a combination of acid phosphate and nitrate of soda, and generally more costly. One ton of raw bone meal would contain eighty pounds of nitrogen and 500 pounds of phosphoric acid, 120 pounds of which or six per cent. is classed as available in the form of a monocalcium, or di-calcium phosphate, which eventually decomposes, rendering up phosphoric acid and lime.

Acidulated bone contains about fifty pounds of nitrogen, and a total of 340 pounds of phosphoric acid in a ton, 280 pounds of which are available at once, the balance slowly so. The value would depend entirely upon the crop, raw bone having the greatest ultimate value on any slow-growing crop like winter wheat or grass, while the acidulated bone would be far more effective on spring sown oats or truck crops.

The best unleached Canada ashes contain about eight per cent. of actual potash, or 160 pounds in the ton. All ashes contain a small per cent. of phosphoric acid as well, and a high per cent. of lime, in some cases very nearly one-half the latter. Where they can be purchased for the content of potash at five cents a pound, they form a cheap and most excellent source for supplying this constituent, and the phosphoric acid and lime are a clear gain.

It is much to be regretted that this problem of fertilization should be so complicated. To the average farmer the mass of figures attendant upon an analysis of the plant, the soil, and the fertilizer expressed, as it usually is, in percentages, has little if any meaning, and in my experience the manufacturer and his agent are rarely any better equipped to elucidate the matter. Of course, every manufactory has, or should have, a capable chemist in charge of the work of compounding its goods, and if the buyer can get back to this source for his information, he will generally find out what he wants to know. But the general rule is to buy by the brand name or analysis on the bag without regard to the requirements of the crop, and the deficiencies in the soil to which the fertilizer is to be applied.

The Hon. James Wilson, Secretary of Agriculture, says in his report to the President, page 34: "The amount of money annually invested in fertilizers by the farmers of the country, now amounting to upwards of \$100,000,000, will continue to increase seems certain. But just as certainly a large percentage of the money—perhaps a third—is annually wasted, and brings no adequate return, owing to lack of understanding of the soil's requirements." And, while I might not be willing to concede that his proportion is absolutely correct, I think, in the main, that the statement is true.

The remedy appears to me to be with the buyer. He should first decide exactly what he wants, and then insist upon having it, free from adulteration, failing to obtain which, he must resort to home mixing. As the case now stands the manufacturer decides what percentages he will furnish, and gives the buyer nothing but a choice of ready mixed goods, very few of which supply the exact requirements of any crop, and that the mixture so offered will exactly supply the needs of the crops when combined with the deficiency of any particular soil is a chance so remote as to be without the bounds of the wildest probab-

ility. In looking over the field then, it would seem that there was room for the profitable employment of a middle man to prescribe for the ascertained need of the crops and soil, just as the doctor is called in to prescribe the wares of the druggist for the benefit of his patients, an office which could be well supplied by our State Experiment Stations, were there one located in every section of the Commonwealth.

PERCIVAL HICKS.

Mathews Co., Va.

PLOWING, CULTIVATION AND CORN PRODUCTION.

Editor Southern Planter:

Referring to Mr. Bailey's query as to the "best plow" for turning fallows, I herewith give my experience for what it may be worth:

Entire success has attended my efforts by the use of a No. 710 Imperial chilled plow with a disc coulter attached. I had nine acres with a heavy growth of crimson clover last spring, some had fallen flat, making it difficult to keep the plow in the ground, but with a high-hitch and new point, the work was well done. Care must be taken to set the coulter right, so that it cuts as much as the point of the plow, otherwise the point will cause choking; but if properly fixed, there is no trouble, and the clover or other fallow is well covered. Of course a chain should also be used. The disc coulter is a blessing when used on turf and all fallows. I have plowed in weeds as tall as my head, (and a thick growth) so it could hardly be seen that a weed had been on the land

Level vs. Ridged Cultivation.

It has been my opinion for many years that level cultivation of the corn crop was "the way," but owing to weeds and grass, and the almost impracticability of checking my corn, I have only in few instances worked the crop level. Last year (1908) I had a twenty-acre field in corn, and decided to keep the turn plow out if possible. This field was worked in the earlier growth of the corn with Planet, Jr. single cultivators, and was "laid by" with the fine, or spike-tooth cultivator, leaving the land in a beautiful condition, with scarcely any weeds or grass, the weather being quite dry up to this period; the corn was beautiful, with the promise of a good crop. One old farmer said it would be a sixty-bushel crop. This estimate was for eleven acres, which had not been manured. Just before the last working was quite finished the rain came, lasting for several days, making the land so soft that a large lot of the corn fell flat; not much of it stood perfectly straight. Right much of the corn is immature, and very few stalks have over one ear, the size of the ear also is not up to my general average. My neighbors plowed ridges to their corn, and nothing like as much of their crop fell down, they planted two or three weeks sooner than I did. The editor will oblige me with some remarks on this, as he is an advocate of flat work.

I will now give some experience in the planting of corn on clover fallow. Three of the nine acres above mentioned were planted in white corn, soon after the clover was ploughed in, and made a good crop; the other six acres stood about four weeks before planting, and was then put in yellow corn; it started well, and looked as if a large crop might be expected, but there was a very

small growth of stalk, and the ear is not up to expectation. Does the editor think the fallow stood too long, and that some of the nitrogen escaped from the soil? Several acres of the clover were top dressed in the early spring, and judging from the growth of clover there should have been a large crop of corn. Please give your ideas on this also.

Prince George Co., Va.

A. R. CLARY.

We trust our friend will not be discouraged with the mishap which happened to his crop last year. Be assured that the true system of cultivation of a corn crop is the level one with shallow cultivation all the time. This has been so fully demonstrated by tests in almost every section of the country that there can be no question as to it being the best. The trouble in your case was probably caused by the fact that the corn was not planted as early as it ought to have been, and when "laid by" the roots had not got so strong a hold of the land as they needed to do in order to resist the prostrating effect of the heavy rainstorm coming upon it immediately after cultivation, before the soil had become compacted again. Had the corn been more mature the root system would have had better hold of the land, and the corn would not have gone down. The plowing of a furrow to the corn has little if any effect in holding up the crop; indeed, if the furrow is plowed deeply, it is almost certain to cut some of the roots, and thus weaken the hold of the corn on the land. It is detrimental to the well-doing of the crop in the event of dry weather setting in, as the furrows expose so much greater a surface to the action of the sun, and thus dry out the land so much faster. This is a danger much more to be feared than a heavy rain or wind storm.

The failure of the yellow corn to make a good crop on the clover fallow may have been partly induced by its planting having been deferred too long after the clover had been plowed down, and thus part of the nitrogen supplied by the clover had been lost. Nitrogen is quickly lost out of the land if there be no growing crop to utilize it as it becomes available. Or, it may be that the failure of the crop was caused by lack of sufficient mineral fertilizer in the soil to balance the nitrogen. The dry fall may have also had much to do with decreasing the yield.—Ed.

THE PLOW QUESTION AGAIN.

Editor Southern Planter:

I see where my friend, Mr. Ruffin, has taken a "shot" at me, but like the rest, he missed his mark. He says I'll never "get there" until I use a jointer, but I do get there and stay there. I have used the jointer and wheel, but have long since laid them away. My opinion of them is: they are not worth a hurrah in — Texas! The wheel is all right for a person who cannot plow, and does not know how to adjust his plow. The jointer will do good work on nice sod, but it is no more to compare to Avery's Moon coulter than a hand-rake is to a harrow. Let a person put a jointer on his plow, and undertake to plow down and under last year's corn stalks, with pea vines and wire grass also; and he will soon find he is not "an angel," and he will wish the whole rig was where "icicles never form." Whilst, if he had a Moon coulter and chain, he would do such nice work he would

not want to take out at dinner time. He says "these attachments require more power than the plow itself." I think it does with the jointer, but let him put a dynamometer on his plow with the coulter (Moon) on, and he will find it registers lighter draught. I think if Mr. Ruffin will take a three-horse Syracuse plow, with good team like he keeps, with the Moon coulter and chain, he can plow any land on his place, and when he gets through he will not know what was there before plowing. I use nothing but the Acme harrow (advertised in your journal) that does perfect work from any point of view. You can work one horse to it, or fix it so it will take three good ones. I have a steel peg-tooth harrow. I never use it, as it is a scratcher. I keep it for the accommodation of my neighbors, who plow about three inches, then scratch. The Acme harrow leaves your land like a plant bed, and it will do as fine and light work as any harrow, and no heavier than a peg-tooth to work. Mr. Ruffin has a fine farm, (I have been on it) and is a good farmer, and it is possible if I were put to managing it, I might get left, but I'd make a lot of fuss, to let people know "I was there." Your subscribers seem to be "calling" me. Well, I am always ready to show my "hand," and whilst I may never have a straight flush, I'll often have a full hand and corn house, and not one rat; corn house is rat-proof: warranted. Next. L. H. CARLTON.

THE AUTOMOBILE ON THE FARM.

A new use has been found for the automobile. Frank Hardart, of the firm of Horn & Hardart, Philadelphia, recently called his friends and neighbors together to witness an innovation in farm methods. At the appointed time, Mr. Hardart drove out from Philadelphia with a party of friends in his touring car. It is a drive of about an hour and twenty minutes from the Quaker City to Glenloch when the conditions are right. The automobile was jacked up in a few minutes, a belt attached to one of the rear wheels, and, in less than five minutes after the arrival of the car at the barn, it was doing duty as a piece of farm machinery of a unique type.

The belt was attached to a fodder cutter and the efforts of two of the farm hands were required to keep the machine fed with material while the big touring car did its work. The belt was then attached to a corn grinder and other farm machinery where power was needed, and the way it sent the wheels flying and the celerity with which it turned out the completed material was calculated to open the eyes of an advocate for up-to-date methods in farm appliances.

There was no hitch in the work. The adjustment of the belt took scarcely as long a time as it takes to describe it, and the wheels were whirring a few seconds after the belt was in place. All the men had to do was to keep the machine fed with material.

To any one who has seen this sort of work done by hand it was a revelation of the possibilities of applying ready-made power to the machinery of a farm. There is no possibility of damaging the automobile. The wear of the smooth leather belt on the tires is considerably less than that of the rough roadway over which these tires are usually driven, and the machine itself is subjected to much less strain in driving the farm appliances than in traveling over bad roads and up steep hills.—Exchange.

Trucking, Garden and Orchard.

WORK FOR THE MONTH.

It is too early yet to sow or plant out any crop in the garden or truck field except it may be in Tidewater Virginia or Eastern North Carolina, where Irish potatoes and English peas may be put into the ground if it is in good order in the latter half of the month. The work of preparing the land for the crops should, however, have attention, as the weather will allow. Lose no opportunity of working of the land when it is dry enough, for upon the fineness of the tilth and the complete mixing of the compost and fertilizer with the soil will largely depend the measure of success which is to be attained. The frequent stirring of the soil will admit the air and sun into it and dry and warm it. The compost heaps we advised to be made earlier in the winter should now be getting into fine condition for applying to the land if they have been worked over as we advised. As they become completely decomposed haul them on to the land and spread broadcast and work into the soil. If the mineral fertilizers—the acid phosphate and potash—which we advised to be mixed in the heaps as they were made were not then mixed in the compost, they should now be applied on the land with the compost and be worked in. Do not be afraid to use these liberally if you want to make good crops. All the vegetables are large consumers of these elements, and you can with advantage use 500 pounds of acid phosphate and 200 pounds of muriate of potash per acre. It takes time for these mineral fertilizers to become available, and therefore, they are better applied now than at the time of sowing the seed or planting out the crops. They will not leach out of the land—nitrogenous fertilizers, on the other hand, cannot safely be applied long before the crop is planted; indeed the most valuable of these nitrate of soda is better not applied until the plants begin to grow, as it is in an immediately available form, and its value is soon lost if there be no crop growing to utilize it—cotton seed meal and fish scrap are valuable as nitrogen suppliers, and may with advantage be applied some little time before the crops is sown or planted, as they have to decompose in the soil before the nitrogen is available. If no compost is available apply the best rotted farmyard manure you can get, and let it get mixed in the soil and be undergoing decomposition, and add to it the mineral fertilizers we have mentioned. In this issue will be found an article dealing with the question of the best fertilizer to use in growing the Irish potato crop, and giving several formulæ for mixing the same, to which we refer our readers.

Few of the brands of commercial fertilizers on the market are rich enough in potash and ammonia to meet the requirements of the truck growers for successful vegetable production. We, therefore, submit a few formulæ for the home mixing of fertilizers for crops now about to be planted. (For Irish potatoes, see the article on that subject in this issue.)

For Beets and Lettuce.—300 lbs. nitrate of soda, 800 lbs. of cotton seed meal, 600 pounds of acid phosphate, 300

pounds of muriate of potash to make a ton. Apply at the rate of 500 pounds to the acre.

For Cabbage, Cucumbers, Melons and Canteloupes.—300 pounds nitrate of soda, 700 pounds of cotton seed meal, 750 pounds of acid phosphate, 250 pounds of muriate of potash to make a ton. Apply at the rate of 500 pounds to the acre.

For Tomatoes and Egg Plants.—200 pounds of nitrate of soda, 750 pounds of cotton seed meal, 750 pounds of acid phosphate, and 300 pounds of muriate of potash to make a ton. Apply at the rate of 600 pounds to the acre.

Asparagus beds should be worked over as soon as the ground is dry enough, and be covered with a thick layer of good rotted manure, in which should be mixed the fertilizer above advised for this crop, and be then covered with eight or ten inches of fine soil.

Strawberry plants may still be set out. They should be got in as soon as possible, so as to get well rooted before the hot weather sets in.

Strawberry beds coming into bearing should be cultivated as soon as the land is in good order, and have a top dressing of 100 pounds of nitrate of soda, 400 pounds of acid phosphate and 400 pounds of muriate of potash applied to the acre. This should be spread down each side of the rows, and we worked in with the cultivator. Mulch between the rows next month to keep the berries clean and conserve moisture, using pine tags, waste hay or other clean vegetable trash.

Irish potatoes may begin to be set out in the latter half of the month, if the land is in good order. Only set out the earliest varieties, and do not set the full crop of these until next month. Fertilize liberally with one of the special mixtures, advised in this issue. Do not cut the sets too closely. They should have two or three eyes left in each piece. If any indications of scab are seen, or if it affected your crop last year, soak the sets in a solution of formalin or corrosive sublimate before planting. The formalin solution is prepared by mixing eight ounces of 40 per cent. solution of formalin with fifteen gallons of water. The corrosive sublimate solution is made by mixing two or two and a half ounces of the sublimate with fifteen gallons of water. Dissolve the sublimate first in two gallons of water. Let stand for five or six hours, stirring frequently. Dip the sets and let remain in it for one or two hours before being cut. Both these solutions are poison, and they should, therefore, be kept out of the way of stock or man, as also should the dipped sets.

English peas may be planted in the last half of the month if the land is in good order and the weather mild.

Sow deeply in rows two feet, six inches apart, and compact the soil well around the seed by treading or rolling.

If the land is dry enough to work well, fall set cabbages should have the first cultivation. Cabbage plants may be set out from the seed bed.

Small patches of lettuce, radishes and cresses may be seeded in sheltered situations.

THE VIRGINIA STATE HORTICULTURAL SOCIETY.

The thirteenth annual meeting of the Virginia State Horticultural Society was held in Lynchburg on the 6th, 7th and 8th days of January, and was the most successful gathering the Society has ever held, the attendance being large, the exhibit of fruit the finest, and the addresses and discussions the most interesting ever presented. It is most gratifying to find that the efforts made during the year and the increased support accorded to the Society by the State has resulted in arousing the interest of the fruit growers to the importance of thorough organization, so that our fruit industry, one of the most valuable assets of the State, shall be placed in that position before the country which the quality and variety of the products warrant it in demanding. The Hon. G. E. Murrell, the President, called the meeting to order, and presented his annual report, in which he reviewed the history and work of the Society since its organization, and declared that the past year has seen more accomplished than in any other year. The report told of exhibits made at fairs in Virginia, North and South Carolina and Washington, these exhibits having been made possible by an appropriation made by the State Board of Agriculture, amounting to \$1,500, these exhibits attracting widespread and favorable comment. Continuing, Mr. Murrell said:

"After last year's meeting in Staunton, part of the exhibit of apples there shown was placed in Woodward &



Competition for the Emerson Cup—Fruit Exhibit, Annual Session of Virginia State Horticultural Society.

Lothrop's department store, in Washington, where it proved an object lesson for two weeks or more, and was then distributed among prospective buyers as an education

as to the superior quality of Virginia apples. So favorable has this method of advertising proved, it has been arranged this season to renew this exhibit, and place a similar one in New York, so as to awaken both buyer and consumer to the excellence of what we have to offer. In the work thus far done, not only has the advertisement to the outside markets proved of far-reaching value, but inside the State it has stimulated interest and cordiality between this Society, members of the Legislature, the Department of Agriculture, and the people in general, that will leave an impress upon the Society's future that cannot be gauged by mere monetary appraisement. All this is gratifying, but it marks but the first step in the race for market supremacy.

"A prominent New York buyer recently told me: 'If you will pack your apples in boxes in Pacific Coast style, buyers will not know the difference, and will pay the same fancy prices, in which they will suffer no wrong, for they will get apples of better quality.'

"If our apples cannot be told from Pacific Coast apples, and are superior in quality, why should they have to pass for these apples, to prevent discrimination in price? The answer is: That Pacific Coast apples have obtained an established reputation through liberal advertising and greater attention to cultivation, spraying and packing. Similar methods will place Virginia apples on the same footing with an extra quality to bring an extra price, but only by unitedly striving to increase the percentage of fancy fruit grown, and constantly advertising, can it be done.

"Let these problems be a constant source of study, and realize and teach your friends to realize, that the State Horticultural Society is a free school of assistance to this end, and that every new scholar that is added to its roll, marks the nearer approach of that State reputation and monetary profit that individually and alone we can never attain."

His report was followed by that of the Secretary and Treasurer, Mr. Walter Whately, which was very exhaustive and full of much interest to the members. The membership was shown to be 245, a higher number than ever before on the rolls of the Society. The financial report showed that the Society had received the sum of \$2,486 during the year, and that of that amount there had been expended \$1,518.32, leaving the sum of \$930.31 in the treasury. Last year the report showed the Society to be in debt \$30.00, and no salaries of officers paid. The Hon. A. McNeil, Chief of the Fruit Division of the Canadian Government, addressed the Convention on "Canadian Governmental Control of Fruit Packages and Grading Fruit," the result of which had been to place Canadian fruit in the front rank in the markets of the world, as buyers could rely upon the quality and quantity of the fruit offered in the inspected packages. He urged strongly the importance of the adoption of this system here. The Hon. S. B. Woods spoke on the adjustment of express rates, and urged the attention of the Corporation Commission being invoked to correct the injustice done to fruit producers by the carriers. Mr. Wesley Webb spoke on "Fruit Conditions in Maryland and Delaware," and pointed out the increased prosperity which had followed the introduction of strawberry growing in those States. Dr. S. W. Fletcher, Director of the Virginia Experiment

Station, spoke on "Fruit Growing in the Pacific Northwest," and illustrated his remarks by packages of the fruit grown in that section, which command the highest prices on the market owing to the careful manner in which the fruit is graded and packed. In comparing the condition of the West with those of Virginia, Dr. Fletcher was very favorable in his remarks on the Old Dominion. He said that so far as climatic conditions are concerned Virginia, if anything, had the advantage, and that apples can be put on the market here more cheaply than in the West. The main disadvantages in this State, he said, are these: Bad roads, insufficient organization of the growers, and the fact that the Virginia horticulturalists have not "tooted their own horn" as the Westerners have done.

In conclusion, the speaker said: "As far as natural advantages are concerned, we can grow apples just as cheaply as in the famous Western points, if we will only adopt some of the methods employed there."

During the session of the Convention the following subjects were presented:

List of Awards. Report of Judge of Fruit Exhibit—Prof. H. E. Van Deman, Washington, D. C.

Address on Growing Chestnuts in Virginia—Dr. J. B. Emmerson, Albemarle county, Va.

How to Raise a Fine Crop of Irish Potatoes—W. W. Sproul, Middlebrook, Va.

Virginia as a Fruit State—Hon. G. W. Koener, Commissioner of Agriculture, Richmond, Va.

Fruit Packing: Report—First Year's Experience of Virginia Growers' and Packers' Association—T. W. Woollen, Manager, Crozet, Va.

Report—First Year's Experience of Shenandoah Valley Packers' Association—J. Lucian Moomaw, Secretary, Cloverdale, Va.

Canadian Experience in Co-Operative Fruit Selling—Hon. A. McNeill, Chief Fruit Division, Ottawa, Canada.

General discussion on above.

Executive Session and reports of Standing Committees.

Future Policy of Society—Prof. W. B. Alwood, Charlottesville, Va.

New Fruits—Prof. H. L. Price, Blacksburg, Va.

Work of Crop Pest Commission—Prof. J. L. Phillips, Blacksburg, Va. (None but members admitted to this session.)

Stereopticon Lecture—Civic Improvement and Shade Trees for City Planting—Dr. S. W. Fletcher, Director Agricultural Experiment Station, Blacksburg, Va. Reports of these will appear in the annual report of the Society.

In presenting his report on Awards on the Fruit Exhibit, Prof. Van Deman said that part of it was the finest exhibit of fruit he had ever judged, and this was high praise, coming from such a source, as Prof. Van Deman is the leading expert in fruit judging, and has probably placed the awards on more exhibits than any other man in this country.

The following officers were elected: President, W. W. Sproule; Vice-Presidents, W. A. McComb, J. Dickie, H. C. Wysor, Dr. W. L. McCue, J. B. Watkins and J. L. Moomaw; Secretary and Treasurer, Walter Whately; Recording Secretary, Prof. H. L. Price.

A correspondent sends us the following notes on the meeting:

The Exhibit.

The "old guard" of the Society was out in force, and all were enthusiastic over the exhibit, stating that it was the best in the history of the Society. Most of the fruit shown was high colored and clean, free from scab and worms, showing the progress of spraying in the State. Prof. Van Deman said to the Society: "Parts of your



Spraying Demonstration in One of Lynchburg's Parks.

exhibit, especially the fruit competing for the Emerson Cup, are as perfect as any that I have ever judged in the East or in the West." No man has had more extensive experience as a judge of fruits than Mr. Van Deman, and the compliment was appreciated.

There was much interest in the State Experiment Station exhibit of Western apples in comparison with Virginia apples. Seven packed bushel boxes of the finest fruit from the Hood River, Oregon, Grand Junction, California, and Yakima, Washington, were shown beside an equal number of packed boxes of Virginia fruit, grown by James Dickie, of Roseland, Dr. M. L. McCue & Son, of Greenwood; H. C. Kelsey, of Crozet; H. M. Grasty, of Crozet, and W. K. Gilkerson, of Fisherville. Much to the surprise of many people, the Virginia fruit did not suffer in the comparison. It was fully as perfect in size and color, and certainly equal, if not superior, in quality. But the Western growers often get as much for a bushel box of their apples as Virginia growers get for a barrel of equally good fruit. Obviously, the difference in price is due to their better packing, and to their co-operative organization for selling and advertising. It is evident from the discussion that these subjects received at the meeting, that Virginia fruit growers do not propose to take a back seat in these matters. The next few years will witness marked improvement in packing and organization.

Resolutions.

Aside from the usual resolutions of thanks, the following were adopted:

A resolution appointing a committee to recommend at the next annual meeting a revision of the Crop Pest Law, "so as to make it possible for the small nurseryman to do business in Virginia."

A resolution supporting the recommendation of the Director of the State Experiment Station that a Fruit Experiment Station be established by the next Legislature, appointing a committee of ten to further this proposition.

The Society recommended that the Station be located as near the center of the largest fruit region of Piedmont Virginia as practicable.

A resolution requesting the Legislature to exempt apple cider from the provisions of all liquor laws that are now or may be hereafter enacted, was laid upon the table.

Notes on Talks.

Hon. Wesley Webb, of Dover, Del., Secretary of the Peninsula Horticultural Society, stated the agricultural regeneration of the Delaware and Maryland Peninsula had been wrought almost wholly by crimson clover. The sandy land in this section used to produce only eight to ten bushels of corn nubbins per acre, and then was rested for a year. With the introduction of crimson clover as a soil improver, and the culture of small fruits, especially strawberries, all this has changed. The same land that formerly produced only \$5.00 worth of inferior corn, now makes \$100.00 to \$500.00 worth of fruits. The progress of peach yellows in the southern part of the peninsula has been stayed by the prompt destruction of diseased trees; in the northern section, where this has been neglected, the disease is spreading. The San Jose scale is spreading rapidly, except where thorough spraying is followed. Apples are replacing peaches quite largely since the fruit has fewer serious troubles.

Dr. J. B. Emerson, of Albemarle, called attention to the chestnut tree disease that is spreading over Eastern America. It is a bacterial disease, and acts exactly like pear blight, killing the inner bark. No practicable remedy is known. Quarantine and the destruction of di-



A Splendid Fruit Exhibit.

seased trees are a help, but not usually practicable. The disease is reported already at several points in Virginia. It is fast killing the chestnut trees and forests to the north of us, and it seems likely that our own trees are doomed. The disease attacks all species of chestnut, both native and imported.

Co-operation in Fruit Growing.

Hon. A. McNeill, Chief of Fruit Division, Ottawa, Canada, told his audience that Virginia fruit growers are too well off already to make much progress in co-operative work. As long as good prices are secured individually there is little interest in co-operation; but after two or three years of ruinous prices growers will get together. In Canada there are now about sixty co-operative shipping organizations, most of which are very successful. As illustrative of a small organization, he cited that at Chatham, Ontario. The region has small orchards, mostly of early varieties, on every farm. For years the growers got little or nothing for their fruit, culminating in the especially disastrous years of 1895 and 1896. Eight years ago, Mr. W. P. A. Ross, of Chatham, saw the possibilities of organizing all the small orchards of the community. A number of growers were called together and agreed to ship their fruit together in carload lots, instead of individually. For several years this informal pooling of shipments was all the co-operation attempted. It was so successful that the growers incorporated, and made a specialty of shipping early varieties. The manager has a list of all the varieties grown by different growers, and calls them in for joint shipment. Formerly these early varieties were worthless; now, they are the most profitable part of the orchard. The organization has an educational value in that it prescribes, under conditions for membership, that the fruit must be thoroughly sprayed. This is a small organization—only sixty-five members—shipping about forty carloads, and is an excellent illustration of how many small orchards, within a radius of six or seven miles, may be made more profitable. It is absolutely necessary, in all such co-operation, that the manager be given full control over all the fruit grown by the members, so that he may have a definite amount of fruit to count on.

At St. Catharine's, the fruit growers have banded together, and ship over 100 carloads of small fruits to the West, receiving not less than 100 per cent. more for it than formerly. They have put up a cold storage plant. The Chatham Association co-operates only in selling; the St. Catharine's Association co-operates in buying also. In 1908 this Association gave a single order for one million grape baskets, and distributed fifty-five spray pumps, 100,000 pounds of bluestone, 140,000 pounds sulphur, etc. They find it best in distributing supplies, to make the price the same as outside dealers, and to return to the members a pro-rata bonus at the end of the year, this being the amount saved by the large order.

Potato Culture.

One of the most valuable papers was that by the incoming President, Mr. W. W. Sproul, of Staunton. He grows potatoes in his young orchards, in the following rotation: Clover, potatoes, corn, sometimes making 250 bushels per acre. He found that the failure to loosen his heavy soil by plowing under humus was the most serious cause of loss. His seed is put in cold storage to prevent sprouting. Deep cultivation, with double shovel plows, he found to be very injurious. Don't work too deep or too close. Spraying has paid him, for nearly every year—the "early blight" cuts the vines. This may be prevented by using Bordeaux, which not only controls the disease,

but also furnishes the best way to put on the poison for bugs.

His fertilizer experiments showed that his soil needed phosphoric acid chiefly. The potato growers of his vicinity have saved considerably by getting the Virginia-Carolina Fertilizer Co. to mix a special fertilizer for them, instead of buying branded goods. The formula now used is 600 pounds bone meal, 600 pounds acid rock (16 per cent.), 400 pounds tankage (10 per cent. ammonia), 200 pounds cotton seed meal, 200 pounds sulphate potash. This makes 3½-11-5 goods in available form, and costs \$25.00 per ton.

In growing the crop he plows under a clover sod that has raised two tons of hay per acre, spreading upon it eight loads of manure. Plows nine inches deep in December, and cuts the ground up the following spring. Drills in 500 pounds of the fertilizer, drags the land to level it, and plants four inches deep, sowing 500 pounds more fertilizer. In a week plows out deep with the double shovel, and the week following levels down the ridges.

ANNUAL MEETING OF THE VIRGINIA STATE HORTICULTURAL SOCIETY.

Editor Southern Planter:

The fact that the Virginia State Horticultural Society is recognized as being most beneficial to the orchardists of the State, was strongly brought into notice at their recent annual meeting, in Lynchburg, January 6th to 8th, by the remarks made by members themselves, and by the daily press. Old members of the Society who have so patriotically persevered in the long, up-hill struggle for twelve year, to force this conviction on the people of the State, felt much gratified at finding that the seed they had been sowing, at first, apparently on hard and barren ground, is now producing the desired results. The Society was fortunate in having the attendance of Hon. A. McNeill, Chief of the Fruit Division of Canada, to tell them the results there of the packing and grading laws, and of the benefits the Canadian growers had received through their co-operative methods of handling and marketing their fruit, especially at this time, when the Society has succeeded in arousing so much interest in better methods of packing and co-operation in marketing by means of packing associations. The reports made by Messrs. T. W. Woolen, and J. L. Moomaw, the managers of the two established Packers' Association were most encouraging. The address given on this subject by the former gentleman, attracted the greatest interest and attention.

The exhibit of apples was magnificent, and the judge (Prof. Van Deman) after reading his list of awards, told the members of the Society that he felt it due them to say that this exhibit contained, as a whole, the most perfect lot of apples he had ever judged. That Virginia can produce the quality, and also the flavor we, who know Virginia apples, have always felt sure of, still we always like to be told this by our visitors, especially those who know whereof they speak. The whole meeting was marked by the greatest interest and enthusiasm throughout. The Society resolved to carry out an extended programme of education in the fruit-growing districts this year, in connection with the Farmers' Institute and State Experiment Station. The apples that were on exhibition were sent on to advertise Virginia fruit in New York,

under charge of the retiring President, Mr. George E. Murrell, whose former exhibition experiences pre-eminently fit him for this work—the intention being to attract the New York buyers' attention to the fine quality of the Virginia product. The members of the Society also resolved to increase the membership of the Society to 1,000 by individual efforts feeling not only that the record of the Society deserves support of all horticulturists, but also that no horticulturist can any longer afford not to be in membership.

New standing committees were appointed, whose special object is to interest vegetable and flower growers, and those interested in forestry, thus embracing all branches of horticulture. Mr. W. W. Sproul, of Middlebrook, Augusta county, succeeds Mr. G. E. Murrell as president. As usual, there are some changes in the list of vice-presidents. Prof. H. L. Price still continues editor of the Annual Report, which is sent free to members, and the Secretary-Treasurer remains the same, and, as usual, is always ready to enroll members.

Since writing the foregoing, I have received a letter from Hon. H. C. Stuart, who desires to explain to the members of the State Horticultural Society that he regrets that an imperative call abroad prevented his making the address before the Society at their recent annual meeting which he had promised, and I trust you will allow me space to make use of your columns to make the explanation desired to them.

WALTER WHATELY, Secy.-Treas.

ORCHARD PRUNING.

Editor Southern Planter:

I have been a silent, though appreciative reader of your valuable journal for many years, and have been much benefited from time to time by the timely contributions to it by the most able writers of this and other States. As the time is at hand when most of the pruning is done, I am writing this to plead for the young apple orchards which are so often butchered, rather than pruned. I believe that hundreds; yes, thousands of dollars are lost to Virginia fruit growers annually by improper pruning. In fact, I have known some orchards that would have been valuable to be almost wholly ruined by the so-called professional pruner. I am not going to attempt to give directions as to how to prune; this depends largely on the age of the tree, the variety of the apple, and the location of the orchard. It seems to me that a little experience and plenty of common sense are all that is needed. I will just say that I believe in light annual prunings rather than heavy occasional ones. I refer all who desire information on pruning to two splendid articles in the January number of Green's Fruit Grower, one by C. A. Green, editor, on page 33; the other by Prof. Van Deman, associate editor, on page 40.

Standard pear trees, I believe, require about the same pruning as the apple, while peaches require much closer pruning to produce the best fruit.

While your journal is not devoted specially to fruit growing, I hope this will be of sufficient interest to find a place in your columns.

S. E. PUGH.

Albemarle Co., Va.

We entirely concur with our correspondent as to the

damage done to orchards by excessive pruning. Our own experience and study has convinced us that the best pruning is done without the use of the knife or saw after the young head has been properly started by the necessary cutting back at planting. Use the finger and thumb freely during the summer in rubbing off the excessive and misplaced buds formed, and pinching back the too luxuriant shoots, and the heads can be kept in good shape and fruitful.—Ed.

SHENANDOAH VALLEY (VA.) FRUIT GROWERS.

Editor Southern Planter:

The Shenandoah Valley Fruit Growers' Association met at the Assembly Hall at 10 A. M. The President, Mr. W. A. McComb, being detained at home on account of sickness, Vice-President Watson called the meeting to order, and with some corrections, the minutes of the last meeting were adopted.

The majority of the stock being represented, the Association went into the election of officers for the ensuing year, and Mr. McComb having resigned the office of President, Mr. M. F. Gilkerson was elected to this office. W. H. Frothingham, of Front Royal, was elected Vice-President; J. L. Phillips and Mr. C. G. Crawford were re-elected directors. The other directors are B. E. Watson, J. L. Moomaw, J. H. Piper.

The following resolutions were unanimously adopted:

Whereas, the San Jose scale, Codling moth, Hessian fly, Gypsy and Brown-tail moths, some of our worst insect pests destroying millions of dollars worth of property annually, and causing an expenditure of hundreds of thousands of dollars annually for their control, were introduced into this country from Europe and Asia, and—

Whereas, the quarantine authorities of California have proven conclusively the value of requirements for the inspection of imported nursery stock, fruits, etc., therefore, be it—

Resolved, That the Virginia Senators and Representatives in Congress be presented with a copy of these resolutions, and requested to aid in the passage of a law to prevent the introduction and spread in this country of dangerous insect pests.

That these resolutions be spread on the Minutes of the Association and a copy be sent to Prof. T. B. Simmons, College Park, Md., who is a member of the committee of American Horticultural Inspectors, having this matter in hand; also to Hon. James Wilson, Secretary of Agriculture, and Dr. L. O. Howard, Chief of the Bureau of Entomology.

Whereas, the use of arsenate of lead, Paris green, copper sulphate and other insecticides and fungicides has now come into general use, and—

Whereas, the fruit growing public, without protection, is liable to obtain adulterated goods, or goods containing material injurious to their trees, etc., therefore, be it—

Resolved, 1. That we do hereby heartily endorse House Bill 21,318, introduced in the last session of Congress, by Mr. Lowden, of Illinois, which provides for preventing "the manufacture, sale or transportation of adulterated, or misbranded fungicides, Paris green, lead, arsenate and other insecticides, and for regulating traffic therein."

2. That a copy of these resolutions be sent to each

Virginia Senator and Representative in Congress with request that he do all in his power to secure the passage of this or a similar bill.

3. That these resolutions be spread on the minutes of the Association, and that a copy be sent to the Hon. James Wilson, Secretary of Agriculture, and to the daily and agricultural papers of the State with request that they be published.

J. L. PHILLIPS, Secy.

THE GIPSY AND BROWN-TAIL MOTHS.

European Insects that May Get a Foothold in this State.

We have just received notice that seventy-five nests of the Brown-tail moth (*Euproctis chryorrhoea*) have been found on apple, pear, cherry and other stock received from France, and wish to call the attention of nurserymen and importers of stock of all kinds to the serious nature of this insect pest, and request that every one, who has purchased any stock from abroad, notify the State Entomologist at once, in order that this stock may be inspected.

The Brown-tail moth is a common European insect, almost as destructive as the well known Gypsy moth (*Porthetria dispar*), and was introduced into this country at Somerville, Mass., in 1890, on nursery stock imported from Europe. The Gypsy moth reached this country about 1868. Massachusetts is the unfortunate State in which it escaped.

While a number of insects have been introduced into this country from Europe, these are two of the worst. Fortunately they have not become generally distributed, being still confined to the New England States.

Almost all fruit, shade, ornamental and forest trees, except pines and other conifers, are attacked by the brown-tail moth, and the Gypsy moth includes also the pines and other conifers and evergreens in its list of food plants. Almost nothing escapes injury where both these insects are present. They entirely defoliate trees after they become plentiful. Trees wholly defoliated in this way, for two or three years in succession are usually killed, and partial defoliation greatly checks the growth and causes distinct loss in value. The great destruction of orchards, shade and forest trees led to the appropriation of large sums of money by the State of Massachusetts and the United States Government for fighting these pests, and preventing their spread to other parts of the country.

Up to the year 1900 Massachusetts had spent, approximately, \$1,500,000 under the Gypsy Moth Commission and the Board of Agriculture to prevent the spread of these serious insect pests, and, if possible, eradicate them. These pests were so well subdued in 1900 that the appropriation was allowed to lapse.

The next few years showed, however, that this was a great mistake, and in 1905, the Massachusetts Legislature made an appropriation of \$150,000 per annum for this work, and in 1906 the appropriation was increased to \$225,000. The National Government has also taken a hand in this work, and spent several hundred thousand dollars in the last five years in conjunction with the New England States to control and prevent the dissemination of these serious insect pests. Every encouragement should be given

the Federal authorities in preventing the spread of these pests. Fortunate, indeed, will we be if we succeed in preventing their spread to our State for even a few years.

They are, no doubt, among the oldest insects of Europe, but do not become very destructive oftener than once in three or four years, because of the numerous parasitic insects, which prey upon them and help to keep them under control. When such an insect is introduced into another country, its parasites are often left behind. Also, the insect itself thrives where its parasites do not. There is usually, then, a long period in which such an insect, deprived of its natural checks, increases and spreads out of all reason.

Part of the appropriation of the National Government is now being used in introducing the primary parasites of these two insects to help in their control. Even with all their natural enemies to help hold them in check, they are very destructive, and every effort should be put forth to prevent the spread of these pests to other parts of the country.

Blacksburg, Va.

J. L. PHILLIPS,
State Entomologist.

IRISH POTATO FERTILIZER.

Editor Southern Planter:

As the time is drawing near when the farmers of that part of Virginia known as the "Eastern Shore," which is fast appropriating to itself the title of the "Early truck patch of the Old Dominion," will be preparing to fertilize the land for Irish potatoes, a few words relative to the home mixing of the brands most commonly used may not come amiss.

An analysis of the potato shows a preponderance of nitrogen and potash as compared with phosphoric acid, and were I so situated as to carry on some experimental plots I think I would be inclined to try to either cheapen my fertilizer by omitting some part of the phosphorous content or increase its effectiveness by greatly augmenting its nitrogen and potash percentage by building on nitrate of potash (KNO_3). Such a plan might or might not prove a financial success, as the phosphate of lime and gypsum which go to make up commercial acid phosphate, may have some effect on the soil, or plant, other than furnishing plant food, which is highly beneficial to the crop.

The safest course is always to apply those fertilizers which have proved themselves successful in growing the kind of crop on the particular soil you are dealing with, for your main reliance, and upon experimental plots or rows in the main crop apply other constituents which, arguing from analysis, should produce equal results with less cost, or better results with equal cost, or possibly a combination of both advantages.

I will proceed, then, not to suggest any new formula, however tempting such a course would be, but confine myself to the formula for the home mixing of those brands most commonly used, showing the cost thereof at the market rates assigned by our State Board of Agriculture for phosphoric acid, nitrogen and potash.

As I understand the conditions, the great bulk of this fertilizer is purchased upon time, but as I presume some of the growers may be in a position to purchase

chemicals at wholesale rates for cash, the difference in the cost of the two plans may be of some value in throwing light upon the premiums demanded by the manufacturers for mixing, transportation, interest and profit.

First, let us take up the composition of a 7-7-7 goods, compute its cost and compare with lower grades.

20 per cent. sulphate of ammonia, 700 lbs.—N. 7 per cent., costing 15 cents—\$21.00.

14 per cent. acid phosphate, 1,000 lbs.— P_2O_5 , costing $4\frac{1}{2}$ cents—\$5.30.

50 per cent. muriate of potash, 280— K_2CO_3 , 7 per cent., costing 5 cents—\$7.00.

Filler, 20 lbs.

Weight of mixture, 2,000 lbs.; cost of mixture, \$34.30.

It is a difficult matter to get these chemicals in purity enough to substitute nitrate of soda for the sulphate of ammonia, but 875 pounds of 16 per cent. acid phosphate, 87 pounds of 16 per cent. nitrate of soda, and 250 pounds of 53 per cent. sulphate of potash come very close to it.

Another simple mixture containing very little filler to balance is composed as follows:

16 per cent. nitrate of soda, 875 lbs.—N. 7 per cent., costing \$21.00.

14 per cent. acid phosphate, 875, lbs.— P_2O_5 , 6 per cent., costing \$5.40.

50 cent. muriate of potash, 240 lbs.— K_2CO_3 , 6 per cent., costing \$6.70.

Filler, 28 lbs.

Weight of mixture, 2,000 lbs.; cost of mixture, \$33.10.

It will be observed that I have selected the muriate as a source of potash which is not generally recommended for potatoes, but I am informed that it has no bad effect on the Eastern Shore soil, and it is a cheaper source for potash than the sulphate.

Below is found a very common percentage which is cheaper, but probably less effective in proportion to its value than any given.

Nitrate of soda, 875 lbs., N. 7 per cent.—costing \$21.00.

14 per cent. acid phosphate, 857 lbs.— P_2O_5 6 per cent., costing \$5.40.

50 per cent. muriate of potash, 200 lbs.— K_2CO_3 , 5 per cent., costing \$5.00.

Filler 68 lbs.

Weight of mixture, 2,000 lbs.; cost of mixture, \$31.40.

Another common mixture is the following, which requires more filler than either of the others, but would probably be as effective on potatoes as any, except the first:

16 per cent. nitrate of soda, 875 lbs.—N. 7 per cent., costing \$21.00.

14 per cent. acid phosphate, 715 lbs.— P_2O_5 5 per cent., costing \$4.50.

50 per cent. muriate of potash, 240 lbs.— K_2CO_3 6 per cent., costing \$6.70.

Filler, 160 lbs.

Weight of mixture, 2,000 lbs., cost of mixture, \$32.20.

This list of formulae might of course be lengthened indefinitely to include all the combinations of 7-6-5 per cent. of which there are almost an incalculable number, but probably enough has been said to point the way to any investigator who desires to take up home mixing.

As a general rule, it will be found the cheaper plan per cost of unit of ingredient to buy the highest grade of nitrate, phosphate and muriate obtainable and aim to reach as near 7-7-7 as they will allow, for not only will the P_2O_5 be, as a general thing, cheaper per unit in 16 per cent. acid phosphate than in 14 per cent. acid phosphate, but as the freight and hauling are also less per unit there is of course an additional advantage there. As an illustration of this, suppose your 14 per cent. acid phosphate costs you \$14 delivered your P_2O_5 is costing exactly 5 cents per pound, which we figure as follows: 14 per cent. x 2,000 = 280 x \$14 = 5 cents. Now, suppose you are offered 16 per cent. acid phosphate, what can you afford to pay for it?

16 per cent. x 2,000 = 320 x 5 cents. = \$16. Clearly, then, 16 per cent acid phosphate is worth \$16.00 a ton when the 14 per cent. is worth \$14.00, and if it can be bought for less than \$16.00 it is the cheaper, and vice versa.

Indeed, where freight rates are an item, it will pay to compound with nitrate of potash analyzing N. 14, K_2CO_5 44, which figures to a value of \$86.00 per ton. Where high percentages are desirable, this is a valuable material and combines well with any substance that does not contain lime.

The question of home mixing is of course further complicated by building upon some organic substance like blood, fish scrap, or guano, and some recommend this practice for potatoes. Fish scrap should be a convenient substance for the Eastern Shore farmer, for he has a factory almost at his door. The idea in using this substance is to supply a source of nitrogen less readily available than that contained in nitrate of soda upon the theory that the ground will lose some of the nitrate before the potatoes can use it all, whereas the fish scrap only supplies its nitrogen upon decay, a process that requires time. In the forcing of early crops of so short a period of growth as potatoes, more especially as they do a good part of this growth in cool weather, I am inclined to doubt this hypothesis more especially when considered in relation to the large crops of corn produced after the removal of the tubers, which can only be due to the grower's applying more fertilizer than is needed for the first crop, or by their using a source of ingredient of slow availability, and in either event the inference is fair that what has been applied is not lost until some time near the maturing of the corn crop at a date some seven months after its application.

Mathews Co., Va.

PERCIVAL HICKS.

THE TARIFF ON BASIC SLAG AND SULPHATE OF AMMONIA.

Editor Southern Planter:

Probably your attention has already been called to a feature in the tariff revision that is important to Virginia farmers. At the present time all materials used as fertilizers or manures are admitted free, as they should be, except sulphate of ammonia and basic slag. The duty on the former is \$6.00 per ton, and the duty on the latter is \$1.00 per ton, it being erroneously classed as a metal, rather than a fertilizer, notwithstanding that its use in this country is solely as a fertilizer. In the tentative schedule now being prepared for the use of the Ways and Means Committee, Basic slag is so listed that it will be

impracticable to bring it into this country at all, while the duty on sulphate of ammonia remains.

In 1907 we imported 32,668 tons of sulphate of ammonia, chiefly from Great Britain, and 7,000 tons of Basic Slag. If these articles were admitted free, their use by our farmers, as fertilizers, would be greatly extended, since slag is one of the best sources of available phosphoric acid, especially for soils deficient in lime (slag contains 30 to 40 per cent. lime); and sulphate of ammonia is the richest in nitrogen of all commercial fertilizers—20 per cent. At the present time, neither material is used in Virginia to any appreciable extent, but undoubtedly both would be largely and profitably used if they were admitted free, as are other similar materials, so that they could be laid down here at a reasonable price.

Objection to the free admission of Basic slag will come from coke, and steel manufacturers, since slag is a by-product in these industries, and to the free admission of sulphate of ammonia from the gas makers, it being a by-product of gas. The slag made in the United States is not nearly as rich in phosphoric acid as that made in Europe, owing to the difference in the ores; in fact, it scarcely pays to use it as a fertilizer, but it is used in making cement. The most strenuous objection to the free admission of both materials will naturally come from the fertilizer interests, which are now so combined as to practically control all the fertilizer trade of the whole country.

The interests of the fertilizer man and of the farmer are so closely allied that what hurts one will be felt by the other, and nobody wishes to impose a hardship upon the fertilizer dealers. But this is so manifestly a discrimination against these two materials, and an injustice to our farmers that the error should be corrected in the new tariff schedule. This proposition was unanimously endorsed by the American Association of Agricultural Colleges and Experiment Stations, at their Washington Convention in November, 1908. The farmers of Virginia should be sufficiently interested in the correction of this error to communicate with their Senators or Congressmen and ask their attention to the correction of the new schedule.

S. W. FLETCHER,

Director of the Virginia Agricultural Exp. Station.

We trust that our subscribers will act upon the suggestion of Dr. Fletcher and at once write their Senators and Representatives. Farmers get no benefit from the tariff as they have no protection on their products and have to sell them in the open markets of the world. It is too bad that they should have to pay a duty on the fertilizer they are compelled to use to make the crops. We have written the Senators and Representatives from Virginia on the matter.—Ed.

Many experienced grape growers are of the opinion that grape cuttings made in the fall produce stronger plants than cuttings made early in the spring when the vines are usually pruned. Cuttings, if made in the fall or mid-winter, should be stored in moderately damp sawdust or moss and then placed in a cool cellar or buried in the open where the soil is well drained. The cuttings usually contain two or three buds and are five to eight inches in length. The first cut is made from one-half to one inch below the lower bud and the other cut one and a half or two inches above the upper bud.

Live Stock and Dairy.

GETTING BEEF CATTLE ON FEED.

(Continued from January Issue.)

Editor Southern Planter:

The problem of handling feeders is much more complicated than that of stockers. Animals unused to the stable should be accustomed to it gradually and the same care and precaution should be taken in preparing a variety of highly palatable foods suited to the peculiar needs of the cattle to be fed. Of course, the class of animals has a very decided bearing on the results of a feeding trial. This we have demonstrated by some seven different experiments made in as many years, and the feeder who hopes for success under the fluctuating market conditions he has to face will see to it that he has the very highest grade of animals to commence with. It is hardly necessary to state that long, lank, coarse-boned animals with cat-hams, light thighs, sloping, contracted hindquarters, flat ribs, narrow backs and coarseness in the shoulder and forequarters, generally speaking, will not make as good gains as animals that are short and stocky, compactly built, well covered with firm but pliable flesh, possessing symmetry and correlation of parts and a soft, yielding hide. People's ideals of what constitutes a good feeder vary so remarkably that it is a difficult matter to discuss this point and make one's attitude clear on it, but our own experience has shown us that many of the so-called native cattle that are considered profitable feeders by farmers have not sustained their reputation in our feed lots. This might by some be attributed to our method of management and feeding; but, in view of the fact that the gains obtained have frequently been as large, and, in many instances, larger than those claimed by practical farmers, indicates very clearly that the fault is resident more particularly in the class of animals fed and not due to their feeding and general management. Make sure, therefore, to get the right class of feeders and then, if the proper foodstuffs are available, a gain of at least two pounds per head per day for a period of six months can be looked forward to with considerable assurance.

When feeders are first put in the stable a week or ten days should be given to accustoming them to their new surroundings and teaching them how to eat a variety of foods. The environment cannot be made too comfortable. Some of us forget what a little thing will irritate a human being until he actually loses all self control. Yet we will subject our animals to a dozen different things that we know are, first of all, uncomfortable and, second, extremely irritating to them. An animal in an irritating environment will never use foods advantageously nor make satisfactory gains. This is a familiar platitude, no doubt, but it is one of those fundamental truths that will bear repetition even unto the end of the world, for it covers an essential condition in successful cattle feeding. It is not an uncommon sight to see feeders kept in yards in which the mud is up to their hocks, sometimes even belly deep, and though they may not suffer so much from exposure to violent extremes of weather, it is most objectionable to have them exposed to cold, drizzling rains. Therefore, a

simple shed-like structure for their protection during bad weather will prove a profitable investment on any farm.

The objects in feeding these cattle should never be lost sight of and they are somewhat as follows: First of all, a considerable increase in size, which calls for a general development of the framework of the animal. This consideration is of particular importance during a long feeding period of say 180 days or six months, for cattle, if in proper condition, can, as a rule, be finished in three months, but to get them in condition to finish will require at least the same length of time, a point that should never be lost sight of. Second, in feeding it is particularly desirable that uniform gains be obtained. This calls for a nice adjustment of the ration and for the proper combination of foodstuffs and the use of palatable and tonic foods to keep the appetite sharp and the digestion good through a long period. Remember, an animal that is to be fed so as to make a large increase in body weight daily for 180 days is undergoing a severe strain and the adjustment of the feeding standard is a matter of great importance. It is not necessary that the animals should be fed one of the so-called perfectly balanced rations, but it should approximate the standard at least. The third matter which should never be lost sight of is the proper distribution of fat and lean in order to secure the highest quality in the slaughtered carcass. The slaughtered carcass that commands the best price on the market is the one in which the fat and lean are properly blended and not developed in separate layers, as it were. An overly thick covering of fat with patchiness at the rumps and in other portions of the carcass is extremely objectionable, nor is an over-development of fat around the intestines at all desirable. The exclusive feeding of corn for a period of six months is likely to bring about some or all of these conditions with many classes of cattle, and particularly so with those that have not been as well bred and in which the assimilative powers are not as highly developed as in cattle of better quality.

Bearing these facts in mind, it is now proper to consider how best to get these cattle on feed and handle them so as to bring about the conditions indicated. First of all, putting cattle on feed should be a very gradual process. Probably more mistakes are made on this point than any other by the farmer who expects to feed cattle for a long period and hopes for a profitable return on the grain fed. It is a very grave mistake indeed to give a heavy grain ration in the beginning. When cattle are first placed on feed they will eat more roughness in proportion than they will later on in the season; therefore, cheaper gains can be made by feeding a larger amount of roughness at this period than would be desirable or profitable at the finish. For the first thirty or sixty days, therefore, only a limited grain ration is necessary, and naturally this grain ration should consist of foods conducive to growth and the development of muscle. Protein foods should certainly predominate at this period, both in roughness and in concentrates.

One of many rations that would be highly suited to the

feeding of beef cattle would be from thirty to forty pounds of silage, with ten pounds of cowpea, alfalfa, clover or soy bean hay, fed in equal parts night and morning. In the middle of the day turn the cattle out in an open yard where they can get a moderate amount of exercise and provide racks in which sorghum fodder, nice shredded stover or oat straw is kept. These racks should be provided with a top so the feed will not get wet during a rain storm, and it is surprising how much the cattle will eat under these conditions. Some will ask why more silage is not suggested, as good-sized cattle will eat a much larger amount. To gorge cattle on silage from the beginning would be a serious mistake, and this in our experience, which now covers several years, is one of the reasons why many feeders have not found silage a satisfactory food for beef cattle. Where silage is not available, clover hay with bright, shredded corn stover, corn fodder, sorghum fodder or cowpeas will make a very nice combination of roughness to use. In our judgment, it is not as healthy a ration as the one first suggested, and, of course, it is not so well adapted to many sections of the South as to the West, where clover and corn are grown in greater abundance.

For the meal portion of the ration, probably no combination of concentrates will be cheaper than a mixture of cotton seed meal or linseed meal in the proportion of two parts to one part of shelled corn, crushed corn, corn and cob meal, or even ear corn, though in sections where other protein foods can be bought at a low proportion of cost, they may be utilized, but it would be a fatal mistake to put feeding cattle on a six months' stretch on an exclusive ration of corn from the start. Moreover, though many feeders may not realize its truth, the feeding of corn alone will not insure as rapid gains, as large an increase in frame, or as good returns to the farmer as the use of some of what to him may seem expensive and unnecessary concentrates.

It has now been clearly demonstrated by our own experience that the use of a considerable amount of protein foods in the fattening of beef cattle, even during the finishing period, is a highly profitable practice. Protein foods tone up the system and keep it in equilibrium. A good, vigorous appetite and a healthy digestion are the essential conditions that must be maintained in any class of cattle where profitable returns are expected. It is, however, injudicious and unnecessary to feed a large amount of grain in the beginning. We frequently receive communications stating that "I am feeding eight, ten, twelve or fifteen pounds of corn to my cattle and they do not seem to be doing well," and this at the very beginning of a feeding period of from three to six months. Cattle coming off grass and not accustomed to a heavy concentrated ration cannot digest and assimilate this feed advantageously, nor do they need it to make profitable gains, as we have shown now by a number of fairly conclusive tests.

While the data suggested in the following table is not considered conclusive by any means, it furnishes a fairly satisfactory guide to the feeder, and, by adjusting the grain ration as indicated, we have been able to obtain an average gain of from one and a half to two and

a quarter pounds per head per day with various classes of cattle fed for six months.

Increase of Concentrates.

Group.	per day—lbs.	Increase Per Head in Pounds.											
		Initial amt. per head		Dec.		Jan.		Feb.					
		14—27.	7—14—21—28.	4—11—19—25.									
1	4	5 6 7 8 9 10 11 12 13 14											
2	4	5 6 7 8 9 10 11 12 13 14											
3	4	5 6 7 8 9 10 11 12 13 14											
4	4	5 6 7 8 9 10 11 12 13 14											
5	4	5 6 7 8 9 10 11 12 13 14											
6	4	5 6 7 8 9 10 11 12 13 14											

It has been our practice for several years to start our cattle on a ration of about four pounds of grain per head per day, increasing it to five pounds at the end of fourteen days, and gradually thereafter as indicated until a total of fourteen pounds is reached on February 25th. From observations made this year, it would seem that we could increase the grain ration to sixteen and possibly eighteen pounds before the conclusion of the feeding trial. This, of course, would not pay with ordinary cattle to be put on a market where high finish and quality are not considered the most essential points, but for animals intended for export, or which are to be sold in a highly discriminating market, the increased amount of grain indicated can be fed advantageously. During the first period the protein foods constitute half of the meal ration and they can often constitute as much as two-thirds with profit. This will depend somewhat on the market price of the various foodstuffs utilized. During the second periods, two-thirds corn and one-third protein will answer very nicely; while during the last period three-fourths corn and one-fourth protein will give satisfactory results. For the last thirty days corn alone may be fed if the animals are not quite so fat as the owner should like to have them. Of course, the amount of grain fed and the adjustment of the ration will depend a good deal on the character and individual appetite of the animals fed. These are points which the skilful feeder must determine for himself and it will not take long for an experienced man to adjust himself to conditions which confront him. It is more difficult, however, for the novice to do this, and hence many features of the subject have been considered in detail in this article with the idea of being most helpful to the new beginner.

In the next table observe what has already been stated—namely, that the amount of roughness consumed at first will be considerably in excess of that consumed later on in the period, and that the pounds of concentrates consumed per pound of gain at the beginning of the experiment increase materially towards the end. While the data given applies to six groups of animals, the differences indicated in the amount of roughness and concentrates required for a pound of gain were due very considerably to the different forms of rations fed. These will not be considered separately in this paper, the data presented being for the purpose of emphasizing clearly the relation of the amount of roughness and concentrates required during the various phases of a feeding period of 180 days.

Food Consumed Per Pound of Gain.

Group	Food	1st period —80 days.	2nd period —50 days	3rd period —50 days	Experimental period—180 days.
1	Concentrates	3.31	8.63	11.47	6.54
	Roughness	19.26	19.72	25.08	20.65
2	Concentrates	7.57	11.66	15.66	11.18
	Roughness	18.69	6.44	7.08	11.15
3	Concentrates	5.51	9.71	14.00	8.99
	Roughness	13.13	8.76	11.45	11.24
4	Concentrates	3.64	9.63	19.77	7.83
	Roughness	21.11	20.69	40.30	23.85
5	Concentrates	7.28	7.90	23.80	10.25
	Roughness	17.39	6.19	14.19	11.54
6	Concentrates	5.61	11.52	16.20	9.91
	Roughness	13.31	9.81	13.66	12.31

That the ration fed has a marked influence on the gains is borne out by the fact that in our own experience animals fed on corn meal, pea hay and corn stover gained 1.8 pounds per head per day throughout a long feeding period, whereas others fed on corn meal, cotton seed meal and sorghum silage gained 2.1 pounds. We have reason to believe that animals of a given weight and uniform quality alike fed on different foodstuffs have made gains varying from 1.1 to 2.25 pounds per head per day. This is certainly a striking evidence of the importance of utilizing foodstuffs adapted to the needs, first, of the individual animals, and, second, to the object in view in feeding. In other words, by using one ration a given set of cattle in a feeding trial may make but one pound of gain. These same cattle fed on a different ration, which need not of necessity be more costly in its nature, may make from one and a half to two and a quarter pounds of gain. Surely, the question of the proper adjustment of rations and the intelligent utilization of foodstuffs is a complicated matter at best, one calling for expert knowledge and clear-cut reasoning where large profits are hoped for. The difference in gain as influenced by the various rations fed is not more remarkable than the difference observed during several consecutive years of feeding trials with a large number of beef cattle. The influence of the individual on the profits of the feeder is one of the most striking truths that has been brought to our attention. A careful selection of high-grade animals for our feeding lots would often turn failure into success.

ANDREW M. SOULE.

Ga. State College of Agriculture.

THE BEEF BREEDS AND MILK PRODUCTION.

Editor Southern Planter:

I have read Mr. Hopkin's article in the January issue of *The Planter* and cannot imagine on what grounds he bases his criticism of my little note in a previous issue of the paper. I certainly never have claimed that cows of the Angus or any other breed would give a large flow on starvation rations. If Mr. Hopkins had read what I have written for years on live stock subjects he would have known that I have urged that breed, feed and heed are equally important if we would produce good cattle. What I suppose he has reference to is the statement I made that the pure-bred cow, Lady Nosegay B., was furn-

ishing a gallon of milk per day more than her young 100-pounds calf could consume, the cow meanwhile grazing in "common frosted fall pasture." The pasture was timothy, red top and sapling clover and not as he seems to have gathered—a mixture of hens' nest grass and fresh air. We don't graze cattle at any time of year on the latter mixture. The facts were as stated in my article, and can be proven. Again, I have never that I recollect claimed the Angus as a dairy breed. I simply made the statement that the majority of Angus cows would give milk sufficient to grow a big, sappy calf, and to do this they must needs produce as much milk as the average cow of other breeds. We don't do any pampering of cattle or any other fancy farming on "Sunny Home Farm." Aim to give our cattle what they need of good farm-raised feeds and grow these feeds on our own farm in the most economical manner of which we have knowledge. We believe after more than twenty-five years of experience (as boy and man) with beef cattle that the breeder who in his breeding operations neglects to give good attention to keeping of the milk producing function in his cows will come to grief and will not have done what he should have done by his favorite breed or himself.

Rockingham Co., N. C.

A. L. FRENCH.

MAKING PORK ON GRAZING CROPS.

Editor Southern Planter:

The Alabama Experiment Station has recently published Bulletin 143, which records a summary of three years' work in swine production. During these three years there has been made a rather comprehensive study of the value of green crops as a supplement to corn for fattening hogs. Some of the conclusions of the work are:

1. Money was lost in every case where corn was fed alone to the hogs. Each hundred pounds of gain costing on the average \$7.43.

2. When corn was supplemented with a partial ration of cotton seed meal the daily gains and the financial outcome were satisfactory. Four deaths occurred as a result of the use of the cotton seed meal, so while the hogs do well upon this ration there is danger of some deaths.

3. Tankage, a packing house by-product, proved to be an exceedingly satisfactory feed to supplement corn. Each pound of gain made while using the tankage cost 5.1 cents.

4. Cowpeas (the seed) were used profitably with corn until they reached a price of \$1.05 a bushel; then they were fed at a loss.

5. Peanut pasture was found to be a very profitable pasture. The average of three years' work shows that when this pasture was supplemented with a half ration of corn each hundred pounds of gain cost \$1.85—grain cost. The grain cost of each hundred pounds of gain when soy bean pasture was used was \$1.96. The same hundred pounds of gain cost \$5.36 when sorghum pasture was used. With chufa pasture the gains cost \$3.81 per hundred.

6. When corn was fed alone but 48 cents was realized for each bushel of corn used. When corn was used with cotton seed meal 59 cents was secured for each bushel of corn fed. When the corn was supplemented with the peanut pasture \$1.53 was gotten for each bushel.

7. When hogs sell at from 5 to 7 cents a pounds live

weight the farmer cannot afford to sell his corn for 75 cents a bushel.

DAN. T. GRAY,
Animal Husbandman.

Farmers who are raising hogs and making pork and every farmer should do this and not have his meat house in Chicago, would do well to read this Bulletin. A copy will be sent on request addressed to the Director of the Experiment Station, Auburn, Alabama.—Ed.

PROSPECTS FOR DAIRYING IN VIRGINIA.

Editor Southern Planter:

When we consider what is being done North of us with cows, as, for instance, in New York, Wisconsin, Minnesota and Canada, where winters are much longer than in Virginia and much more severe, does it not occur to us that we can do as well and better than can be done in these higher latitudes. Wisconsin sells more than fifty millions of dollars worth of dairy products each year, and we in Virginia are buying each year from Wisconsin or some other dairy State dairy products amounting in value to many hundreds of thousands of dollars. Our larger cities are buying outside of the State practically all the butter and cheese they are using.

In addition to having a better climate here in Virginia than the States which have been named, and markets right here at home for a large amount of dairy products, we have also in certain sections of the State grazing equal to any in the country. Our soil, as a rule, takes very kindly to improvement, and where dairying is being done conditions are improving right along. The dairy farmer feeds practically everything he produces to his cows and the manure is returned to the soil so practically no fertility is lost. The farmer who is producing hay, grain and tobacco and selling these from his farm is gradually selling off the fertility of his land. This is very evident to any one in the tobacco sections of the State, where field after field has been practically abandoned because it does not pay to cultivate them any more in tobacco or anything else. On the other hand, the dairy farmer is adding to the fertility of his land all the time. The humus in his land is being increased, the nitrogen which is the most costly ingredient as well as the most important is being increased by growing leguminous crops.

The thrifty dairy farmer keeps cows that pay him a large amount for the feed he gives them, this enables him to buy feed and keep more cows than he can feed from what he produces on his farm. When the dairyman reaches this point then he can increase the fertility of his farm very rapidly because he is actually putting on more than is being taken off, and if he is buying largely then he is adding fertility rapidly to the soil. Holland is said to have more than two cows to the acre; this means that they must buy feed all the time. They undertake to grow what roughage they feed and buy such concentrated feeds as may be necessary to enable them to feed what they grow economically. As a result, Holland to-day is producing more on her land probably than any other country of the same size. To indicate what they are doing, lands are seldom sold at any price and are said to rent for as much as \$50.00 per acre a year. In going over the State

we find that the dairy farmers are producing more per acre than other farmers around them. The production of corn per acre can be increased almost indefinitely, as the fertility of the soil increases, by the application of manure, and as we increase the humus content of the soil, which is done very rapidly by the application of stable manure, we find that we can double and quadruple the amount of corn over what could be grown before such application was made. Corn put into ensilage is the dairyman's standby. When he can grow from eight to ten tons of ensilage per acre it can be seen what that means—ten tons is 20,000 pounds, and will feed one cow thirty pounds for 666 days, or for twenty-two months, or about four cows all winter. This would of course have to be supplemented to some extent with some concentrate and some little additional roughage, but it would supply in a large measure the feed for the cows. Crimson clover can be grown in connection with a corn crop, getting two crops off the land in a year. This crop serves a double purpose—it adds nitrogen to the soil through the stubble and roots left after removing the crop, as well as supplies a valuable feed at a time in the spring when the cows are very ravenous for some green feed, and it very materially increases the milk flow at that time. A good crop of crimson clover is easily worth from \$25.00 to \$30.00 per acre. When land can be made to produce in one year ten tons of ensilage and \$30.00 worth of crimson clover per acre, and when the farmer has cows to consume this product that will give him a calf each year and produce in addition in dairy products value amounting to \$100, then what value do you think he would put on his land? He could hardly afford to sell it at all, selling for \$100 an acre would be almost like giving it away.

Average cows can be counted on to produce from 125 to 200 pounds of butter a year and, by breeding these to a pure-bred dairy bull, the produce can be made to give from 200 to 400 pounds. Butter has been selling around 30 cents for some time. The 125-pound cow, then, would, in addition to her calf, bring in about \$37.50 a year. This is a small amount for a cow for a year; 200 pounds of butter, however, carries the income up to \$60.00, which carries some profit with it. When you get your cows producing more than 200 pounds a year then you are getting a good price for all your feed, paying for all labor connected with your operations, and a good profit over and above.

It might be well to say in this connection that the last Legislature created the office of Dairy and Food Commissioner and amongst other things he is expected to encourage the dairy industry in the State in such ways as may seem to him best to be done. With this in view, various parts of the State have been visited and where interest has been shown meetings have been held and conditions have been discussed with the view of establishing creameries. Those who may be interested in this matter should write the office of the Dairy and Food Commission at Richmond, and when it should seem to be warranted, various points in the State would be visited and meetings held and the dairy question be discussed fully with the farmers with a view of establishing creameries or other means of finding a market for the products.

Creameries seem to be the best way of disposing of

dairy products as a more uniform product can be made and the quantity of cream or butter which can be offered is so much greater than in the case of small, private dairies that more buyers can be interested in its purchase. The producer has only to carry his product to the creamery where it will be cared for to the best advantage and offered as the market wants it. The small producer in any line has to work at tremendous disadvantage. The organization of farmers into associations for the purpose of handling and marketing their products seems at the present time to be the best thing to be done.

Richmond, Va.

W. D. SAUNDERS,
Dairy Commissioner.

THE LONDON (ENGLAND) FAT STOCK SHOW.

Editor Southern Planter:

Although the area of London is so enormous, yet an observant person could not fail to notice in December an unusual number of country cousins in well nigh all parts of the city, particularly in the theatres and similar places of amusement. Each year on the anniversary of the holding of the show of the Smithfield Club, advantage is taken of the cheap fares to London by residents in the country who make the show an excuse for an outing and a visit to their friends and relatives who are fortunate enough, or the reverse, to be temporarily or permanently located near the capital. The show was visited by about the usual large crowds and the exhibition of stock was well worthy of a visit, as it was one of the best displays of fat animals seen for years, whilst the portion of the show devoted to the carcasses of various kinds of stock and the dead poultry was most instructive and inconveniently crowded, so anxious were the public to be able to take a most valuable lesson in a part of their business which has been sadly neglected.

The actual outcome of efforts in breeding and feeding stock has been to so many a sealed book. Occasionally a show animal is on view at the country butcher's shop, but this is an exceptional case and one not sufficiently attractive to repay the trouble of a drive of a few miles, whereas selected specimens of all breeds of stock and poultry are on view at the Smithfield show so that the various types of our domestic animals can be compared in that form which lends itself to the acquisition of practical knowledge.

As at the other fat stock shows of the year, the black polled cattle of North Britain, or, to give them the recently adopted name, Polled Angus, were most successful, the championship of the show going to a pure-bred heifer and the reserve championship to a cross Polled Angus and Shorthorn heifer, so that it has been a black year and a female or suffragette year in more respects than one. In addition to these championship honors, the Shorthorn breed cup was won by a heifer from the North, which beat His Majesty, the King's white steer for this honor. Mr. J. Buchanan's Sussex heifer, Olive Bud 2d, also beat the male contestants for the breed championship. A wonderful specimen of the Galloway breed won the breed cup in this section, this steer was reserved steer champion at the Scotch National Fat Stock Show, held last week at Edinburgh. The King was not quite as successful in the classes for Highlanders as at the last show, although

he had the best and second best aged steers, the breed cup was won by W. O. Dalgleich's younger steer. Cross breeds were a grand lot as well as more numerous than any special breed. The judging of these was said to have left something to be desired. The yearling heifer, Blue Bell, of Cullen, was declared to be the best of the young heifers, but Mr. Hudson's wonderful cross heifer had the most admirers amongst the onlookers. The best Red Poll was found in the steer bred and exhibited by the popular President of our Board of Agriculture, the Right Honorable Ailwyn E. Fellowes.

Here again the judges overturned a previous decision, since of the two steers shown in the class by Mr. Fellowes, the Norwich judges had placed first the one which was only second in London, and further the breed cup at the former show was not given to either steer. It is these variations in the decisions of judges which adds zest to the game of showing.

Of the sheep the best were declared to be Hampshire Downs, from a flock which has supplied the short-wooled reserve pen for three years. The reserve pen for championship honors were Lincolns, so that there was a variation of type, size, skin and mutton between the best and second best pen of sheep in the show. Both these pens belonged to tenant farmers, Mr. Fred D. Jennings, as did the best pen of Southdowns, Leicesters, and of all the other breeds save Shropshires, which were bred and exhibited by Sir Richard Cooper.

Pigs were a fine and large show; for the championship there was a very close fight, the pen of Berkshires belonging to H. R. H., the Prince of Wales, eventually beating some cross middle Whites and Berkshires of which the sire was bred by.

SANDERS SPENCER.

Holywell Croft, Hunts., England.

VIRGINIA SHEEP INDUSTRY.

Editor Southern Planter:

For the year 1907, according to the statistics of the State, Virginia had 355,366 sheep valued for assessment at \$1,007,915, which was evidently low, in some cases sheep being appraised at less than the value of the pelt.

The lambing season begins in January, in many sections about the first, and runs through February and into March. It is unfortunate that the breeding is not so regulated that the lambs would all come at least within a month and that month date from February 15th to March 15th, thus beginning after the worst winter weather and ending before the equinoctial storms. Great loss in lambs and also of ewes in 1908 caused the Virginia Experiment Station to institute an investigation into the causes, which is reported in Bulletin 178, now ready for distribution.

Thousands of lambs and hundreds of ewes died during the lambing season of 1908. The principle object of the investigation was to secure data as to the extent of these exceptional losses and the conditions under which they were sustained. Loss was found to have resulted quite at frequently from causes other than insufficient shelter during the severe weather of January and February. In fact, many lambs died after a successful introduction into this cold world at a very cold time. This we found could only have been due, in most cases, to insufficient nourishment, absolute lack of milk. This unnatural inability to

provide for the young on the part of the ewes was due to insufficient and improper feed and forage, not only at the time of lambing, but prior to that important and trying time to both ewe and lamb. In consequence, both lacked vigor and ability, on the part of the dam to provide good, nourishing milk, and the lamb strength to resist the severe weather. Many of the losses ascribed to natural and unavoidable causes would not have occurred but for the abnormal and trying conditions. Not so great a loss as 24 per cent.—nearly one-fourth of the total losses—is hardly possible to be assignable to natural causes. This reason was assigned when no special cause could be given.

The sheep farmer naturally dislikes to acknowledge that he has been short in preparation and care.

Many breeders state that the ground continued so completely covered with snow that the ewes could not secure grass and had no succulent food. Dry hay or fodder is indigestible and an incomplete feed for pregnant ewes. This resulted in a weakened condition of the ewes, causing them to produce weak lambs and having no milk to nourish them, they died when a day or two old, even when dropped in favorable quarters. The ewes, debilitated from lack of good and succulent food, became feverish from parturition, and, when not given special care, died.



on nothing (weeds) that the farmer should give them Sunday dinners every day in the week during lambing season, especially since they paid for their cheap board full price and in advance last spring with their fleeces of wool. By the way, it should be remembered that Virginia has over 600 species of noxious weeds, of which sheep eat 582 kinds, relishing them quite as much as we do celery or salad. It will be noticed that there are more lambs than ewes in this picture and that all are strong.

We desire to call attention to the type of ram usually used in the flocks we have seen. Not always of any particular breed, but usually purebred, some of the Down breeds or Dorsets. The point we desire to make is this, that we fear, from general observation, not enough importance is placed on the strength and vigor of the ram. That he is not managed properly, but allowed to run down, from which condition he has not fully recovered in strength and stamina, if he ever will. The rams pictured do not appear in the best of condition and are lower in flesh than rams should be allowed to get. This half of the flock is not so expensive to keep that it should be fed short rations. The rams should be separated from the ewes after the breeding season.

Let us consider the feeding conditions under which one of the greatest losses of lambs and ewes occurred. The loss of ewes was 25 per cent., the owner having a flock larger than the average. His loss of lambs was also painfully heavy, amounting to 37½ per cent. He says the cause of his lamb loss was lack of milk. Before lambing he fed the ewes cut fodder and timothy hay, and after lambing he fed bran and cut fodder. Could a dairyman expect returns from milch cows fed such a ration? It is a great mistake to feed sheep merely timothy hay or corn fodder before or after lambing, as neither contains enough protein and succulence to give an adequate supply for making milk for developing the lamb soon to be dropped.

The picture of the ewes and lambs in the orchard calls to mind the advantages of a small band of sheep on every farm and that they subsist so nearly



Another cut representing Shropshire ewes and lambs exhibits a better condition. They are vigorous and yet not overkept. We should say they are in the best money-making condition. We believe there is no class of live stock that will give better returns for good shelter and feed and the absolutely necessary attention during the lambing and breeding seasons.

The "ready for market" picture is, of course, the pleasing one of our illustrations and represents the final and desirable outcome of the whole year's operations. If the flock has been in no way neglected and represents a hardy, prolific strain upon which good, pure-bred rams are used, the owner may expect as prolific returns as he can possibly secure from any other line of animal husbandry. At the same time, he can secure quite as much genuine pleasure in the ownership of a fine flock of sheep as in any live stock, realizing that he always has a market for his lambs and wool and that his land is constantly increasing in fertility. Sheep manure is very rich in nitrogen. The average value annually per sheep has been found over \$3.00. It will pay to secure and read the bulletin mentioned above if done with the intention of follow-



ing some of the suggestions made for better sheep farming.
V. P. I., Blacksburg, Va.

WALTER J. QUICK,
Prof. Animal Husbandry.

This report emphasizes what we have so often said, that no sheep keeper ought to fail to grow some Rutabagas or Mangold beets for feed for the ewes before and at lambing time. Fed these, there will be no lack of milk and the ewes and lambs will be healthy and vigorous.—Ed.

RECORDS OF A VIRGINIA (JERSEY) HERD.

Editor Southern Planter:



In your issue of last May you kindly published a notice of our cows (The Milwood Dairy) and photos of some of them.

Thinking it will perhaps be of interest to your readers, I will give some records made by several of them recently. Milly Signal (150391), now in her 14th year, dropped a heifer calf on October 18th last by Fly-

ing Fox's Cash (72280), and when the calf was about three weeks old I weighed and tested her milk for seven days. During this time she gave 225 pounds of milk testing 6.3 per cent fat, total fat 14.175 pounds, total yield of butter 85 per cent., fat 16.676 pounds. I know the government calls for only 84 per cent. and Holstein records are reckoned on an 80 per cent. basis, but we Jersey breeders call for 85 per cent. straight. Her best day's milk was 34½ pounds. She has a record of 52 pounds of milk a day in her younger days, but I did not try to force her as she is too valuable a cow as a breeder to feed too heavily at her age.

Denny's Queen Bee (189254) dropped a bull calf by Maret's Flying Fox (imported) on May 1, last, and after milking seven months a great part of this time on past-

ure alone, was tested for seven days, and though heavy with calf gave, with the regular herd feed and treatment, 182 pounds of milk testing 6 per cent. fat, a total of 10.92 pounds fat and 12.85 pounds butter, 85 per cent. fat. I am sorry that a yearly record of this cow has not been kept, as I feel sure she would have made a great one with proper care.

You can form some idea of her probable yield from the fact that in her seventh month of lactation she is giving 25 pounds of milk a day right along.

Carrioli (152628), after being fresh about two months gave in seven days 196 pounds of milk testing 6 per cent. making a yield of estimated butter of 13.83 pounds. She sometimes tests as high as 7 per cent. fat. She milked very heavily last year and is not doing so well this year.

Eloise H. (214628) a heifer fresh with first calf March 1st and after milking nine months and far advanced with calf, gave in seven days 105 pounds of milk testing 6.5 per cent. fat, making a yield of 8 pounds butter, 85 per cent. fat.

Miss Blandy (214629), a heifer calved at twenty months of age and, after milking nine months and fifteen days, gave in seven days 98 pounds of milk testing 6 per cent. making 6.92 pounds, estimated butter 85 per cent. She has tested as high as 8.2 per cent. fat at one milking and nearly always over 6 per cent.

None of these cows were forced in feed or attention, but received the regular feed and care with the rest of the herd and the weight and test of their milk was recorded for seven days.

The average of the whole herd was 6.14 per cent. fat.
WOODSON VENABLE.

Prince Edward Co., Va.

The Poultry Yard.

POULTRY NOTES.

I have been in the poultry business for forty years and have never known so much complaint about hens not laying. I have many letters before me from people in several States asking how and what to feed to make their hens lay. I cannot say more than I said in these notes last month. I want to say in addition to what I said last month that I believe that many hens do not lay because the houses are too damp and have not enough ventilation. One man asked me to come and see his flock and tell him why the hens and pullets did not lay. I visited his yards and found the feed all that could be desired, houses large enough and clean and plenty of green clover and spring water. This man had sixty early hatched Leghorn pullets, some large Barred Rock pullets, some White Wyandottes that were nine months old, and yet the egg yield was less than two dozen per day from over two hundred hens and pullets. I could see nothing lacking but sunshine and fresh air. The houses were 12x20, two of them with three windows in the South side of each. Houses built very tight. I inquired as to ventilation. He informed me that he kept the door to each house open a part of every pleasant day and that the flock had the run of the yards every fair day. I advised him to change the houses to the open front plan. He concluded to try one and had a space thirty inches wide cut out of the South side of the house the entire length and put heavy drilling over it at night but had it open every day. This was done the third week in December. There were sixty Leghorn pullets, and thirty-five Barred Rock pullets kept in this house and over 100 White Wyandottes in the other house. Feed and feeding has not been changed. Last week (January 10th to 16th) the ninety-five pullets in the open front house laid an average of forty-four eggs per day, and those in the other house an average of nine eggs per day. I do not say that the open front made the difference, but I believe it did.

I have twenty Single Comb White Leghorn hens and pullets, ten of each, in a house 10x30 feet, open front, no yard, that have laid 238 eggs since January 1st (seventeen days), an average of fourteen per day. These eggs were sold for 36 cents per dozen, \$7.14. The feed cost \$1.25, leaving a net profit of \$5.89. Here is material to make a great hen story and I suppose some town chap will figure it out about this way. If twenty hens made a net profit of \$5.89 in seventeen days, 100 hens would make five times this amount, or \$29.45; hence 1,000 hens would make ten times \$29.45, or \$294.50 in seventeen days, or \$520 per month. Counting ten months for the laying season, we have the modest sum \$5,200. But, alas! figures do not lie, but they lead us into error many times. I write this to show how these great stories are made and yet tell the truth as far as they go. Men are often led into business ventures by these errors of figures in not giving all the facts. One thousand such hens can be kept on a five acre lot and can easily be made to yield a net profit of \$2.00 per

hen, and one man can care for them easily and have time to spare. In addition, this land will produce many bushels of fruit, such as plums, pears, apples, peaches, cherries, quinces and grapes. The finest lot of grapes that I have ever seen growing were in a poultry yard near Cleveland, Ohio. They were trained on long wire trellises and an extra row of small posts were set near each side of the row of grapes and when the grapes were nearly full grown poultry netting was stretched and tacked to these posts and left there until the grapes were ready to pick, then it was taken away and the fruit gathered and sold and the hens kept the land rich, free from grass, weeds and insects. I intend to plant fifty vines in a row in one of my yards within a week or two and try the experiment with Leghorns here in Virginia. I will plant Moore's Early, Concord, Niagara and Worden. I am also planting plum trees and will plant them very close together in the row. My yards are 150 feet long and I will plant thirty plum trees in each row, or five feet apart. Will I succeed? There is a plum orchard in Southern Indiana (Switzerland county) planted in rows twenty feet apart and the trees five feet apart in the row that produced more plums per tree than any trees I have ever seen. The varieties are, Abundance, Red June and Arctic. I will plant Red June, Abundance and Climax.

It is folly to attempt to grow vegetables and chickens on the same ground at the same time, but tree fruits can be grown successfully in the yards and I shall undertake to get my five acres of land in fruit and hens as quickly as possible. I intend to plant and have growing on this five acres 1,000 fruit trees and vines and 1,000 hens. The soil is good and quite rolling, some old field pine, a few oak, some gum, dogwood, etc., now growing on part of the land will be cleared away and the trees and vines planted in rows to form yards 20x150 each. My plan is to build one colony house 10x16 feet for two yards and keep twenty-five to thirty hens in each house. I feel sure that the hen business will pay, but as to the fruit, time will tell that tale.

When one pays nearly \$400 per acre for land, or rather \$50 per acre for the land and \$350 per acre for the location, it makes one think seriously several times daily. Houses, fencing and nursery stock will increase this to fully \$500 per acre. This will make \$2,500 invested. Interest, insurance and taxes will amount to \$200 per year. With feed of all kinds away up in high C, it makes the cuticle on top of one's cranium creep up in ridges, to contemplate the possibility of having old "biddie" scratch hard enough to keep it down, but she will come as near doing it as anything on earth. Fortunately, I am not susceptible to nightmare. This will enable me to meet all my bogies in broad daylight.

And so with the cluck, cluck, cluck
 And the peep, peep, peep
 Of the old biddie hen and her chick,
 I will trust in Providence and luck
 To long nights of good, sweet sleep
 And very, very little in the "Great Big Stick."

This is the time of year to expect wonderful things in the new incubators, brooders, chick feed and 300 egg hens. This fake advertising has grown to such ridiculous proportions that very few people are misled. Several firms advertise "insurable incubators." This is new! I know of a great many incubators that are insurable at very low premiums because they are stored away in some outhouse with no fire or lamp flame near them from year to year. Last year I had occasion to write to one of these "dead sure" hatcher manufacturers and he assured me that he did not have "a single dissatisfied customer." I have in my files now, and had at that time, more than fifty letters from people asking advice how to make that very incubator hatch chicks without having from fifty to ninety per cent. die in the shell. I suppose these people were all married. Not a single one among them.

Another hatches chicks by steam. I presume he hatches cold storage eggs and uses steam to thaw them. The chicks hatched in this steam machine must be ironclad. In that event they should have one of the "Metal Mothers" advertised so extensively. One of my neighbors bought one of these non-moisture, absolutely self-regulating, insurable, germ developers, and put 140 eggs into it. Good eggs, too. The thing regulated, non-moistened, insured and developed for twenty-two days and brought forth seven little cripples. All of them went to the high roost in less than three days. This man is a satisfied customer. He is satisfied that his eggs, his oil, his time were all wasted. One man advertises a 200 egg size incubator for \$7.00, freight paid, providing you live East of the Mississippi River. I wonder what the poor people on the other side of the Father of Waters will do without this great wealth producer?

One paper advertises "poultry secrets made public." I was not aware that poultry had any secrets. Can it be possible that President Roosevelt has set his sleuths to lay bare the private life and individual business of our modest biddies. I have one hen that steals her nest, but I have never known her to try to lie out of it. It seems that all the secrets from the United States Senate to the hen yard must be dragged into public view.

Why do I write in this way? To show how ridiculous such advertising is and appears when we look at it from a business point of view. Every incubator must have good care and attention. It must be understood and managed in every detail or it will fail to give good results. There are no secrets about poultry that have not been published time and again. Seven dollars will not buy the material to make a good 200 egg size incubator. I am paying \$75.00 per 1,000 for lumber and it takes fifty feet to make one incubator. The regulator, tank and lamp cost more than \$7.00. Add to this \$3.75 for lumber, besides nails, glass, screws, hinges, glue, varnish, wire, labor, etc., etc. The hen is honest goods and gives us honest products that cannot be adulterated or imitated. Let us be honest with her.

CAL HUSSELMAN.

PROFITS IN PURE-BRED POULTRY ON THE FARM— ANNUAL STATEMENT.

Editor *Southern Planter*:

From time to time I have told your readers of the

progress we were making and the methods pursued in developing the oldest flock in the world of pure Barred Plymouth Rocks from a small family or door yard flock up to the limit of convenience and profit on a ninety-



Pen of Single Comb White Leghorns—Illustration from
Southern Poultry Guide.

five acre farm with an available force of five small children who are helped out as may be necessary by the one hired man or by myself. We have begun carefully, not plunging nor buying expensive fixtures nor putting up any elaborate or costly buildings. We have originated a few labor-saving devices, have hatched over 1,100 chicks with hens, of which we brought about 440 into winter quarters, this being the limit of our housing capacity. We have purchased practically all the grain and prices have been high. Your readers were promised the figures and I give them here as accurately as my system of accounts will permit:

On January 1, 1908, we had a total stock of about 80 fowls, of which possibly 60 were females, including some August chicks, and about 20 were cockerels held for breeding and sale. The feed on hand consisted of about 40 bushels of corn, which had been damaged by too early housing. For about four months during summer three farm horses were fed all their grain from the chicken bin and their keep must be credited to the flock in the final account. The bills for feed, meat, shell, etc., for the year amounted to \$301.60. Small fixtures, such as watering dishes, shipping boxes, etc., \$2.85; Mongrel hens bought for sitters, \$21.95. Total expense, including four months' grain for three horses, \$325.60.

The total cash credits for the flock for the year amounted to \$408.57 and we then had on hand over \$50 worth of wheat bought ahead and charged in the foregoing account, and we also had on hand a total stock of 437 fowls as against the 80 of one year ago. While many of these are late chicks, yet the difference in value of the flock may be safely put at \$275 to \$300. Counting the horse feed as being worth only 10 cents

per horse per day, we have a credit for the flock of \$36 on the feed bill.

The summary, then, is as follows:

Cash sales.....	\$308 57
Credit by feed of 3 horses 4 months.....	36 00
Credit by feed on hand Jan. 1, 1909.....	50 00
Credit by value of increased stock.....	275 00

Total	\$669 57
Feed bills, sitters and sundries.....	325 60

Profit, representing our labor.....\$343 97

This would far more than pay for all our coops, buildings and permanent equipment and leave us as large a flock as we had a year ago. The eggs consumed by the family and the fact that a household of ten persons have eaten chickens more freely than ever before have been ignored in this account, though this is really an important item to the credit of the flock.

Although we consider this a good showing for a start with eighty fowls, we have been handicapped by moving everything to a new location and into new buildings on September 22d. We lost about a dozen chicks in a mink raid, and since the fowls have been too large for hawks to carry off we have had not less than fifteen killed by these depredators, representing a loss of nearly as many dollars. We have been fortunate in catching six of these hawks in steel traps set around the chicken after the first meal had been eaten from it. Hawks often return after forty-eight hours for a second feast, even though putrefaction may have begun.

In case any of your readers may think that my estimate of the value of the stock on hand is excessive, I will add that for the first sixteen days of the present year the cash sales, largely of breeding stock, have amounted to \$123, and we now have on hand and unsold 388 fowls.

As we wish to make this venture pay its way at every step, we will probably sell down to 150 females. The carrying over of a large number of good cockerels for breeding stock has been justified by an active demand at fair prices. We are doing fully twice as much of this business as ever before.

We have never had a large enough stock of females to enable us to do the business which has been offered in supplying large incubator orders, but we hope this season to be able to supply all demands.

We will probably build two more small houses enabling us to keep six separate flocks all on free range with choice of woodland and field. I never want so large a flock that I cannot take each bird in hand once or twice a year and note all defects, if any there be, so as to know just what I am breeding from.

Vienna, Va.

W. A. SHERMAN.

POULTRY KEEPING ON A CITY LOT.

Editor Southern Planter:

I again give you report on my city lot poultry farm of half an acre:

January 1, 1908, stock on hand.....	256
January 1, 1909, stock on hand.....	209
Stock sold for the year.....	179

Eggs laid for the year.....12,888

Cash from eggs sold.....	\$319 63
Cash from stock sold.....	102 60
Manure sold.....	11 65
Total receipts.....	\$433 88
Expenses—Feed, etc.....	180 39

Profit clear of expense.....\$253 49

Not quite so good a return as in 1907, on account of buying new blood stock for 1909 breeding stock.

Warwick Co., Va.

R. H. HARRIS.

Geese should not be permitted to have the freedom of the farm. They will foul more food than they will eat. A bog meadow is the place for them, or any rough pasture that is accessible to water. A small number will take care of themselves during the summer with very little if any grain. They are equal to horses and cattle as grazers. Timely cut corn stalks, clover and vegetables should be the main winter food. They will prove better breeders in the spring if not much grain is given them. A building with a good roof where they can get in out of the wind and storm and have their feet dry is about all the shelter they require.

We haven't all bog meadows, but we can find a piece of grass large enough to raise a few geese for our own eating, and they certainly are good in the winter, and so little expense and trouble to raise. Two geese and a gander can't hurt very much of the pasture, and you'll have a few profitable dollars worth to sell around Christmas time.—Blooded Stock.

IMPROVEMENT OF THE FLOCK BY SELECTION.

Increasing the egg producing capacity of a flock requires selection. The mistake made is not in the selection of the hens, but of the male, as he is the sire of all the chicks hatched. Eggs from the best layers only should be used for hatching, and the male should be hatched from an egg laid by the best hen in the flock, using only pure-bred fowls, and avoiding kinship, if possible, as prolificacy can be transmitted to the progeny.

If this rule is adhered to there will be a marked improvement in the number of eggs laid by each member of the flock. The difficulty is to discover which hen in a flock lays the largest number of eggs. This cannot easily be done, except by watching the hens, which is impossible; but the difficulty is lessened by using small flocks, as then the hens are known. One method is to have the nests in a location so arranged that after a hen lays she cannot get back into the yard from which she came, but must pass out of an entrance leading into another yard. At night all the hens that have laid will then be together, leaving the others in the first yard.

FEED LOTS OF CLOVER AND ALFALFA.

Hens need bulky food. Clover hay, or alfalfa, cut in half-inch lengths, helps to make an ideal ration. If cooked and mixed with bran it makes an excellent breakfast. Clover and alfalfa not only promote digestion, but also largely assist in supplying the elements necessary for the albumen.

The Horse.

THE HORSE.

By W. J. Carter, "Broad Rock."

Horsemen all over the country are being attracted to the great possibilities of the South as a fall racing section, which is well, seeing that this exhilarating, time-honored sport is annually increasing in importance in this territory. This being so, an announcement likely to be well received by horsemen, breeders and others is that at an early date a called meeting will be held of representatives of the Associations that made up the Virginia-Carolina Circuit in 1908. Not only are representatives of the various Associations in Virginia, North Carolina and South Carolina expected to be present, but those from other Southern States will also be welcomed. The success of the fairs and race meetings that made up this Circuit during the present season was pronounced and leads to the belief that the chain will be strengthened by the addition of new members, which would require an earlier opening, something that could be done easily and likely to prove rather beneficial than otherwise at the Virginia end. For several years past the Circuit has begun at the mountain town of Galax, far down in the southwestern part of Virginia, during the first week in September, but there seems no reason why a month earlier should not be an opportune time, while the South Carolina and Georgia meetings could be held right along until at least the middle of December, as weather conditions in either State are usually favorable to open air affairs until a later date even. Such an adjustment of dates would render it possible to avoid conflict of dates, which has worked to the disadvantage of different Associations in North Carolina, South Carolina and Georgia, while it would also permit the addition of new members in Virginia, as it is understood that both Petersburg and Emporia, in the latter State, desire to join. No fairs have been held at Petersburg for a generation or so past, but it is likely that an organization will be formed at an early date. The Emporia Fair Association has been in existence for several years and is now one of the thriving organizations of its kind in any of the States mentioned.

Joseph Lassiter, who has been prominently identified with the horse and mule trade of Richmond for many years, and than whom there are few horsemen more widely known in Virginia and the two Carolinas, is now probably more actively engaged than formerly, as his semi-weekly auction sales at the mammoth and splendidly appointed plant of the Southern Stock Yards Corporation, at Richmond, are features of the trade here. During his entire career, Joseph Lassiter has been a loyal patron of the light harness horse, and that the fancy still lingers is aptly evidenced by some good ones now in his stable, of which the best known is the bay stallion, Petaurist, 42431, a good looking bay horse, with a trial of 2:27¼, trotting, and demonstrated ability to trot quarters handily during any part of the mile in 35 seconds—a 2:20 gait. Petaurist is by Peter the Great, 2:07¼, a great race horse himself, and now in the very front rank of famous trotting sires, with seventeen new standard performers to his credit in 1908. The first dam of Petaurist is Telka, a young mare, by Arion, 2:07¾, a world's champion trotter at two years old and sold for \$125,000 at that age; second

dam, La Jolla, dam of Binjolla, 2:17¾, trial 2:10, by Advertiser, 2:15¼; third dam, the famous Sally Benton, 2:17¾, former world's champion four-year-old trotter and dam of Serpol, 2:10 and three others, by General Benton; fourth dam, the wonderful great brood mare, Sontag Mohawk, dam of eight trotters, among them Conductor, 2:14¼, the sire of Walnut Hall, 2:08¼, who got The Harvester, 2:08¾, the greatest three-year-old trotter of 1908, for whom \$40,000 was refused. This is rich breeding; in fact, advanced students regard it as the cream of the Trotting Register.

Petaurist will make a limited season in the stud at the Southern Stock Yards, at the moderate fee of \$25.00 the season, and that with return privilege granted, after which the son of Peter the Great will be placed in training, and prepared for a fast record.

The annual meeting of stockholders of the Virginia State Fair Association was held in Richmond on January 10th and, after disposing of various routine affairs of more or less importance an election of directors was gone into, rendered necessary by expiring terms of membership and retirement, due to other demands. J. G. Corley, whose term had expired, was re-elected by acclamation. M. E. Doyle, who declined re-election, was succeeded by W. J. Carter, for a term of five years, while John Stewart Bryan and A. R. Holderby, who were prompted to resign by pressure of various other matters, were succeeded by R. W. Spillman and C. H. Ratcliff, the former for five years and the latter for one year. In addition to Messrs. Spillman, Ratcliff, Carter and J. G. Corley, who was re-elected, the Board of Directors of the Virginia State Fair Association includes Hon. Henry C. Stuart, E. B. Sydnor, O. J. Sands, M. A. Chambers, L. O. Miller, Legh R. Page, Samuel Cohen and J. M. Miller, Jr.

At Springfield Stock Farm, Gordonsville, Va., W. W. Osborne is wintering one of the best collections he has yet owned of hunters, jumpers, saddle and harness horses. The finest heavy weight hunter in the stable is Oriflame, the big chestnut gelding, by Blue and Grey, thoroughbred son of Hindoo. Oriflame won two blue ribbons and a silver cup, offered for horses in his class last fall at the Lynchburg Fair. Mr. Osborne's stud is headed by Racine, the California-bred son of Bishop and imported Fairy Rose, by Kisber. Racine is a richly coated bay horse of sixteen hands and 1,100 pounds, and there are few finer specimens of the thoroughbred stallion to be found. He was a great race horse during his turf career and since retirement to the stud this well bred and handsome son of Bishop has sired a number of good winners, both on the flat and over the jump.

John Baker, who for some years was located at Champaign, in Essex county, Virginia, has disposed of his farm there and removed to a new location, near Lloyds, in the same county, where he owns and has in winter quarters the big and handsome bay stallion, J. W. Parrish, by Dumbarton, dam Maud Elliver, by Conductor, 2:14¼; Lucy Taylor, by J. W. Parrish, and other trotting bred horses. Parrish will be in stud at Lloyds during the season of 1909, and a number of good mares are being booked to the son of Dumbarton.

Miscellaneous.

VIRGINIA STATE FARMERS INSTITUTE.

The Committee appointed by the Virginia State Farmers' Institute at its session in Richmond last August to secure a charter, met at Murphy's Hotel, January 10th, and perfected an organization. Those present were: T. O. Sandy, of Burkeville; Westmoreland Davis, of Leesburg; Samuel B. Woods, of Charlottesville; J. F. Jackson, of Richmond; James Bellwood, of Manchester; Henry W. Wood, of Richmond, and Joseph A. Turner, of Hollins Institute. Hon. J. Hoge Tyler, Leslie D. Kline and C. N. Stacy were absent, owing to other engagements.

The charter was accepted, by-laws adopted, and a general plan of work outlined. T. O. Sandy declined another term as president, pleading a pressure of Farm demonstration work as greatly interfering with the proper attention to the office. Mr. Westmoreland Davis was unanimously elected his successor. Joseph A. Turner was elected Vice-President; B. Morgan Shepherd, of Richmond, Secretary, and James Bellwood, Treasurer.

The county Vice-Presidents and standing committee will be named and announced later.

An informal discussion was had as to the place for holding the next Institute, but no definite decision was reached. Richmond, Charlottesville and Petersburg presented invitations, which will be considered by the directors of the Institute.

The general plan and scope of the Institute under its incorporation contemplates a great deal of hard work on behalf of the farmers of the State. In addition to holding Institutes, the organization proposes to assist the farmers in their transportation, legislative and other problems. Every county will have a representative, who will be a member of the Advisory council, and every member of the Institute is invited and expected to keep in touch with the central body through his county representative.

Every farmer in the State is urged to become a member of the organization. The annual membership fee is \$1.00.

PEANUT GROWERS ORGANIZE.

Editor Southern Planter:

At a meeting held at Dendron, Va., January 5, 1909, farmers from Surry, Isle of Wight, Prince George and Sussex counties effected the organization of an Association to be known as "The Peanut Growers' Union of Virginia, Incorporated,, with a capital stock of \$50,000 maximum, \$5,000 minimum, in shares of \$5.00 each.

Every member of the Association must own at least one share of the stock, and no one member may own more than 10 per cent. of outstanding stock.

It is the purpose of this Association to bring the farmers of the peanut growing counties together so they may by united effort educate themselves in their profession; learn to farm so as to reduce cost of production, and learn to do business on a cash basis.

Its object is to buy, inspect, grade, brand and store, sell or consign the produce of its members and their tenants, and, by means of fixed standards in grade and package, and selling through a central agency, establish

and maintain prices for produce, and, by purchasing supplies through said central agency, in large lots for cash, get them at better prices than now rule.

Having in mind the mistakes that have wrecked similar efforts in the past, sources of dissension, such as politics etc., are barred. Our aim is strictly to further the material welfare of our members. Actual farmers, or those who advocate our cause, only are eligible for membership, and we invite these from all the peanut growing counties to join with us, and help themselves and us.

If you want to form a county association, write our President, Mr. P. O. Goodrich, Surry, Va., he will instruct you and help you, or write the Vice-President nearest you—W. E. Laine, Orbit, Isle of Wight Co.; Edmunds Gee, Disputanta, Prince George Co.; J. A. Brittle, Wakefield, Sussex Co.

Form "Locals" wherever peanuts are grown, and send a delegation to our next meeting, to be held at Dendron, Va., the first Tuesday in April next, at 10 o'clock A. M. Spottsville, Va.

J. B. JONES, Secy.,

Peanut Growers' Assn. of Va., Inc.

"THE BIG SNOW" AND STUART.

Editor Southern Planter:

How it does snow! It is lying now from eighteen to twenty-two inches deep. How beautiful it all looks. Never have I seen so much snow fall in such a short time in old Virginia as on this 22d day of December, 1908.

It is a far cry from the old home to the station—one mile and three quarters. The telephone wires must be broken for no answer comes to my call. Christmas is near and there are still some things to be gotten. But now the roads are covered too deeply with snow.

Stuart has gone to care for the stock. They need extra care and plenty of feed in such weather. Some of the barns and stables are quite a distance and I feel sorry for Stuart.

As I am looking towards the stables I see him coming, driving before him a horse hitched to some implement. Out of a few planks nailed together in V-shape, he has made a snow plow, and wherever he drives he leaves behind a clear path fully two feet wide. Now he is driving towards my chicken house, now to the wood shed, now he swings around the horse and calls to me: "Going to make a path to the station," as he starts along the main road.

Nearly an hour and a half have passed when I see him coming back. At the station he has spread the planks further apart, and on his trip home the path has been widened to between three and four feet. Now he is hitching two horses and is spreading his plow boards to the full width of a wagon track. This time the horses have solid footing and the trip to and from the station is made in an hour.

Yesterday was Christmas, our roads have been in splendid condition, almost entirely dry. We can drive at a good trot nearly all the way. And all over the farm yard are good, dry paths. The work of clearing the roads took

over three hours, but the time has been saved over and over again since. We are driving to town in ten minutes with a buggy and the horses can pull a good load in the wagon.

But look at the other country roads in our neighborhood! Slush and mire, half frozen every morning and impassable for walking or for a heavy load, and as the snow melts and sinks into the ground and mires with the clay they will be still worse.

Stuart has put his plow in the shed until the next blizzard.

Who is Stuart? Oh, I forgot to say. He is my man in the Moon.

ALICE N.

FARMERS CLUBS.

Editor Southern Planter:

In your issue of December, Dr. Walter J. Quick has a capital letter on Farmers' Clubs, a letter which will well repay the most careful study and consideration. Mr. Quick finishes his letter with a quotation from R. L. Stevenson, which is not quite in the form in which I have previously seen it. In the author's work it runs—

"There is so much good in the worst of us,
There is so much bad in the best of us,
That it ill behooves any one of us
To talk about the rest of us."

Your readers may prefer this version to the one given in December, at least this is the view of
Holywell Croft.

SANDERS SPENCER.

Hunts., England.

CORN SHOW AT BLACKSBURG.

Editor Southern Planter:

The First Annual Corn Day was held at the Virginia Polytechnic Institute at Blacksburg, January 21st. Judging from the attendance and the interest shown by the visitors, the meeting was a success. There were over 130 farmers present. The proceedings consisted of two addresses at the morning meeting, one by Judge G. E. Cassell, of East Radford, Va., and the other by T. O. Sandy, of Burkeville, Va. In the afternoon some time was taken up in organizing a Virginia Corn Growers' Association and placing the awards on the exhibits of corn.

Judge Cassell, in his address, discussed the methods of growing a corn crop which he has found successful. He stated that the farmer should have begun preparing for the 1909 corn crop last fall; that he should have had his seed sown selected and the ground plowed deeply. But, as he stated, it is of no use to dwell in the past. The best thing now is to get the ground plowed as early as possible. He emphasized the need of thorough tillage in preparing the seed bed for corn. A few days after the corn is planted he goes over the field with a weeder and continues using this implement until the corn is all up. One statement which Judge Cassell made should be given more than passing notice, and that is: "A farmer has not time to thin or replant a crop of corn." If the farmer will select good seed corn and take care of it during the winter, there will be no necessity for planting more than is necessary for the crop. It is a well-known fact that corn "planted in" never amounts to anything except to furnish a little fodder. The speaker referred

to some of the big yields that have been reported in Northern agricultural papers and dwelt at some length on the work of a farmer in Pennsylvania, who is reported to have raised over 100 bushels of corn on one acre of land without the use of commercial fertilizers. While Judge Cassell did not condemn the use of commercial fertilizers entirely, he made it plain that they should be used in limited amounts and that the fertility of the land should be kept up with legumes and barn yard manure.

The next speaker, Mr. Sandy, endorsed all the remarks made by Judge Cassell, but stated that he was in favor of the use of commercial fertilizers in the section where he lives. Mr. Sandy's methods of farming are so well known to the readers of your magazine that they hardly need to be repeated here. He urges the use of lime on all of the broom straw land of Virginia, stating that one application of a ton of rock lime to the acre would greatly reduce the quantity of this pest, and that a second application of lime four or five years later would entirely destroy it. At the close of his address there were a number of questions in regard to his cultural methods in raising corn and also his success with grass and clover crops.

At the afternoon session the Virginia Corn Growers' Association was organized with J. R. K. Bell, of Pulaski, Va., as President; T. C. Commins, Rumford, Va., Vice-President, and Lyman Carrier, Blacksburg, Va., Secretary-Treasurer. It was the sentiment of the meeting that an annual corn show be held in connection with the Virginia State Farmers' Institute at their winter meetings. The Constitution and By-Laws of this Association will be perfected and published later.

In the corn show the first prize and sweepstakes, which consisted of \$10.00 worth of seeds, given by Diggs & Beadles, Richmond, Va.; one bushel of clover seed, given by W. H. Miller & Son, Lynchburg, Va., and a silver loving cup, given by T. W. Wood & Sons, Richmond, Va., went to Dr. C. U. Gravatt, of Port Royal, Va., for ten ears of Boone County White corn.

The second prize in the White Class was given to R. T. Montague Christiansburg, Va., one inch of advertising space in the Southern Planter to continue three months, given by the Southern Planter Publishing Co.

The third prize was given to George Frank, Rice, Va., \$2.50 cash.

In the class for yellow corn, the first prize was given to Mr. W. G. Routt, Roanoke, Va., and consisted of \$20.00 worth of seeds given by George Tait & Sons, Norfolk, Va.

The second prize was given to Mr. Charles McDonald, Blacksburg, Va., one inch of advertising space in the Southern Planter to continue three months, given by the Southern Planter Publishing Co.

The third prize was given to Mr. J. S. Pechin, Buchanan, Va., \$2.50 cash.

LYMAN CARRIER, Agronomist.

THE NECESSITY FOR IMPROVED RURAL CONDITIONS IN THE SOUTH.

Editor Southern Planter:

The aim of the Farmers' Co-operative Demonstration Work is to place a practical object lesson before the farm masses, illustrating the best and most profitable methods of producing the standard farm crops and to

secure such active participation in the demonstrations as to prove that the average farmer can produce better results.

This work also shows that there is no necessity for the general deterioration of farms and the too common poverty of the rural masses. When these facts have been demonstrated the first step in the improvement of rural conditions has been taken.

Every substantial advance in the progress of human society costs money and must be maintained by an increased earning capacity of the masses. Food and clothing are the first requirements. If the earning capacity of a people is only sufficient to supply these, progress is blocked and it is useless to insist upon better houses, more home comforts, schools, or any upward step. The problem is, are the rural masses unwilling to provide the betterments which a progressive civilization in the country demands—comfortable houses with improved home and farm equipment, good schools and more months of schooling, better highways, rural free delivery, telephones, etc.—or do they lack the means.

Organization of This Special Work.

As organized under the Bureau of Plant Industry, the working forces of the Farmers' Co-operative Demonstration Work consist now of one Director with assistants, ten State agents, and 188 district and local agents. Local agents must be practical farmers and thoroughly instructed in their duties by the State and district agents. The campaigns for the ensuing year are planned in September and active work commences in October by calling public meetings in every district to be worked, at which is shown the great advantage to all the people of increasing the crop yield two, three or four fold, and it is made clear that this can be done by adopting better methods. In country villages the banker, the merchant, and the editor join with the leading farmers of the section in endorsing the progressive plans of the demonstration work; farmers agree to follow instructions, and demonstration plots of one or more acres are located so as to place a sample of the best farming in each neighborhood of a county or district.

The following farmers in Halifax county have signified their intention to demonstrate with from one to five acres the coming year: J. S. Newbill, H. C. Lacy, Dr. R. C. Beckitt, T. Y. Hundley, T. J. Owen, A. A. Farmer, J. M. Lacy, J. L. Waldon, J. L. McCormick, J. W. McCormick, S. A. McCormick, C. H. Dance, W. H. Dance, Lohr & Lanz, Robert Lacy, J. H. Hastings, C. J. Childress, all of Scottsburg; Thomas A. Adams, Danripple; H. H. Edmunds, Houston; A. F. Wilkins, Turberville; J. E. Thomas, Rep. Grive, C. G. Pollard, R. T. Edwards, J. T. Noblin, R. E. Perkins, C. W. Salmon, Thomas Hudson, all of Crystal Hill; Tom West, Jr., A. H. Dunn, George Hunt, T. S. Armistead, H. C. Canada, all of Lennig; Gran Craddock, Houston; J. R. Blackstock, J. E. Conner, W. H. Dorin, of Mount Laurel, and numerous others.

While the State agents of the Farmers' Co-operative Demonstration Work were in Washington, September 1, 1908, arranging some details of their work for the year 1908-1909, they called upon Secretary Wilson and, in response to inquiries made by him, the following facts were

brought out: Mr. T. O. Sandy, of Burkeville, Va., State Agent, reported that the demonstration work was commenced in Virginia in January, 1907. Up to this time it has been exclusively conducted in the counties south of the James River, where tobacco was the staple cash crop, under the effect of which farms had deteriorated in productive capacity and value until many farms were on the market a short time since at \$5.00 to \$8.00 an acre. Most of the hay and corn for the work animals was imported. Two hundred and thirty-two thousand dollars worth of hay was imported within a radius of a few miles of Burkeville in the year for home consumption.

W. H. DORIN.

THE VIRGINIA STATE VETERINARY ASSOCIATION.

Not in the history of the Association has there been a more interesting or better attended meeting of the State Veterinary Association than there was in Richmond on the 8th of January, at the annual meeting of this Association.

The members from different portions of the State and from Washington, D. C., were as follows, viz.: Dr. Charles McCulloch, Howardsville; H. Banister, Roanoke; C. C. Faville, Norfolk; W. T. Gilchrist, Norfolk; H. S. Willis, Rapidan; Thomas Fraser, Richmond; Fraser Smith, Richmond; W. Van Lloyd, Richmond; Charles Epps, Richmond; H. H. Adair, Newport News; Edward Ferneyhough, Washington, D. C.; W. G. Chrisman, Charlottesville, Va.; R. R. Clark, Hampton, Va.; J. G. Ferneyhough, Burkeville, Va., and E. P. Wood, Washington, D. C.

Dr. McDonnagh, of Richmond, and R. E. Ferneyhough, of Warrenton, were elected to membership in the Association.

The State Examining Board met on the 7th, and examined four candidates. The Association has determined that every one who enters Virginia in the future to practice veterinary medicine shall comply with the law and pass the required examination before they will be allowed to receive money or other compensation for their services. It matters not what institution they claim to be from or what papers they can show from other States. Virginia is tired of being the dumping ground for incompetent men from other sections.

The Association and Examining Board meet twice every year and thus every one has an opportunity to take the examination who wishes to do so. The next meeting will be on the 8th and 9th of July, at Hampton, Va.

As usual at the annual meeting, officers for the year were elected. Names of officers:

President, S. C. Neff, Staunton, Va.; First Vice-President, J. G. Ferneyhough, Burkeville, Va.; Second Vice-President, Charles McCulloch, Howardsville, Va.; Secretary and Treasurer, W. G. Chrisman, Charlottesville, Va.

Examining Board: S. C. Neff, Staunton, Va.; H. Banister, Roanoke, Va.; H. S. Willis, Rapidan, Va.; Thomas Fraser, Richmond, Va.; J. G. Ferneyhough, Burkeville, Va.

Committee on Program, for next meeting: Charles McCulloch, H. Banister, and George C. Faville.

J. G. FERNEYHOUGH,

State Veterinarian.

THE
Southern Planter

PUBLISHED BY
THE SOUTHERN PLANTER PUBLISHING CO.,
RICHMOND, VA.
ISSUED ON 1ST OF EACH MONTH.

J. F. JACKSON,
Editor.

B. MORGAN SHEPHERD,
Business Manager.

B. W. RHOADS,
Western Representative, 844 Tribune
Building, Chicago, Ill.

MANCHESTER OFFICE.
W. J. Carter, 1102 Hull Street.

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TO ADVERTISERS.

Please bear in mind that we must have all copy or instructions for advertisements by the 25th of each month without fail. Every month we are compelled to omit advertising in large volumes for the simple reason that copy does not reach us in time.

A NEAT BINDER.

If you will send thirty cents to our business office, we will send you a neat binder made of substantial Bristol board, in which you can preserve an entire volume of the Southern Planter. Many of our readers find this a useful device, as they always save their copies for reference.

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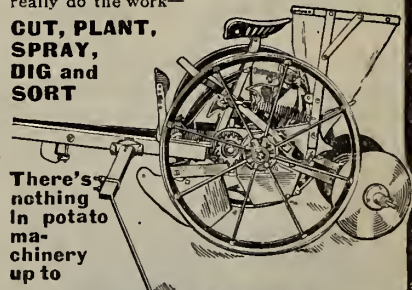
At Bristol, Tenn., Dec. 16, 1908, under Drevenstedt: Barred Plymouth Rocks, 1 pen, 1, 2, 3, pullet; White Wyandottes 1 hen 2, 3 pullet; 3 cock-erel, 2 pen; Bronze Turkeys, 1 pair.

At Charlotte, N. C., Jan. 16, 1909., under Simmons: White Wyandottes, 1 pen, cup special, (nothing else entered).

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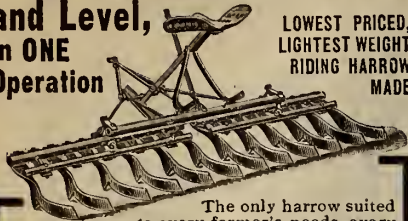
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The Acme is the lightest riding harrow made, guaranteed against breakage, and will last a lifetime. Made of steel and iron. Ask your dealer. If he doesn't carry it, we'll ship direct. Book for your farm library Free.

Write us now for our valuable book by high authorities on "Preparation of the Soil." It is an education in itself. We'll send complete catalogue and prices also. We want you to see what our customers say of the Acme.

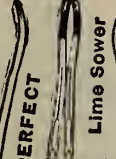
DUANE H. NASH, Inc.

146 Central Ave., Millington, N. J.

Fertilizer Sower

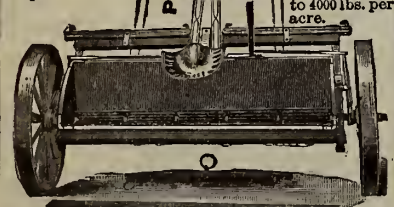
Handles All Commercial Fertilizers

wet or dry, coarse or fine. Positive feed, no choking, no skips.



For Broadcast Top-dressing

or Drilling in Rows. Spreads to width of 5 ft. 10 inches, 200 to 400 lbs. per acre.

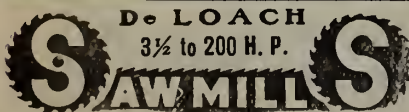


LOW-EASIEST TO LOAD

Broad tires, no rutting. Quick changes from drilling to broadcasting, also for thick and thin spreading. Furnished with shafts or tongue. Write for descriptive circulars and testimonials.

Special Large Size, Sows 8 Feet 3 Inches Wide.

BELCHER & TAYLOR A. T. CO.,
Box 25, Chicopee Falls, Mass.



De LOACH
3½ to 200 H. P.

Steam, Gasoline and Water Power Planers, Shingle Mills and Corn Mills. **WE PAY THE FREIGHT.**

Send for Catalogue. DeLoach Mill Mfg. Co., Bridgeport, Ala. Box 265

WITH THE ADVERTISERS.

Three young men have a splendid opportunity offered them in our "Want" columns.

The Quality Poultry Farm is a new advertiser this month. White Wyandottes are a specialty.

The E. W. Jones Nursery Co. has several ads. in this issue to which attention is invited.

C. M. Gibson offers Cabbage Plants in lots of 100 or 1,000,000.

The Belcher & Taylor A. T. Co. has a couple of ads. in this number of interest to farmers.

The Kemp & Burpee Mfg. Co. is advertising its Success Spreader on another page.

The Waterloo Gas Engine Co. has something interesting to say about its engines.

A valuable treatise, "Modern Silage Methods," can be had of the Silver Mfg. Co. for 10 cents.

The Salzer Seed Co. has three ads. in this issue, to which attention is asked.

Write the National Lead Co. for free paint test equipment No. 14. See ad. on another page.

The Virginia-Carolina Chemical Co. starts the season's advertising this month.

Canning outfits and machinery are advertised by A. K. Robbins & Co.

The Sharples Separator Co. has a prominent announcement on another page.

The Oaks Mfg. Co. is offering a splendid line of seasonable machinery. See the ad.

Percheron horses, stallions, mares and teams are offered by O. E. Jordan.

The Seay-Dillard Hardware Co. is a new advertiser this month. A complete line of farm implements and machinery is offered.

W. R. Fensom has a splendid offering of high-bred Berkshires.

Sans Tache Poultry Yards makes a bid for a share of your patronage. Look up the ad.

The International Harvester Co. has several prominent ads. in this issue, to which attention is invited.

The "Want" columns teem with bargains this month. No better value for the money in the United States.

Albemarle Co., Va., Dec. 7, '08.

I will state that I have been a subscriber to the Southern Planter for a long time and, in my honest, humble opinion, it is the best of its kind. I take a good many papers and the Southern Planter surpasses in regard to facts, good sense and useful knowledge, and it is worth double its price to any farmer.

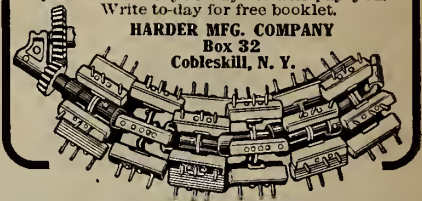
G. A. TAPSCOTT.

FEARLESS Manure Spreader

Why put money in a wide, cumbersome, heavy manure spreader which distributes only the width of its own box, when the "FEARLESS" spreader, built narrow and handy, covers a strip six and a half feet wide.

The "FEARLESS" is the most economical spreader built—saves time and horse power. Tracks with an ordinary farm wagon and passes any gate or bar-way without trouble. The "FEARLESS" circular beater shown below is the key to "FEARLESS" superiority. Its circular form makes it spread outside the wheels. That means more ground covered per load and no driving over spread manure. Investigate the "FEARLESS" spreader before you buy—it will pay you. Write to-day for free booklet.

HARDER MFG. COMPANY
Box 32
Cobleskill, N. Y.



The Improved New Stump Puller
Write for Prices



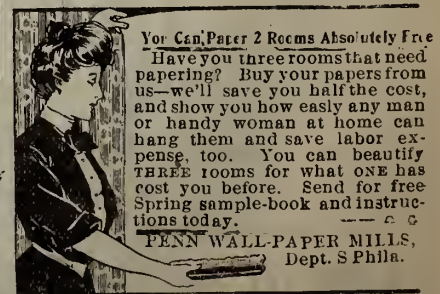
Chamberlin Mfg. Co., Olean, N. Y.

The 'MONARCH' STEEL STUMP PULLER.



The best and simplest on earth. No cost to you, except freight, until it is set up and giving satisfaction. Nine years experience in this business. Write for catalogue and prices.

JOS. W. RITCHIE, Agent,
Route 1, Grottoes, Va.



You Can Paper 2 Rooms Absolutely Free
Have you three rooms that need papering? Buy your papers from us—we'll save you half the cost, and show you how easily any man or handy woman at home can hang them and save labor expense, too. You can beautify THREE rooms for what ONE has cost you before. Send for free Spring sample-book and instructions today.

PENN WALL-PAPER MILLS,
Dept. S Phila.

Always mention The Southern Planter when writing advertisers.

Deere

Free Books

Write your Name on a Postal to Deere



Here is the Greatest Time Saver you can use on

Corn Stalk or Cotton Plant fields before plowing. When you need it—you need it badly.

But only "Deere Durability" will stand the test and do this work properly. Deere Stalk Cutters are High Frame—of Strong, Rigid Steel—Instantly Adjustable—Lightest Draft—with Double Edged Knives that positively do the work.

Deere Stalk Cutters

are made in single and double-row, 5, 6 or 7 knife, open or closed heads. All open head cutters have oil soaked hard maple bearing boxes.

The lever raises both head and stalk hooks in one operation, leaving one hand free to control the team. Spring Hitch with both pull and cushion springs, drag hooks spring controlled, cutter heads have spring pressure. A double leaf seat spring insures comfort to the operator.

Durable Steel Frame with Double Edge Knives for

Corn or Cotton

Write us a POSTAL so we can put your name on the DEERE FREE MAILING LIST. Then you'll get regularly all latest farm implement news of improvements. Mention this paper when writing.

Deere & Mansur Co. Moline, Illinois



HARNESS By Mail

You can buy custom-made oak-tanned harness direct from our factory at wholesale prices. You save two profits—the jobber's and dealer's. Write for our new illustrated catalogue and see for yourself just how much money you can save. All our harness is guaranteed, and we leave you to be the judge. If you're not satisfied, money back. Every farmer should have our booklet. Write to-day and ask for catalogue O.

THE KING HARNESS CO.,
16 Lake St., Owego, Tioga Co., N. Y.

A. K. ROBINS & CO.
CANNING MACHINERY
CANS CASES LABELS.
726 E. PRATT ST. BALTO. MD.

PROPERLY DESIGNED FARM TOOLS.

Wide awake farmers, such as we number among the readers of the Southern Planter, are learning that true farm economy consists in having farm tools designed for the work to be done.

In a few weeks farmers will begin spring activities, and right now is the time to decide what implements will be needed for the best work.

For putting the soil in best tilth, the disc harrow stands at the top. A well-disced field retains the largest amount of moisture, keeps the soil in best condition so that it receives the full warmth of the sun's rays, and allows the atmosphere to permeate to the full depth of cultivation. Disked land leaves openings and channels for the passage of the rootlets and allows the plant to extend its root growth so it can gather the soil food that later results in bumper crops.

In the orchard, too, the disc harrow is invaluable for spring work, particularly if it is fitted with an extension frame, allowing the discs to work near the trees, later on there are binders, mowers, tedders and, in the great corn belt, the corn binder—all paying big returns on their cost.

The Johnston Harvester Co. has representatives almost everywhere, all supplied with Johnston "Librarys." as the books descriptive of their line are called, with instructive information about farm machinery and its use. It would be a good thing if these books were in the hands of all our readers.

The Johnston dealer at your post-office will gladly supply you, but if you do not know who he is, drop a line to the Johnston Harvester Co., Batavia, N. Y., and you will receive the Library free with directions where you can inspect the Johnston line for 1909.

DEATH OF CHAS. E. WHITMAN.

Charles E Whitman President of the Whitman Agricultural Company, of St Louis, Mo., died at his home in that city Thursday, at 1:15 o'clock P. M., January 7, 1909.

Thus another of the pioneer implement manufacturers has been gathered home.

He was born in 1837 at Winthrop, Maine, his father, Luther Whitman, being an inventor and large manufacturer of machinery and implements in that place, hence it will be seen that Mr. Whitman was born and reached his majority in an implement atmosphere.

Mr. Whitman is survived by his wife, a daughter of the late Mr. A. P. Waterman, of Belott, Wis., and his sister, Mrs. Henry R. Sayward, and brothers, Gustavus F., Henry L. William E., and Albert S., the first three brothers mentioned being connected with the factory in official capacities.

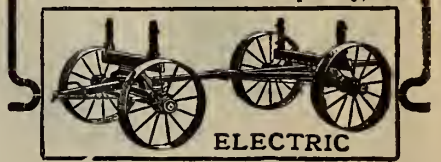
YOU Can Save a Lot of Work!
Can Save a Lot of Money!
Can Increase Your Comfort!
Can Increase Your Profits!

If you are interested in those things we'd like to send you our new book about

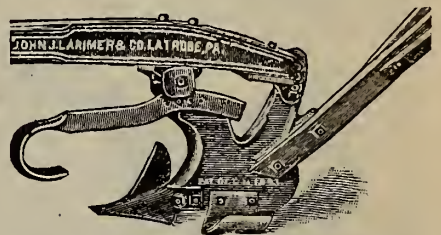
ELECTRIC STEEL Wheels
and the **ELECTRIC Handy Wagon**

More than a million and a quarter of them are in use and several hundred thousand farmers say that they are the best investment they ever made. They'll save you more money, more work, give better service and greater satisfaction than any other metal wheel made—because **They're Made Better**. By every test they are the best. Spokes united to the hub. If they work loose, your money back. Don't buy wheels nor wagon until you read our book. It may save you many dollars and it's free.

ELECTRIC WHEEL CO.,
Box 146 Quinoy, Ills.



Larimer Ditching Plow.



with subsoil attachment. If you have ditching to do this plow will save you more money than any implement you have on your farm. Reduces cost of digging ditch from one-half to two-thirds. Send for descriptive circular.

LARIMER MFG. CO.,
EOLA, (near Chicago), ILLINOIS.

ONE MAN DOES WORK OF TWO

With Iron Age Riding Cultivators. You can do it easier and better, because they are built on lines that make this possible. Hoes are under perfect control. Can regulate depth and keep hoes desired distance from growing plants. More advantages in our IRON AGE Booklet's FREE.

SAVE HIRED HELP

Pivot or fixed wheel, wheels high or low

IRON AGE

RATHEMAN MFG. CO., Box 167C GRENLOCH, N. J.

ENGINES FOR SALE.

Ten horse traction \$250; 10 horse portable, \$150; 12 horse portable, \$200; 6 horse boiler and engine, \$90; 1 horse gasoline engine, \$40; 3 horse, \$60; 6 horse, \$125; 10 horse, \$175. Boilers and engines from 1 to 100 horse carried in stock for immediate shipment. Casey Boiler Works, Springfield, Ohio.

WHEELS, FREIGHT PAID \$8.75
for 4 Buggy Wheels, Steel Tires. With Rubber Tires, \$15.25. 1 mfg. wheels 1/2 to 4 in. tread. Buggy Tops \$5.00. Shafts \$2.00. Top Buggies \$35. Harness \$5. Learn how to buy direct. Catalogue Free. Repair wheels, \$5.00. Wagon Umbrella FREE. W. V. BOOTH, Cincinnati, O.

Proof!

That's what you get before you pay one cent on a Waterloo Boy Gasoline Engine. We send you the engine for a real 30 days free trial. Let it saw the wood, grind the feed, do the pumping, churning and all the time-taking, profit-eating jobs. Then if you think you can get along without the

Waterloo Boy

ship it right back at our expense. We take every bit of the money risk off your shoulders, so why shouldn't you accept our Free Trial Offer.

Write to-day for fine catalog and say: "Send me your Waterloo Boy for a free trial at my work."

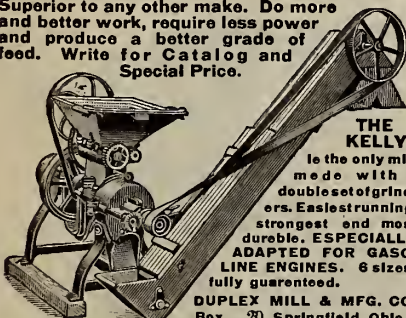
WATERLOO GASOLINE ENGINE CO.

20 West Third Ave., Waterloo, Iowa.



KELLY DUPLEX GRINDING MILLS

Superior to any other make. Do more and better work, require less power and produce a better grade of feed. Write for Catalog and Special Price.



THE KELLY is the only mill made with a double set of grinders. Easiest running, strongest and most durable. ESPECIALLY ADAPTED FOR GASOLINE ENGINES. 6 sizes, fully guaranteed. DUPLEX MILL & MFG. CO. Box 20, Springfield, Ohio

Corn Belt Mill

Sent, Freight Paid, FREE

On 20 Days' Grinding Test

This is the only mill that grinds Corn and Cob Meal perfectly. No other mill grinds the cobs evenly with the kernels.

It cuts before it grinds.

Doesn't heat the ground feed.

Unequaled for easy grinding and fast work.

It grinds feed that fattens in shortest time, at lowest cost.

Any responsible stock owner can have one on 20 days' free trial, freight paid in advance.

Write for FREE BOOK ON FATTENING STOCK

Worth dollars to stock owners. Gives full facts about our famous Sweep and Power Mills. Write for it now.

SPARTAN MFG. CO., Dept. 1140, PONTIAC, ILL.



KEEP YOUR CATTLE QUIET

Dehorned cattle are quiet and docile. Cows give more milk—steers fatten quicker. Dehorn your cattle with the

KEYSTONE DEHORNER

Easy, simple operation. The Keystone makes a clean cut; does not crush horn or bruise flesh. Money back if not satisfied. Write for booklet.

M. T. PHILLIPS, Box 45, Pomeroy, Pa.



We Will Give A RURAL MAIL BOX,

The best and handsomest Galvanized Steel Rural Mail Box made, to the first person sending address of party canvassing for petitions for new Rural Route. Write today. KENTUCKY STAMPING CO., DEPT. 25, LOUISVILLE, KY.

He was a member of the Manufacturers' Association, a director in the Latin-American Club, a member of The Missouri Athletic Club, and a Knight Templar.

The pall-bearers were eight of the company's employees, who had been longest in their service, and the factory employees attended the funeral in a body.

FREE TRIAL OF STOCK TONIC.

There is really no secret about stock tonics, neither about their ingredients nor their effects on live stock. There is also no doubt about the usefulness of stock tonics. Their good effects are as certain as are the nutrient action of feeds. In fact, the benefits of a rightly compounded tonic are more certain than that of feed.

Feed sometimes nourishes and sometimes it doesn't. It depends altogether on the condition of the organs of digestion assimilation.

But a good tonic, used as intended, always acts with a stimulating and restorative effect on the functions that make nutrition possible.

The Wilbur Stock Food Company offers to demonstrate the certainty of the benefits of their stock tonic in every case by giving away, in locations where they have no agent, a 25-pound pail to any stock owner who will ask for it accompanying the request by a statement of the number of head of stock he owns.

They have been making this stock tonic for twenty-five years, and know absolutely what it will do. They run no risk in giving away the twenty-five pounds as they are certain it will be its own solicitor in the hands of the intelligent stock owner.

Every keeper of live stock ought to take advantage of the offer for his own satisfaction and profit. Write the Wilbur Stock Food Co., 541 Huron St., Milwaukee, Wis., stating the number of hogs cattle and horses you own, or fill out the coupon attached to the Company's advertising and send it with request for a pail of stock tonic, which will be sent promptly without any charge.

DEERE FLOW BOOKLETS.

Perhaps you have often wondered, as you were plowing with modern plows, what kind of implements people used a thousand years ago. You can see pictures of such ancient plows by writing to Deere & Company, Moline, Illinois, for their three booklets. The booklets Deere & Co. are sending out this year are very fine. They are printed in colors and illustrated from photographs. Besides the pictures shown, the information concerning plows from the days of Pharaoh until 1909 is both interesting and valuable. Write for these three plow booklets. They will be sent free if you mention this paper.

A Postal Card

To Us Will Save You Money on any

FARM

IMPLEMENT

OR

MACHINE

It Matters not who or where you are

Write us for Prices

Seay-Dillard H'd'w. Co.

BLACKSTONE, VA.

"The Big Store in the Little Town."

The FARMERS' GARDEN

A Seed Drill and Wheel Hoe is indispensable—not only in a village garden but on largest farms.

Farmers should grow all manner of vegetables and "live on the fat of the land." Should provide succulent roots for Cattle, Swine, Poultry, and save high priced feed stuff. Great labor-saving tools of special value for the home as well as the market garden. Send for free book.

SAVE HIRED HELP

Only One of Many Iron Age Tools

IRON AGE



The most complete tool made

BATEMAN MFG. CO., Box 187G, GREENLOCH, N. J.

ROOFING?

If So, Let Us Show You the Money Saving Way and How to Get Fire Protection At No Extra Cost

Get Our Free Samples and Book First

You will be interested in our samples and prices and our instructive book about—

J-M ASBESTOS ROOFING

J-M is the only Asbestos roofing and ASBESTOS is the only fireproof, practically indestructible material from which ready roofing can be made.

Because of this and other equally good reasons—after a thorough investigation of all the leading roofings—the U. S. Government Supervising Architect reported J-M ASBESTOS ROOFING to be "Distinctly superior to the others."

NO PAINTING, no coating, no expense or trouble to maintain. Comes ready to lay. You need only a hammer and a knife.



Use Asbestoside

The cheapest and most durable siding material for barns, poultry houses, etc. Keeps out the cold in winter and the heat in summer. Resists fire.

Write for Free Samples. Prices and Book No. 62

H. W. JOHNS-MANVILLE COMPANY
100 William St., New York

SAVE MONEY ON ROOFING

\$1.00 buys full roll (108 sq. ft.) of strictly high grade roofing, either rubber or flint coat surface, with cement and nails complete. Most liberal offer ever made on first class roofing. Better than goods that sell at much higher prices. Don't spend a dollar on roofing until you have seen

UNITO ASPHALT ROOFING

You send no money when you order Unito Roofing. Satisfaction Guaranteed. Write today for free samples for test and comparison and our unparalleled selling plan.

UNITED FACTORIES CO. Dept. A8, Cleveland, O.



FIX YOUR ROOF

5c Per Square.—We will guarantee to put any old leaky, worn-out, rusty, tin, iron, steel, paper, felt, gravel or shingle roof in perfect condition, and keep it in perfect condition for 5c per square per year.

Roof-Fix The Perfect Roof Preserver, makes old, worn-out roofs new. Satisfaction guaranteed or money refunded. Our free roofing book tells all about it. Write for it today.

The Anderson Manufacturing Co., Dept. 61 Elyria, Ohio

VETERINARY COURSE AT HOME.

\$1200 year and upwards can be made taking our Veterinary Course at some during spare time; taught in simplest English; Diploma granted, positions obtained for successful students; cost within reach of all; satisfaction guaranteed; particulars free. Ontario Veterinary Correspondence School, London, Can.

Please mention the Southern Planter.

CLIP YOUR HORSES.

One of the greatest improvements ever introduced into stable management, according to the opinions of leading veterinarians, is the custom of clipping farm horses, which has now become so common. A clipped horse will not only do a greater amount of work on the same amount of food than a horse with his natural coat on will do, but he will also be fresh and full of vigor, while the horse with the heavy coat will be dull, out of condition and seldom or never dry or clean. Clipping removes the tendency to sweat, and there is no comparison as between a long, wet coat and a short, dry one. When the long coat is warmed up and the horse is being worked regularly, it is next to impossible to thoroughly dry the coat, and this causes the animal to lose flesh, in addition to making him a prey to a multitude of ills. Big companies, which require hundreds of horses in carrying on their business, have experimented, and have found that where their horses were clipped coughs and pneumonia have been practically eliminated. Clip your horses if you want to keep them healthy and in good condition.

You can make money by saving ing money, and you are surely ahead of the game when you can purchase a good clipping machine for less than eight dollars and save wearing out your horses and get work from them that otherwise could not be got on account of their condition.

Keep your horses in condition by clipping them. They need to be clipped even more than they need to be shod. Shoeing them makes them comfortable in their feet. Clipping them makes them comfortable in body, and more, it makes them healthy and vigorous. The clipped horse feels better, works with spirit and gets there. It's to your benefit, means money for your pocket and satisfaction to your feelings.

Health and appearance add value to your horses—clipping makes them healthy by taking off the heavy coat of hair that mats with sweat and lies tight against the skin, covering up the pores and preventing healthy action in the sweat glands, causing irritation and finally sores and other skin disorders. Then, too, after a horse has worked himself into a sweat, or is wet from the rain, he is led into the barn where he remains in the chill night air subject to colds, rheumatism and fevers, because the natural heat of the body cannot find its way through the matted coat to thoroughly dry it out. When the horse is clipped the hair is short and free and is quickly dried out by the natural heat given off by the body, and averts all tendencies towards diseases.

Clipping makes your horses look better. This is evident. You know that if you had the choice between

Trinidad Lake Asphalt gives Genasco the life that makes it resist the weather and last for years.

Genasco Ready Roofing

doesn't crack, rot, rust or break. How long do you suppose roofing lasts that's made of—who can tell?

Get Genasco—the roofing you know about. Guaranteed in writing by a thirty-two-million-dollar organization. Mineral and smooth surface. Look for the trade-mark. Write for samples and the Good Roof Guide Bbok.

THE BARBER ASPHALT PAVING COMPANY

Largest producers of asphalt and largest manufacturers of ready roofing in the world.

PHILADELPHIA

New York San Francisco Chicago



"MODERN SILAGE METHODS"

Send for this new 224-page book on Silos and Silage. 1908 edition—size 5 1/4 x 7 1/2 in.—indexed—over 40 illus. Used as a text book in many Agricultural Colleges. Contents by chapters follow: "Advantages of Silo," 25 pages; "Silos: How to Build," 76 pp.; "Concrete or Cement Silos," 10 pp.; "Silage Crops," 16 pp.; "How to Make Silage," 19 pp.; "How to Feed Silage," 22 pp.; "Feeder's Guide," etc., 56 pp. A vast amount of knowledge boiled down—nothing so complete ever published—answers every silage question. Mailed for 10c coin or stamps, if you mention this paper.

SILVER MFG. CO.,
Salem, Ohio

10c

SILOS

that make and keep real ensilage; that have the utmost strength, convenience, and durability; that are used by the United States Government. Send for free catalogue.

HARDER MFG. COMPANY,
Box 32, Cobleskill, N. Y.



LEARN VETERINARY DENTISTRY

and \$2000 a year. We teach you at home in make three months of your spare time by illustrated lectures and grant diploma with degree. Particulars Free. Detroit Veterinary Dental College, Detroit, Mich.

**BARGAINS IN
2nd Hand Machinery.**

**THE WATT PLOW COMPANY,
Richmond, Va.**

- 1—15 H. P. (8x10 cylinder) Pitts Engine and boiler. Mounted on Steel Wheels.
- 1—8 H. P. Geiser Engine and Boiler on wheels in first-class condition.
- 1—10 H. P. Geiser Engine and Boiler on wheels. In fine condition.
- 1—12 H. P. Geiser Engine and Boiler on wheels in good condition.
- 1—12 H. P. Ames Engine and Boiler on wheels.
- 1—20 H. P. Geiser Engine and Boiler on wheels in first class condition.
- 1—No 2 American Saw Mill with saw and belts as good as new.
- 1—No. 1 Lane Saw Mill with 52-inch saw, all belts. One swing cut off saw. Both in good order.
- 1—4-inch, 4-sided Molder.
- 1—22-inch Planer, Matcher and Molder complete with countershaft and pulleys.

We invite your correspondence and will gladly give any information desired.

**THE WATT PLOW CO.,
1426 E. Main St., Richmond, Va.**

25% More Water than is produced by any other pump using the same power or a given amount of water can be raised with 25% less power by the

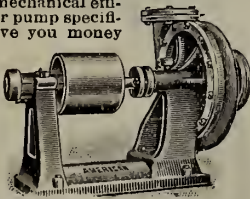
American Centrifugal Pump

Guaranteed highest mechanical efficiency. Give us your pump specifications. We can save you money and labor. Catalog for the asking.

**The American
Well Works**

General Offices
and Works
Aurora, - Ill.
U. S. A.

1st Nat'l Bank Bldg., Chicago.
Sydnor Pump & Well Co. Richmond, Va.



**Rockford Engine Works,
Dept. 35, Rockford, Ill.
The Engine that will please you**

Before you contract or buy write for our proposition

Neat-Nobby-Handy.
All Styles 3 to 30 h. p.

“ROCKFORD”

WE PAY \$80 A MONTH SALARY
and furnish rig and all expenses to introduce poultry and stock powders; new plan; steady work. Address BIGLER COMPANY, 3378, SPRINGFIELD, ILLINOIS.

A Neat Binder for your back numbers can be had for 30 cents. Address our Business Department.

a dispirited, shaggy haired nag and a smooth, shiny-coated spanker you would pick the latter. What makes him look like that is a clipping, which takes away the bunches of dead hair, and makes grooming a snap.

Furthermore, the half-hour you give to each horse in clipping him early saves you three-fourths of the work of currying and taking care of him the rest of the season. No long hair sticking in your curry comb and brush. No going over the horse a half-dozen times to get all the loose, long hair off. No shedding of hair for a whole season to have them blow over everybody and everything. In short, there is every good reason for clipping and none for not doing it.

**HEALTH FOR LIVE STOCK AND
POULTRY.**

This is the title of a booklet issued by The Black-Draught Medicine Co., of Chattanooga, Tenn., in the interest of its stock and poultry remedies. The book is chock full of rattling good testimonials from prominent breeders, scattered all over the country. You are requested to send for a copy of the book which will be mailed to you free of cost. The Company's announcements will appear regularly hereafter in the Southern Planter. It will be well for you to follow them.

FREE BOOK ON GROUND FEED.

It is significant of the times that more and more manufacturers of special appliances are realizing that it is not enough to simply make a good machine, but that they must tell the purchaser and user how they can use it so as to get the most out of it.

Such a book has just been issued by the Spartan Mfg. Co. of Pontiac, Ill., makers of the famous Corn Belt Feed Mills. It is called "Grinding Feed into Dollars," and it certainly makes its title good. It not only shows how the grinding of grain saves about 25 per cent. of the grain itself, but since the "Corn Belt" Mill grinds the cob as perfectly as it does the grain, a still further economy is effected.

The value of "Corn and Cob" meal is just beginning to be recognized. Formerly cobs were a waste product, or were used with indifferent success for fuel. Now, by grinding corn and cob together, a superior feed mixture is obtained. It is the nearest approach to a perfectly balanced ration which nature has provided.

But the "Corn Belt" mill cuts and shears the cob before it reaches the grinding burrs, which reduce both grain and cob to an even granular product, which is eaten with greater relish and is perfectly digested and assimilated. The cob meal not only increases the nutritive value of the feed, but it so lightens the mass that

**SHIP ME YOUR
OLD METALS**

HIDES

RUBBER

SCRAP IRON

Car Lots a Specialty

**50,000
Hides Wanted**

Write for Prices.
Satisfaction Guaranteed.
No Commissions.

**CHECKS SENT SAME
DAY FREIGHT BILLS
ARE MARKED PAID.**

Clarence Cosby,

Established 1890.

RICHMOND, VA.

**LARGEST DEALER IN
Scrap Iron, Metals, Hides,
Etc., in the South.**

REFERENCES:

National Bank of Virginia,
Bank of Richmond,
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PERFECT POTATO PLANTING

Every farmer knows the importance of proper potato planting. Here's a machine that does it perfectly. Has none of the faults common with common planters. Opens the furrow perfectly, drops the seed correctly, covers it uni- formly, and best of all never bruises or punctures the seed. Send a postal for our free book.

IRON AGE

Iron Age (Improved Robbins) Potato Planter

No Misses
No Doubles
No Troubles

BATEMAN MFG. CO., Box 167P GRENLOCH, N. J.



PUMPS WATER

Day and Night Automatically

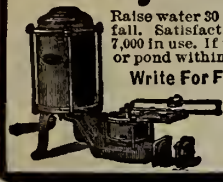
Low in first cost, easy to install, no expense to operate, any capacity desired for Country Homes, Farms, Dairies, Gardens, Irrigation, Town Plants, Railroad Tanks, etc.

Rife Hydraulic Rams

Raise water 30 feet for every foot of fall. Satisfaction Guaranteed. Over 7,000 in use. If there is a stream, spring or pond within a mile—

Write For Free Plans and Book. Get our Free Trial Offer.

Rife Engine Co.
2118 Trinity Bldg.
NEW YORK



BUY THE DAVIS

Get it direct from Factory at Factory prices and **SAVE 20% to 50%** of your money and all your cream.

Our Improved cream separator which doubles profits and cuts dairy work in two. Absolutely the simplest, easiest running, easiest cleaned separator in the world. Just belt high to a man. Its bowl gets the last drop of cream. Investigate our liberal selling plan. Send your name and address to us on a postal card and get our money saving catalogue No. 126 by return mail.

Davis Cream Separator Co.
56B North Clinton St., Chicago, U. S. A.

Low Down Supply Tank.
We Pay the Freight.
Fully Guaranteed.



\$100 that the **20th CENTURY FARM GATE** is the most simple and practical farm gate ever produced. Do you want to make money?

H. M. MYERS, Lodi, Ohio.
Sole owner Pats. U. S. and Canada.



15 Cents a Rod

For a 22-inch Hog Fence; 16c for 26-inch; 19c for 31-inch; 23 1-2c for 34-inch; 27c for a 47-inch Farm Fence. 50-inch Poultry Fence 37c. Lowest prices ever made. Sold on 30 days trial. Catalog free. Write for it today.

KITSELMAN BROS.,
Box 14, MUNCIE, IND.



the digestive juices of the stomach get into quicker action.

Every reader of this paper is urged to write for a copy of the book, "Grinding Feed Into Dollars." It will be gladly sent to any address. Write to-day to Spartan Mfg. Co., 1140 Main St., Pontiac, Ill.

W. A. WOOD CATALOGUE.

The Walter A. Wood Company, whose advertisements are appearing in our columns, is the world's oldest and largest independent manufacturer of harvesting machines. It was founded by the late Walter A. Wood, who was one of the pioneers in the harvesting machine business. He first placed his machines on the market in 1852. His first factory was located only a stone's throw from the great Walter A. Wood plant of to-day. Walter A. Wood machines have been made every year since in ever increasing quantities and have made the name of Walter A. Wood famous all over the world.

The Wood Company have recently placed on the market their latest mower, The Admiral. This mower has created huge interest wherever introduced and is now in use in all parts of the world. Every up-to-date farmer who wants to keep posted on the new achievements in farm machines should get acquainted with the Walter A. Wood line of modern machines and implements. Their new catalogues describe the many different models and is of great interest to every one engaged in farming. It may be obtained from your dealer or from the Wood Company.

COURTSHIP IN IRELAND.

An Irish boy marries when he has a rid house, and an Irish girl just when she pleases. Sometimes she so pleases while yet her years are few; at other times she is content to wait upon wisdom. In the latter case, of course, she makes a wise choice; but in the former almost always a lucky one—for Luck is the guardian angel of the Irish.

"You're too young to marry yet, Mary," the mother said, when Mary pleaded that she should grant Laurence O'Mahony a particular boon.

"If you only have patience, mother, I'll cure meself of that fault," was Mary's reply.

"And she's never been used to work, Laurence," the mother said to the suitor, discouragingly.

"If you only have patience, ma'am," was Laurence's reply to this, "I'll cure her of that fault." And he did, too.

Bland Co., Va., Feb. 18, 1908.

I cannot afford to do without the Southern Planter as it points the way to success for every Southern Farmer.

GEO. T. BIRD.

Your stock is kept inside and other stock outside if your pastures are enclosed with

SUPERIOR WIRE FENCE

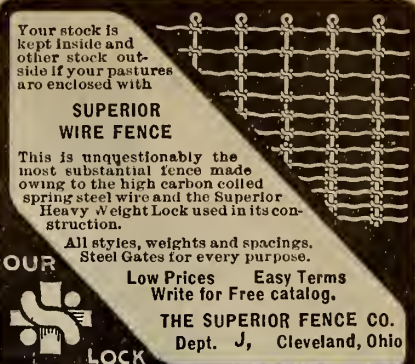
This is unquestionably the most substantial fence made owing to the high carbon coiled spring steel wire and the Superior Heavy Weight Lock used in its construction.

All styles, weights and spacings. Steel Gates for every purpose.

OUR LOCK

Low Prices Easy Terms
Write for Free catalog.

THE SUPERIOR FENCE CO.
Dept. J, Cleveland, Ohio



BALL BEARING AUTOMATIC GATE


IF NOT THE BEST AUTOMATIC GATE ON THE MARKET SEND IT BACK

GUARANTEED THE SIMPLEST AND STRONGEST AND EASIEST OPERATED AUTOMATIC GATE ON THE MARKET.

Don't Look Near

MONEY REFUNDED IF NOT SATISFACTORY IN EVERY WAY

E. W. ADAMS,
STATION A, TOPEKA, KAN.




Union Lock Poultry Fence

Square close mesh. Highest quality, superior lock, easily erected, strong, low priced.

Write for new catalog describing the Union Line of Field, Hog, Poultry and Lawn Fences.

Union Fence Co.
Do Kalb, Ill.
Kansas City, Mo.

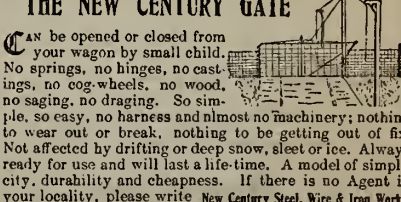
RANGER BARB WIRE



THE NEW CENTURY GATE

CAN be opened or closed from your wagon by small child. No springs, no hinges, no castings, no cog-wheels, no wood, no sagging, no dragging. So simple, so easy, no harness and almost no machinery; nothing to wear out or break, nothing to be getting out of fix. Not affected by drifting or deep snow, sleet or ice. Always ready for use and will last a life-time. A model of simplicity, durability and cheapness. If there is no Agent in your locality, please write New Century Steel, Wire & Iron Works,

602 S. REGISTER ST. BALTIMORE, MD



ALWAYS IN ORDER

MANLOVE Automatic Gate

Saves time, adds to value, safety, beauty and pleasure of home.

MANLOVE GATE CO., 272 E. Huron St., CHICAGO, ILLS.



LAWN FENCE

Many designs. Cheap as wood. 32 page Catalogue free. Special Prices to Churches and Cemeteries. Coiled Spring Fence Co. Box Q Winchester Ind.



WARD FENCE Farm and Poultry. Old fashioned galvanized. Elastic spring steel. Sold direct to farmers at manufacturers prices. Write for particulars.

Ward Fence Co., Box 517 Decatur, Ind.



30 Lbs.—SUGAR Best Granulated 75c

SEND NO MONEY. We will ship you the following goods to your city with the privilege of seeing them before paying the agent \$7.58 and if not found in every way as represented and what you would have to pay your merchant \$12.86 they can be returned to us at our expense. **FREIGHT PAID** if the full amount of cash is sent with order.

	Merchants	Our
	Price	Price
30 lbs Sugar best granulated.....	\$1.80	.75
2 " A & H Soda or our own.....	.20	.10
2 " Corn Starch best quality.....	.20	.19
1 " Pepper Pure Gr. in tin can.....	.40	.20
1 " Cinnamon " " ".....	.60	.39
4 oz. Vanilla Extract strictly pure.....	.60	.37
4 " Lemon " " ".....	.50	.35
10 bars Castle & G.P. Tar Soap (½ each).....	1.00	.60
1 lb. Chocolate Bakers Best.....	.50	.35
1 " Coconut Shepps Best.....	.40	.19
5 " Coffee Pure Java and Moca, roasted.....	2.10	1.60
2 " Tea Y. H. & P. or Eng. Break. best.....	1.80	1.20
10 bars Soap Lenox or our own.....	.50	.25
3 large cans ½ size Mustard Sardines.....	.30	.20
3-2 lbs cans Peas E. J. Finest.....	.36	.20
5 lbs. Prunes choice Cal.....	.60	.35
5 " Rice best Japan.....	.60	.30
5 " Rolled Oats Quaker.....	.30	.10
2 Pkgs. East Foam.....	.10	.05

Price list FREE
 Grocery, Jewellery Merchants Price \$12.86 7.58
 Hardware Etc. Our Price 7.58
 Your saving \$5.28

DEERING MERCANTILE CO.
 60 WABASH AVE., CHICAGO, ILL.

BETTER HIGHWAYS.

A meeting of the officers and Board of Directors of The Greater Highways Association of Southeastern Virginia, recently organized, was held December 8th, in the hall of the Chamber of Commerce, Petersburg, President Charles T. Lassiter, presided, and there were present Vice-President William M. Whaley, Secretary and Treasurer, H. L. Harwood, Richmond, Va., and nine of the seventeen directors, representing the cities and nearly every county in the limits of the Association. Letters from several of the directors were read, expressing regret at their inability to be present, and showing their interest in the organization and its objects.

After discussing plans of work, etc., for several hours, the following constitution was unanimously adopted:

1. Name.—The name of this Association shall be The Greater Highways Association of Southeastern Virginia.
2. Objects.—The objects of this Association are to secure the permanent improvement of the greater highways of the State, and particularly of the highway from Richmond, via Petersburg and Suffolk, to Norfolk, and also to secure the co-operation as soon as possible of representative people from all parts of Virginia looking to the formation of The Greater Highways Association of Virginia, having for its object the permanent improvement of those public highways extending through one or more counties and connecting the cities of the State or connecting other important points with main lines of traffic.

This Association recognizes that in order to carry out its program and to secure its objects it will be necessary to secure the cordial co-operation of the people of the whole State, so as to secure from the General Assembly of 1910 the passage of such acts as may be necessary to insure the building or permanent improvement of said highways.

3. General Plan of Procedure.—Recognizing that it has undertaken a great work of internal improvement affecting the entire State, and requiring resources which can only be obtained by taxation, this Association submits the following plan:

(a) That this association call a convention to meet in the city of Richmond at some convenient date in February, 1909, for the purpose of organizing the Greater Highways Association of Virginia, said convention to be composed of delegates from all of the cities and counties of the State, from the various automobile associations and from the Travelers' Protective Association, to be appointed by the Governor of Virginia. Upon the organization of The Greater Highways Association of Virginia, the Greater Highways Association of Southeastern Virginia to become merged in the State Association.

The \$7,500 Fowls Bought by Madame Paderewski

Like most of the high priced fowls you hear of, they were hatched in a Standard Cyphers incubator and raised in a Cyphers brooder. Buy the set—
Cyphers Fire-Proofed, Insurable Incubators and Brooders
 Because the Insurance Inspectors Label ever issued on Incubators and Brooders has just been granted to Cyphers Incubators and Brooders by the National Board of Fire Underwriters. NOW you can insure your incubator, brooder and buildings. Only if you insurors bear the Insurance Label. Our 1909 Catalogue, 212 pages, fully illustrated, tells all about it, and contains five valuable chapters on the poultry business. It is FREE. Write for it.
Cyphers Incubator Co.
 Buffalo, N. Y.; Boston, Mass.; New York, N. Y.; Chicago, Ill.; Kansas City, Mo.; Oakland, Cal.



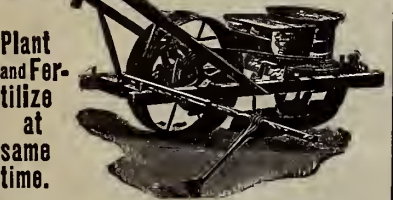
Model Incubators and Brooders Make Easy Big Profits in Poultry

Because the Model Incubator is built to hatch chickens. The Model is the only "automatic" hatcher. The famous Model Thermostat controls the temperature absolutely. The Model Automatic Moisture Regulator controls the moisture absolutely, turning it off and on as needed. Because Model Brooders raise every chick. They are light, warm, profusely ventilated, sanitary and easily kept so. The Model Brooder Mothers the chick.
 My 64-page book giving the profits in "Eggs, Broilers and Roasters," together with catalog, mailed on request.
CHAS. A. CYPHERS,
 359 Henry St., Buffalo, N. Y.



PLANT CORN

Peas, Beans, Beets, Buckwheat, etc.



"KING CORN FIELD"

marks out rows and plants in drills or hills 4½, 9, 12, 18, 24, 36 or 72 inches apart. Corn and any other seed at same time. Distributes all commercial fertilizers, wet, dry, lumpy, etc., 25 to 700 lbs. per acre. A great labor and time saver. Built to last. Full guarantee. Agents wanted. Send for Catalog.

Belcher & Taylor A. T. Co.,
 Chicopee Falls, Mass.

Here is a Money Maker for every TOBACCO, CABBAGE, TOMATO AND SWEET POTATO GROWER Masters Plant Setter

takes away all the tedious work of setting out a field of plants. This Setter is a great labor saver, a crop producer and a drought breaker. Is worth TEN TIMES its cost to every farmer and grower in the U. S.
 Send us your name and address and we will tell you all about it and what it will do, price, etc.

COUNTY AGENTS WANTED
MASTERS PLANTER CO
 184 So. Water St., Chicago, Ill

Make Money to complete your education, buy a home, or start in business. For particulars address P. B. R. MOSS, Chase City, Va.

A Neat Binder for your back numbers can be had for 30 cents. Address our Business Department.

Ertel's POULTRY DIARY

is our new book for the use of poultry raisers. Keep account of your eggs, chicks and profits. Our Diary shows how and also tells about our new Incubators. It tells why our prices are so low. The Diary is free. Better write for it today. Tell us if you are thinking of buying an incubator and what size you want. We pay freight. Geo. Ertel Co., Quincy, Ill.



Hatch Chickens By Steam

"Excelsior" and "Wooden Hen" Incubators hatch every fertile egg. Require little attention; solve problems of heat, moisture and ventilation. Catalogue free. GEO. H. STAHL, Box 76D Quincy, Ill.



INCUBATORS Hot Air or Hot Water MILLER'S IDEALS

The Lowest Priced Standard Machines. Certain results instead of experiments. Send for great, free book, "Poultry for Profit." Finely illustrated and covers every poultry topic. Worth dollars but mailed free, postpaid. Don't wait—SEND NOW to
J. W. Miller Co., Box 312, Freeport, Ill.



Hatch With the Least Cost Per Chick

That is what we guarantee you can do with the **Invincible Hatcher**. Try it and if it don't produce more strong, healthy chicks than any other incubator, regardless of price, send it back. 50-Egg Size Only \$4.00. Same low prices on larger Hatchers, Brooders and Supplies. Write for 176-page FREE catalogue. The United Factories Co., Dept. X G. Cleveland, O.



"SUNSHINE" SPRAYER

Do You Spray Your TREES, VINEYARDS, PLANTS and VEGETABLES?



Fig. 825—Pump with automatic agitator and two spray leads.

Spraying is a necessity—To spray properly a good Pump is a necessity.

Our "Sunshine" Sprayer is, we claim, the only durable, heavy, first-class Sprayer that can be bought at a price within the reach of small fruit growers.

Write us for full descriptive circulars and prices.

The Crestline Mfg. Co.
CRESTLINE PUMP WORKS
Crestline, Ohio.
ESTABLISHED 1903

(b) The greater Highways Association of Virginia to secure as many members as possible at one dollar (\$1) per year, giving membership cards to all members of The Greater Highways Association of Southeastern Virginia who may have paid membership dues to the parent organization. From membership dues and from voluntary contributions to be solicited from people interested in the building of greater State highways and from the manufacturers of automobiles and other vehicles, The Greater Highways Association of Virginia to raise a campaign fund sufficient for the employment of suitable agents and clerks, and for printing, postage, and other expenses. A campaign of education to be instituted at once to secure the co-operation of the people of the State in behalf of the objects of the Association and the passage by the General Assembly of Virginia of laws necessary for this purpose.

(c) The cost of building or permanently improving the greater State highways to be met—

(1) Forty (40) per cent. by convict labor aid from the State of Virginia;

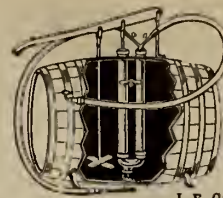
(2) Sixty (60) per cent. from the proceeds of bonds to be issued by the counties through which the greater highways run, proportionate in amount to the number of miles of such roads in any given county;

(3) The interest and sinking fund on such county bonds to be paid out of the proceeds of a special license tax on automobiles of ten dollars (\$10) per annum on residents and five dollars (\$5) per annum on non-residents, and out of the proceeds of a special license on vehicles graduated as follows:

On a wide-tired vehicle for one horse, 50 cents per annum; on a wide-tired vehicle for two horses \$1 per annum; on a wide tired vehicle for more than two horses, \$1.50 per annum; on narrow-tired vehicles, double the foregoing license charges.

The proceeds of these licenses to be paid into the treasury of the State of Virginia as a special fund for building and permanently improving greater State highways; ten (10) per cent. of the amount so collected each year to be available to pay the expenses of the State Highway Commission of Virginia for making plans and specifications and superintending the construction of greater State highways; ninety (90) per cent. of the proceeds of said licenses to be held in the treasury of the State of Virginia as a special fund with which to pay the interest and sinking fund on such county bonds as may be issued in behalf of greater State highways, with the approval of the State Highway Commissioner.

4. Estimates.—It is estimated that there are 50,000 miles of public roads



Defender Sprayer

All brass, easiest working, most powerful, automatic mixer, expansion valves, double strainer. Catalogue of Pumps and Treatise on Spraying free. AGENTS WANTED, J. P. Gaylord, Box #2 Catskill, N. Y.

Which Spray Pump

shall you buy? Buy the most scientifically constructed pump. Buy the Spray Pump that fully meets the demands of the Government Agricultural Scientists and all Practical Fruit Growers. These pumps are widely known as

DEMING SPRAYERS

and are made in 23 different styles of high class, high pressure machines for use in small gardens or immense orchards. Write for our 1909 catalog with Spraying Chart. Add 4 cents to cover postage, and receive "Spraying for Profit" a guide book on suppressing all injurious insects and fungous diseases.

THE DEMING COMPANY,
715 Depot St., Salem, Ohio

GET THE BEST

A Good Spray Pump earns big profits and lasts for years

THE ECLIPSE

is a good pump. As practical fruit growers we were using the common sprayers in our own orchards—found their defects and then invented The Eclipse its success practically forced us into manufacturing on a large scale. You take no chances. We have done all the experimenting.

Large fully illustrated Catalogue and Treatise on Spraying—Free.

MORRILL & MORLEY,
Benton Harbor, Mich.

IT PAYS TO SPRAY

The Iron Age 4-row Sprayer gives perfect satisfaction. Puts solution just where needed and in fog-like mist. Pump delivers spray under high pressure, thus reaching every part of vine, effectually killing bugs and preventing blight. Has Orchard Spraying attachment. Write for free catalog illustrating this and other Iron Age tools.

IRON AGE

SAVE HIRED HELP

Iron Age Four-Row Sprayer

BATEMAN MFG. CO., Box 1678 GRENLOCH, N. J.

Make Your Own Fertilizer

At Small Cost with WILSON'S PHOSPHATE MILL From 1 to 40 H. P. Also Bone Cutters, hand and power for the poultryman; grit and shell mills, farm feed mills, family grit mills, scrap cake mills. Send for our catalog.

Wilson Bros., Sole Mfrs., Eastern, Pa.

Paint Without Oil

Remarkable Discovery That Cuts Down the Cost of Paint Seventy-Five Per Cent.

A Free Trial Package is Mailed to Everyone Who Writes.

A. L. Rice, a prominent manufacturer of Adams, N. Y., has discovered a process of making a new kind of paint without the use of oil. He calls it Powderpaint. It comes in the form of a dry powder and all that is required is cold water to make a paint weather proof, fire proof and as durable as oil paint. It adheres to any surface, wood, stone or brick, spreads and looks like oil paint and costs about one-fourth as much.

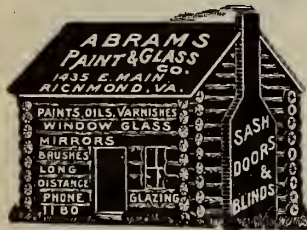
Write to Mr. A. L. Rice, Manufr., 2 North St., Adams, N. Y., and he will send you a free trial package, also color card and full information showing you how you can save a good many dollars. Write to-day.



Write Me a Postal For My New Paint BOOKS FREE

Two full gallons free to try—You Pay no Freight to try my Paint. Let me send you my Books and big Color Cards to select from—all FREE. They tell why my Made-to-Order Paint is better than ready-made or painter-made Paint—tell why I save you money and give you a satisfactory long-lived paint—made fresh to order for the individual user—shipped in cans dated the day it's made—and sold under a \$100-gold guarantee as to its purity. Write me today—just a postal.

O. L. CHASE, The Paint Man
Dept. 133 ST. LOUIS, MO.



Write for prices.



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MAKE MORE MONEY

Copy of monthly magazine, Hunter-Trapper, 128 or more pages, about steel traps, snares, deadfalls, trapping secrets, raw furs, dogs, gluseng, big game hunting, etc., 10 cents. Catalog describing magazine and books on Trapping, Prospecting, Bee Hunting, Ginseng Growing, etc., Free. Address at once.

A. R. Harding Publishing Co., Box 719 Columbus, O.

WANTED ACTIVE, ENERGETIC MEN

to represent us; profitable, permanent position; hustlers can make big money; exclusive territory, cash weekly advances; complete canvassing outfit free. Teachers, students, farmers, and others find our business profitable. Write immediately for our liberal offer.

W. T. HOOD & CO.,
Old Dominion Nurseries, Dept DX.,
Richmond, Va.

CALVES Raise Them Without Milk, Booklet Free.
S. T. Beveridge & Co., Richmond, Va.

Tell the advertiser where you saw his advertisement.

in the State of Virginia; that approximately 20 per cent. (or 10,000 miles) are main thoroughfares, which should be permanently improved, and that 20 per cent. of the main thoroughfares (or 2,000 miles) are roads of such great importance to the people of the whole State that they may be designated greater State highways. If the counties will undertake, with the aid now given by the State under existing laws, permanently to improve 8,000 miles and lend their credit by an issue of bonds, so as permanently to improve 2,000 miles of greater State highways, the burden of paying interest and sinking fund on bonds so issued should be borne by a fund to be paid by the people of the whole State, thus relieving the counties to a large extent in this matter. It is further estimated that such license taxes as are suggested above will prove a very slight burden upon the individual taxpayers. The accumulation of this fund in the Treasury of the State of Virginia should prove sufficient to carry the interest and sinking fund upon \$2,600,000 worth of bonds after paying 10 per cent. of the fund for engineering expenses.

5. Officers.—The officers of The Greater Highways Association of Southeastern Virginia shall be a president, vice-president, secretary-treasurer and seventeen (17) directors. The officers shall also be members of the board of directors. The management of the affairs of the association shall be entrusted, until the formation of the Greater Highways Association of Virginia to the officers and directors, who may appoint from their own body an executive committee. If the Greater Highways Association of Virginia is not organized in February, 1909, then the said officers of this Association shall forthwith call a meeting of the members of this association for the purpose of perfecting a permanent organization and formulating plans for the permanent improvement of the road from Richmond to Norfolk via Petersburg and Suffolk.

6. Dues.—The membership dues of this association shall be one dollar (\$1) per year. The funds of the association shall be expended by the board of directors in carrying out the objects of this association, as above set forth.

Executive Committee.

The board appointed the following executive committee:

Charles T. Lassiter, chairman, Petersburg; H. L. Harwood and Dr. R. A. Nichols, of Richmond; C. H. Bull, of Norfolk, and C. O. Shoop, of Nansemond.

Each member of the board of directors was designated a committee of one to solicit new members of the association, and to have their names and membership forwarded to Secretary and Treasurer H. L. Harwood, Richmond.

AGRICULTURAL LIME.

PLAIN ROCK

OR

SHELL LIME

BAGS OR BULK

SPECIAL FINE HYDRATED LIME

FOR DRILLING.

If in the market for any grade and any quantity of

LAND LIME

Write for our price list particulars.

T. C. ANDREWS & CO., Inc.

NORFOLK, VA.

Nitrate of Soda

Nitrate Sold in Original Bags

NITRATE AGENCIES CO.

64 Stone Street, New York
Keyser Building, Baltimore, Md.
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305 Baronne Street, New Orleans, La.
140 Dearborn Street, Chicago, Ill.
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603-4 Oriental Block, Seattle, Wash.

Address Office Nearest You

Orders for All Quantities Promptly Filled—Write for Quotations

Kills San Jose Scale

You need not lose your fruit crop this season. Spray your orchard early with a strong solution of

GOOD'S CAUSTIC POT ASH SOAP No. 3 & WHALE OIL

It will positively destroy scale, apple scab aphids, lice, bugs, worms and all other insects and parasites which infest your trees, plants and shrubs. It contains no poisonous or injurious ingredients; no salt, sulphur or mineral oils. It fertilizes the soil, and quickens growth. Endorsed by the

U. S. Department of Agriculture
50 lbs. \$2.50; 100 lbs. \$4.50; larger quantities proportionately less.

Write for free booklet, "A Manual of Plant Diseases."

JAMES GOOD

Original Maker, 959 N. Front St. Philadelphia.

Men Wanted Quickly By Big Chicago Mail Order House to distribute catalogues, advertise, etc. \$25.00 a week. \$60.00 expense allowance first month. No experience required. MANAGER, Dept. 90 885 WABASH AVENUE, CHICAGO

A Neat Binder for your back numbers can be had for 30 cents. Address our Business Department.

Bone Phosphate

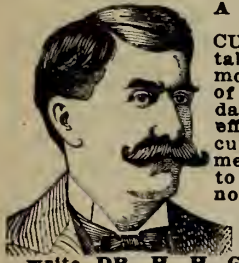
Phosphoric Acid 22½%
 Equivalent to Bone Phosphate
 of Lime 50 %
 Ammonia 4½%
 (Guaranteed Analysis.)

A PURE ANIMAL BONE FERTILIZER

In the manufacture of which no Chemicals or Filler are used.
 Ton (2,000 pounds) \$28.50
 Sack, (200 pounds) 3.00
 Sample on request.

RICHMOND ABATTOIR,
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Box 267. Office Sixth and Cary Sts.



A Great Discovery. DROPSY

CURED with vegetable remedies; removes all symptom of dropsy in 8 to 20 days; 30 to 60 days effects permanent cure. Trial treatment furnished free to every sufferer; nothing fairer. For circulars, testimonials and free trial treatment write **DR. H. H. GREEN'S SONS,** Atlanta, Ga.

ECONOMY SILO

There's no wasted fodder if you feed ensilage to your cattle. No hard, dry corn-stalks to throw away. Get an Economy Silo and save money. Absolutely air-tight. Keeps ensilage perfectly sweet. Doors the simplest made. No complicated fastenings. Continuous door-way makes silo easy to fill and easy to empty. Hoops of refined iron, thoroughly tested. Wood:—Selected white pine, or cypress. Every silo easy to erect, and fully guaranteed. Write today for free illustrated catalogue, with testimonials from users.
Economy Silo & Mfg. Co.
 Box 38G Frederick, Md.

FUMA kills Prairie Dogs, Wood-Chucks, Gophers and Grain Insects. "The wheels of the Gods grind slow, but exceedingly small." So the weevil, but you can stop their grind with

FUMA CARBON BI-SULPHIDE as others are doing. It fumigates poultry houses and kills hen lice.
 Edward R. Taylor, Penn Yan, N. Y.

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SOUTHERN PLANTER, Richmond, Va.

A JOURNAL OF EASTERN TRAVEL. Our Sojourn in Yokohama.

By Traveller.

One soon eats the lotus and begins to drift into Oriental ways. Though we were not idle in Yokohama, we profited by Kipling's story of the man who died trying to hustle the East, and we put aside our strenuous Western ways. Social engagements occupied a good deal of our time, and for the rest we amused ourselves as the spirit and the occasion led us. In the morning we visited the shops, in the afternoon we drove, and in the evening there were dinners. Dining is, par excellence, the social function of the East, for there are no theatres, nor other amusements to occupy the time, so late and elaborate dinners fill up the evenings.

Our first invitation was to a dinner on the Bluff, the high residential portion of the city. Dressed in our best, we started in rickshaws, and when we got to the foot of the Bluff our boys called "pushee men" or atoshi to get us up the steep incline. We paid and dismissed all at the gate and were much embarrassed to find the atoshi pursuing us to the porch muttering discontentedly. Our host opened the door before we could dispose of them and we confided to him that we did not think they were satisfied with the ten sen we had given them. "Of course not," he replied. "Five sen is the tariff, and they know you are strangers because you have overpaid them. Perhaps they have come to bring you the change." A few Japanese phrases sent them scurrying. Like all dinners in the East, this one was a great success. The company was most agreeable and the food had a faint, elusive suggestion of the East.

Just at this time the Peace Treaty was ratified, and all Yokohama was en fete in consequence. The principal thoroughfares were elaborately decorated in the national colors—red and white bunting—the sun flag, wreaths of flowers, lines of lanterns and triumphal arches. It looked like fairy land, especially at night, when the lanterns were lit and search lights played over the harbor. During this period, Admiral Togo brought his victorious fleet into port to be reviewed by the Mikado, and the sight of so many fighting vessels, fresh from the war, and crowned by such brilliant victories, aroused the popular enthusiasm to the highest pitch. Three hundred and eight war ships, including three Russian war ships with the double eagle on their sterns, and several other spoils, were drawn up in six lines two miles long. They made a magnificent show, despite the scars from the war. Yokohama was crowded with people to see them. Many of the nobles and officials came from Tokyo to see the review, and country people for miles around walked in.

—ANNOUNCEMENT—

Owing to the many letters received, relative to crop rotation and formulae for the home mixing of fertilizer, and the amount of time and labor necessary to intelligently indite my replies, I have determined to give up some other work, and devote some time at regular intervals to correspondence of this character, making a nominal charge, graduated to accord with my earning capacity at other lines of work elsewhere.

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The whole water front was lined with curious throngs and every sort of a boat put to sea to get a better view. We went down on a launch and I was silly enough to be made sick by the rocking of the boat and the nearness of the waves. I lay flat on deck, on somebody's overcoat, for several hours before I could lift up my head to look about me. Meantime our little launch had worked its way to a fine position in front of the line and kept drawing in closer and closer till a police boat cleared the line and sent us back.

At noon a royal salute announced the Emperor's arrival, and, boarding the armored cruiser, "Asama," accompanied by two others in war paint, he steamed out in front of the lines and halted opposite Togo's flag ship, "Shishoma." Here he received his admirals and the commanders of the foreign ships in port, while the submarine destroyers around his ship performed some evolutions wonderful to unnautical eyes. When the Emperor went down the line there was absolute quiet. The jackies manned the decks; that is, joined hands entirely around it, and the officers stood at attention. When the review was finished every ship in port fired a salute, and the din and roar and flashes of light gave us a very fair idea of what a naval engagement might be like. I never saw or heard anything so terrific. When the Emperor went away we were allowed to go down the lines and see the war ships at close range. Some were dreadfully battered, but we cried out "Banzai" (Hurrah!) to all, and the sailors waved and shouted "Banzai" back to us.

We were invited by some Japanese officers to visit the I. J. S., Oboro, a torpedo destroyer, which did great work in the sea of Japan. We examined her scars of war and were shown some of her torpedoes made in America, which cost \$1,500 apiece. The officers were very kind in taking us over the boat, and did their utmost to amuse us, but we found it difficult to converse with them, as neither spoke the language of the other, so, after a brief stay. Lieut. Namikawa, who spoke English, escorted us back to the hotel.

At this time the Anglo-Japanese alliance was celebrated with great rejoicings, and there was a perfect love feast between the Japanese navy and the English Asiatic squadron which was visiting in their waters. The flags of the two nations were crossed everywhere and there were alliance pins and post cards and alliance dances at the tea houses, where the geishas were draped in the sun flag and the Union Jack. Everything denoted the satisfaction of the masses over the consummation of this union.

We had hired for our stay in Yokohama two faithful and fleet rickshaw boys, to whom we gave fifty cents a day each, and they were ours, whenever we wanted them. Their name

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HORSES

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and number were marked on their hats, which was fortunate for us, as all coolies look alike at first, but after a little we came to think there were no two other boys equal to our Toku and Yuma. They knew Yokohama thoroughly and understood the tastes of tourists, so there was no need to give them any directions. They waited on us every morning, bowing and smiling. Then they tucked us snugly into the rickshaws with a pillow at our backs and trotted off to the shops. Sometimes we would go to the brass shop in Moto Mache, where we would gladly have brought everything away with us, including the girl who waited on us. There were all sorts of wonderful candle sticks and incense burners, swinging vases for flowers and quaint hot water jugs. Nearby was our favorite post card place where we would get eight to ten dozen at a time, but never had enough. Yamamoto, the best embroidery place, was also not distant. The big foreign shops did not appeal to us, but we knew very little native place by heart. Shienos' silk shop was our favorite resort. Here we found soft silks, embroidered in chrysanthemums, and gauzes, with cherry blossoms or forget-me-nots. Then there were kimonos and sacques embroidered all over with flowers and birds or butterflies, and there were wadded dressing gowns and smoking jackets, besides every sort of silk imaginable. Yokohama is an excellent shopping place, because the best products from all over Japan are brought here.

On bright afternoons we drove into the country and never wearied of the trip to Mississippi Bay, where Commodore Perry anchored in 1853 and made a treaty that opened Japan to the world. Our patriotism was much aroused by looking out over this sheet of water where American enterprise had accomplished so much. It was a pretty sight with all the white sails on it and the bath houses on the beach where Yokohama society indulges in surf bathing during the season. The return trip was through the rice fields, past many tea houses where we would stop for refreshment. The tea house is universal in Japan and from the accounts I had read of it I fancied it would be as gay and Bohemian as the cafes of Paris, for the Japanese are considered the French of the East. On the contrary, we found the tea houses eminently quiet and genteel. Possibly the geishas, with their naive and engaging ways, may be misunderstood by foreigners, but though they are often very pretty and rather naughty, they are never bad. They are young girls from twelve to sixteen, chosen for their personal attractiveness and trained from childhood to the task of serving and dancing in the tea houses.

The tea house itself is a flimsy structure, like most buildings in Japan, with tiled roof and walls made of

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sliding screens of rice paper, over which heavy boards are fastened at night. The rooms are partitioned off with other sliding screens, which are beautifully painted and ornamented. The floors are covered with soft, white rush mats, fitting closely, and the decorations of the house are bright cushions, for seats, on the floor, with an occasional scroll on the wall, a vase of flowers in an alcove, or a brazier of coals in cold weather. In the walls are cupboards where soft quilts called 'futons' are kept during the day, and spread on the floor at night for beds. There is no furniture of any sort in a Japanese house.

The tea house generally stands in a garden which has pots of dwarfed pines and maples in it, an artificial lake with a high drum bridge, a pond of goldfish, and rocks and sand arranged in art motifs, as, for example, the sleeping oxen rocks. In it are benches where visitors may sit and have tea, without removing their shoes, which are not allowed on the highly polished floors and white mats inside.

Tea is served on a wooden tray, in a fat little Japanese teapot, with a straight handle at the side. It is poured into cups without handles and served without either sugar or cream. It is a mild looking beverage, a greenish straw color, but is stronger than it looks. By degrees, we grew dependent on it, and really missed it. With it came dreadful little cakes, made of rice flour or a paste of peas. One bite of them sufficed us, but the girl always wrapped what was left in a paper napkin and gave it to us as a souvenir. Most of the tea houses are named, as, for instance, "The Hundred Step Tea House at Yokohama." This is one of the oldest and best known in Japan. As its name indicates, it is at the head of a hundred steps, and it commands a magnificent view. We used to sit on its balcony and watch the sacred mountain, Fuji-Yama at sunset. In its guest book are many distinguished names, beginning with Perry and coming down to Grant and others in more modern times.

We stayed on in Yokohama long enough to plan out an itinerary for our trip through Japan and to arrange our passage to Manila. We could not get a sailing on our stop over, as soon as we wanted, but thought we could join my brother in December.

Now we were anxious to travel northward in Japan before cold weather came upon us. Yokohama was very pleasant, but we realized it was superficial Japan. It is a busy, commercial city, the largest and most important of the open ports. It has such a large foreign element that it has lost its distinctive characteristics. The appearance and life of the place are to a great extent foreign and we felt whilst

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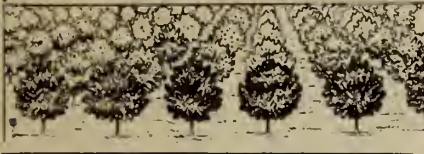
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See Salzer's catalog page 129. The biggest money making crop in vegetables is cabbage. Then comes onions, radishes, peas, cucumbers. Big catalog free. Or, send 16c in stamps and receive catalog and 1000 kernels each of onions, carrots, celery, radishes, 1500 each lettuce, rutabagas, turnips, 100 parsley, 100 tomatoes, 100 melons, 1200 charming flower seeds, in all 10,000 kernels, easily worth \$1.00 of any man's money. Or, send 20c and we add one pkg. of Earliest Peep O' Day Sweet Corn.

THE SALZER SEED CO., LaCrosse, Wis.

Choice Strawberry plants, strong, healthy, true to name. A trial will convince you of their superiority. Second-crop seed potatoes, Asparagus Roots, Seed Corn, choice varieties. Ringlet Barred Plymouth Rock Eggs, Maryland Farms for sale. Write for free catalog.



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FREE To prove that our Blizzards Belt Evergreens will grow in all parts of the country we offer to send 6 Fine Spruces 1/4 to 1/2 ft. tall free to property owners. Wholesale value and mailing expense over 30 cents. To help, send 5 cents or not as you please. A postal will bring the trees and our catalog containing many colored photo plates of our choice Blizzards Belt Fruits. Write today. The Gardner Nursery Co., Box 105, Osage, Ia.



NEW WARD BLACKBERRY

ONE OF THE BEST.

Fine stock of plants for fall delivery. Send for descriptive circular of the Ward. For other nursery products, send for general price list.

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Clay, Black, Whip-Poor-Will, Mixed and New Er

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Hollybrook and Mammoth Yellow Write for delivered prices.

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RARE BARGAINS IN Northern Virginia Farms

A Few Specimens:

No. 162. Contains 280 acres—80 acres in timber, balance cleared. This land is a splendid quality of grass, hay and corn land. It is smooth and level. Fronts on a good level road $3\frac{1}{2}$ miles from station. Farm is very well fenced and watered by streams with a good well at the house. About one acre in orchard, apples and peaches. Buildings: A new six-room house, barn 30x40 for horses and cows, corn crib and hen house. 75 acres of this land is in meadow. This a bargain for a progressive man. Price \$5,000.

No. 172. Contains 315 acres—40 acres in oak and hickory timber; 5 miles from station, situated near the village; considered one of the best wheat and grain farms in Fairfax County. The land is a little rolling; machinery can be run all over it. The land is all in good state of cultivation; well fenced and watered by springs and running streams. Improvements are a good 7-room house with elegant shade, good stable and all out-houses in good repair. Price \$20 per acre.

No. 176. Contains 346 acres, about 70 acres in timber, mostly oak and hickory, situated 1 mile from store, school church, shops, etc.; 6 miles from R. R. station. This land is a little rolling and is a fine quality of chocolate clay soil, excellent for grass and grain of all kinds. Good orchard of about 200 apple trees. Farm is well fenced and watered by never falling streams. Spring in every field. Improvements: A good $2\frac{1}{2}$ story dwelling with 8 large rooms, 4 attic rooms, basement, barn, 40x70, in good repair, other out-buildings, all in good condition; farm is located on good road, and about \$10,000 is subscribed to macadamize this road to the railroad station. Price per acre, \$30.00

No. 193. Contains 156 acres, smooth land, chocolate clay soil, with good stiff clay subsoil, just rolling enough to drain well, 30 acres in good timber, balance cleared, watered by running stream, very well fenced. In good neighborhood located 7 miles from railroad station, in Loudoun county, sufficient fruit of all kinds for family use, 5-room house in fair repair, other small outhouses in good repair. Price \$3,000.00.

No. 194. Contains 175 acres, 25 acres in good timber, balance is cleared, 9 acres in orchard in full bearing, good six-room house, old barn, good granary, hen houses, dwelling in a grand oak shaded lawn, spring at house, farm watered by streams and springs, situated on good pike. One hour's drive from Leesburg, Va. Owner is anxious to sell. Price \$3,500.00.

Send for my Complete List,
Wm. Eads Miller,
HERNDON, VA.

Farm Weeds. American Steel & Wire Co., Chicago. An illustrated treatise on the eradication of farm weeds by the use of sulphate of iron. Our readers should send for this pamphlet, as they will find it most interesting.

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Planet, Jr. A handsome catalogue of the well-known "Planet, Jr." farm and garden implements, made by S. L. Allen & Co., Philadelphia, Pa.

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SPRAYERS.

As now is the time to buy your sprayers so that you will have them to use when the time comes, we show a complete and substantial Auto-



matic 4 and 5 gallon Sprayer. It is made in the all brass, also galvanized steel, has a safety valve, sufficient hose, and fine all brass pump fitted on the outside of the pump, so that the solution cannot get at the valves. Each stroke of the pump agitates the solution. It works by compressed air, all you do is simply to remove the handle, fill about two-thirds full of solution, pump about two minutes, then strap to your body, or carry it in one hand, and spray with the other. The solution is forced out in the form of a fog mist. It will spray trees twenty-five feet high, or will white-wash barns, coops, by using extra hose, and rods to elevate the spray. This sprayer is advertised elsewhere in this issue by the manufacturers, Ripple Hardware Co., Box V., Grafton, Ill. Write and get copy of their 1909 catalogue of sprayers and prepared sprayer mixtures and poultry supplies.

ARE YOU LOOKING FOR A

Good Investment

COME ON AT ONCE

A valuable blue-grass farm at sacrifice price; 227 acres, 54 timber, 73 grass; fenced in 7 fields; 6 springs, fine stream, 8-room stone house, slate roof, large cellar, attic; double cornhouse, barn, stable, stone dairy, stone meat-house; fruit, 28 acres in wheat, 2 cows, 20 head cattle, 6 horses, brood sows, hogs, etc.; all farm implements, harness, wagons, new dayton, etc.; furniture, stoves, bedding, china. Owner going abroad, offers this stock farm, best part of Loudoun county. With magnificent view on every side, completely stocked, house furnished, for \$11,000. \$6,000 down, balance to suit. Two hundred and sixty-four acres, 4 miles from Sterling, 6 miles from Herndon, in Loudoun County. Thirty acres in timber; artesian well; 3 never-falling springs; 7-room house, barn and outbuildings fair. A fine stock farm, paying 12 per cent. on investment, in high state of cultivation. Price \$7,000; \$2,500 down, balance to suit purchaser.

Two hundred and seventy-seven acres in good state of cultivation, just rolling enough; in a good neighborhood; 5 miles from Sterling, 6 miles from Herndon, in Loudoun County. Seventy acres in timber, mostly oak, part of it first class; faces on two roads; has been operated as a cattle, sheep and hog farm for 25 years. On account of old age the owner is offering his farm for much less than its true value; is well fenced, 2 houses in first class condition—one 10-room house, the other six rooms; large barn and all necessary outbuildings. Price \$8,500; one-third down, balance to suit.

A. H. BUELL,
Real Estate Broker,
Herndon, Fairfax Co., Va.

Please wire me at my expense when you are coming.

Mandy Lee Incubators AND Brooders

Are the only kind that will give results in every condition of climate and altitude. Endorsed by poultry raisers everywhere. The handsomest, best built and most satisfactory machines on the market to-day.

See the machines or write for catalogue and circulars.

THE IMPLEMENT CO.,
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SEED OATS 60 cts. a bu.

See Salzer's catalog page 129. Largest growers of seed oats, wheat, barley, speltz, corn, potatoes, grasses and clovers and farm seeds in the world. Big catalog free; or, send 10c in stamps and receive sample of Billion Dollar Grass, yielding 10 tons of hay per acre, oats, speltz, barley, etc., easily worth \$10.00 of any man's money to get a start with, and catalog free. Or, send 14c and we add a sample farm seed novelty never seen before by you.

THE SALZER SEED CO., LaCrosse, Wis.

A Neat Binder for your back numbers can be had for 30 cents. Address our Business Department.

Selected Offerings in NORTHERN VIRGINIA REAL ESTATE \$25.00 PER ACRE

Contains 735 acres, 2 1-2 miles Railway station, on thoroughfare; 125 acres of good timber; 60 acre blue grass meadow; cultivate 200 acres in wheat and corn and graze 125 head of stock annually; watered with mountain stream, running full length of farm, and numerous springs, also well at each house. Improvements: new 6-room dwelling, two large halls, two porches, cellar, large lawn and abundance shade; dwelling center of farm and well elevated; new horse barn 33 x54 containing 12 stalls and modern in design; one large bank barn; two machine houses; two good tenant houses; stone out buildings; large and small fruits; fencing in good condition. A very valuable stock farm in good state of cultivation.

\$20.00 PER ACRE

Contains 280 acres; 60 in small timber; balance in grass and in cultivation; one-half mile from railway station; on two public roads; apple orchard of about two hundred trees and in bearing; 7-room dwelling, good barn and all outbuildings, and all in good condition.

\$27.00 PER ACRE

Contains 400 acres; 60 in timber, balance in grass and in cultivation; wove wire and rail fencing and locust posts. At railway station on public road; bordering two large streams of running water; two wells at house. Improvements, 7-room dwelling, two halls, large lawn, and abundance of shade, dwelling well elevated, near center of farm. Until recently was used as a dairy farm and is a valuable one. Must be sold to settle an estate.

For the asking, I will furnish description of a Northern Virginia farm, and the one you desire. No unreasonable delay.

GEORGE W. SUMMERS,

Box 21, Sterling, Va.

FARMS For Sale.

If you want a farm to raise grass, grain, stock, fruit or tobacco, buy from us. Chocolate soil with red subsoil. Address

W. W. BARNES & CO.,

LAND AND TIMBER AGENTS,
Amelia Courthouse, Va.

FOUR CROPS EACH SEASON.

\$2,000 cleared per acre; send for booklet (Va. List 21) telling how it is done; also for picture and details of this 40-acre money-maker; with two horses, wagons, two cows, two yearlings, and farm implements included; new two-story house; beautiful shade; stable; three hen houses; easy drive to Richmond; to settle affairs at once, only \$2,600; write to-day.

E. A. STROUT COMPANY,

Scottsville, Va.

Please mention the Southern Planter.

LOWER PRICED SEPARATORS.

There is no question but there has been among the dairymen a crying need for a high-grade separator which could be sold at a lower price. Everybody wants a cream separator, but many have felt they could not afford to pay the high prices demanded. It remained for a Chicago separator manufacturer to meet this demand and to place a separator of the first class on the market at a price which is within the reach of even the smallest cow owner. We refer to the Davis Cream Separator, of Chicago.

The high price at which Separators have been sold has been due not to the expense of manufacturing, but to the costly plan of selling. Here is where the Davis people have opportunity to make their great cut in price. They have not cheapened the material, or reduced the capacity, or built an inferior machine, but they have adopted the plan of selling direct from the factory, cutting off all State agents', jobbers' and dealers' commissions and expenses. They have found that by pursuing this policy they are able to sell direct to users their simple Davis Separator at a price but little more than half what other standard machines are selling for. And it is one of the easiest running, cleanest skimming, easiest cleaned machines on the market. We believe that an investigation, both as to quality and price, will prove what we have said to be true. The way to begin is to write to the Davis Cream Separator Co., 56-B. N. Clinton St., Chicago, for their catalogue. Not necessary to write a long letter; a postal card will do. Just address as above and say: "Send me your catalogue No. 126." It will come promptly.

FORM A POTATO CLUB.

How to grow a larger and a better crop of potatoes without increasing the acreage is an important subject for potato growers to consider. The farmer who has been growing 200 bushels per acre should strive for 225 bushels in 1909, and even more. No one, no matter how large the crop, has reached the limit. Do some thinking on the subject and then invite a half dozen of your neighbors to come to your home some evening and talk it over. Form a "Potato Club." Wonderful results will be sure to follow. Do not set a date for the meeting, however, until you have sent for the 1909 "Iron Age" book which should be used as a text-book at your first meeting. This book also a copy for each member invited to join the Club, if name and address of each party is given, may be had free by addressing Bateman Mfg. Co., 167-P, Grenloch, N. J. The ladies should be invited, for if they do not take part in the "Potato Discussion," they can surely spend the evening pleasantly and profitably.

IDEAL DAIRY FARM.

Containing 173 acres more or less; 168 acres in high state of cultivation; 5 acres in woods; farm in sight of double-track Southern R. R.; one mile from school, church and mill. Farm in splendid neighborhood; rural mail route within 150 yards of the house. House in nice grove; has 9 rooms including kitchen, 2 wells at door; barn 32x95 feet; 40 feet of barn is new and fitted up for 30 cows; has up-to-date hay fork and steel track; Silo in barn 12x18x24 feet, cemented bottom and 8 feet up from bottom all around; old part of barn is fitted up for 6 horses, feed-room and room for young stock; hay fork in old part of barn on wooden track; corn house, mill house, granary, large box stall between corn house and granary; large shed for binder; 2 dairy houses 10x12—one has cement floor and has good well with pipes running to tank for milk cooling; also has new 1,000 pound capacity steam turbine Sharpless cream separator, with boiler attached for running same and heating water for washing milk utensils and sterilizing purposes; about thirty good milk cans, one large Star milk cooler; good well at barn with pipes laid to watering troughs in barnyard; fine well in yard with pipes laid to dairy house for running water to milk cooler; 20 acres of wheat—looking fine; 16 acres rye—looking fine. No waste land on farm; can run binders or mowers all over it except about 1 acre which has some large rocks on it; farm lies fine, and is watered by running water except two fields. Four good work horses—all large; Deering binder in good repair; 2 mowers, 1 hay rake, 4 wagons, 1 Bickford & Huffman disc drill, 1 three-horse Ontario riding plow, 1 three-horse walking plow; 2 cultivators, 4-horse disc harrow, spring and spike tooth harrow, double check row corn planter, corn cutter, corn sheller, feed mill, manure spreader, good 6-horse steam engine, new 3½ gasoline engine, new pump jack, No. 13 Ohio ensilage cutter, about 40 feet of elevator for cutter, 50 bbls. of good corn, 2,000 bundles fodder, about 15 tons clover, timothy and pea hay, about 50 tons ensilage, 20 choice cows, 7 choice heifers from my heaviest milkers by thoroughbred bulls. Am shipping milk to Washington. Shipping 52½ gallons per day now (Jan. 5th) at 22c. per gallon; will be shipping 60 gallons by February 1st. Am getting 22c. for 6 months Nov. to May 1st., and 15 c. per gallon from May to Nov. 1st. This property run with 30 cows such as I have, will I believe net \$2,000 per year. Cur dairy scored higher than any one of the dairies in my section. My herd of cows are as heavy milkers as are in the country. We are shipping 52½ gallons from 17 cows, the heifers are coming fresh some of them this winter. I do not live on the farm and have no help of my own and want to go in other business, and will sell the entire outfit. All purchaser has to do is to come here and go to work; everything here in shape of feed and stock, will give possession at once. First party coming will get one of the best bargains ever offered in Northern Virginia. Will sell entire outfit as described herein for \$12,500. How much could you pay down and balance each year?

A. H. BUELL,
Herndon, Va.

Please wire at my expense when you are coming.



VIRGINIA FARMS

\$8 per Acre and up

with improvements. Good productive soil, abundant water supply and best climate on earth. Near railroad and good markets with best church, school and social advantages. For list of farms, excursion rates and our beautiful pamphlet showing what others have accomplished, write to-day to F. H. LA BAUME, Agri. and Indl. Agt., Norfolk & Western Ry., Box 500, Roanoke, Va.



VIRGINIA FARMS

229 A.—1 1/4 mile from R. R. Sta. \$3,500. Running water, county road front and other attractions.
 140 A.—large orchard, barns, dwelling, farm fenced into fields and other improvements. Land in high state of cultivation—Price \$4,000.
 82 A.—near electric line, necessary buildings, running water, fine truck and poultry farm—\$2,500.
 488 A.—Valuable river farm—2 mi. from R. R. station.—\$7,320.
 Write for complete list.

FRANK H. COX,
 Resident Agent. Ashland, Va

MARYLAND AND VIRGINIA FARMS NEAR WASHINGTON.

Unsurpassed as money-makers; best place on earth for farmers, dairymen, stockmen or poultry men; mild climate, best markets in country; highest prices; no such word as "Fail" for industrious man. Big bargains here now. \$500 places to select from. Catalogue free.

THE SOULE CO., Washington, D. C.
 Largest Farm Dealers in the South.

STANDING TIMBER

For sale—A splendid piece of oak and pine timber on about 100 acres of land 1-2 mile from station, good hauling. About 500,000 feet is the estimate. Will sell in a lump or have it cut on shares, taking 1-3 of hauling price for my part. The wood also can be handled with a good profit.

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Special Attractions in

Loudoun County, Va., Farms.

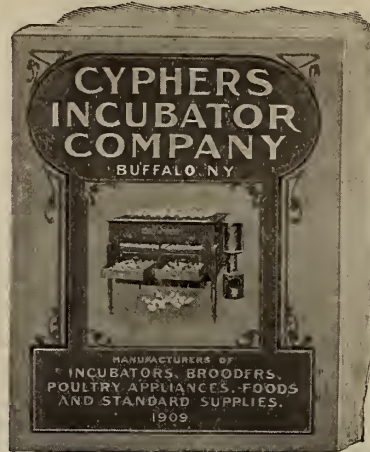
I will show you any farm for sale in the County FREE OF CHARGE.

DeL. S. CRITTENDEN,
 Broker, Ashburn, Va.

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"WHAT THE POULTRY BUSINESS IS."

Five interesting chapters on poultry raising will be found in the new free annual book of Cyphers Incubator Co., Buffalo, N. Y. They cover the subjects of Feeding Chickens, Laying Records, Incubating, Brooding and "What the Poultry Business Is." Both beginners and experts will get from these chapters valuable information they do not now possess—and one cannot know too much in and about the poultry business.



Fully Illustrated—212 Pages.

This great annual book has this year excelled all previous years in the attractive pictures it contains. Superior standard-bred farm fowls are portrayed, as well as numerous prize winners at America's big shows. There are also photographs of the highest priced birds ever sold, and letters from their owners. These pictures include the five fowls sold to Madame Paderewski for \$7,500. There are about seventy illustrations of the world's biggest and most successful poultry and duck plants and experiment stations, both American and foreign; over fifty photographs of leading fanciers and experts whom you have perhaps read about, but never seen, and some nice flocks of fowls raised by women fanciers. This goes to make up a collection of attractive information that cannot be secured in any other book, and it costs you nothing.

The balance of the book is devoted to describing what Cyphers Company makes and sells, and how it is made. It is startling evidence of the growth of the poultry industry. By no means the least interesting is the long list and illustrations of poultry supplies made by this leading poultry supply Company on its nine acres of floor space, by its 500 or more employees, at its seven branches.

Write to-day for this book. It will not cost you a cent, even for postage. Simply mail your name and address to one of the branches of the Company (the one nearest to you), ask for the

ATTENTION

HOMESEEEKERS AND INVESTORS.

I sell and exchange Virginia Real Estate of all classes, such as Grain, Dairy, Fruit, Stock, Truck, Poultry and Bluegrass Farms, Village Homes and Business Places of all classes. The reason I make a specialty of the two suburban counties—Loudoun and Fairfax—they offer the homeseekers more advantages combined than any country known to me. This fine portion of Virginia, extending from the national capital to the top of the Blue Ridge Mountains, is not only beautiful and healthy, but is very accessible to Washington and Alexandria cities by rail and pike, which gives all producers a fine home market.

My facilities for locating you in this section of Virginia are second to none. State what kind of property would interest you. I have a large number and great variety of properties, and can very likely suit you. New catalogue and map mailed free on request.

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Old Virginia Farms.

Climate and Productiveness unexcelled. Largest sale list in the State. For full particulars and Free Catalogue address

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MOST SELECT LIST, and in all sections of the State.

FREE CATALOGUE.

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130 ACRE FARM

For Sale 8 miles from Richmond, 1 mile from depot on steam and electric railroad. Good dairy and truck farm, about 70 acres cleared, rest in timber. Cannery on next farm. For particulars address.

R. E. BUTLER,
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Virginia Farms

Handsome Country Homes and High-Grade Farm Lands a Specialty.

J. E. WHITE, "THE LAND MAN,"

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CHOICE VIRGINIA FARMS

Along Chesapeake & Ohio Ry. as low as \$5.00 per Acre.

Rich Soil, Mild Winters, Good Markets. For Handsome Booklet and Low Excursion Rates address G. B. Wall, Real Estate Agent C. & O. Railway, Box G., Richmond, Va.

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From the Mountains to the Ocean. Catalogue free. Loans made on farms. Established 1875.

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Big Book and mention the name of this paper. Address Cyphers Incubator Co., Buffalo, N. Y.; Boston, Mass.; New York City; Chicago, Ill.; Kansas City, Mo.; or Oakland, California.

SAVED \$75.00 FOR THIS MAN.

Lebanon, Kan., May 29, '08.

Dr. B. J. Kendall Co.,
Enosburg Falls, Vt.

Gentlemen:—Have been using your Spavin Cure; it has saved me just \$75.00 on my mare. Please send me your Treatise on the Horse and His Diseases.

Yours truly,

OTTO C. STONGE.

REAL GALVANIZING.

Undoubtedly, the farmers of this country have wasted a great many thousand dollars in recent years on poor wire fence. Many of us have been unable to understand why what seems like a good fence will become utterly useless in such a short time. A little booklet has been written by an expert on this subject, who shows how in the rush to get rich quick many manufacturers have neglected the fundamentals of good fence building. They have built fences with light uprights, and have used wire that was hardly galvanized at all. Mr. Brown, the author of the book, points out that in true galvanizing the galvanizing compound is not merely washed on the wire like cheaply plated jewelry, but that a chemical action takes place whereby the spelter used for galvanizing becomes a very part of the wire. It is not a simple covering for the wire, but a part of the wire itself. He attributes the long life and durability of the Brown Fence to its superior galvanizing and its extra heavy uprights.

We know every one of our readers will be interested in Mr. Brown's little book. Write to the Brown Fence and Wire Co., Cleveland, Ohio, and ask for it.

GRANT'S DESTINATION.

The confidence of the followers of two of our January generals is illustrated in the story of a captive Southern soldier who chanced to see General Grant hastening by.

"General, where are you going?" asked the Confederate.

"To Petersburg, I think," was the reply; "but maybe to heaven or hell."

"Well, I tell you, General," replied the soldier, "Bob Lee's at Petersburg and Stonewall Jackson's in heaven. I guess hell's the only place left for you."

That Grant appreciated the grim assignment was indicated by the smile of amusement on his face as he went on.

—La Salle Corbell Pickett, in January Lippincott's.

CHEAP FARMS.

CLOSE TO WASHINGTON.

Eight acres of land in the thriving town of Herndon, Va., at station; ten-room house; modern improvements, sanitary plumbing, bath, etc.; 90 feet of veranda; shaded lawn; bored well at door; excellent water; good stabling and poultry quarters; some choice fruit; \$4,500; \$500 down, balance to suit.

This is an excellent house and ought to interest the best class of families seeking country homes. Prompt possession.

Also a village farm of 20 acres, near station, in Herndon; 8-room house, stabling, artistic grounds, lawn and shade; excellent water; fruit in abundance (apples, pears and grapes). \$4,500; down, balance to suit.

Herndon is located in a beautiful plateau region one hour from and four hundred feet above Washington on the Bluemont division of the Southern Railway. No typhoid; no malaria; no mosquitoes.

25 acres, 3 miles from Herndon; near store, school, etc; 15 acres under cultivation, balance in timber; 6-room house, fine orchard in bearing and young orchard; lasting stream; fenced garden; good barn and outbuildings. Price very low—\$2,000; \$500 down, balance easy terms.

Ninety-seven acres of mountain land in Loudoun Co., near the weather bureau, 8 miles from Bluemont, 2 miles from Upperville; about 40 acres in wood; fine blue grass spring; good house of 5 rooms; fine shade; plenty of fruit; barn and outbuildings in good condition. Price only \$1,500. Will sell half interest for \$750 to one who has had experience raising and handling fruit. This is the most ideal location for a fruit farm in Loudoun county.

34. One hundred and thirty-five acres near railroad, in Fairfax county. Cheap, comfortable house, good barn, 35 acres in timber, very fine apple orchard. A good dairy farm. Price \$4,500.

35. Ninety-nine acres 2 miles from station in Loudoun county, in high state of cultivation. Comfortable house of 5 rooms, fine stream and well, barn that cost \$1,000, good outbuildings. Price \$5,500.

39. Eighty-two acres 1 1/2 miles from Southern railroad in Loudoun county. Eight acres in timber, good clay soil, springs and streams, good house of eight rooms, with fruit and shade trees, good barn and necessary outbuildings. A good farm and a bargain. We think \$6,000 will buy it. On easy terms.

52. One hundred and ten acres, 1 1/4 miles to post-office, 150 yards to electric line, in Fairfax county. About 50 acres cleared, 60 in pine and oak timber, 36 in grass, 14 in various other crops; soil fine quality of loam and clay, not very hilly has well at house,

spring 200 yards from 8-room house, 64 feet of porches, nice cellar, all in good condition; fine lawn, 20 Norway maples, new barn 30x40, stabling 13x30, one 14x30, one double wagon house 20 x25, new poultry house 16x50, new wood house 10x20. This is a very desirable property. Price \$70 per acre, \$2,000 cash, balance to suit.

87. Ninety-seven acres 2 miles from railroad, 1 1/2 miles from electric line, in Fairfax county; 62 acres in timber, balance under cultivation; red clay soil, land rolling; well and four lasting springs; new frame house of 5 rooms, nicely located near road, good shade. Barn for 12 horses and all necessary outbuildings, in good condition. One can cut four or five thousand cords of wood on place, besides much nice timber. Live stock, farm implements and everything for \$4,500. Bargain.

71. Three hundred and eighty-seven acres, 5 miles from electric line, in Fairfax county, in a high state of cultivation, on pike, one of the best farms in the county, good neighborhood, survey for electric line near house, 10-room house in good condition, beautiful lawn, large barn in good shape and outbuildings, fine apple and peach orchard. Has been a first-class stock farm for a number of years. Price, \$21,000, on easy terms.

LOUDOUN COUNTY

First Class Stock Farms.

77. Three hundred acres, 3 miles from railroad, in Loudoun county, in a high state of cultivation, well fenced, plenty of fruit; running streams and springs; on pike. Fine large Colonial house, lawn and shade, large new barn with basement; necessary outbuildings. This is considered one of the best stock farms in the county, and a bargain. Price \$60 an acre, worth \$100, on easy terms.

78. Four hundred and eighty-five and a half acres, 1/2 mile from railroad and a large, thriving town, in Loudoun county, in a high state of cultivation; 50 acres in timber, rest mostly in blue grass; will feed and graze ready for market 100 steers. New house of 10 large rooms, with modern improvements; cost \$5,000; tenant houses and large barns; can be operated as a dairy or stock farm. Owner has been offered \$225 per acre for one field for building purposes on macadam road. Price, \$34,000 on easy terms. A beautiful place.

93. Six hundred and seventy-five acres, in Loudoun county; good house, barn and outbuildings; in a high state of cultivation, part in timber. A good investment. Price \$27,000, \$25,000 has been offered for this place.

Write for new list; farms in Northern Virginia, Loudoun and Fairfax county stock farms a specialty.

Write or telegraph me when to meet you.

A. H. Buell,

Real Estate Broker,
Herndon, Va.

Farms in Northern Virginia

DAIRY, GRAIN, STOCK, POULTRY, FRUIT.

Near Washington and Baltimore, and in easy reach of Philadelphia and New York.

Unlimited markets and unsurpassed shipping facilities.

Reasonable in price. Near good live towns, schools and churches. Write us.

CLAUDE G. STEPHENSON,
(Successor to Stephenson & Rainey, Herndon, Va.)

SOUTHERN POULTRY GUIDE

This is Cal Husselman's great Poultry Book, just off press. It is freely illustrated with numerous useful and handy home-made accessories to the poultry business. It contains his 40 years' experience as a poultryman. It is the best poultry book ever printed and just what you want. It contains more plain, everyday common sense about the chicken business than you ever read. 150 pp., cloth bound. Price? We will almost give it to you. Just send \$1 and we will enter your order for the book and throw in a year's subscription to The Southern Planter.

SOUTHERN PLANTER,
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White Plymouth Rocks—Cocks—Mary Berry, first; C. M. Walker, second; D. J. Hoge & Son, third. **Hens**—D. J. Hoge & Sons, first; Mary Berry, second; W. H. Mayer, third. **Cockerels**—C. M. Walker, first and second; Mary Berry, third. **Pens**—C. M. Walker, first; C. E. Gibbs, second.

Buff Plymouth Rocks—Cocks—J. E. Morris, first and second; A. H. Kirk, third. **Hens**—J. E. Morris, first; A. H. Kirk, second. **Cockerels**—A. H. Kirk, first and second; Frank Robey, third. **Pullets**—A. H. Kirk, first; Frank Robey, second. **Pens**—A. H. Kirk, first.

White Wyandottes—Cocks—A. H. Buell, first. **Hens**—A. H. Buell, first and third; Hutchinson & Heitmeuller, second. **Cockerels**—Hutchinson & Heitmeuller, first; A. H. Buell, second and third. **Pens**—Hutchinson & Heitmeuller, first; Buell, second and third.

Silver Laced Wyandottes—Cockerels—H. H. Scott, first; J. W. Smart, second. **Pullets**—J. W. Smart, first; H. H. Scott, second.

Columbian Wyandottes—Cockerels—H. A. Sager, first; C. M. Walker, second. **Pullets**—H. A. Sager, first and second; Walker, third.

Partridge Wyandottes—Pullets—C. M. Walker, second and third and first pen.

Black Langshans—Cocks—D. J. Hoge & Son, first, second and third. **Hens**—D. J. Hoge & Son, first, second and third. **Cockerels**—D. J. Hoge & Son, first, second and third. **Pullets**—D. J. Hoge & Son, first, second and third. **Pens**—D. J. Hoge & Son, first.

R. C. Black Minorca—Cocks—J. Wilkins, first. **Hens**—Wilkins, first, second and third. **Cockerels**—Wilkins, first, second and third. **Pullets**—Wilkins, first and second. **Pens**—Wilkins, first and second.

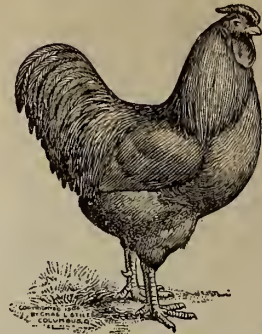
S. C. Black Minorca—Cockerels—A. H. Burton, first. **Pullets**—A. H. Burton, first.

S. C. Rhode Island Reds—Cocks—A. S. Harrison, first; Beans, second; H. Day, third. **Hens**—Harrison, first; Day, second and third. **Cockerels**—Harrison, first and third; Beans, second. **Pullets**—Harrison, first and second; Beans, third. **Pens**—Harrison, first.

R. C. Rhode Island Reds—Cockerels—L. F. Hough, first. **Pullets**—L. F. Hough, first and second.

S. C. White Leghorns—Cocks—M. K. Stroud, first and second; Sager, third. **Hens**—Sager, first; Stroud,

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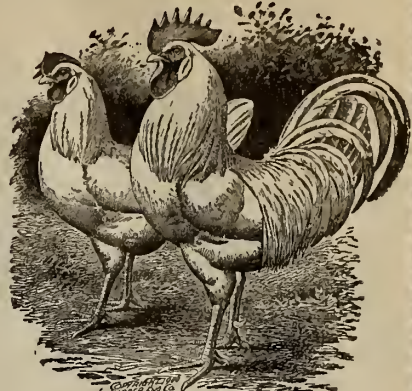
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Black Leghorns—Pullets—Dorothy Choate, first.

S. C. Buff Orpingtons—Cocks—Van A. Zohn, first. Hens—C. E. Gibbs, first. Cockerels—Van A. Zohn, first; Hutchinson & Heitmeuller, second; C. E. Gibbs, third. Pullets—C. E. Gibbs, first; Van A. Zohn, second and third. Pens—Hutchinson and Heitmeuller, first; C. E. Gibbs, second.

S. C. Black Orpingtons—Pullets—W. A. Metzger, first. Pens—W. A. Metzger, first.

S. C. White Orpingtons—Cocks—Day, first. Hens—Day, second.

Black Sumatras Games—Cocks—first, second and third. Hens—Warner, first, second and third. Cockerels—Warner, first and second; Wilkins, third. Pullets—Warner, first, second and third. Pens—Warner, first.

Cornish Indian Games—Cocks—Wampler, first; Day, second. Hens—Wampler, first. Cockerels—Wampler, first; D. J. Hoge & Son, second; Day, third. Pullets—D. J. Hoge & Son, first; Wampler, second and third.

White Indian Games—Cocks—Day, first. Pullets—Day, first.

B. B. Red Games—Cocks—R. S. Crippen, first. Hens—Crippen, first.

B. B. Red Game Bantams—Cocks—T. W. Dudley, first. Hens—T. W. Dudley, first. Cockerels—L. F. Hough, first; T. W. Dudley, second. Pullets—T. W. Dudley, first; L. F. Hough, second and third.

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A SPECIALTY.

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 Wyandottes,
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Are the best for the Farmer, the Trucker, the Amateur. They lay more eggs at less cost for feed. The eggs hatch better, and the chicks grow faster (cost less to raise). We guarantee our eggs 90% fertile. Stock sold with the distinct understanding that it may be returned if not entirely satisfactory, and price will be refunded without question.

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EXCLUSIVELY

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Ducks—J. L. Moffett, first and second.

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The Dr. H. B. Hutchison (Loving Cup) and the Association's \$5.00 in gold, for the largest and best display, single variety, was won by N. B. Warner, of Hamilton, Va.

Westmoreland Davis (Loving Cup) for best display of single variety, was won this year by N. B. Warner, of Hamilton, on Black Sumatras.

President Sager's (Loving Cup) for the whitest bird in show, was won by Mr. C. M. Walker's first White Rock Cockerel.

Treasurer Moffett's (Loving Cup) for best Barred Rock Cockerel, was won by G. W. James, of Hamilton, Va.

William E. Miller's \$2.50 in gold, for the best pen in the show, was won by Hutchinson & Heitmeuller, White Wyandotte pen.

E. A. Kirk's \$2.50 in gold for the best cock in the show, was won by D. J. Hoge's first Langshang Cock.

A. H. Buell's \$2.50 in gold, for the best cockerel in the show, was won by G. W. James' first Barred Rock Cockerel.

T. H. Walker's \$2.50 in gold for the best female bird in the show was won by D. J. Hoge & Son, of Hamilton, Va.

J. J. Darlington's \$2.50 in gold, for the best Plymouth Rock Cock, Cockerel, Hen and Pullet, was won by A. H. Kirk's Buff Plymouth Rocks.

J. J. Darlington's \$2.50 in gold, for the best Wyandotte Cock, Cockerel, Hen and Pullet, was won by A. H. Buell's, White Wyandotte.

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J. J. Darlington's \$2.50 in gold, for

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At the great Richmond Show, Dec. 7-12, 1908, I won 10 firsts, one second, 3rd, 4th and 5th.

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Eggs from my best pens, \$1 per 15 or \$6 per 100; little chicks 15c each, shipped anywhere in U. S.; Tumbler Pigeons, \$2 pair; Belgian Hares, \$2.50 pair. Satisfaction guaranteed. J. A. ELLETT, Beaver Dam, Va.

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Satisfaction always guaranteed.

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These are the best bred-to-lay strains in the country. Eggs \$5 per 100; \$1 per 15.

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Cockerels, E. B. Thompson strain, \$2 to \$5 each. Satisfaction guaranteed.

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WHITE HOLLAND TURKEYS.

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**Glenview Orpingtons.
S. C. BUFFS EXCLUSIVELY.**

I will not sell any eggs for hatching next season. If you want some of the best stock of Orpingtons in the South, BUY NOW. Prices reasonable. State your exact wants.

B. S. HORNE, Keswick Va.

Black Langshan Eggs.

From grand birds of the great egg-laying strain. \$2 for 15, \$3.50 for 30, \$10 for 100.

Book your order for eggs now. Some choice breeding birds for sale. Write for descriptive circular.

A. M. BLACK, Tazewell, Va.

BLACK

LANGSHANS

Some nice stock for sale.

JOHN C. ADAMS,
Bristol, Va.-Tenn.

**STRICTLY
PURE-BRED FOWLS**

FOR SALE.

S. C. B. Minorcas and Toulouse Geese. Write me for prices and full particulars.

J. A. HICKS, Highland Springs, Va.

Buff Plymouth Rocks

Of fine quality. Pullets \$15 per dozen. Cockerels \$1 to \$5 each. Eggs in season.

MRS. F. C. NUSSEY, Massaponax, Va.
Money Order to Spotsylvania.

\$1.20, for the best Rhode Island Male in show, was won by Mrs. A. S. Harrison's first Cockerel.

CORRECTION IN AWARDS, VIRGINIA POULTRY SHOW.

In our haste to get the list of awards of this show for our January issue, we let in a few errors, which we have pleasure in correcting now:

S. C. White Leghorns—Fifth Cock. M. L. Burton, Richmond, Va. J. A. Ellett was credited with this award.
S. C. Buff Orpingtons—Second Cockerel, J. H. Thompson, Richmond, Va.

Barred Plymouth Rocks—First Cock and best display, B. S. Davis, Charlotte, N. C. Credited to W. B. Alexander.

F. S. Bullington and not A. J. Warren, was Secretary of the Dog Department.

PLANTING COTTON IN HILLS.

Practical tests made by the Southern Agricultural Experiment Stations and by a large number of planters has proved that there are many advantages in planting cotton seed in hills instead of in drills. This method saves half the labor of "chopping out," saves from three-fourths to one and one-half bushels of cotton seed per acre, and results in the production of an extra bale for every fifteen acres planted.

A booklet describing this new and money-saving method of planting has been issued by the Harriman Mfg. Co., of Harriman, Tenn., and will be sent to any one who will write for it.

CURED SWEENEY AND REMOVED A SPAVIN.

Dr. Sloan's Liniment and Veterinary Remedies are well known all over the country. They have saved the lives of many valuable horses, and are a permanent institution in thousands of stables.

Mr. G. T. Roberts, of Resaca, Ga., R. F. D. No. 1, Box 43, writes:—"I have used your Liniment on a horse for sweeney and effected a thorough cure. I also removed a spavin on a mule. This spavin was as large as a guinea egg. I regard Sloan's Liniment as the most penetrating and effective Liniment I have ever known."

Mr. H. M. Gibbs, of Lawrence, Kans., R. F. D. No. 3, writes:—"Your Liniment is the best that I have ever used. I had a mare with an abscess on her neck and one 50c. bottle of Sloan's Liniment entirely cured her. I keep it around all the time for galls and small swellings, and for everything about the stock."

Dr. Sloan will send his Treatise on the Horse free to any horseman. Address Dr. Earl S. Sloan, Boston, Mass., Station A.

**FREE RANGE
White Wyandottes**



Exclusively.

The yellow leg, blocky kind, heavy laying strain. Choice cockerels and pullets for sale. Give us a show.

DUNLORA POULTRY FARM,
Carson, Va.

**TAYLOR'S
WHITE WYANDOTTES**

Are Again on Top

Having won in Richmond, at the Virginia Poultry Association, December 7-12, 1908, 1st cock, 1st cockerel, 5th hen and 5th pen hens, also capturing the Breeders' silver cup and two medals from the National Wyandotte Club, as well as association ribbons.

A limited number of cocks for sale. Sold out of cockerels and pullets.

Orders for eggs booked now and delivered in order as received. Write me for prices. Correspondence a pleasure.

R. RANDOLPH TAYLOR
Hickory Bottom Poultry Farm,
R. F. D. 2, Beaver Dam, Va.

**NOW IS THE
TIME**



to place your order for eggs from my noted strain of White Wyandottes.

Orders booked now and filled in rotation. My 1909 matings contain the cream of many years careful breeding. My

stock is in perfect health and laying eggs that will hatch. Never owned better quality. No more stock for sale.

Eggs, prize matings, \$2.50 per 15; \$4 per 30. Utility matings, \$1.50 per 15; \$8.00 per 100. My new booklet will give further information.

R. O. BERGER, State Sec'y Nat'l White Wyandotte Club,
16 N. 20th St., Richmond, Va.

WHITE WYANDOTTES.

Rose and S. C. Rhode Island Reds. Eggs for hatching, \$1 per 15; \$1.75 per 30; \$2.75 per 50; \$5 per 100. Utility strain. Satisfaction Guaranteed.

Valley View Poultry Yards.
J. D. Glick, Prop. Route 1,
Box 41, Dayton, Va.



Silver Laced Wyandottes

Eggs for hatching from choice matings at \$1 per 15. Now booking orders. Vigorous Cockerels, \$1.25 to \$1.50. Trios, \$4. Choice lot of birds to select from. Can furnish in any quantities wanted.

All stock strictly first class and healthy.

DR. H. H. LEE,

Poplar Hill Poultry Farm, R. F. D. No. 4, Lexington, Va.



HINTS BY MAY MANTON.

The one-piece or semi-princesse, house gown is the one that active women are sure to require. The waist and skirt being joined by means of a belt, there is no possibility of annoying separation, and the gown can quite easily be slipped on and off, so that it is a genuine boon. This one is made in shirt waist style and closed at the left of the front. In the illustration the material is one of the heavier cotton fabrics, and a great many women prefer gowns that can be laundered at all seasons of the year, but light weight wool materials also are much used, viyella is a pronounced favorite, and is absolutely durable as well as attractive.



6183 House Gown, 32 to 42 bust.

The gown is made with the waist and skirt. The waist consists of fronts that are tucked over the shoulders, and a plain back with moder-

EGGS FOR HATCHING

Pens No. 1—Fancy Orpingtons that win.

15 for.....	\$ 4 00
45 for.....	9 60
90 for.....	14 50

Pens No. 2—High-Class Breeders.

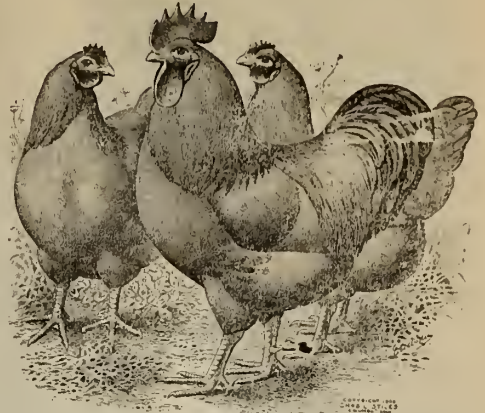
15 for.....	\$ 2 00
45 for.....	4 80
90 for.....	7 20

Pens No. 3—Thoroughbred Utility Stock.

15 for.....	\$ 1 00
45 for.....	2 40
90 for.....	3 60

Single-Comb Buff Orpington Stock for sale at all times. Write for prices.

HENRY J. and CHAS. G. SANGER,
Proprietors of The Ethernore Fruit and S. C. Buff Orpington Farm.
R. F. D. No. 2, DAYTON, VA.
The Best All-Purpose Fowls Known



BURKE'S GARDEN POULTRY

- | | |
|------------------------|-------------------|
| S. C. W. LEGHORNS | S. C. B. LEGHORNS |
| BARRED PLYMOUTH ROCKS | WHITE WYANDOTTES |
| PARTRIDGE WYANDOTTES | RHODE ISLAND REDS |
| MAMMOTH BRONZE TURKEYS | DUCKS |
| WHITE HOLLAND TURKEYS | |

From Best Strains Possible.

Each breed on separate farms under personal care of specialist. Stock correctly bred and VIGOROUS.
Stock, \$2 to \$5 for single specimens; trios and pens at special prices. Eggs \$1.50 to \$5 a sitting.
Unequaled bargains in White Leghorns and Muscovy Ducks. (Look up our record in lists of winners at recent shows at Richmond, Va., Bristol, Tenn., Charlotte, N. C.)

STANDARD-BRED POULTRY FARMS,

Burke's Garden, Va.

QUALITY STRAIN OF

White Wyandottes Only!

I have only heavy layers combined with high scoring, vigorous birds that are fit to win in any company. No birds used in my breeding pens that are not up to or above STANDARD WEIGHT.

Am now booking orders for eggs at following prices:—From three best pens, THE BEST MATINGS at \$5.00 per setting; \$12.00 for fifty eggs or \$20.00 per hundred.

From six pens of next best, ALL HIGH SCORING BIRDS, \$3.00 per setting; two settings for \$5.00 or \$15.00 per hundred.

From 11 pens of GRAND BIRDS, that score 90 points or better, \$2.00 per setting, three settings for \$5.00 or \$10.00 per hundred.

Write for illustrated "BOOKLET" describing our plant and breeding pens.

QUALITY POULTRY FARM,

F. A. Mason, Mgr.,

R. F. D. 2, Forest Depot, Va.

My aim "QUALITY! first, last and ALWAYS." Life member A. P. Association.

FOUR BREEDERS!

FOUR BREEDS.

EGGS FOR HATCHING

From high-class, pure-bred fowls.

S. C. RHODE ISLAND REDS. Eggs from 1st pen at last Va. State Poultry Show, \$5 for 15, from other good pens, \$1.50 to \$3.

BLACK LANGSHANS. Eggs from choice birds of Black's Original Egg-Laying Strain, State Poultry Show winners, \$1.50 to \$3 for 15.

S. C. WHITE LEGHORNS, Lakewood Strain, Eggs from high-scoring, vigorous, farm raised stock \$1.50 to \$3 for 15.

PARTRIDGE WYANDOTTES. Healthy, vigorous, fancy stock. Eggs from 1st pen \$2 for 15; 2nd pen \$1.50 for 15.

Good breeding birds of all four above varieties for sale.

TAZEWELL PURE-BRED POULTRY YARDS,

Tazewell, Va.

MRS. J. D. S. BROWN,

STAUNTON, VA., - Route 7.

Breeder of Pure-Bred

R. C. RHODE ISLAND REDS.

Eggs for sale—\$1 for 15. A few cockerels for sale.

MISS LOUISE V. SPENCER,

Blackstone, Va.

Headquarters for pure-bred R. C. Rhode Island Reds.

EGGS FOR HATCHING.

Member R. I. Red Club.

S. C. RHODE ISLAND REDS.

I have a stock for sale carrying as good blood as any in America. They are descended from prize winners at Jamestown, Providence and Nashville, the greatest shows in the country. Eggs for sale at \$2 per setting of 15. I never have seen finer birds than I offer for sale. Write me if you want the best that can be had at moderate prices. I breed for fancy and utility purposes.



ROBERT G. HUNDLEY,
P. O. Box 118, Farmville, Va.

SINGLE COMB

RHODE ISLAND REDS

EXCLUSIVELY.

Eggs for hatching, \$2.50 for 15 from 4 pens containing 1st pen State Fair 1908, 2nd pen Va. Poultry Show, pen headed by 1st cockerel State Fair, 1907, and pen of fine, large uniform birds. From general run of the yard of 75 hens, \$1.50 per 15, good utility stock.

A. R. VENABLE Jr., Farmville, Va.



S. AND R. C. RHODE ISLAND REDS

Columbian and White Wyandottes; B. F. Rocks Eggs for hatching, \$1 for 15; \$1.75 for 30; \$2.75 for 50; \$5 for 100. All stock has free range.

Riverside Poultry Farms, J. B. Coffman & Sons, Prop., Route 19, Dayton, Va.

SINGLE COMB

RHODE ISLAND REDS

Eggs for hatching (Thompson & De-Graft strain) \$1.25 per 15.

MISS BELLE BROOKE,

201 Thompson St., Staunton, Va.

R. AND S. C.

Rhode Island Red

Cockerels and Pullets for sale. Eggs in season. Prices right.

Miss Mamie H. Herbert,
Route 2,
Blackstone, Va.



ROSE COMB

RHODE ISLAND RED

Pullets from prize-winning stock— for sale. Orders for eggs received, \$1 for 15; 3 sittings for \$2.50. Place order early.

L. E. SMITH, Appomattox, Va.

SINGLE COMB

RHODE ISLAND REDS

Prize winners at Herndon Poultry Shows 1908 and 1909. Choice cockerels from \$3 to \$5 each. Well mated trios good foundation stock, \$5.00. Eggs from special matings, \$2 per 15.

A. S. HARRISON, Herndon, Va.

ately full sleeves. The neck is finished with a neckband and either a collar of the same or those of linen can be used with it.

The skirt is cut in eight gores and laid in inverted plaits at the back.

The quantity of material required for the medium size is 8-8 yards, 24, 71-2 yards 32 or 6 yards 44 inches wide when material has figure or nap; 8 yards 24, 65-8 yards 32 or 43-8 yards 44 inches wide when material has neither figure nor nap.

The pattern 6183 is cut in sizes for a 32, 34, 36, 38, 40 and 42 inch bust measure, and will be mailed to any address by the Fashion Department of this paper on receipt of ten cents.



6195 Girl's Gibson Dress, 6 to 12 years.

The Gibson dress is such a generally becoming one that it is not surprising its popularity should be constantly increasing. This one is made of light weight serge finished simply and plainly, but it would be found just as satisfactory for the pretty bright plaids that little girls are wearing so much, and for the washable materials that will be shown in such variety before many weeks. Among the latter, linen, madras and

PURE-BRED RHODE-ISLAND REDS

Cockerels \$2, pullets \$1.50, eggs, \$1 for 15. My fowls were imported from RHODE ISLAND in 1907. They are good layers and the young chicks very hearty. Address,

A. B. BURRUS, Fordwick, Va.

PURE-BRED R. C.

RHODE ISLAND REDS



Eggs, \$1 per sitting of 15. Special rates for Incubator Eggs.

MRS. J. A. UPSON,
R. F. D., Wellville, Va.

Indian Runner Ducks.

Greatest layers on each; easy to raise, no lice. Prize winners Virginia State Fair and Poultry Show. Also R. C. Reds and S. C. B. Leghorns. Ducks sold out. Eggs in season.

MRS. B. J. GRASBERGER,
Bumpass, Va.

MAMMOTH BRONZE TURKEYS

and Pekin Ducks. Turkeys of Wolf, Bird Bros., and other strains. Ducks of Rankin and other strains. We have the largest and finest birds this season that we have ever bred.

Shenandoah Valley Stock Farms,
Leslie D. Kline, Vaucuse, Va.

MAMMOTH BRONZE TURKEYS
WHITE TURKEYS
BUFF PLYMOUTH ROCKS
WYANDOTTES
GEESE MAMMOTH BUFF VERY RARE
MAMMOTH TOULOUSE
GUINEAS AFRICAN WHITE
PURPLE VERY RARE

JOHN C. FOWKE, Baldoek, S. C.

MAMMOTH

BRONZE TURKEYS

57 beautiful, pure-bred toms and hens for sale.

ENGLISH SETTER PUPS.

Good ones, Blue Belton strain. Also Berkshire Pigs entitled to registration. Write your wants.

MRS. GEO. M. WEST, Vinita, Va.

TURKEYS

THE OAKSHADE STRAIN OF M. B. TURKEYS FOR SALE.

NONE BETTER.

Write for Prices.

HUGUENOT POULTRY YARDS,
Dublin, Va.

PURE-BRED

Mammoth Bronze Turkeys

Bred from toms 40 to 45 lbs. and prize-winning stock, the best I ever raised. Also Silver Laced and Penciled Wyandottes, stock and eggs.

ELBERON POULTRY YARDS,
Otho M. Cokes, Prop., Elberon, Va.

PURE-BRED

MAMMOTH BRONZE TURKEYS

Hatched May, 1908—also a few two-year-olds, fine size and plumage. Bred from prize-winning stock. Prices reasonable.

G. W. PATTESON, Mantoo, Va.

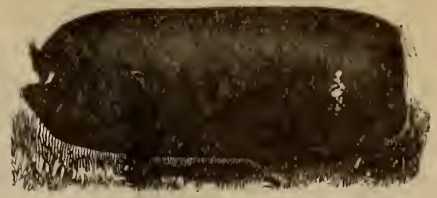


Ft. Lewis Stock Farm

THE BEST PLACE FOR BLOOD AND REGISTERED
BERKSHIRES

White Leghorn, all breeds of Plymouth Rock, Black Minorca and Rhode Island Red Fowls. Eggs from these pure-blooded birds for sale.

DR. W. L. NOLEN, PROPRIETOR, SALEM, VA.



fine gingham are especial favorites, and many girls wear them at all seasons.

The dress is made with fronts and back, and is laid in plaits in each shoulder, the opening being made invisibly beneath one of the tucks at the left side of the front. The fullness is held in place by the belt, and the simple sleeves are gathered into straight cuffs. The collar can be made to match or the neck can be finished with a neckband and the dress worn with separate collars of linen as liked.

The quantity of material required for the medium size (10 years) is 5 1-2 yards 24, 3 7-8 yards 32 or 2 7-8 yards 44 inches wide.

The pattern 6195 is cut in sizes for girls of 6, 8, 10 and 12 years of age, and will be mailed to any address by the Fashion Department of this paper on receipt of ten cents.

THE MASTERS PLANTER.

Every farmer who has cabbage, tobacco, tomato, cauliflower, strawberries, potatoes, sugar beet plants, etc., should know of the Masters Plant Setter, advertised in another portion of this paper. We believe that when a machine does better work than can be done by hand and at the same time is cheap, that every possible user should know of it. Please note the following letter, which speaks for itself:

Dear Sirs:—I used your Plant Setter on 35,000 cabbage and tobacco plants. I did the setting in the hottest and driest weather in June and every plant lived. This is wonderful, considering the heat and drought, and compared with the work of the horse planter. Your Planter is simple and absolutely perfect and I would not be without it for \$50.00. This planter enables me to set the best plants from the seed beds and not sacrifice the smaller ones, and the method of watering and fertilizing ensures perfect planting.

Yours truly
Syracuse, N. Y. E. A. CORNWALL.

A TESTIMONIAL.

Miller, S. Dak., Oct. 1, '08.

Chicago House Wrecking Co.
Chicago, Ill.

Dear Sirs:—Car of lumber received September 24th, all checked up and can say am very well pleased with it. Can recommend your lumber to any one you refer to me.

Very truly yours,
(Signed) J. W. ALLEN.

RHODE ISLAND REDS.

Single Comb.

Pure-bred stock at reasonable rates. First Pen, First Cock at Bristol, 1908, with 8 high-scoring pullets. Eggs \$2 for 15, \$5.50 for 50. Second Pen. Third cockerel Bristol, 1907. Eggs \$1 for 15, \$3 for 50.

A few fine birds yet for sale.

SANS TASCHE YARDS,
(without blemish)
Seven Mile Ford, Va.

SINGLE COMB RHODE ISLAND REDS.

The supremacy of the Reds, not only from a stand-point of beauty, but as a money-maker on the farm and in the back-yard, is questioned only by the ignorant.

One hen of the \$50 trio, on which my strain is built up, has laid in 6 years over 800 eggs and is still active and busy. I have reduced my flock to forty layers in four pens, and every fowl is beautiful, healthy, prize-worthy. I believe this is the best utility-fancy strain in the country. To avoid disappointment, I advise booking orders for eggs ahead.

BIG, PINK, FERTILE EGGS, \$2 for 13.

A few magnificent cockerels to spare, \$3 to \$5.

DR. J. H. C. WINSTON,

Hampden-Sidney, Va.

SYDNOR'S

Rose Comb Rhode Island Reds

SPEAK FOR THEMSELVES.

Won 40 Ribbons and Silver Cup at Richmond, 1908.

Eggs from the winners now ready for delivery.

W. D. SYDNOR, Barton Heights, Richmond, Va.

Matthews' "NEW UNIVERSAL" Garden Tools

6 GOOD TOOLS IN ONE

Seeder, marker, hoe, rake, plow, cultivator, Single or double wheel. Adjustments easily made. For planting and all kinds of cultivation.

Send for Free Booklet giving full description of implements.

AMES PLOW COMPANY,

Dept. 56

BOSTON, MASSACHUSETTS

FOR SALE BY GRIFFITH & TURNER CO., BALTIMORE, MD.

6 Styles Seeders

Opens furrow, drops in plain eight cutters marks.



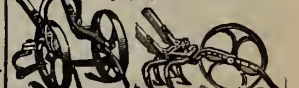
Hand Wheel Plows

Rear wheel gives steadiness & ease.

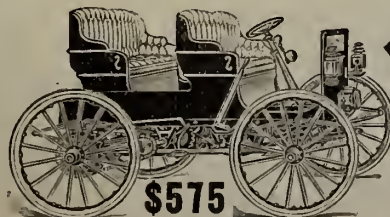


Double or Single Wheel Hoe

Cultivator, Plow, Rake, Changes quickly made. Cultivate between or astride the rows. Any depth, any width.



Note High Arch and Plant Guards. Bent Oak Handles on all Tools.



\$575

Takes All The Family Safely and Quickly There and Back Again

Costs only \$575—Air cooled—2 cylinders of 4 1/2-inch bore—Full 18-H.P.—Speed 4 to 25 miles per hour on high gear and 2 to 6 miles on low gear. Carries 7 gal. gasoline—Runs 20 miles on 1 g.l.—Great in sand, mud or on hills and splendid for country roads. No tire troubles. Easy riding.

Book No. A221 FREE

Write for book today—Investigate before you buy any car of any make. Get as good as the best and save money on first cost and lowest up-keep.

BLACK MFG. CO.,

124 E. Ohio St.,

CHICAGO, ILL.

BLACK MOTOR SURREY

Removable Rear Seat

Don't pay two prices—Buy direct and get one of these most popular Black Motor Surreys—illustrated and fully described in our "Black Motor Buggy" Book, FREE showing all single and double-seat cars with or without tops—This Surrey is most dependable—handsome finish—durable—Guaranteed fully and

FOR SALE
AT FARMERS PRICES

GUERNSEY CATTLE, DAIRY MACHINERY; GRAIN DRILL, PRIVATE CARRIAGE.

Two registered Guernsey Cows, Adv. Reg. ancestry—due to calve March or April, by a Registered Guernsey bull; 2 registered Guernsey bull calves, 6 months old; 1 Davis Cream Separator, capacity 450 pounds, power or hand; 1 new Davis power churn, capacity 20 gallons; 6—10-gallon milk shipping cans, new; 1—30-gallon hot water expansion tank, new; 1—4 H. P. Charter Gasoline engine, now in use. 1 pump jack; 1 Buckeye grain drill, all latest attachments, used one season; 1 handsome rubber-tired station carriage, excellent condition.

Liberal terms, 60 days credit to responsible party all amounts over \$100. Address "GUERNSEY," Care Southern Planter.

Duroc Jerseys

We are offering twenty young sows bred to a good son of the great Commodore. These sows are first class in size, bone, color and breeding. They are the choice of their respective litters. Buy a bred sow or two and begin breeding a profitable and prolific hog. Write for our circular and proposition to the purchaser of two or more sows.

WARREN RICE, Vaucluse, Va.
Frederick Co.

QUALITY Poland - Chinas.

Lest you forget we have the best breeding and individuals in P. C. blood in Va. at farmers' prices. Young pigs and bred sows "the best ever."

A son of the "King of Them All" at head of our herd. Write us your wants.

H. B. BUSH & BRO.,
Michaux, Powhatan Co., Va.



Reg. Poland-Chinas

Sunshine Perfection Strains.

Choice 3 months pigs, either sex, \$5; Gilts and Service Boars, \$10 to

\$15. Write for prices on any age wanted. All stock healthy and vigorous.

F. W. HOUSTON, Clifton Farm,
Lexington, Va.

TAMWORTHS.

The lean bacon hogs—pigs, bred sows, and service boars, all registered and of best blood.

BERKSHIRES.

Fine pigs and service boars entitled to registration and of blue ribbon stock. Am out of Poland-China pigs at present.

J. C. GRAVES, Barboursville, Va.

SUNNYSIDE BERKSHIRES.

Boars in service. "Premier Duke," son of Premier Longfellow; "Peerless Premier," sired by Lord Premier III, and imported "Hightide Commons." Also a number of sows rich in Premier blood. Prices reasonable.

W. R. Walker, UNION, S. C.

NEW STATE TUBERCULOSIS SANATORIUM.

Virginia State Board of Health Makes Important Announcements.

Richmond, Va., Jan 23, 1909—(Special).—The State Board of Health announced to-day that Dr. Robert F. Williams, of El Paso, Texas, who was elected Superintendent of the State Sanatorium for Consumptives, has accepted the position, and will assume his duties by March 1st.

Dr. Williams is a native of Virginia, and a nephew of Bishop Channing Williams, of Japan, but he is not a relative of the Health Commission, Dr. Ennion G. Williams. The new superintendent is a graduate of the University of Virginia, and was for some years a professor in the Medical College of Virginia, at Richmond, and moved to Texas in 1906. The selection of the Board is considered a particularly fortunate one, in view of Dr. Williams' wide experience and special training for this line of work.

The Board also announced that the Sanatorium at the old Red Sulphur Springs would be opened in the course of a few weeks, with accommodations for a considerable number of patients. This number will be increased as rapidly as arrangements can be made to house the patients. The Board has decided to call the Sanatorium the "Catawba Sanatorium," in view of its location in the valley of that name.

In speaking of the outlook to-night, Dr. E. G. Williams, Health Commissioner, said: "The State Board does not intend to make the Catawba Sanatorium a resort for hopeless consumptives, and we will for the present at least, admit only those patients whose cases are deemed curable. This regulation is necessary, in order that cases which can be cured may not be crowded out by those who have no chance of recovery. The Board has also decided that a minimum charge of \$5.00 per week will be made to all patients admitted to the Sanatorium."

A GOOD ROOFING.

Amatite is a self-reliant roofing. You don't have to go out and coat it every few months or patch it up to stop leaks. After it is laid, you can go off and forget about it, and it will stay at its post and do its duty year after year. A booklet about it and a sample may be had for the asking from the Barrett Manufacturing Company, New York, Chicago, Philadelphia, Cleveland, Cincinnati, St. Louis, Allegheny, Kansas City, New Orleans, Minneapolis.

Campbell Co., Va., Dec. 12, '08.

The "Work for the Month" in the Southern Planter has been of the greatest possible benefit to me.

MISS ANNIE RODE.

RED POLL CATTLE

The great breed for the South and the greatest of all breeds for milk, butter and beef. We have the right breeding and good individuals at prices to suit.

DORSET SHEEP

Are reliable for early lambs. Early lambs are what the Southern farmer, through natural advantages, can beat the world on.

POLAND CHINA HOGS.

PURE-BRED POULTRY,

ALBEMARLE PROLIFIC SEED CORN,

ALBEMARLE PIPPINS

and

FANCY RED APPLES.

Arrowhead Stock Farm,

SAMUEL B. WOODS, Prop.

CHARLOTTESVILLE, VA.

REDLANDS FARM RED POLLED CATTLE

One splendid young registered Red Poll Bull; beautiful conformation; exceptional animal.

One fine Red Poll Bull calf.

Three specially fine pure-bred

SHROPSHIRE BUCKS

2-year-olds.

Address:

AARON SEAY, Manager,

Carter's Bridge,

Albemarle Co., Va.

RED POLLS

Will Virginia and North Carolina farmers be convinced that these are the cattle for them? Write for photos and records. We will interest you. Second prize bull at last International now at head of herd. Two prime cows now ready. Most any time you can buy a calf.

H. B. ARBUCKLE,
Maxwelton, W. Va.

Devon Herd Established 1884. Hampshire Down Flock Established 1880.

DEVON CATTLE

BULLS AND HEIFERS,

HAMPSHIREDOWN SHEEP,

RAMS AND EWES.

ROBERT J. FARRER, Orange Va.

THOROUGHbred

BERKSHIRE BOARS,
JERSEY BULL CALVES,
DORSET BUCK LAMBS.

Sire of Calves, FLYING FOX, #5456, son of Flying Fox, who sold for \$7,500 at the Cooper sale, 1902.

All stock in best condition and guaranteed as represented.

F. T. ENGLISH, Centreville, Md.

Please mention the Southern Planter.

GALLOWAYS

Registered stock of both sexes for sale.

No orders taken for bulls except calves for future delivery.

Cows and heifers, all ages.

Sold on approval. I take all risks. Prices moderate.

Built like hogs, fatten like hogs, and make fine robes.

N. S. HOPKINS
Gloucester, Va.

Ingleside Herefords

Polled and standard bred—200 head in herd. All ages, both sexes. Write for catalogue and prices. Inspection invited. Farm near Alderson, W. Va., on C. & O. R. R. Address.
S. W. Anderson, Blaker Mills, W. Va.

VALLEY FRONT FARM.

Sassafras, Gloucester Co., Va.

I have a nice lot of registered Hereford Bulls and Heifers, for sale at farmers' prices. Also a number of grade Heifers and cows. My herd represents best strains and choice individuals.

Wm. C. Stubbs, Prop.

ANGUS CATTLE.

SOUTHDOWN SHEEP.

ESSEX PIGS.

Three fine bulls, 4 mos. to 2 years old; one choice 5-year-old cow, bred; a number of young cows. A few early spring lambs left. A number of young pigs for November and December delivery. All stock first-class. Prices reasonable

L. G. JONES, Tobaccoville N. C.

Fine Angus Calves.

Two beautiful registered yearling Angus heifers, just bred to our herd bull, at \$60 each.

W. M. WATKINS,
Saxe, Charlotte County, Va.

Aberdeen-Angus Bulls

FOR SALE.

Reporter Lad, No. 97135, 3 years, excellent animal, can't use longer on my herd; also 2 grade Angus bulls, rising 1 year. Price and full particulars.

J. McPHAIL, R. F. D. 5, Richmond, Va.

ROCK SPRING FARM

Offers for Sale

REGISTERED GUERNSEYS

of the best strains; Registered Duroc anerkd B shire Swine; Breeding stock and eggs from B. Rocks, Pekin Ducks, White Holland Turkeys and Guineas.

H. T. HARRISON, Prop. Leesburg, Va.

Please mention the Southern Planter.

ENLIGHTENED SELF-INTEREST.

There is one motive behind all business dealings, the mainspring of all business transactions. People buy and sell with one fundamental object—the hope of gain. It is a matter of self-interest pure and simple, and doubtless will remain so to the end of the chapter. The difference in merchants lies in the fact that this self-interest may be brutal and unprincipled with the result that it is shortsighted and considers only temporary gain or that, on the other hand, it may be controlled by the highest aims and be rewarded by permanent success.

In the United States one of the most conspicuous examples of self-interest wisely consulted is the seed business of D. M. Ferry & Co. It would be hard to better serve the purchasing public than by their method of supplying annually every local dealer in the country with seeds freshly put up, and then at the end of the season reoving from the retailer all stocks left on hand, thus preventing the possibility of unfit seeds being carried over for another spring. By regarding primarily the interests of the purchaser, D. M. Ferry & Co. have grown to be the largest seed house in the world. This success has necessitated systematic organization, and made it possible not only to specialize, but to have the best physical equipment in America.

Learn more about reliable seeds by writing to D. M. Ferry & Co., Detroit, Mich., for their 1909 Seed Annual which is sent free on request.

KEEPING RECORDS.

On large poultry farms careful records are kept, but the ordinary poultry raiser has little idea of the results he is actually getting.

Therefore, "Ertel's Poultry Diary," is something that is likely to prove very valuable. It has pages for recording the egg output, the incubator output, cost of feed and supplies, and the amounts received for eggs and poultry sold with space enough to last at least a year and perhaps two.

No matter how small the flock it is worth while to know the returns secured.

There is no doubt that if many general farmers had the records they would find that their hens are doing better for them than other live stock.

The Diary also contains hundreds of hints and helps valuable to the poultry raiser, and an article, "Uncle Sam's Advice," is well worth reading by those who have not had access to the original government bulletins.

This book is free, and the George Ertel Co., Quincy, Ill., will gladly send copies to readers of the Southern Planter who ask for it.

Tell the advertiser where you saw his advertisement.

A SPLENDID OPPORTUNITY.

STOCK FOR SALE

I offer at moderate prices, two Registered Percheron Stallions, one a bay, coming 4 years old, one a gray, coming 8 years old; several 7/8 Percheron Mares in foal; a few Registered Saddle Horses; also a few choice Red Poll Cattle. Inquire about this stock. My Motto.

"Satisfied Customers,"

M. M. JARMAN, Elkton, Va.

Berkshire Hogs

M. B. TURKEYS, S. C. B. LEGHORNS.

I have for sale, at all times, Berkshire hogs and pigs from some of the best English and American strains. Pigs 10 weeks old, \$5 to \$15; boars ready for service, \$15 to \$25; herd gilts \$20 to \$60; bred sows \$25 to \$65.

I have a few choice M. B. Turkey toms left, \$5 each.

S. C. Brown Leghorn cockerels, yearling cocks and pullets \$1 to \$2 each.

Nothing but strictly choice stock is shipped from my place.

Satisfaction guaranteed; your patronage solicited.

W. A. WILLEROY, Brett, Va.,
King William Co.

Edgewood Stock Farm DORSET SHEEP

Our lambs are coming again, so we are ready to book your orders. Don't delay writing. Our lambs are out of large, strong-boned ewes and sired by rams descended from the best blood in England. Give us a trial. We can please you. Address,

H. H. ARBUCKLE, Maxwelton, W. Va.

WOODLAND FARM DORSETS.

A few yearling rams and a lot of ram lambs for sale. Order early before the flock has been culled over. We are offering a splendid bunch of ewe lambs, excellent quality and bargains at the price.

J. E. WING & BROS.,
Mechanicsburg, Ohio.

TAMWORTH PIGS.

From Registered Stock of Fine Breeding.

Knowle of Cook Farm 5057 at head of herd. Sire 2nd prize boar at Royal Show, Eng., 1907., Dam, 1st prize gilt at same show, 1907.

VOLNEY OSBURN
Bluemont, Loudoun Co. Va.

DUROC-JERSEY and TAMWORTH SWINE.

Sterling Stock Farm,
R. W. Watson, Petersburg, Va

CHESTER WHITES

Best hogs on earth. Pigs now ready for fall delivery. Stock A No. 1

Satisfaction Guaranteed.
S. M. WISECARVER, Rustburg, Va.

Buy a Stallion

Now before the season is on you and your horse will get used to his new home.

No man or firm can or will sell you a stallion,

PERCHERON

OR

==SADDLE==

as cheap or as good as I.

I have eight stallions and fourteen mares—all with foal. My stallions are sure foal getters, having been bred and reared under proper and natural conditions.

I can sell you

SHORT HORN CATTLE

AND

==BERKSHIRE HOGS==

cheaper, class of stock considered, than other breeders.

Come and See.

JOHN F. LEWIS,

Lynwood,

(N. & W.) Rockingham Co., Va.

REGISTERED PERCHERON STALLION

Dark gray with star in forehead; will be two years old in April; very large, beautiful form, straight limbs, flat boned, good feet and eyes.

Also some beautiful pure-bred rough-coated

Scotch Collie Puppies.

Having sold my property and expect to leave here, will dispose of above stock cheap, considering quality.

F. B. ALBERT,

Route 4, Roanoke, Va.

Pure-Bred

Percheron Stallion

48975

Three years old, May, 1909; prize-winner at two horse shows this season; blue ribbon pedigree, descended on dam side from Ficklin's celebrated importation of 1866, than which, no better ever came to America. Splendid individual. Color, grey; weight, 1,500 pounds; price right. For further information, apply to

D. M. CLOYD, Dublin, Va.

PERCHERONS FOR SALE

Two 2-year-old and two 3-year old Stallions, all registered, sound, good clean flat bone, good style and action. Will sell low considering quality as I am cramped for room.

THOS. R. SMITH,

Lincoln, Loudoun Co., Va.

FOR MORGAN COLTS

and Fillies and High-Bred Fox Hound Puppies. Address,

Dr. JOHN D. MASSENGILL,

Blountville, Tenn.

Please mention the Southern Planter.

MODERN SILAGE METHODS

Is the name of a new 224 page book of 7 chapters, 1908 copyright, published by the Silver Mfg. Co., Salem, Ohio. Before it was off the press one agricultural college ordered 400 copies for text-books in classes. Others are using it for the same purpose. There's been nothing more complete ever published. Look up their ad. on page 141 and send for a copy of the book to-day.

A FINE ORCHARD HARROW.

The proper cultivation of the orchard makes it pay; lack of care and cultivation results in wasting the land the orchard occupies. But the proper cultivation of the orchard is ordinarily supposed to require either a special line of machines or so much time and physical labor as to be beyond the means of an ordinary farmer. This was probably true before Clark's Orchard Harrows were invented. This useful machine solves the problem of orchard cultivation for both the large orchardist and the farmer whose orchard is a side issue to his farming.



These harrows are so constructed that the harrow will throw the earth to or from the trees as desired; they can be drawn together or extended, as shown in the cut; and the operator can cultivate under the trees or close to the trees—the horses do not interfere with the branches. To accomplish these changes, all that is required is a simple adjusting of a few pins—no heavy lifting of steel parts.

But while specially designed for orchard work, these harrows have no superior for general farm work. They weight only 260 pounds, in contrast to the 400 or 500 pound harrows, and, with less horse power do better work. Made in various sizes to suit the purchasers need. Orchardists and farmers who are interested in lightening their labors and increasing their crops should write for prices and description of this very complete tool. Clark's Reversible Double Lever Extension Head Orchard Harrow, mentioning this paper. Made by the Cutaway Harrow Co., 861 Main St., Higganum, Conn., whose advertisement appears elsewhere.

Scott Co., Va., Mar. 19, 1908.

I have been reading the Southern Planter for many years and I like it best of any agricultural paper I have ever taken.

E. M. HART.

ATTRACTIVE FARM

Prince Edward Co. 396 Acres. \$6,000.

Three and one-half miles Prospect, 8½ to Farmville, 8½ to Hampden Sidney College; on Appomattox River, public road, daily R. F. D., County phone, handsome dwelling, 8 large rooms, three large halls, kitchen and basement, on knoll surrounded by large grove of native oaks.

New stock barn, box stalls and cattle sheds, loft capacity, 50 tons, running water in barn lot, all fields on the farm entering the same barn lot. New corn crib, meat house, chicken house and poultry yard, two large frame tobacco barns, two double tenement houses, all good repair; six miles of new woven wire fence, iron gates, 100,000 feet of tanding timber; stock growing a specialty; crops tobacco, corn, wheat, oats, hay and trucks; 57 acres well set in grass; farm well watered; good local markets; good schools and churches, nice neighborhood; on paying basis now, will sell quick for \$6,000; ½ cash, balance to suit purchaser. Possession arranged.

VENABLE & FORD, Lynchburg, Va.

THE KENTUCKY JACK FARM



is the wholesale home for jacks, as we breed and raise the big mammoth Kentucky jacks, and sell you a first-class jack 25 to 50 per cent cheaper than a dealer or speculator can. Write to-day for prices on jacks, jennets, and mules. A large lot to select from.

JOE. E. WRIGHT, Junction City, Ky.

COOK FARMS.

JACKS, SADDLE HORSES, TROT-
TING AND PACING STALLIONS.



We are the largest Breeders and Importers of jacks in America. Write us your wants.

J. F. COOK & CO.,
Lexington, Ky.

Branch Barn,
Wichita, Kansas.

TWO ENGLISH

Shire Stallions

for sale; gray and black; 4 and 5 years old with 4 and 5 crosses by imported horses; good individuals. Prices reasonable.

B. F. A. MYERS, Clifton Station, Va.

Pure-Bred

**PERCHERON
and BELGIAN HORSES**

We have more and better horses and will sell them cheaper than ever before. A nice lot of young stallions from weanlings up; also mares.

C. A. ALEXANDER & CO.,

Harriston, Augusta Co., Va.

\$3.50 PAIL FREE

TO PROVE BEYOND ALL DOUBT TO EVERY INTELLIGENT STOCK RAISER THAT

WILBUR'S STOCK TONIC

IS THE WORLD'S GREATEST CONDITIONER AND FEED SAVER WE WILL ACTUALLY GIVE THIS 25 LB. PAIL ABSOLUTELY FREE WHERE WE HAVE NO AGENT TO EVERY READER OF THIS PAPER WHO FILLS OUT AND MAILED TO US THE COUPON SHOWN BELOW.

relish their food, keeps the hair smooth and sleek and prevents that rough looking coat. It is a pure vegetable food, positively prevents disease and makes horses strong, large and full of life. Wilbur's Tonic should be fed to mares while they are suckling the colt and mixed with the colt's grain while weaning. It will prevent scour and keep them healthy and growing. Stallions should be fed Wilbur's Stock Tonic during standing season every day. When out of the standing season, feed Wilbur's Tonic two or three times a week to keep them regular and healthy.

FOR HOGS

Hogs you know are the most susceptible animals to contagious disease. But you know, too, if they escape contagion they are kept cheaper than any other stock. If you keep your hogs healthy they can resist contagion, will fatten quickly and cheaply. If they get sick and refuse to eat you know they will quickly ally die. Nothing will save them; medicine is useless. To keep them healthy you must feed them something they will eat, and something that will satisfy the demands of their systems. We believe that there is only one thing in the world that will do this and that is Wilbur's Tonic.

FOR POULTRY

Wilbur's Stock Tonic is an egg and fat maker which will not only force more profit from the poultry yard but will also prevent disease and save birds. It is a sure preventive for cholera, gapes, pip, roup, indigestion, diarrhoea, apoplexy and all poultry diseases. For little chicks it has no equal and produces large, heavy birds.

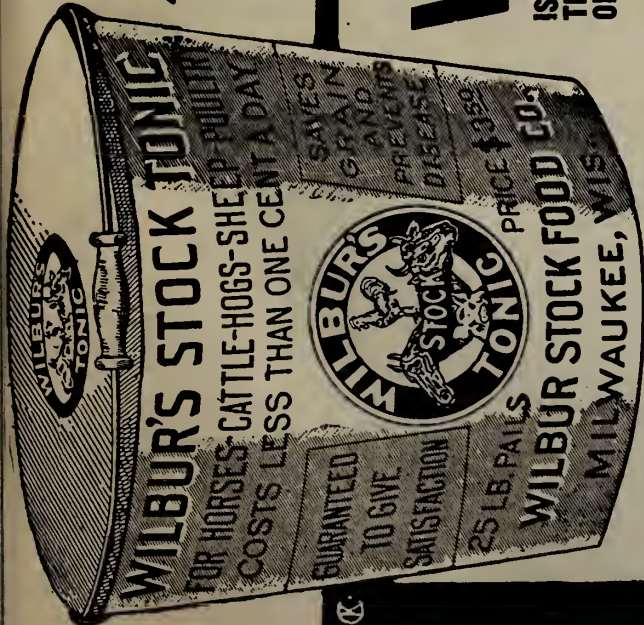
PREVENTS ABORTION

By counteracting colds and soothing the nerves while the mother is in a delicate condition, Wilbur's Stock Tonic PREVENTS ABORTION and saves for the breeder at least one-half more of his increase. Wilbur's Stock Tonic fed in small quantities to calves and all young animals will make them grow large, strong and fat.

REFERENCES: 25 years of success in business. Any bank in America. Any Mercantile Agency in America. Any Agricultural Paper in America.

541 HURON ST. MILWAUKEE, WIS.

WILBUR STOCK FOOD CO.



WHAT WILBUR'S STOCK TONIC IS

NEARLY a quarter of a century's actual experience has proven beyond all doubt that Wilbur's Tonic is a money-maker for feeders. We KNOW THIS. It has been PROVEN to us thousands upon thousands of times in the most forcible manner. We want to convince YOU and are willing to do it AT OUR OWN RISK.

You know the value of pasture for any kind of stock; how it keeps the animals in good condition—nature's own way of doing it. There is no argument about the value of the pasture, but it does not last the year 'round. We prepare a tonic which mixed with grain and fed to stock, furnishes in stall or feed box in the proper proportions, the ingredients of pasture diet, invigorates and fattens stock at small enough cost to make the tonic a money-making investment for the owner of one cow, horse, hog or sheep, and a proportionately larger one for the owner of thousands of head.

FOR COWS

You know when the pasturage goes down in the fall, the milk goes, the butter goes, the flavor goes, until all are shortest when the price is highest. Wilbur's Tonic invigorates cows; it supplies the needed roots, bark and leaves of the pasture, sustains the flow of milk, and color, quantity and flavor of the butter.

Take a cow right off the pasture, feed her Wilbur's Tonic in the stall and she will show very little loss of milk and one cent's worth of Tonic per day saves one dollar's worth of grain per month.

FOR HORSES

Wilbur's Tonic builds up run down horses, prevents colics and keeps them in good appetite. It keeps the bowels loose, water clear, blood cool and in a healthy condition. They are always ready for work — Wilbur's Tonic makes them

FILL OUT THIS COUPON AND MAIL IT TO US TODAY

Wilbur Stock Food Co. 541 Huron St. Milwaukee, Wis.
Gentlemen—Please send me the 25-lb. pail of Wilbur's Stock Tonic absolutely free.

Name.....
P. O.....
Freight Office.....
State.....
Kindly answer this question:
What live stock do you own.....
.....Horse.....Cattle.....
.....Horse

WANT ADS.

Rates 2 cents per word. Cash with order. Initials and figures count as one word; 25 cents minimum charge.

POULTRY, ETC.

AFTER MATING UP MY PENS, I have some extra cockerels, hens and pullets for sale in R. I. Reds, Barred P. Rocks, White Leghorns and Black Minorcas. 50 Buff Wyandotte hens at a bargain. My annual catalogue, full of poultry information, describes and quotes lowest prices on eggs; 25 varieties listed. Enclose stamp for one. C. L. Shenk, Luray, Va.

I CLAIM TO KEEP THE BEST equipped and the largest poultry yards in Page county. Inspection solicited. C. H. Dickinson, Luray, Va.

WE ARE NOW BOOKING ORDERS for eggs from our best yard S. C. White Leghorns at \$2.00 per 15. Every female in this yard is an aristocrat and has an egg record. Sterling Poultry Yards, P. O. Box 626, Staunton, Va.

FOR SALE—LINE BRED BARRED Plymouth Rock cockerels and pullets, correct points, beautiful markings; fine winter layers at \$1 to \$2 each; Indian Runner drakes at \$1.50. Can furnish B. P. Rock eggs now \$1 for 15; \$1.50 for 30; \$5 per 100. Have 3 fine White Holland Toms for sale. Eggs from all stock in season. Mrs. M. F. Gooch, Somerset, Orange Co., Va.

POULTRY—1908 TURNED INTO TWO hotels in Washington, D. C., 3,500 chickens at 41c per pound, net average 2 pounds. Same plant purposes furnishing 10,000 for 1909. Do you want to join me by putting your services and \$1,000 in the business. Read over three times. If you mean business write T. H. Harris, Fredericksburg, Va.

INDIAN RUNNER DUCKS — MY Ducks come from the best duck breeders in the United States. My birds have free range and their eggs last season ran high in fertility and hatched vigorous ducklings. Eggs alone for sale, 11 for \$1; 50 for \$4; 100 for \$7. W. W. Henry, Jr., Broad Run, Fauquier Co., Va.

FOR SALE—CHOICE S. C. BROWN Leghorn hens, pullets, cocks and cockerels. My birds are from Brace's 1st prize pen at Madison Square Garden Show, New York, and from pens taking 1st at Va. State Fair, Richmond Poultry Show and Jamestown show. None better. Can furnish eggs after Feb. 1st. Evergreen Farms, W. B. Gates, Prop., Rice Depot, Va.

IF YOU WISH TO HATCH EARLY pullets for Fall and Winter layers, get eggs from our "Shenandoah" strain Single Comb White Leghorns. Snow white birds, yellow legs, perfect in comb and carriage and perpetual layers. \$2 per 15; \$3 per 30. Yards mated in December. Freshness and fertility guaranteed. Sterling Poultry Yards, Box 626, Staunton, Va.

SPLENDID WHITE WYANDOTTE cockerels at half their worth. Prices, \$1.50, \$2.50, \$5 and \$10 each. No need to write for price; send what you want to spend and we guarantee to please you. Cockerel and money returnable if you are not pleased. Standard-Bred Poultry Farms, Box 1, Burke's Garden, Va.

HAVE 17 AS BLUE BARRED PLY-mouth Rock hens as can be found in any show ring. Birds large. Will exchange for White Wyandottes same class, or will sell for \$1 each. Apply R. P. Burwell, Tobaccoville, Va.

YOUPELL'S WHITE WYANDOTTES. Can sell you eggs from pens scoring 93½ to 94½ points. Good layers. Square dealing my motto. Write for Prices. J. C. Fishel world's best strain. Mrs. J. A. Youell, Big Stone Gap, Va.

RHODE ISLAND REDS, AS FINE AS any in the South. Large kind: laying strain; fifty exceptionally fine cockerels from \$1 to \$2 each; trios, \$2.75 to \$5, Rose or Single Comb. Thos. S. Turner, Dickens, Va.

SOME CHOICE STANDARD BRED—Rhode Island Red cockerels for breeding purposes left. Both combs. Price from \$1 to \$5. The Valley Poultry Farm, Maurertown, Va., R. F. D. No. 1.

WHITE WYANDOTTES, BEAUTIFUL and useful; fine in color, comb and shape. Hardy farm raised which lay. Bargain in eggs at \$1 per 15; \$5 per 100. C. R. Moore, Route 5, Staunton, Va.

OUR M. B. TURKEYS ARE ALL SOLD and enquiries are too numerous to answer personally. Eggs in season. White Wyandotte eggs (February price) \$1. Sunnyside Farm, Jonesville, Va.

R. C. RHODE ISLAND RED COCKS and cockerels, also nice lot of pullets; large kind, laying strain, \$1 to \$2 each. Eggs \$1 for 15. J. J. Gilliam, Moylena Dairy Farm, Route 3, Farmville, Va.

EGGS—S. C. RHODE ISLAND RED Eggs from birds that are free from smut and red to the skin, \$2 per 15; second pen, \$1 per 15. Evergreen Farms, W. B. Gates, Prop., Rice Depot, Va.

SINGLE COMB WHITE LEGHORNS, Wyckog strain exclusively for six years. Positively no inbreeding; new blood from headquarters this year. Eggs \$1 for 15. Cotton Valley Farm, Tarboro, N. C.

MAMMOTH BRONZE TURKEYS. White Wyandotte hens, pullets and cockerels; also B. P. Rocks and White Orpingtons. Prize Winning stock. Landor Poultry Yards, Croxton, Va.

MAMMOTH GOLDEN BRONZE TUR-keys, 4 yearling toms (Mrs. Jones' famous stock) \$6 each, 4 for \$20. Large hens, \$3, 4 for \$10. Black Langshan eggs, \$1 per sitting. Mrs. S. F. Badgett, Farmville, Va.

FOR SALE—M. B. TURKEYS, CORN-ish Indian Games, S. C. Rhode Island Reds and Wyandottes; will sell at reasonable price; all pure-bred. Mrs. J. H. Price, R. F. D. 2, Charlotte C. H., Va.

20 POUND MAMMOTH BRONZE TOMS \$3 each; Buff Orpington cockerels, \$1; eggs 75 per 15; \$2 per 50. Indian Runner Duck eggs, \$1 per 11; all handsome pure-bred stock. T. W. Wood, Hewlett, Va.

WANTED—TO BUY PURE-BRED Light Brahma Cock and Hens. S. Graham Smith, Dixondale, Va.

FOR SALE—LAST OFFER, PURE-bred Pekin Ducks. Mrs. Armstrong, Union Mills, Fluvanna Co., Va.

CORNISH INDIAN GAMES, PURE-bred exhibition stock bred from best winter layers, 15 eggs, \$1.50; 30, \$2.50. Females bred from prize-winners, \$1.50 and \$2 each. S. A. White, Box P., Timberville, Va.

WHITE WYANDOTTES, 35 HENS AND pullets, \$1 to \$2 each; 1 cock and cockerel, \$2.50. Am obliged to sell to make room. Write immediately, Robert S. Williams, 1913 Grove Ave., Richmond, Va.

EGGS FROM SPECIAL MATINGS OF pure-bred Single Comb White Leghorns; farm raised, hardy and bred to lay. \$1.50 and \$2 per 15. T. D. Ganse, Bedford City, Va. "Vista Farm," Route No. 6.

EGGS BOTH COMBS AND LOT SING-le comb pullets for sale. We have the best in Reds, Blue Ribbon, shape and color, winners. Circular will interest you. W. Shook, McGaheysville, Va.

S. C. RHODE ISLAND RED AND Barred Plymouth Rock cockerels, choicest stock, \$1.00 to \$1.50. Eggs in season. Satisfaction guaranteed. Mrs. F. E. Williams, "Wilmont," Charlottesville, Va.

FINE YOUNG MUSCOVY DUCKS ready for shipment. Have just the habits of wild ducks. Excellent layers and good mothers, \$2.50 per pair, a trio \$3. W. B. Coleman, Mannboro, Va.

SINGLE COMB BUFF CRPINGTON cockerels, \$1.50 each, Orpington and Rose Comb Brown Leghorn eggs. \$1.50 for 15. Allen Wood, Petersburg, Va., Route 4.

MOUNTAIN VIEW POULTRY FARM—For sale, Cornish Indian Games, S. C. Minorcas, and Pit game cockerels \$1 each. All are of the best strain. S. H. Carpenter, Novum, Va.

BUFF WYANDOTTES ARE HARD TO beat for winter layers, table qualities, mothers or beauty. Some fine cockerels for sale. Eggs from prize winners, \$2 per 15. Geo. W. Osterhout, Bedford City, Va.

FOR SALE: BUFF PLYMOUTH ROCKS Single and Rose Comb Buff Leghorns. Choice stock. Satisfaction guaranteed. Send for my circular. J. W. Silcott, Bluemont, Va.

WANTED TO EXCHANGE S. C. White Leghorn eggs, Waterville and Wyckoff strains, for Barred Plymouth Rock eggs. Address T. T. Frazier, Route 2, Durham, N. C.

FOR SALE—PEKIN DUCK EGGS from prize-winners at Virginia State Fair, \$1 per setting of 12 eggs. A. W. Harman, Jr., Lexington, Va.

FOR SALE—R. C. RHODE ISLAND Red and White Wyandotte eggs, \$1 per sitting of 15; \$5 per 100. John Campbell, Route 2, Beaver Dam, Va.

PURE-BRED WHITE WYANDOTTES, first class stock in every respect. Eggs in season \$1.50 per sitting. O. O. Harrison, Mt. Ulla, N. C.

HENS ALL SCLD. A FEW LATE hatched S. C. Red cockerels. 75c. Narragansett Turkeys. White Guineas. W. E. Birch, Afton, Va.

A FEW R. C. RHODE ISLAND RED one and two year old hens for sale. Also a few choice males. J. O. Barksdale, Red Hill, Va.

FOR SALE—CHOICE S. C. WHITE Leghorn cockerels \$1.25 each. T. C. Morton, Rice, Va.

POULTRY, ETC. (Continued).

FOR SALE—PURE-BRED R. I. RED Eggs for setting \$1 per dozen. Cockerels \$1 to \$1.50 each. Holly Farm, Lackey, Va.

ROCKLAND POULTRY FARM—BEAUTIFUL, pure, Barred Rock Cockerels at \$1.50 and \$2 each. Mrs. Keese Brookings, Somerset, Va.

SILVER LACED WYANDOTTES, cockerels and pullets, price \$1 and \$1.25. Eggs reasonable. Mrs. F. B. Carter, Rice Depot, Va.

FINE BOURBON RED TOMS FROM eggs from Wildwood Poultry Farm, Williamsport, Ohio. Price \$4 each. Mrs. E. T. Pierce, News Ferry, Va.

PIGEONS—SQUAB BREEDERS AT half price. Mated Carneaux, Homers and Crosses. Sidney Johnson, Boydton, Va.

EGGS FROM PURE-BRED R. C. Rhode Island Reds, Indian Runner and Pekin Ducks. Mrs. Lee Johnson, Manassas, Va. Route 1.

MAMMOTH BRONZE TURKEYS—Hens two years old weigh 20 lbs.; toms 40 lbs. Hens, \$3, toms, \$4. C. S. Hamlin, Route 1, Box 5, Leakesville, N. C.

TWENTY-FIVE WHITE HOLLAND Turkeys for sale. Toms \$4 each. Hens \$3, Trio \$9. E. M. Harnsberger, Orange, Va.

FOR SALE—PURE-BRED RUFUS RED Belgian hares, \$1 per pair. Jas. H. Whitten, Amherst, Va.

TWO TRIOS OF WHITE HOLLAND Turkeys for sale, \$7 a trio. By W. L. Elliott, Formosa, Va.

S. C. RHODE ISLAND REDS. FINE bred roosters for sale. \$2 per bird. F. H. Board & Co., Lynch's, Va.

FOR SALE—PURE-BRED MAMMOTH Bronze Turkeys, Toms \$3.50, hens \$2.50. M. K. Trice, Buckner, Va.

WHITE WYANDOTTE EGGS FOR sale, \$1 per sitting of 15. George Osborne, Hurlock, Md.

COLUMBIAN WYANDOTTE COCKERELS and eggs per sitting, each \$1.50. C. V. Campbell, Oliver, Va.

SINGLE COMB WHITE LEGHORN hens, pullets and cocks cheap. W. E. Sheppard, Front Royal, Va.

ONE THOUSAND HENS FROM THE best birds now ready for sale by the Edgehill Poultry Yards, Luray, Va.

B. P. ROCK CHICKENS—OF THE finest quality. Charlie Brown, Route 1, Cartersville, Va.

LIVE STOCK.

HOLSTEIN BULL CALF, OUT OF cow now giving eight gallons, four per cent. milk a day. Born Sept. 14, 1908. Will sell right. \$35. Registered and transferred. Very large and well grown. Wm. W. Jackson, Bizarre Dairy Farm, Farmville, Va.

IMPORTED SPANISH JACK, GRAY, 6 years old; 14 hands; 3 and 4 year old black Jennets, price \$315, also a 15-month Red Poll bull calf, price \$75. \$375 will buy the lot; cheap enough for a dealer to buy. Call on or write to C. J. Armand, Fairfax, Va.

REGISTERED BREED OF YORKSHIRE hogs at farmers' prices. W. E. Stickley, Strasburg, Va.

WANTED—LARGE YORKSHIRE young sow to farrow in 30 to 60 days, also yearling Holstein bull for light service. All must be well bred at farmers' price. Two young Holstein cows to calf in 60 days. C. F. Hodgman, Diamond Springs, Va.

FOR SALE OR EXCHANGE—ANGUS Cattle for first-class trotting bred stallion or Percheron mares, Hackney mares and colts for sale cheap. All stock registered. Myer & Son, Bridgeville, Del.

FOR SALE AT BARGAIN PRICES—Combination horses, matched pairs. Mules and mule colts, Angus cattle, Berkshire hogs. Fine 8-year-old Jack. Oak Hill Farm, Wenonda, Va.

PONIES—SEVERAL SHETLAND AND others for children, well broken. One pair matched roan mares, 5 years, kind; single and double. J. M. Cunningham, Brandy Station, Va.

REGISTERED JERSEY CATTLE AND large Yorkshire swine for sale. Choice stock at moderate prices. Address Riverside Park, Morgantown, N. C.

FEW MALE POLAND-CHINA PIGS yet, \$4. Seed corn yielding 80 bu. to the acre; also yellow seed corn, each \$1.25 bu. W. B. Payne, Crofton, Va.

W. H. COFFMAN'S ILLUSTRATED herd catalogue of his magnificent Berkshire Hogs is now ready to mail free to breeders at their request. Address, Bluefield, W. Va.

CHOICE BERKSHIRE PIGS AND M. B. toms \$5 each. Try us, we might give better value than the others. W. G. Hundley, Callands, Va.

SADDLE STALLIONS, GOOD ONES, Prices \$300 to \$700 each. Registered Shorthorns, good ones, \$40 to \$150. J. D. Stodghill, Shelbyville, Ky.

LARGE YORKSHIRE PIGS AND bred sows, Hampshire-down sheep and Buff Plymouth Rock Chickens. J. D. Thomas, Round Hill, Va.

FOR SALE—TWO REGISTERED Percheron yearling stud colts. McCloy, Agt. Birdwood, Va.

POLAND-CHINA PIGS—OF THE BEST breeding. Charlie Brown, Route 1, Cartersville, Va.

REAL ESTATE.

FOR RENT OR WORK ON SHARES—a fine farm especially adapted to dairying, stock breeding and trucking. Near splendid market for all dairy and farm products. Station, post office, express office, church and school on farm. Excellent neighborhood. A bargain for the right man. Apply Oak Hill Stock & Dairy Farm, Wenonda, Va.

FOR SALE—AN IMPROVED 200-ACRE farm in Piedmont Va., on easy terms. Buildings, fences, etc., in good repair and ready for business. Fine young 7-acre orchard of standard apples just in full bearing. A bargain. Write for particulars. Also mill and crusher with 2-horse tread power to run them, making a complete outfit for grinding feed in barn. All in good repair at closing out price. Address, Box 33, Jeffersonton, Va.

SALE DELAWARE FARMS—FULL description, grain, fruit, truck, poultry farms. Level land. Healthy climate. Free catalogue. Chas. M. Hammond, Milford, Del.

VIRGINIA—ABOUT 400 ACRES OF land at railroad station, 20 miles from Norfolk, Va. Good schools and neighborhood, etc. 250 acres cleared. Grows corn, cotton, timothy hay and truck, 2-3 fenced with stock wire, 10-room dwelling; 4 three to five room houses, barns, stables, etc. Good pastures. Price \$10,000, easy terms. Write owner, Jos. R. Ives, 143 Plume St., Norfolk, Va.

TWO FARMS FOR RENT, BUCKINGHAM County, Virginia, with good James River low grounds. Rent for money or part crop. Possession given one farm forthwith, other November 15th next, can sow wheat. Good productive land, convenient depots. Correspondence solicited. Camm Patteson, Howardsville, Va.

WANTED—FARMS AND BUSINESSES everywhere. Don't pay agent's commissions. We find you cash buyer direct. Describe property fully naming lowest price. Get our free advice as to best property to buy. American Investment Association, 518 20th Ave., North, Minneapolis, Minn.

TIMBER AND FARM FOR SALE—Between Richmond and Lynchburg, Va. James River Valley. 650 acres. All in good timber. Less than 3 miles to station. Must be sold. Box 8, Appomattox, Va.

FARM 150 ACRES, SOME CHOICE Cotton land, new buildings, stock, implements, etc. Richmond 11 miles. Price \$3,800. Owner, care Southern Planter.

POSITIONS—HELP.

WANTED ON A VIRGINIA FARM which is being operated under the direction of the U. S. Department of Agriculture, three strong, healthy, industrious young men who are willing to work as farm hands, at regular farm hand wages, with a view of perfecting themselves as practical farmers under the new Scientific plan provided by the Department of Agriculture. No man need apply who is afraid of farm hand work and who is not ambitious to prepare himself for farming with a view of following that calling. Address with references. Box 752, Richmond, Va.

WANTED—Responsible man with horse and buggy in each community, salary \$5 to \$10 per day to take orders from owners of farms, orchards and home gardens. A splendid opportunity for farmers' sons, also fruit tree and sewing machine agents to make a business connection which will become more profitable each year. Address: P. O. Box 6, Young's Island, S. C.

PARTNER WANTED—A HONEST man with first-class references and \$500 to join me in buying a few horses on speculation. The man wanted is to select and buy the horses and bring them to my farm stable to be cared for till sold. Only a thoroughly competent horseman need answer. Money in the business as advertiser knows from twenty years experience. Write for particulars. Wm. M. Watkins, Saxe, Va.

WANTED—GENERAL FARMER FA-miliar with gardening, care and feeding of all stock, wife to care for butter and milk and board help. State size of family, ages, wages expected and references. Address E. G. Craig, Box 296, Charlottesville, Va.

WANTED—SITUATION AS MANAGE on a gentleman's place or large dairy farm. Address R. S. Davis, R. F. D. 3, St. Johnsburg, Vt.

POSITIONS—HELP. (Continued.)

WANTED—TENANT FOR FINE FARM 600 acres, 42 miles west of Richmond. Will furnish land, team, implements and new dwelling, 5 rooms. Practical dairyman preferred. Applicant must have sufficient capital for his expenses and labor. Apply to R. P. Burwell, Tobaccoville, Powhatan Co., Va.

EXPERIENCED FARMER, WHO HAS made a specialty of raising hogs, cattle, and sheep for market, wants to work farm on shares or superintend. Location convenient to transportation within a radius of 50 miles of Richmond or on the James River. Address S. J. E., care Southern Planter Pub. Co.

POSITION WANTED AS MANAGER by a thoroughly practical man of wide experience in modern farming, horses, dairy, sheep, poultry, forage crops, silo and silage; strictly temperate and can handle men. Address with particulars, "Temperate," care Southern Planter.

WANTED: MANAGER FOR CITY MILK and Ice Cream Plant. Must be competent business man, capable of handling the buying and selling, as well as the inside work. State experience, salary and references in first letter. X, care Southern Planter.

SITUATION BY EXPERIENCED LO-comotive, dinkey, or stationary engineer, with large lumber plantation, or mining company. W. W. Lewis, Luckets, Loudoun Co., Va.

WANTED — FIRST-CLASS FARM hand, married. W. D. Robertson, Route 4, Box 28, Leesburg, Va.

MISCELLANEOUS.

FOR SALE—A SPLENDIDLY BRED Collie dog, 3 years old this coming spring. This Collie is from the celebrated Maplemont (Vermont) kennels, and is of the very best blood. The price of this dog when ten days old at the kennels was \$40. He would be invaluable to any one who desires to raise a high grade class of Collies. Will sell at some loss simply because have no use for him. Address Box 752, Richmond, Va.

WANTED—TO BUY ALL KINDS Wild Birds and Animals, particularly

117 SQUARE MILES OF FARM LAND SOLD.

If you were to count the farms you pass when taking a drive through the country some day, you might get a faint idea of what it means when you are told that one real estate company sold seven hundred and twenty-two farms during the past twelve months. But even then it would be only a faint idea at the best, because those 722 farms contained more than 75,000 acres, or more than 117 square miles of farming land. If stretched out in a straight line they would cover a strip more than 200 feet in width all the way across the continent from New York to San Francisco. The total value of this immense tract, or more properly, collection of tracts, which were sold through the E. A. Strout Company, of New York, Boston, and Philadelphia during 1908, was more than \$2,000,000.

Tame Deer, Wild Turkeys, White Squirrels, Peafowl, Otters, Red Foxes Gray Squirrels, Partridges, Pheasants, Beaver. State price when writing. Dr. Cecil French, Naturalist, Washington, D. C.


SEND 15 CENTS FOR ONE YEAR'S subscription to best semi-monthly farm paper published, three beautiful colored pictures for framing and pictures of 42 beautiful girls and 397 babies. Agents wanted. Central News Co., Bank Block, Chattanooga, Tenn.

42 EARS OF CROOK'S WHITE GIANT seed corn shelled one bushel; this corn cannot be beaten for size of ear and yield per acre. I will send one pound for 30c, peck 75c, ½ bushel \$1.40. Reference Citizen's Bank, Lexington, Tenn. Address W. C. Crook, Huron, Tenn.

COLLIE PUPPIES FOR SALE. FARM raised, from registered stock. Price \$5.00. Pedigree with each. Black and white or yellow and white, male or female. Norfolk & Western Railway Farm, Ivor, Va. S. M. Geyer, Manager.

FOR SALE—BEES, SEVERAL KINDS various prices. For spring delivery. Pure honey in various style packages. 40 White Plymouth Rock pullets, spring hatched. B. F. Averill, Howardsville, Va.

WANT TO MOVE TO TOWN TO EDU-cate your children? Have nice brick home for sale. Splendid educational facilities. Write T. H. Strohecker, Salem, Va. County Seat Roanoke Co. Amid the healthful mountains.

WOODWARD & SON, RICHMOND, VA.

 Lumber, Laths, Shingles, Sash, Blinds, Doors, Frames, Mouldings, Asphalt Roofing. Yards and buildings covering ten acres.

REPLACING MY SHARPLESS CREAM Separator No. 4 with larger machine, will sell cheap. Used five months. Perfect working order. Boxed and delivered on cars here, \$45 cash. Jno. T. Nicholas, Remington, Va.

FOR SALE—SET "SOUTHERN PLANT-er," paper bound, 1889-1908. Address Room 124, 39 Cortlandt St., New York.

COLLIE PUPS FROM CHAMPION IM-ported stock and brood females cheap. R. I. Red Eggs, \$1 for 20. Shady Brook Farm, Route 2, Roanoke, Va.

FOR SALE—ARTICHOKES, \$1 PER Bushel, 10 bushels for \$9. White Wyandotte eggs, \$1 per sitting, from extra fine layers. B. H. Walker, Stevensville, Va.

WISH TO PURCHASE ANY PART OF 100 bushels of cow peas. Whippoorwill preferred. State best price for cash. R. G. Bickford, Newport News, Va.

FARMERS! — STOP THE LEAKS. "Whelpley's Money Maker for Farmers," will do it for you. Write J. H. Bonnell, State Mgr., Falls Church, Va. for information.

WANTED—SOMEONE TO STAND A thoroughbred stallion on shares for the season of 1909. I have a good horse in the wrong locality. Percival Hicks, North, Mathews Co., Va.

FOR EXCHANGE—PRIVET HEDGE plants, two years old, branched, first class. Write what you have. L. A. Reynolds, Clemmons, N. C.

FOR SALE—ONE CYPHERS INCUBA-tor, 240 eggs, \$20. 2 brooders, \$12, used one season. A Zacharias, Mosley's Junction, Route No. 2, Va.

FOX, DEER, COON AND OPOSSUM hounds and pups \$3.50 to \$15 each. For bargains write me. W. F. Wilmouth, Shelbyville, Ky.

FOR SALE—4 COON, POSSUM AND Fox Hounds. Best in two states. R. J. Dillard, Kendallia, W. Va.

\$15 WILL BUY 360-EGG CORNELL Incubator, good as new. Laurel Hill Poultry Farm, Roxbury, Va.

SCOTCH COLLIE PUPS—SECOND TO none. Charlie Brown, Route 1 Cartersville, Va.

WANTED—BUYERS FOR BEST VIR-ginia farms. J. H. Bonnell, Falls Church, Va.

JERUSALEM ARTICHOKES WANTED. State price. F. L. Faison, Warsaw, N. C.

BILTMORE FARMS.

POULTRY AND EGGS

Barred Rocks, White Rocks, Brown Leghorns, White Leghorns and White Wyandottes.

BERKSHIRE HOGS

A few young boars and gilts, and a magnificent, uniform lot of young fall pigs. Prolific, good type, large size, low prices.

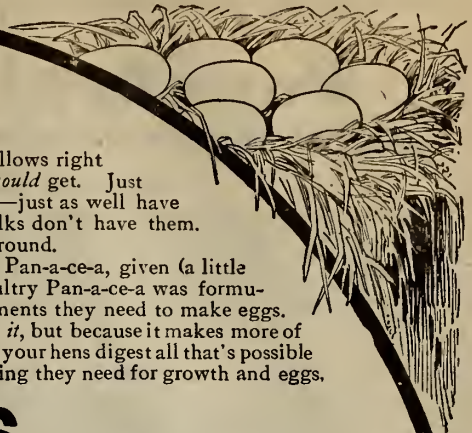
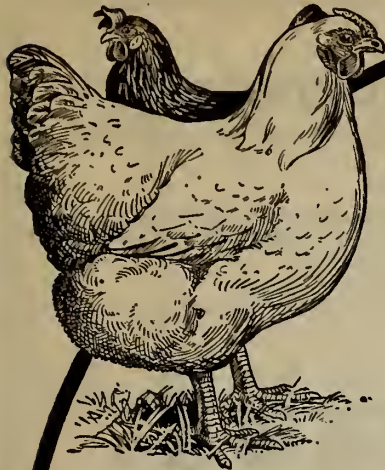
JERSEY CATTLE

A few select young bulls and heifers from dams having large YEARLY milk and butter records, and by well known sires of tested cows and prize-winners.

APIARY

Pure Honey for sale. Also full colonies of bees. For full particulars, address,
BILTMORE FARMS, R. F. D. No. 2, Biltmore, N. C.

TELL THE ADVERTISER WHERE YOU SAW HIS ADVERTISEMENT.



Eggs A-Plenty

That's what the poultry man gets who follows right ideas about feeding, and that's what you *should* get. Just as well have eggs in winter as in summer—just as well have them when they are high and when other folks don't have them. A hen can be made to lay almost the year 'round.

What all hens need is Dr. Hess Poultry Pan-a-ce-a, given (a little of it) in soft feed every day. Dr. Hess Poultry Pan-a-ce-a was formulated to provide hens *in confinement* with elements they need to make eggs. It does this, not because of any food value *in it*, but because it makes more of *your* ration available. In other words, it makes your hens digest all that's possible for them to digest, and thus they have everything they need for growth and eggs.

DR. HESS Poultry PAN-A-CE-A

is very different from so-called egg foods. It is *not* a stimulant; instead, it brings about a *natural* increase and consequently a steady one. Increasing growth and egg production by increasing digestion is known as "**The Dr. Hess Idea.**" Sound reason is back of this idea, and leading poultry associations in United States and Canada endorse it. Besides tonic principles, Dr. Hess Poultry Pan-a-ce-a contains blood-building elements like iron and nitrates which eliminate poisonous matter. Give it as directed and you will be amazed at the wonderful increase of eggs. It also cures gapes, cholera, roup, etc. It helps old hens and all market birds to fat in a short time, and saves young chickens. A penny's worth is enough for 30 fowls one day. **Sold on a written guarantee.**

1½ lbs. 25c; mail or express 40c

5 lbs. 60c; 12 lbs. \$1.25; 25 lb. pail \$2.50

Except in Canada and Extreme West and South.

DR. HESS & CLARK.
Ashland, Ohio.

Send 2 cents for Dr. Hess 48-page Poultry Book, free.

DR. HESS STOCK FOOD

Feed a steer a heavy ration; continue it any length of time, and you are likely to bring on annoying and costly digestive disorders. Animal organs can't stand this strain without help, and Dr. Hess Stock Food is the tonic to give it. It was "**The Dr. Hess Idea**" to provide a prescription acting *directly* upon stomach and intestines, giving strength and "tone" to the organ and thus maintaining appetite and healthful assimilation of a large amount of food. The profit saved by keeping stock in condition, free from disease, is another valuable feature of "**The Dr. Hess Idea.**" Thousands of feeders testify that Dr. Hess Stock Food is the foundation of their success. It is **sold under a written guarantee.**

100 lbs. \$5.00; 25 lb. pail \$1.60. Except in Canada and Extreme West and South. Smaller quantities at a slight advance.

Send 2 cents for Dr. Hess Stock Book, Free.

INSTANT LOUSE KILLER KILLS LICE

If you want to save money on your purchase of fence, write Kitselman Brothers, of Muncie, Ind., for their free catalogue. They are selling fence direct to the farmer on thirty days' trial for 15 cents a rod up. See their ad. in this issue.

Buy fence at wholesale—15 cents a rod up. Write Kitselman Bros., Muncie, Ind., to-day for free catalogue. See their ad. in this issue.

PLENTY GOOD ENOUGH.

Aunt Chloe was burdened with the support of a worthless husband, who beat her when he was sober, and whom she dutifully nursed and tended when he came home bruised and battered from a fighting spree.

One Monday morning she appeared at the drug store, and asked the clerk for "a right pow'ful linerment foh ach'in in de bones."

"You might try some of this St. Peter's Prescription, Aunty; it's an old and popular remedy, cures cuts, bruises, aches, and sprains. One dollar the bottle. Good for man and beast."

Aunt Chloe looked at the dollar bot-

DUROCS SHORTHORNS POLLED DURHAMS SHROPSHIRE

THE DUROC is the most prolific hog on earth. The large fairs of the West prove that they are the most popular hog of that section. The demand for them in the South shows conclusively that they are the coming hog of the South. We have the largest herd in the East and one of the most fashionably bred herds in the world. Our herd averaged over eleven pigs to the litter this year. Send for printed catalogue if you are interested in hogs. Boars, Sows in pig, Shotes and Fall Pigs for sale—two hundred in all. Send for "**Duroc Facts.**"

Shorthorn Cows, Heifers and bulls, dual purpose, pure Scotch and Scotch topped, at prices that will make you buy.

Shropshire Rams and Ewes, Yearlings and Lambs.

LESLIE D. KLINE, Vacluse, Va.

JERSEY CATTLE.

My herd is headed by the Pure St. Lamberts Bull,

"Rinora's Rioter of St. Lambert's, 60,478.

His dam gave with **FIRST CALF** 17¼ pounds butter, 301 pounds milk in 7 days. Granddams—one, 23 pounds 6 ounces butter, 319 pounds milk; the other, 23 pounds 12 ounces butter, 320 pounds milk in 7 days. A few of his sons and daughters for sale. Cows and heifers due to calve in the spring. Address

EVERGREEN FARMS,

W. B. Gates, Prop.,

Rice Depot, Va.

TELL THE ADVERTISER WHERE YOU SAW HIS ADVERTISEMENT.

Hygeia Herd Pure-Bred Holstein-Friesians.

The herd offers a few more well bred bulls and bull calves from large milk and butter producing dams and sired by

Pontiac Calypso's Son, No. 39469.

The dam of this richly bred young sire, Pontiac Calypso, No. 61,100, has an official record of 28.43 pounds of butter in 7 days, with a milk record of 560.3 pounds, or an average of nearly 10 gallons per day for 7 days.

His sire's dam, Beryl Wayne, No. 32,496, produced 27.87 pounds of butter in 7 days.

The breed not only holds the milk, but also the butter records of the world.

It pays to get the best blood to head your herd, therefore write for pedigrees and prices.

No females offered for sale at the present time, as the herd will be numerically increased as rapidly as possible.

HYGEIA HERD.

W. Fitzhugh Carter M. D., Owner,

Crozet Albemarle County, Virginia.

Address: W. F. Carter, Jr., Agent.

tle and then dubiously at her flat purse. "Ain't yo' got some foh fifty cents?" she ventured. "Some foh jes' on'y beast. Ah want it foh ma ol' man."

SOMETHING TO REMEMBER ABOUT HENS.

A, B, C isn't simpler, or more easy to learn, than the business of poultry keeping, if the keeper will take the pains to remember one or two facts about hens.

In the first place, the hen is a liberty-loving bird. Her natural instincts prompt her to roam far a-field in search of natural food—bugs, worms, grasses, etc.

In the second place, the exercise she gets in this daily search for food is a perfect preventive of disease, and a guarantee of long life and great productiveness.

Now, the hen-man, who wants to carry on a big business, catches Mrs. Hen and imprisons her in a close coop and a little yard, so that he can have her handy to feed and not trot his legs off hunting her eggs. But it's fatal to the hen, and also to a full egg basket, unless something is done to replace natural conditions in the hen's life.

Here is where "The Dr. Hess Idea" is of great and permanent value. Dr. Hess—a stockman and poultry farmer—after long study, formulated Poultry Pan-a-ce-a, a preparation used almost universally by successful poultrymen everywhere, and which is really the actual cause of their success.

Anyone possessing medical knowledge or a clear idea of the digestive process, knows how difficult it is to preserve health in idleness, especially if feeding be heavy, as in the case of the hen forced for eggs.

Thus, the maintenance of a healthy activity of the whole system is, in the case of the hen, as also in that of feeding animals, the one object to be constantly sought.

If, then, you are struggling with a lazy, droopy, inactive flock of hens, you can change a disheartening situation into a cheering one in short order, by the use of Dr. Hess Poultry Pan-a-ce-a. It is tonic—in no sense,

DAIRY COWS.



Do you own cows that will give you from twenty-five to thirty quarts of milk daily when fresh and 5,000 quarts in a year? These are the kind we keep and offer for sale, and they are the only kind you can afford to feed. Do not keep "cow boarders" any longer, but write us to-day stating what class of dairy cows you want.

We sell Registered or high grade Holstein, Guernseys, Jerseys, and Ayrshires. Address,

SYRACUSE BREEDERS ASSOCIATION
One of our grade cows that gave 11,000 pounds of milk in a year. 414 Dillaye Bldg., Syracuse, N. Y.

THE HOLLINS HERD

OF HIGH-CLASS

HOLSTEIN-FRIESIANS.

A WORKING HERD—WORKING EVERY DAY IN THE YEAR.
This herd of 22 head, of which 14 head are heifers with 1st or 2d calf, milked from the 1st of October, 1907, to the 1st of October, 1908:

195,941 Lbs. of Milk

an average of

8,906 Lbs. Per Cow Per Year

REGISTERED YOUNG BULLS FOR SALE.

JOS. A. TURNER, General Manager Hollins Institute,

Hollins, Va.

Silver Spring Herd of

SHORT HORNS

ROBERT R. SMITH, Proprietor.

Charlestown, Jefferson Co., W. Va. or Wickliffe, Clarke Co., Va.



Cattle are going through the winter in fine shape. I still have two one year old bulls and some bull calves for sale. Will have 20 Short Horns, some of them fine, all good ones; 15 Poland-Chinas, both sexes and 10 one year old draft colts to offer at my Public Sale, May 27.

PUBLIC SALE THURSDAY, MAY 27, 1909.

EXCELLENT

SHORTHORN HEIFERS AND BULLS.

By the Scotch topped Bull, Royal Lad (advertised by the old reliable breeders, P. S. Lewis & Son, as the best bull ever bred on their farm) by the International winner, Frantic Lad, son of The Lad for Me, champion of America in 1900. Also a few fresh Shorthorn Cows.

Pure Yearling SOUTHDOWN RAMS by Senator, a prize winner in Canada as a lamb and a yearling. He was bred by Hon. George Drummond, the foremost Southdown breeder in America.

J. HANCOCK & SON, "Ellerslie," Charlottesville, Va.

MORVEN PARK ESTATE.

The Property of WESTMORELAND DAVIS, Esq.

Large Yorkshire Swine.

These pigs are hardy and prolific. The two boars that took the first prize in their classes at the Virginia State Fair had been exposed without cover or shed for a year in the open. They had, as have all our pigs, well developed carcasses, covered with heavy growth of hair that insures against scurf or skin troubles in hot climate. These pigs mature early, are good mothers, and are very prolific. They are the bacon pig of England and of the West.

WE HAVE THE FINEST STRAIN OF IMPORTED BLOOD FOR SALE.

Registered Guernsey Cattle.

Dairymen shipping to the city markets will find a Guernsey bull most valuable to cross on their herds, thus increasing the content of butter fat in their milk or cream. Especially is this cross desirable when shipping to cities where dealers pay upon the basis of butter fat.

At the Pan-American Exposition, the only time the Guernsey met other breeds in competition, the Guernsey led all breeds for the most economical production of high-class butter.

We Have Brilliantly Bred Bulls For Sale.

Dorset Horn Sheep.

We have the largest flock of Imported Dorsets in America. They are of one type and both thrifty and prolific.

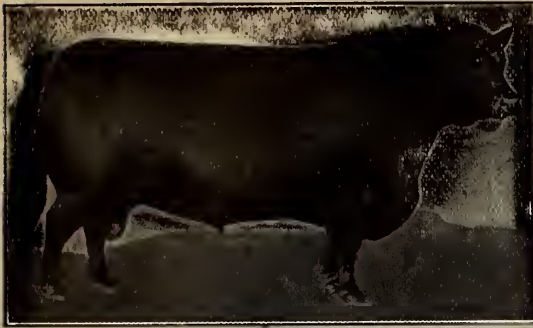
WE ARE BOOKING ORDERS FOR EARLY DELIVERY OF LAMBS.

For further particulars, address,

LIVE STOCK DEPARTMENT, MORVEN PARK ESTATE,

LEESBURG, LOUDOUN CO., VA

ROSE DALE HERD ABERDEEN-ANGUS CATTLE



We offer to the farmers and breeders of the East strictly choice Young Registered Bulls from weanlings to serviceable age. They are of the straight, broad-backed, low-down, compact, blocky type. Many of them show ring animals. They represent the blood of Master II. of Meadow Brook; Gay Lord, Jr.; Heather Lad II., Zaire V., Ermine Bearer, Blackbird of Corskie IV., Black Abbott, Abbottsford, Coquette X., Etc.

They are well grown out, in thrifty condition, but not pampered. Come and see them or write us your wants. Prices right. We can please you. Angus Cattle are our speciality. We raise no other stock, but give them our undivided personal attention.

To avoid inbreeding we offer an exceptionally good herd bull. Write for particulars. Address

ROSEDALE STOCK FARMS, JEFFERSONTON, VA.

a food alone; its mission is to make food available. That is, it aids digestion; strengthens the digestive organs, so that the hen gets more out of her food—elements that make flesh and bone, feathers and eggs. Thus, though confined and denied the hen's natural right to forage at will, she is yet as prolific and healthy when getting this preparation in regular daily doses as though at large.

But, further than this, if there are old hens, unfit for layers, which are better disposed of, Poultry Pan-a-ee-a fats them in a very little while, and for the same reason that helps the laying hen—it aids digestion.

HOW TO SAVE SEED AND HAVE BIGGER CROPS.

Every farmer is interested in this question. He realizes if it is possible for him to save seed and get bigger crops it means his betterment financially. To learn how it is possible to do this, write to the Goodell Co., Antrim, New Hampshire, and ask for a copy of their Seed Sowers' Manual, which is sent free to all interested parties.

This Manual contains a lot of information on how to get bigger crops—knowledge that every farmer should have. Incidentally it also describes the most accurate and durable Hand Broadcast Sower made—the Cahoon Seed Sower. It is claimed for this seed sower that it will do more and better work than any other hand seed sower made, and that it will pay for itself many times over every year.

Write to-day for a copy of the Seed Sowers' Manual.

EFFICIENT HOUSE HEATING.

To every housekeeper who studies economy and efficiency in house heating, the plan of having auxiliary heating apparatus to the regular system will appeal with peculiar force.

In very cold weather the usual house furnaces, stoves or boilers have

THE SUNNY HOME HERD

Is one of the well-bred herds of

ANGUS CATTLE

And the people know it. We sell cattle all over the South and have sold more Angus bulls in our own county than in any other section. This is as good proof as you need that the cattle are of the right quality and that our methods appeal to our neighbors.

We have only one bull of weaning age for sale. He is a grandson of Gay Blackbird on sire's side and of the great Erica bull Ermoor on dam's side. He is not a herd header, but is a good blocky calf. If you need a herd header we have a little fellow that will "fill the bill" nothing better in America.

Station Draper.

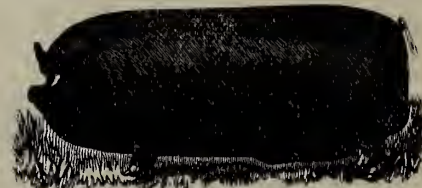
Rockingham Co., N. C.

A. L. FRENCH.

R. F. D., Byrdville, Va.

REDUCED PRICES ON

BRED BERKSHIRE GILTS



for next 30 days only.

The panic drove hundreds of breeders out of business. The next twelve months will see them tumbling over one another to get back—as the demand and prices advance. I staid in the boat, kept up my herd and advertisements, hence am well equipped for orders. My Berkshires are as fine as the world can produce. Price in easy reach of everyone. Scores of pigs ready for shipment.

THOS. S. WHITE,

Fassifern Stock Farm.

LEXINGTON, VA.

Glenburn Berkshires.

Lord Premier and Premier Longfellow are dead, but we have their best sons. Our LORD PREMIER III is not only a son of Lord Premier, but is a litter mate to Lord Premier II, and a brother in blood to Lord Premier's Rival. Our PREDOMINANT and DOMINANT are probably the best sons of Premier Longfellow. IMP. ROYAL HUNTER is a great individual. We have Lord Premier, Premier, Longfellow, Masterpiece, Chamber's Duke XXIII., and fine imported sows.

FORFARSHIRE GOLDEN LAD JERSEYS.

Write for Catalogue.

Dr. J. D. KIRK, Roanoke, Va.

Percheron Horses.

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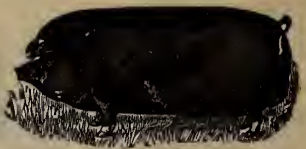
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to be driven to the limit, and even then there are many days when still more heat is needed in certain rooms.

With a Perfection Oil Heater, the trouble and expense of driving the furnace can be greatly reduced.

The "Perfection" is a handsome oil heater, finished in japan, nickel mounted. It is equipped with a safety burner which cannot be turned too high or too low, and the heater can be carried from room to room with perfect safety. It also has a smokeless device.

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The Rayo is all metal except the shade, is equipped with the latest improved burner, which makes it in every way safe to light and handle and overcomes the danger of carrying about a glass lamp.

Dealers everywhere handle Perfection Heaters and Rayo Lamps.

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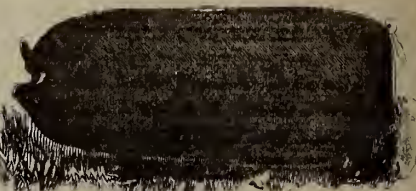
We have pleasure in calling attention to the advertisement of Sysonby Garden's, Petersburg, Va. The poultry yards of this concern are among the most extensive in the South and are making quite a reputation for breeding blue ribbon birds. At the recent Virginia Poultry Show they entered 28 birds, 23 of which took the ribbons. Their Barred Buff and White Plymouth Rocks are among their specialties. Look up the advertisement and write to Mr. Sam McEwen, Manager, for prices and information.

**Prize-Winning
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Our herd won 33 ribbons at Richmond 1907, and Lynchburg and Richmond, 1908; also won silver cup offered by American Berkshire Assn. for best under-year herd (3 sows and boar).

We have Masterpiece, Lord Premier, Beryton Duke and Biltmore strains.

BRED SOWS, GILTS, YOUNG BOARS AND PIGS FOR SALE.
MOORE'S BROOK SANITARIUM COMPANY, CHARLOTTESVILLE, VA.



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BERKSHIRE GILTS and BOARS.

WELL DEVELOPED

JERSEY BULL CALVES

CORRECT DAIRY TYPE. GREAT PRODUCING ANCESTORS.

Forest Home Farm, PURCELLVILLE, VIRGINIA.

BEGIN THE NEW-YEAR WITH A BETTER BREED AND LARGER HERD OF HOGS.

Give them good attention and watch your mortgage disappear or your bank account grow large. Start with a pair or trio of pigs from my Large English and Amerienn bred Berkshires. The big, long, and deep kind that farrow and raise large litters. I have some choice young boars, bred gilts, and a number of very fancy pigs out of litters of 10 to 14 each. They were sired by my great herd boars Hunter of Biltmore 3rd, and Earhart's Model Premier, and are as good as can be reasonable, and remember: I guaran your money. Write for prices and



found in America. My prices are very tee entire satisfaction or will refund description to
D. E. EARHART,
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"STANDARD OF EXCELLENCE."

Capital Stock, \$100,000.

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J. ELLIOTT HALL, General Manager.



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PERCHERON STALLION

Drawing by Geo. Ford Morris.

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Standard Type of The Horse of Gold.

If you are interested in pure-bred stock—Percheron, Hackney or Standard-Bred Horses, Short Horn Cattle, Poland-China Hogs, Dorset Horn Sheep—then you must certainly want a copy of our handsome, illustrated catalogue entitled "Inaugural Announcement." This book cost us many hundred dollars to publish and we want you to have a copy absolutely free. There is no other breeders' catalogue just like it.

Write us a post card stating (1) Your Name. (2) Your Address, Street and Number, P. O. Box or Rural Route and Number. (3) Your Post Office. (4) The County, in which your Post Office is located. (5) Your State. (6) Please say you saw this advertisement in The Southern Planter. Please write plainly! Address the company as above, or write direct to the General Manager, as below.

J. ELLIOTT HALL, Bellevue, Virginia.

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GOOD HOUSEKEEPING.

Bean Soup.

Into a pot with a closely fitting top put one gallon of water, a ham bone with no meat on it and a hock or a piece of a raw ham and one quart of navy beans. Let them come slowly to a boil, then skim and keep it boiling for four hours, take the beans out and run them through a sieve, return them to the pot and heat, season with salt, pepper and a dash of cayenne; serve with toasted bread.

Hamburg Steak.

When the steak is tough (or when you can't get steak at all you may use other parts of the beef), you can make a very tempting and delicious dish of it by running it through the meat chopper, season with salt, pepper and a little bit of onion; make out in flat cakes about as large as the palm of your hand, fry in hot fat, turning carefully to prevent breaking the cakes. Make a rich, brown gravy and pour over it; serve very hot with creamed Irish potatoes.

Fried Apples.

Put some thin slices of fat bacon on a griddle and fry all the grease out of them. Wash your apples and dry them, then cut into thin slices, put them on the griddle with the hot fat and fry them a light brown, turning frequently to prevent burning. When they are half done, sprinkle sugar enough on them to make them pleasantly sweet. These are good hot or cold, but much better very hot.

Corn Pudding.

Open two cans of corn, pass a fork or an egg beater through it to catch all the silk left in it. Turn it into a pudding dish with three well beaten eggs, salt, pepper, two tablespoons of meal, two tablespoons of butter and two cups of milk, one tablespoon of sugar. Stir all well and let it cook slowly for half an hour or longer, if it is not well set in that time.

Boiled Rice.

Wash two cups of rice in two waters, then stir it slowly into a sauce pan containing five cups of water, slightly salted, shut the top and let the rice boil without stirring until it is tender, then, if there is any water not absorbed, pour it off, shake the saucepan until the rice is loosened and set it back on the stove for a few minutes to dry off, every grain should stand for itself and be perfectly white. Fill a dish with the rice and put a tablespoon of butter on top; serve hot.

Chocolate Pie.

Grate a half cake of chocolate, put it in a pan with a lump of butter or a cup of milk and set the pan over boiling water to melt. Pour three cups of boiling milk over three heaping tablespoons of cornstarch, stir to prevent its lumping (the starch should be dissolved first), let this cool; beat three eggs separately, cream three heaping tablespoons of



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Sloan's
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Our herd comprises the most splendid lines of breeding and individuals that money can buy or experience develop in American and English Bred Berkshires.

"LORD PREMIER OF THE BLUE RIDGE," 103555, the greatest living boar, heads our herd. If you are interested write.

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Berkshires For Sale.

One of the best herds in the East.

Bred Sows, Gilts, Young Boars and pigs for Sale.

All stock shipped as represented or money refunded.

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Richmond, Va.



A Few BERKSHIRES FOR SALE.

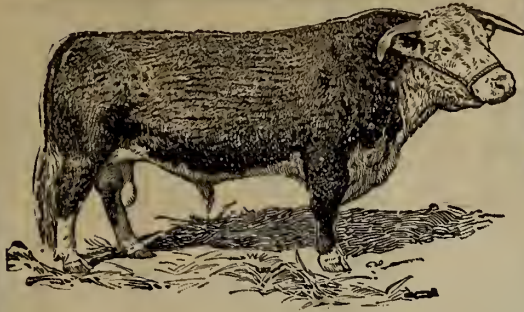
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Sows all kinds of grain and grass seed. The most correct, simple and durable broadcast sower made. Lasts a lifetime—made of steel, iron and brass. Guaranteed to do more and better work than any other hand seed sower. You save time and seed and get bigger crops with the Cahoon. Pays for itself many times over every year. Ask your dealer for the Cahoon. Send to-day for the Seed Sowers' Manual. It tells how to save seed and have bigger crops. It's free.

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on your stock depend on your keeping them in good health. Disease is the worst enemy of the stock raiser, for sick stock yield no profits.

Diseases of stock generally arise from disordered liver, stomach or bowels and in nearly all cases, when these organs are regulated, the disease disappears. For this method of treatment we recommend *Black-Draught Stock & Poultry Medicine*. This is *not* a stock food—

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P 3

butter with the yolks and three cups of sugar. Stir the chocolate into this and add the cornstarch; beat well together, bake on rich crusts. When they are done beat the whites of the eggs with seven tablespoons of sugar, season with nutmeg and make a network of it over the pies; set in the stove to brown.

Every-Day Cake.

This recipe sounds pretty big to people with small families, but it pays to make it and fill it with a variety of seasonings. We usually bake it in the two biggest biscuit pans, and when it is done cut it into suitable sizes for filling. Fourteen eggs beaten separately; sixteen cups of flour, sifted three times with four teaspoons of bread powder; four cups of lard and butter mixed half and half, eight cups of sugar, four cups of milk; wash the butter, cream with the lard and sugar, beat the yolks of the eggs into them with the milk, season with nutmeg or pineapple extract; beat hard, then add the flour and whites of eggs and beat again until the mass is perfectly smooth.

Filling.

Beat four eggs very light; boil four cups of sugar with one cup of water until it will ball when dropped in cold water. pour this boiling mass over the beaten eggs and beat until it thickens, then spread in between the layers of the cake and over it. You may sprinkle grated cocoanut on this to make cocoanut cake, but simply seasoned and spread thickly it is delightful.

CARAVEN.

Keep Your Savings Safe.

Money deposited with the Planters National Bank, is not only absolutely safe, but is earning you a liberal rate of interest, and is protected by the **LARGEST SURPLUS AND PROFITS OF ANY NATIONAL BANK SOUTH OF WASHINGTON, D. C.**

We invite your account. Whether large or small, it will receive the same courteous and liberal treatment that is accorded the thousands of our well-satisfied depositors.

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Planters National Bank,

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Capital, - - - - -	\$ 300,000.00
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Alcoholism, Morphine and other drug addictions cured in from four to six weeks. 28 years successful experience.

Write for our booklet, "What do You Drink?"

The Keeley Institute,
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When corresponding with our advertisers always mention Southern Planter.

"Grand Concert for Benefit of the Wives and Children of the Maryland Volunteers. By Ladies and Gentlemen Amateurs, Assisted by Able Professors, Richmond, Va., Thursday, December 19, 1861."

The above caption I have copied from a printed program, pasted in my war time diary. It indicates that Virginia appreciated the conduct of the Marylanders who had flocked to the Confederate standard, and wished to give some tangible proof of this feeling. Although Maryland never seceded, still there were many of her sons in accord with the sentiments expressed by Randall in his famous battle hymn, "Maryland, My Maryland." Southern sentiment in Maryland was sufficiently strong to cause the government to move the naval academy from Annapolis to Newport during the Civil War. I may mention, en passant, that I first heard Randall's poem sung in Richmond in December, 1862, and a wag present, noticing the frequent repetitions of the refrain, "Maryland, My Maryland," remarked that his only objection to the song was that it did not recur sufficiently often to the subject.

There were two concerts gotten up for the benefit of the Maryland volunteers, but I regret to say I did not preserve the program of the first one, which took place on December 17, 1861. I subjoin the second program:

Part First.

- | | |
|----------------------------------|------------|
| 1. Overture | Orchestra. |
| 2. Solo. Basso | Muller. |
| 3. Aria from Lucia | Donizeth. |
| 4. Grand Duo. Romeo e Guilietta. | Bellim. |
| 5. Scena E Aria. Judith. | Concone. |
| 6. Chorus. Ernani. | Verdi. |

Part Second.

- | | |
|-----------------------------------|-------------|
| 1. Cavatina and Chorus. Tancrede. | Rossini. |
| 2. Fantasia. Violoncello. | Servais. |
| 3. Variations Brillantes. | Rode. |
| 4. Grand Duo. Tancrede. | Rossini. |
| 5. Vespri Siciliani. Bolero. | Verdi. |
| 6. Gypsy Chorus. | Balfe. |
| Tickets | One Dollar. |

The gentlemen of the orchestra who kindly tendered their services on Tuesday night will also perform to-night. Concert to commence at 8 o'clock.

These concerts were gotten up by Mr. H. P. Lefibore, the principal of a fashionable day and boarding school for girls. He was in the habit of getting up showy and brilliant concerts in his school, so he was quite in his element in this enterprise. He enlisted as his assistants several Richmond ladies, not only accomplished in music, but of social prominence.

Chief among these I may mention Mrs. Wirt Robinson, whose beauty, wealth and accomplishments gave her social prestige, but whose chief charm after all lay in her goodness of heart. She was one of the earliest members of the Mount Vernon Association, and a year or two before the War, gave



PAINT TALKS No. 1—Exterior Work

"I am going to tell a number of specific and money-saving facts in this paper from month to month. Space is limited and bare facts only can be stated. Those who want reasons, explanations, fuller information, etc., need only write National Lead Company.

Exterior paint is exposed to the weather, hot—cold—rainy—freezing. No risk should be run with faulty materials or faulty methods. The priming coat should not be ochre. It's cheap but fatal. The best primer—our pure White Lead mixed with linseed oil, some turpentine (enough to drive the paint into the pores of the wood) and a bit of Japan drier. The body and finishing coats need exactly the same materials but they should be mixed thicker.

Points to Avoid—(a) adulteration in pigment (a guarantee of absolute purity goes with our White Lead)—(b) adulteration in oil—(c) too much turpentine—(d) inferior drier—(e) also stale paint should not be used. Mix the ingredients fresh for each job.



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\$12⁵⁰ to \$60

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It is Mr. Edison's desire that a Phonograph should not only be cheap enough for everyone to own one, but also that everyone should enjoy the same advantage in purchasing it.

Wherever you buy an Edison Phonograph you buy it at the same price. The purchaser in the small country town has the same advantage as those who live in large cities.



Nothing else that you can buy will provide so much of the best kind of amusement for yourself and your family at such a trifling cost as

The EDISON PHONOGRAPH

It differs from all other sound-reproducing instruments because it was invented and perfected by Thomas A. Edison, and because it is constructed on a principle which is more nearly perfect than that used in any other instrument made for a like purpose.

The first Phonograph ever made was made by Mr. Edison, and from that invention was perfected the Edison Phonograph which today is considered the most perfect instrument for reproducing music, voice and other sounds.

For you the Edison Phonograph means constant and varied entertainment in your own home.

You can have any kind of music you like—your kind of music, the kind of music your family likes, the kind of music your friends like.

You may hear the songs of great singers, the music of great orchestras, the speeches of great speakers. You may hear your favorite hymns and the good old songs you've always enjoyed. You can reproduce the latest vaudeville hit, the popular songs that everyone is whistling, or the star part of a star opera singer, in your own home, to a circle of your own friends.

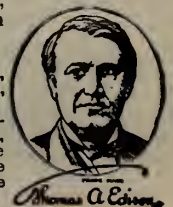
No method of spending an evening can be pleasanter. The Edison Phonograph is always there, always ready to be turned on; it is easily operated and the cost is slight.

Edison Amberol Records



Mr. Edison did not consider his Phonograph good enough with Records that played only two minutes, so he experimented until he produced a Record which will play four minutes. It is no larger than the other Record. It is played on the same Phonograph by means of an attachment which your dealer has. It more than doubles the enjoyment of the Phonograph. Music formerly unavailable for the two-minute Record, on account of its length, can now be heard in full and to better advantage.

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Even if you are not ready to buy at once, go to the nearest Edison store and hear this wonderful home entertainer, the Edison Phonograph. Ask the dealer for a catalogue of Phonographs and a catalogue of selections. Do not be misled by any other sound-reproducing instrument. The Edison Phonograph is the best for the home.



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EARLY JERSEY WAKEFIELD 	CHARLESTON WAKEFIELD 	SUCCESSION 	CABBAGE PLANTS EARLY HEADERS MONEY MAKERS
Earliest Header. Fine, Medium Size. Excellent Shipper. Delicious for Table.	About ten days later than E. Jersey. A full size larger. A Money Maker.	Earliest Flat Cabbage. A large yielder and a good shipper.	

THESE ARE THE KIND THAT MADE SOUTH CAROLINA FAMOUS FOR CABBAGE GROWING

They need no introduction. We guarantee FULL COUNT, safe delivery, and satisfaction or your MONEY REFUNDED. Send money with order, otherwise plants will be shipped C. O. D. and you will have to pay return charges on the money, thus adding to the cost of your plants. Prices F. O. B. Young's Island: 500 for \$1.00; 1,000 to 4,000 at \$1.50 per 1,000; 5,000 to 8,000 at \$1.25 per 1,000; 9,000 to 20,000 at \$1.00 per 1,000. Special prices on larger quantities. Prompt attention given all orders and inquiries. Illustrated catalogue mailed free on application.

C. M. GIBSON, Box 55, Young's Island, S. C.

valuable assistance to Mrs. Anna Cora Ritchie in getting up a series of beautiful tableaux from "Paradise and the Peri," the proceeds of which went to the Mount Vernon Association. She was equally as kind in lending her aid to these Maryland concerts, and sang in several of the concerted pieces. The other Richmond ladies who took part in these concerts were Miss Helen McMurdo (aunt to Amelie Rives), Miss Sallie Palmer, and Miss Althea Morgan, also Miss Evelyn Cabell, of Buckingham county, Va., afterwards Mrs. Rupell Robinson.

Both concerts were very largely attended and favorably received. Amongst the audience there was a considerable sprinkling of Baltimoreans, as, for instance, the famous Miss Hettie Cary, who, as some traveler said of the city of Florence, "was too beautiful to look at except on a holiday." Richmond society was rendered more attractive by this Maryland element, and, in addition to the female contingent, there was during the winter quite a number of brave young officers visiting the city, as, for instance, Lieut. Frank X. Ward, Lieut. Frank Markoe, and many others.

General Bradley T. Johnson and Col. Snowden Andrews were amongst the distinguished officers furnished us by "Maryland, My Maryland."

But, to return to the concerts, which were received with plaudits loud and long. In addition to the regular program, there were several lovely ballads sung as encores, an especially charming one being given by Miss Evelyn Cabell, "Come When Thou Wilt, I've a Welcome for Thee."

"Come in the spring time, come in the summer,

Come when the autumn makes leafless each tree,

Or when the chill winds of winter are blowing,


Come when thou wilt, I've a welcome for thee."

Partly from the beauty of the song and partly from that of the singer, this ballad brought down the house.

The blockade affected music as it did most other things in the Confederacy, keeping away the professional singers, so we had to rely almost entirely on amateur music throughout

WM. C. GERATY

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PRICE: In lots of 1 to 5,000 at \$1.50 per thousand, 5 to 9,000 at \$1.25 per thousand, 10,000 and over at \$1.00 per thousand f. o. b. Young's Island, S. C. Our special Express Rate on Plants is very low. Our Cabbage Plants are Frost Proof. To produce the best results they should be set in the South Atlantic and Gulf States in December and January. In the Central States just as early in spring as land thaws sufficiently to get the plant root in the soil. Send for our Catalogue; it contains valuable information about fruit and vegetable growing, home mixing of fertilizers, etc. We grow a full line of Strawberry plants, Fruit trees, and Ornamentals. Special terms to persons who make up club orders.

We are sowing this season six thousand pounds of cabbage seed.

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TEN MILLION OF THEM FOR SALE

During the months of February and March at reduced prices to clean up our fields. These plants are grown from the same strain of seed that we set out our own large acreage with and are guaranteed to be the best that can be bought. Grown on the Sea Islands of South Carolina they are strong, vigorous plants and absolutely frost proof. We plant no inferior seed and ask the public to look us up before giving their order to others. We guarantee the plants, the count and the safe delivery to your express office. Varieties are: Early Jersey, which is the earliest variety grown, next the Charleston Wakefield, which is about ten days later than the Early Jersey; in late flat varieties we have the Succession and Late Flat Dutch, both large flat cabbage.

Prices as follows. 1,000 to 4,000 at \$1.25 per thousand; 5,000 to 9,000 at \$1 per thousand; 10,000 to 20,000 at 90 cents per thousand and special rates on large orders or to agents who can sell for us in their town and neighborhood. We make a specialty of supplying associations and large growers. Plants pulled, packed and shipped same day order is received. Cash with order but will ship C. O. D. to those who prefer.

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Address,

RATEKIN'S SEED HOUSE, Shenandoah, Iowa.

FIELD SEED, BEANS, PEAS, POTATOES, ETC.

We have in stock all different varieties of Field Seed, including CLOVER, TIMOTHY, HERDS GRASS, ORCHARD GRASS, KY. BLUE GRASS, TALL MEADOW OAT GRASS, ALFALFA, ALSYKE, CENTRAL PARK LAWN GRASS SEED, RYE GRASS SEED; also SEED OATS, RYE, VETCHES, SEED POTATOES, Maine grown, early and late varieties, MILLET, SORGHUM, KAFFIR CORN, BEANS, PEAS, SEED CORN, ONION SETS, MILL FEED of all kinds, CORN AND OAT CHOP, MEAL and HAY

When you order our AA brands of Field Seed, you may be sure that you have gotten the highest grade seed obtainable. We fill orders as low as possible, quality considered.

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We are also large buyers of home grown Seed, Grain and Grass Seed. Send samples and we will make you offers delivered your R. R. station. We will be glad to make quotations and send samples on application.

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RICHMOND, - - - - VIRGINIA.

the War. Blind Tom, to the best of my recollection, was the only public musician who performed in Richmond during the War. In the dearth of professional music, amateur concerts were eagerly attended, and so were amateur theatricals, which were especially popular in Richmond during the winter of 1863-1864. Mrs. Semmes and Mrs. Ives, from the far South, were especially active in getting up charades and theatricals. "The Rivals" was performed at the house of the latter in January, 1864. Miss Constance Cary afterwards Mrs. Burton Harrison) enacted the part of "Lydia Languish," and Mrs. Clay of Mrs. Maloprop, and Mr. Page McCarthy, afterwards so well known as a duellist, and as a newspaper man, took the part of Sir Lucius O'Trigger, if my recollection is correct. M. W. E.

A TRIBUTE TO DR. FERNEYHOUGH

Dr. J. G. Ferneyhough, State Veterinarian, Burkeville, Va., has recently been offered the position of State Veterinarian of North Carolina at a salary considerably in excess of the amount he is at present receiving from the State of Virginia. While fully appreciative of the monetary advantage of the offer, at the same time Dr. Ferneyhough remained true to his maxim, "Virginians for Virginia," and so declined to leave his native State, or present field of action.

This love for his State and intense interest in the affairs thereof has been a controlling influence throughout Dr. Ferneyhough's career, each step of which is clearly marked thereby. After graduating at the Virginia Polytechnic Institute, taking the degree in Agriculture, B. S.; he went to Washington, D. C., and entered the United States College of Veterinary Surgeons of that city, and, upon graduating there, immediately returned to Virginia, and began the practice of

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We are wholesale growers of first class nursery stock of all kinds, Fruit, Shade, Ornamental Trees, Shrubbery, Hedges, Small Fruits, etc., Asparagus, Strawberries, and California Privet in large quantities.

The BEST is the CHEAPEST. Ours is the CHEAPEST because it is the BEST. Handling Dealers' orders a specialty. Catalogue free.

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ONION SEED!!

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 - 2—For farmers direct.
 - 3—At farmers' prices, though superior
 - 4—Fresh, threshed Jan. 16-23,
 - 5—Cleaned by special process,
 - 6—Germinative power guaranteed.
 - 7—Sold on Government plan,
 - 8—See U. S. Farmers' Bul. 111.
 - 9—Yellow Globe, Danvers, U. S. Standard Onion,
 - 10—12 years improving the strain,
 - 11—Tested by Government on germination,
 - 12—Plump Seeds and large,
 - 13—No old seed adulteration,
 - 14—No sediment,
 - 15—Don't forget—grown on upland.
- The world challenged to produce better.

"WORTH LOT TO KNOW IT'S FRESH."
 Extra large packet 10c; Instructions free, 1 lb., \$2; 10 lbs., \$15.
 Express prepaid.

Pittsylvania Co., Va., Dec. 17, '08.
 I like the Southern Planter better than any farm paper published.
 C. W. ANDERSON.

New Haven, Ind.,

Dear Friend McCoy:—

I am 71 years old; have been a farmer all my life, never saw anything equal to them. They came up so strong, and every seed must have grown, for they are lying there almost in piles. This tape-strip shows the measurements round some of the onions. Wishing you success, I am

Yours truly,

LEROY SPRAGUE,

(The tape-strip is 10 inches.)

Address.

I. A. McCOY, Grower,

(Not a Dealer)

Green Plain, Va.

Brunswick Co., Va., Dec. 12, '08.

I enjoy the Southern Planter and wish my name to be kept permanently upon your roll. THOS. FLOURNOY.

veterinary medicine. After two years of private practice he was appointed State Veterinarian, and as that office was then located at Blacksburg, he returned to his alma mater to resume the duties of that office and also those of Assistant Professor of Veterinary Science, later being promoted to Associate Professor of Veterinary Science. In the fall of 1907, owing to the want of railroad facilities at Blacksburg, it was deemed expedient to move the office of State Veterinarian to some point easily accessible to the railroads, and Burkeville was selected for that purpose.

But while Dr. Ferneyhough relinquished his professorship upon moving to the present location, Burkeville, Va., yet he has never allowed his interest in the V. P. I. to flag, but has kept in close touch with the Institution, ever ready to lend his assistance in any manner calculated to promote the interests of the college. Last year, for the "Short Course," he was called upon to lecture during the week devoted to Dairy Husbandry, and, for the same course this year, has been requested to lecture on "Horse Breeding in Virginia," during the week devoted to Animal Industry. In this connection a most interesting feature will be the day devoted to Horse Judging, when a number of stallions and mares of several of the finest breeds will be exhibited with a corresponding number of indifferent animals, and their relative good and bad points will be pointed out and fully exemplified by Dr. Ferneyhough.

During the recent outbreak of hog cholera in the State, Dr. Ferneyhough was indefatigable in his efforts to check the disease and render all possible aid to those whose herds had the infection, and the reluctance to leave his Board at a time when they were relying on his assistance was a strong factor in his decision relative to the offer of our sister State. His alert, wide awake interest in all that pertains to the sanitary care of the live stock of the State prompts him to keep in close touch with the Bureau of Animal Industry, Washington, D. C., and served well its purpose when foot and mouth disease was recently located in Maryland, by enabling him, through his Board, to at once forward the Governor of Virginia a declaration of State quarantine, with the request that the Governor issue his proclamation concerning same as speedily as possible, with the result that forty-eight hours after Maryland was placed under quarantine by the Federal authorities, Virginia was likewise safeguarded by quarantine against all infected States.

Born and raised in Virginia, Dr. Ferneyhough feels that in holding a State office he is being given an opportunity to promote the welfare of his State along certain lines, and



More Corn in the Crib

is the result of the vigorous, thrifty plant growth insured immediately upon the application (at planting time) of

Nitrate of Soda

Test it for Yourself Entirely Free

Let us send sufficient Nitrate of Soda for you to try, asking only that you use according to our directions, and let us know the result. To the twenty-five farmers who get the best results, we offer, as a prize, Prof. Voorhees' most valuable book on fertilizers, their composition, and how to use for different crops. Handsomely bound, 327 pages.

Apply at once for Nitrate of Soda by post-card as this offer is necessarily limited. "Grass Growing for Profit," another book of useful information, will be sent free to farmers while the present edition lasts, if paper is mentioned in which this advertisement is seen.

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Write for our descriptive catalogue of 64 pages—Correspondence Solicited.

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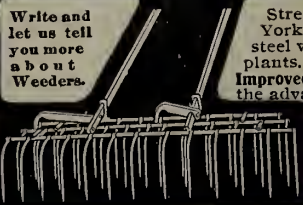
Ratekin's Big Banner 100 Bushel White Oats—The biggest, prettiest, plumpest oat in existence. Side by side with common sorts they yield 100 bushels per acre where other sorts make but 25 to 35 bushels. Strong, stiff straw; sprangled heads; ripens early; never rusts, blights or lodges. There is none like them, and when our stock is exhausted there is no more to be had. Samples mailed free. Also our Big Illustrated Catalog of farm, field, grass and garden seeds. A postal card will bring them to your door.

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RATEKIN'S SEED HOUSE, Shenandoah, Iowa.

The YORK Improved Weeder

Write and let us tell you more about Weeders.



Strength of frame and flexibility of teeth are combined in the York Improved Weeder. The teeth are made of square spring steel with round points. Being narrow they do not injure the plants. No clogging. Ask your dealer to show you The York Improved Weeder, examine it carefully, and you will see that it has the advantages of efficiency and economy over all other weeders. If your dealer doesn't sell this weeder, we will sell it to you direct. Spangler Corn Planters and Fertilizer Distributors always give satisfaction—durable, perfect in operation. Write for our free catalogue.

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therefore accepts the position of State Veterinarian as a public trust and a chance to serve others, rather than merely a salaried position, yielding a stipulated, monetary emolument. W.

WASHINGTON NOTES.

Hybrid Zebras Born.

Out at the Government Experiment Station at Bethesda, Maryland, the officials of the Department of Agriculture have two baby zebras—a hybrid resulting from a cross between the African zebra and the American burro. These two are the first hybrids of the zebra born in the United States and the first of this particular sort of hybrids born anywhere. The mothers of these two youngsters are simpure Texas burros, dark colored, with light points. The father is a grevy, one of the two zebras sent by the Emperor Menelik to this country. The other beat its brains out in the inclosure at the Government National Zoo in Rock Creek Park.

The Department of Agriculture is anxious to raise a hybrid from the grevy zebra, for it is thought that it might prove a valuable animal for a beast of burden, and as there are not many grevy zebras in captivity, it was the more desirable to have one of his get.

The grevy is a decidedly larger animal than the coon zebra, and it is to be expected that the progeny will be a fairly large animal. One of the zebra's foals was dropped in January and the other in December. They are both getting on well and promise to be lively youngsters. They ought to be tough enough in all conscience, for the zebra is about the toughest thing in the horse line in the world, except the burro—the angel of the desert—the ranchman's goat.

While the officials of the Department of Agriculture are very optimistic over the outcome, they are not taking any chances and therefore are nursing the little hybrids very carefully, for though the burro is used to all sorts of weather, it is not known whether they will take after their mothers or have the tropical streak of their father uppermost. It is believed, however, that they will make valuable animals for the mountain country, for if they have the good points of both their parents, they ought to be hardier than the mule and almost as big.

Baron Parana, a wealthy Brazilian planter, has demonstrated that a valuable hybrid can be obtained by crossing Burchell's zebra with the horse. This hybrid inherits from the former parent immunity to certain diseases

POTASH

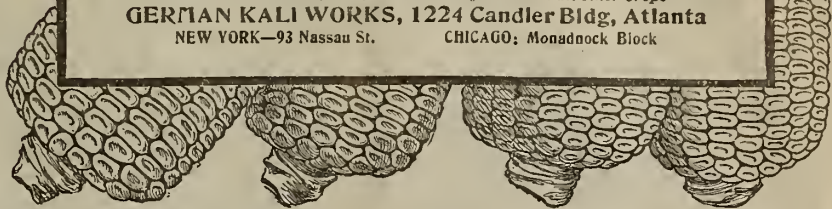
CORN

requires the best selected seed and the most thorough cultivation; but the real difference between profit and loss on the crop depends on Potash. It makes strong, sturdy stalks and well shaped ears filled out to the very tip, with every kernel sound. Fertilizers high in phosphoric acid, with a little nitrogen, won't do. They need Potash to complete them—15 to 20 lbs. to the hundred. Supplement the manure or clover or fertilizer with 50 lbs. of Muriate of Potash per acre.

POTASH IS PROFIT

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MAINE SEED POTATOES—
EARLY ROSE,
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MICHIGAN SEED POTATOES—
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DON'T BUY GASOLINE ENGINES UNTIL YOU INVESTIGATE

alcohol engine, superior to any one-cylinder engine; revolutionizing power. Its weight and bulk are half that of single cylinder engines, with greater durability. Costs Less to Buy—Less to Run. Quickly, easily started. Vibration practically overcome. Cheaply mounted on any wagon. It is a combination portable, stationary or traction engine. SEND FOR CATALOGUE. **THE TEMPLE PUMP CO., Mfrs., Meagher and 15th Sts., Chicago.** THIS IS OUR FIFTY-SIXTH YEAR.

which are particularly fatal to the horse, asses and mules, and is, moreover, valuable as a truck and artillery animal.

Meanwhile the subject is being studied carefully by the government officials, for there is a possibility that the little youngsters at the Experiment Station may prove to be most valuable adjuncts to our beasts of burden.

Trees as Scarce as Diamonds.

During the past week the American Forestry Association held its twenty-eighth annual meeting, at one of the sessions of which Secretary of Agriculture, Wilson, made an address in which he declared that our forest growth is getting scarcer and scarcer every day and that we are using three times as much wood as we are growing.

"The time is coming in this country," he stated, "when trees will be as scarce as diamonds unless immediate steps are taken to preserve our forests." He emphasizes the importance of the States, the various Associations and individuals in helping to solve the problem by planting trees in denuded places.

"Do not let us sit down and make faces at Congress," he continued, "because that body has not yet seen fit to provide for the Appalachian and White Mountain forest reserves. We must not depend too much on Congress. What we want is a reforestation of the country at the rate of about one-quarter of a million acres each year."

The Reverend Doctor Edward Everett Hale, chaplain of the Senate and Vice-President of the Forestry Association, said that we must stop denudation, plant trees, and make the people who own the funds for the future invest them in forests.

At one of the meetings there was a general discussion of forest fires and the best methods of prevention. The general opinion as evinced by the numerous speakers was that there should be uniform fire laws in the various States and that public opinion should be aroused for their strict observance.

A most startling point was brought out to show that many States are discouraging forest planting by putting a tax on trees planted and thus prohibiting the reforestation of denuded areas, while it was agreed that the right way would be to encourage tree planting by remitting all taxes from land that was so reforested.

Representative J. E. Ransdell, President of the Rivers and Harbors Congress, spoke on the relations of forests to inland waterways, and Bailey Willis, of the Geological Survey, gave an illustrated talk on some effects of deforestation. Mr. Willis has made a special study of this subject for the government and has accumulated a large collection of illus-

No Land So Rich That Fertilizer Cannot Make It Better

You use fertilizers for the profit you get out of them—and the better the land the more profitably a good fertilizer can be used on it. Do not imagine because land will produce a fair crop without

Virginia-Carolina Fertilizers

that these fertilizers cannot be profitably used on it, or that they were made only for land too poor to produce without them. If poor land will show a normal increase when fertilizer is used, good land will show at least double the increase. Use Virginia-Carolina Fertilizers to increase the *quality*, as well as the *quantity* of the crop—and you will increase the profits from your land.

"I have been using your fertilizers for a number of years" says Mr. William Fraiser, of Glasburg, La., "and find that it not only pays to fertilize, but to do plenty of it, and use the best fertilizers to be had, such as your brands. I have used a number of them and found them to be as recommended and to give better results than any other fertilizers that I have ever used."

Every planter and farmer should have a copy of the new 1909 Virginia-Carolina Farmers' Year-Book. Get a free copy from your fertilizer dealer, or write our nearest sales office.

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SEEDS at ONE-HALF-City Seedsmen Prices!

different. It tells you facts, and why we can save you money, and give you a guaranteed SQUARE DEAL. Just drop a postal today and see the difference in buying your seeds in country or city.

FORREST SEED CO., Box 42 Cortland, N. Y.

Southampton Co., Va., Aug. 14, '08.
I consider the Southern Planter the best farm paper I ever saw and I am recommending it to my friends.

R. B. GRAY.

Worcester Co., Md., Dec. 16, '08.
I do not want to do without the Southern Planter as long as I can find the price of a subscription.

W. BATES HANCOCK.

trations covering the whole subject. The government of India, on the 1908-1909 cotton crop of British India, reports the total area under cotton in all territories reported is 18,670,000 acres, as against the revised estimates of 20,826,000 acres at the same date in 1907. This marks a decrease of 2,157,000 acres. The total output is estimated at 3,641,000 bales, giving an increase of some 592,000 bales above the figures for the previous year.

A New Method of Preserving Eggs.

Using as a theory that an egg decomposes owing to the entrance of bacteria through the shells, an English firm has adopted a method of preserving eggs by first disinfecting them and then immersing them in a vessel of hot paraffine in a vacuum. The air in the shell is extracted by a vacuum and atmospheric pressure is then allowed to enter the vessel and the hot wax is pressed into the pores of the shell, which thus hermetically seals it. Evaporation of the contents of the egg, which has a harmful effect, is thereby prevented, and the egg is practically sterile. The yolk of pickled eggs and others artificially preserved will frequently break on being poached, but the eggs preserved by this novel process, it is stated, are quite free from such fault.

Our Agricultural Wealth.

According to the report of Secretary Wilson recently issued. It is indeed very hard for any one to talk of the down-trodden farmer, and some question whether it is really needful for the government to engage in the uplift business on behalf of the agriculturists. During the last year the farm value of all farm products reached the extraordinary total of \$7,778,000,000—four times the value of the products of the mines, including mineral oils and precious metals. It would take eight billion dollar Congresses to dispose of this sum. In other words, enough money is now being extracted out of the farms of the country in a year to pay for running the government for eight consecutive years. Broadly speaking, the farmers of the country are better off this year than in previous years in two respects—the crops are better than the average, and the prices are much higher. It is not so much, however, by reason of increased production this year that the farmers are better off as it is because of high prices.

And yet, with all the allurements of such wealth on farms, the government officials have found it necessary to step in to establish a remedy whereby country life may be made so pleasant as to keep the boys and girls on the farm and not turn to the enchanting lights and witchcraft of the city where as clerks, salaries of \$10 and \$12 a week, with little cubby holes

Our
1909
Model

Wear STEEL SHOES

**Absolute Protection Against
Colds, Rheumatism, Stiffness, Discomfort
No More Blistered, Aching Feet
GOOD-BYE to CORNS and BUNIONS!**



Pat. Dec. 4, '06.

FREE
Write for Book
"The Sole of
Steel" or order
a pair of STEEL
SHOES on the
blank below.

like them, for they keep your feet warm, dry and comfortable—though you work in mud and slush up to your shoe tops. Steel Shoes are shaped to fit the foot, and the rigid steel bottoms and sides force them to keep their shape. No warping, no twisting, no leaking possible. And they are light shoes, too.

Off With the Old, Rough, Wrinkled Leathers!

On With the Comfortable STEEL SHOES!

How Our 1909 Model Steel Shoes are Made. The Wonderful Steel Bottoms

Steel shoes solve the problem of the Perfect Work Shoe for all time to come.

The soles of Steel Shoes and an inch above the soles are stamped out of a special light, thin, rust-resisting steel. One piece of seamless steel from toe to heel. As a further protection from wear, and a means of giving a firm foothold, the bottoms are studded with adjustable steel rivets.

The adjustable steel rivets of the 1909 model Steel Shoes add the finishing touch of perfection. Practically all the wear comes on these steel rivets. When steel rivets wear down, you can instantly replace them with new rivets. And the rivets at the tip of toe and ball of foot are the only ones that wear. Steel Shoes never go to the repair shop, for there's nothing to wear but the rivets. And the Steel Shoes shed mud almost as easily as they shed water. The cost is only 30 cents for 50 extra steel rivets. No other repairs are ever needed.

The uppers are made of the very best quality of pliable waterproof leather, and firmly riveted to soles. There is greater strength and longer service and more foot comfort in steel shoes than in any other working shoes in existence. It's in the steel and the pliable leather, and the way they are put together.

THROW AWAY RUBBER BOOTS, FELT BOOTS AND "ARCTICS."

Rubber or felt boots heat the feet and make them sweaty and tender. Nothing more uncomfortable or more harmful to the feet. One pair of steel shoes will outlast at least three pairs of felt or rubber boots.

A man who wears steel shoes doesn't have to own three different styles of working shoes. No arctics or felt boots necessary.

SECRET OF STEEL SHOE ELASTICITY.

Steel Shoes have thick, springy Hair Cushion Insoles, which are easily removable for cleansing and airing. They absorb perspiration and foot odors—absorb the jar and shock when you walk on hard or stony ground. They keep your feet free from callouses, blisters and soreness.

STEEL SHOES SAVE DOCTOR'S BILLS

Wear Steel Shoes and you need not suffer from Colds, Rheumatism, Neuralgia, Lumbago, Stiffnesses of the joints and other troubles and discomforts caused by cold, wet feet. Keep your feet always warm, dry and comfortable in Steel Shoes. They protect your health and save doctor's bills while adding to your comfort.

LOW PRICE ON STEEL SHOES.
Sizes, 5 to 12, 6 inches, 9 inches, 12 inches and 16 inches high.

Steel Shoes, 6 inches high, \$2.50 a pair, are better than best all-leather \$3.50 Shoes.

Steel Shoes, 6 inches high, extra fine grade of leather, \$3.00 a pair, excel any \$4.50 all-leather shoes.

Steel Shoes, 9 inches high, \$3.50 a pair, are better than the best all-leather \$5.00 shoes.

Steel Shoes, 12 inches high, \$5.00 a pair, are better than the best all-leather \$6.00 shoes.

Steel Shoes, 16 inches high, \$6.00 a pair, are better than the best all-leather shoes, regardless of cost.

ONE PAIR OF "STEELS" WILL OUTWEAR 3 TO 6 PAIRS OF LEATHER SHOES.

The comfort of Steel Shoes is remarkable. Their economy is simply astounding! Practically all the wear comes on the rivets in the bottoms and the rivets can be replaced very easily. Don't sweat your feet in rubber boots or torture them in rough, hard, twisted, shapeless leather shoes. Order a pair of Steel Shoes to-day. Sizes 5 to 12.

SATISFACTION OR MONEY BACK.

We strongly recommend the 6 inch high at \$3.00 a pair or 9 inches, at \$3.50, as they give best satisfaction for general service.

In ordering, state size shoe you wear. Enclose \$3 a pair for 6-inch size, and the best and most comfortable working shoes you ever wore will promptly be shipped to you. Your money refunded if you are not delighted when you see the Steel Shoes. Send to-day.

STEEL SHOE CO.

Dept. 76. Racine, Wis.
Canada Branch, Toronto, Canada.

ORDER FOR STEEL SHOES.
Steel Shoe Co., Dept. 76, Racine, Wis.

Gentlemen:—

I enclose _____ for \$ _____

in payment for _____ pair Steel Shoes.

Size _____

Name _____

Town _____ State _____

County _____ R. F. D. _____

for lodging are the reward instead of pure food, pure air and pure environments of the country. The temptation to leave the country is great, but the awakening is sad.

Agricultural Reporters.

The Department of Agriculture has its agents—reporters, we might call them—who are investigating the agricultural conditions all over the world, endeavoring to obtain some, plant or some crop which will thrive in some corner of this country. These men may be found in the aucasus chatting with the farmers as to the probable yield of their fields, shelling out the kernels of wheat and running them through their fingers, visiting scores of villages and hundreds of farms, or far away on the other side of the world other men are riding from one lonely station to another in the great Australian interior from ranch to ranch across the Argentine plains, and in dust-covered buggies along Dakota roads.

From the time when the seed goes into the ground they are at work, observing and reporting, every factor that influences the yield of the quality of the world's great staple. In this way they are playing an important part in the great work of handling the year's crop, for volume and quantity, regulating price, determine the flow marketward, and incidentally, though not in a minor degree, they are keeping an eye on strange crops, strange vegetables, strange fruits which in our great land, reproducing a corner of the world, may add some wealth to the American farmer.

During last year the meat inspection force exercised strict supervision over the slaughtering and packing operations of 787 establishments in 211 cities and towns. Of the animals inspected at slaughter, 175,126 carcasses and 704,666 parts were condemned, 108,519 carcasses were passed for lard and tallow, and 53,689,692 passed for food.

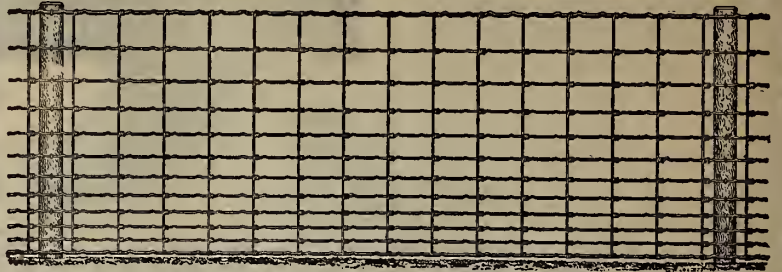
GUY F. MITCHELL.

OUR DUTY TOWARDS THE NEWSPAPERS.

In the first place, we can demand that the newspapers give facts rather than sensations. This is part of our public duty. Each one of us is given a share in governing the country because it is supposed that he will take an intelligent interest in facts which affect its management. If he reads his newspaper primarily for the sake of murders and prize-fights, and only looks at the columns of public news when they are made as much like reports of murders and prize-fights as possible, he fails to do his duty as a citizen. Here is an opportunity for young men to make the standards of the next generation better than those of the last.—President Hadley of Yale, in The Youth's Companion.

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Turns Cattle, Horses, Hogs—Is Practically Indestructible



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Buy your new fence for years to come. Get the big, heavy wires, the hinge joint, the good galvanizing, the exactly proportioned quality of steel that is not too hard nor too soft.

We can show you this fence in our stock and explain its merits and superiority, not only in the roll but in the field. Come and see us and get our prices

Our complete Catalogue of Improved Farm Machinery sent to any address free.

THE IMPLEMENT COMPANY,

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STRONGEST FENCE MADE



When you buy our High Carbon Coiled Spring Fence you buy strength, service and durability combined. Twenty years of experience—hard knocks, has taught us that the best fence is made from heavily galvanized Coiled Spring Steel Wire

CLOSELY WOVEN FROM TOP TO BOTTOM

Our Fence is so closely woven that small pigs cannot "wiggle" through it. So strong the vicious bull cannot "faze" it. We have no agents. We do not sell to dealers but sell direct to the user

AT WHOLESALE PRICES FREIGHT PREPAID

Coiled Wire provides for contraction and expansion and prevents sagging between posts. Every pound of wire in our fence is made in our own wire mill from the best high carbon steel. We give

30 DAYS FREE TRIAL

That our customers may be sure they are satisfied. We make a full line of FARM AND POULTRY FENCE. Our Wholesale Prices will save you money. Write today for our 40 page free Catalog.

COILED SPRING FENCE COMPANY, Box 52 Winchester, Indiana.

Clipped Horses Work Better

Look Better, Feel Better, Rest Better and Live Longer

They enjoy their food more, are less liable to catch cold and can be cleaned in one fourth the time.

The Stewart No. 1 Ball Bearing Horse Clipping Machine

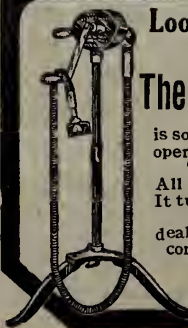
is so simple in construction and operation that any boy can operate it with the greatest ease.

This machine is guaranteed. Nothing about it wears out. All moving parts are enclosed, protected and swim in oil. It turns easy, clips fast and lasts a life time.

Price, complete ready for use, is only \$7.50. Your dealer has it, or just pin a \$2 bill to your order and machine comes C.O.D. for balance. Catalog first if you wish.

Send now.

CHICAGO FLEXIBLE SHAFT CO., 150 Ohio St., Chicago



United States Department of Agriculture, Bureau of Plant Industry, Farmers' Co-operative Demonstration Work, Washington, D. C.

A Common Economic Error.

For many years it has been the custom of Southern farmers to make their crop upon the "advance system," and while this has been regarded as an economic error on the side of the farmer, by many merchants it has been thought that it was a very profitable way of buying cotton.

The farmer realized that as a matter of safety it was better to make the food consumed by his family and his stock upon the farm rather than to purchase it, and especially when he had to promise payment out of a crop which had not as yet been made. I have been watching this phase of country life in the South for many years and have come to the conclusion that the "advance system" is just as great a mistake on the part of the merchant as it is on the part of the farmer, for the following reasons:

First, the merchant takes great risks, which, of course, he tries to cover by increased charges. But even though these charges are increased the staples of life are not such articles as a high percentage of profit will adhere to, and the merchant is practically trading gold for a promise to pay. If the crop fails, he is obliged to carry and carry and carry and possibly may ultimately, as in thousands of cases, be obliged to take the farm, for which he has no use, and under boll weevil conditions, is difficult to handle profitably upon a tenant system.

Under a cash system there will be a great reduction in the sales of some staple foods such as bacon, potatoes, beans, lard, vegetables, canned goods, hay, corn, etc., all articles that carry low profits. The farmer is rarely a hoarder of money and if he saves two hundred dollars or more by producing all his food supplies at home he has that much more to spend when his crop is made, and it is cash.

Under a cash system the farmer will buy with his surplus more dry goods, clothing, shoes, furniture, etc., for his family; better teams, farm implements, wagons, buggies, etc., on which there is a much greater profit for the merchant than on staple articles of food. The merchant can turn his money in thirty days, instead of a year. Ten per cent. clear profit turned monthly is better than 120 per cent. gain received annually. Some of the farmers increased income goes into permanent improvement to enable the farmer to produce more and spend more annually.

Again, there is something about raising cotton, tobacco, etc., to pay a debt, that saps the vitality of the farmer and affects the quality of his tillage. It really lowers the grade of



Great Fences

AMERICAN FENCE

Made of wire that is all life and strength — wire that stretches true and tight and yields just enough under impact to give back every jolt and jam it receives.

Made of materials selected and tested in all the stages from our own mines, through our own blast furnaces and rolling and wire mills, to the finished product. Our employment of specially adapted metals is of great importance in fence wire; a wire that must be hard yet not brittle; stiff and springy yet flexible enough for splicing—best and most durable fence material on earth.

To obtain these and in addition apply a quality of galvanizing that will effectually protect against weather conditions, is a triumph of the wiremaker's art.

These are combined in the American and Ellwood fences—the product of the greatest mines, steel producing plants and wire mills in the world. And with these good facilities and the old and skilled employes back of them, we maintain the highest standard of excellence possible for human skill and ingenuity to produce.

Dealers everywhere, carrying styles adapted to every purpose. See them.

American Steel & Wire Co.
Chicago
New York
Denver
San Francisco

ELLWOOD FENCE

"Jubilee Year" of Page Woven Wire Fence

Page Fence is now in its Quarter-Centennial or "Jubilee Year." It is the Pioneer Woven Wire Fence, having had 10 years the start of all competitors. It leads today in sales and in satisfaction. Admitted by all to have double the strength, life and elasticity of any other fence. Used as the Government standard of highest quality and by many foreign Governments. Supreme throughout the world. "Jubilee Edition" of the Page Catalog has just been issued. A copy FREE to you if you write promptly

PAGE WOVEN WIRE FENCE CO., BOX 51D, ADRIAN, MICH

farming. If upon the other hand the merchants will join with us in urging farmers to raise all their food supplies and try to produce by better tillage double the crop per acre they now produce, the result as it affects the merchant will be this:


All business will soon be on a cash basis and the volume will be three or four times as large from the farmers alone. The advent of more money will bring diversified industries among the farmers and eventually will attract manufacturers to the market towns.

If there are idle farms in the country, instead of calling meetings for the purpose of raising funds to secure immigration, call meetings to encourage the farmers who know the country and are loyal to it to universally adopt the following plan: First, provide their own food supplies from the farm. Second, double the average product on every acre under cultivation and let each worker on the farm by the use of better teams and tools till three times as many acres as at present, not in the one crop, but in a variety of diversified and profitable crops. This would cause an immediate demand for more land and would provide the money to pay for it. This makes every man on the farm more than six times the industrial power he now is and gives him a love of the farm. This is better than to leave him in discouragement and secure immigrants to come and buy him out.

I should not speak so positively, only I have observed for a quarter of a century that where the Southern merchants have changed from an "advance system" to a cash system, they have prospered very much more than in former years and the number of failures is immensely less. Of course, it is not meant that there should be no credits, but practically there should be little necessity for them until the crop is actually ready for the harvest, then trade becomes a cash transaction. Or, better still, the farmer can get his money from the bank and pay cash in all cases, if there is a lack of ready money.

The advance system bears down upon the cotton farmer with special hardship. His crop is either sold at once or is forced to the gin and the warehouse so as to secure loans. If the cotton farmer is not forced to sell to raise money or pay debts he will store his crop on his farm and market at his leisure, which is in the interests of all parties.

It appears to me, therefore, that the farmer will immeasurably gain when he produces what he has hitherto bought in the way of living. He is not compelled to sell his crop immediately upon the harvest. When he does sell he trades for cash. The greater amount of money he has is very helpful to the family, but the stimulus to his self-respect is perhaps



YOU CAN TRAVEL OVER ROUGH AND HILLY ROADS WITH THE INTERNATIONAL AUTO BUGGY

Farmers, stockmen, salesmen, doctors and others ride through the country safely, rapidly and in comfort in this Auto Buggy. It will go anywhere that a team of roadsters can go—up steep hills, over rough roads and through mud.

The International Auto Buggy is a vehicle of wonderful serviceability. It is alike adapted to the requirements of business and pleasure. It saves your time and avoids the necessity of keeping a road team or of taking a team away from the farm work when you want to go to town or on a business or pleasure trip.

This Auto Buggy is made so simple and strong that there is little chance for it to get out of order or cause trouble. It has a high clearance with its 40 and 44-inch wheels. The wheels run on roller bearings, and, being standard gauge, they track with the farm wagons and other vehicles.

There are no tire troubles because the tires are solid rubber. Both rear wheels are chain driven by a thoroughly reliable 14-horse-power air cooled gasoline engine. The rate of speed is from 2 to 20 miles an hour.

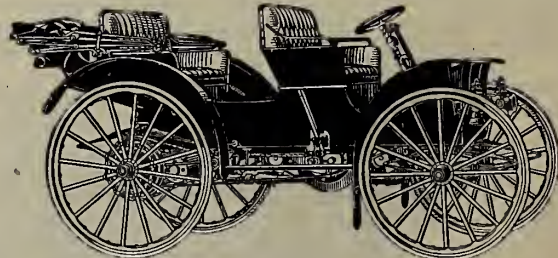
Control is one of the most important features in every horseless vehicle. The control in the International Auto Buggy has been worked out to a great nicety. One convenient lever controls the two speeds forward and the reverse. The steering wheel operates easily and effectively. Children and ladies operate the Auto Buggy easily.

In addition to the rapid and pleasant means of travel afforded by the International Auto Buggy, it is also most economical. The gasoline tank holds seven gallons, which is sufficient for a run of 75 to 100 miles under ordinary conditions.

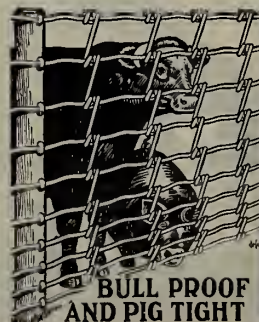
This horseless vehicle has been subjected to the severest kinds of road tests. It has proven to its owners from Maine to California, operating under all conditions, that it is the car that meets country road requirements.

These auto buggies are made to accommodate one or two seats and with single or full top.

The Auto Buggy has great possibilities for you. Investigate it fully. Call on the International local agent for catalog and particulars, or write to the home office.



INTERNATIONAL HARVESTER COMPANY OF AMERICA
(INCORPORATED)
CHICAGO, U. S. A.



**BULL PROOF
AND PIG TIGHT**

BROWN FENCE

GET OUR FREE SAMPLE which we send for inspection. Test it for strength, stiffness and rigidity, then look to the galvanizing. File it and see how thick that is. We want you to satisfy yourself that for YOU Brown Fence is the best fence to buy for Horses, Cattle, Sheep, Pigs, Chickens, etc. Our fences are made of extra heavy Steel Wire—both strand and stay wires No. 9 gauge.

SELLS AT 15 to 35c PER ROD DELIVERED. WE PAY THE FREIGHT.

Easy to put up. Stands staunch, solid and rigid. Won't sag or bag down. Our prices are less than you would pay for much lighter fences.—fences not half so durable. Write today for sample and catalog showing 150 styles.

The Brown Fence & Wire Co., Dept. 68 Cleveland, Ohio.

SAMPLE FREE



ARTISTIC DESIGNS

WARD

FENCE COMPANY
BOX 650 DECATUR, IND.

Cheaper than wood, containing strength and art. Write for Catalogue.



For Lawns, Churches, Cemeteries and Public Grounds

the most important item to be considered. The merchant prospers by the greater volume of business and by the quick return of his money. It seems to me that these points should be urged upon all the people.

S. A. KNAPP.,

Special Agt. in charge Farmers' Co-operative Demonstration Work.

WINTER CANNING ON THE FARM FOR COMMERCIAL PURPOSES.

Many people, especially farmers, have the impression that canning is profitable only when the various fruits and vegetable are in season. This is a false impression for you can enter any merchant's store in every season and find his shelves lined with canned goods of all kinds, decorated with handsomely colored labels. All sorts are there—vegetables, fruits, soups, meats grains, etc.

Nearly all of these originate with the farmer yet he is willing to pass them on in their raw condition to the "middle man," who, of course, is more than glad to put them in such marketable shape as the consumers demand. By this procedure, there is not only an inestimable waste coming from the nicely matured portion not being in a fit condition for shipping, but, by virtue of incessant handling and natural withering and shriveling, the material is not fit for food and unwholesome foods are forced upon the consumer at a price for which he should be able to obtain them fresh and pure.

There are hundreds of housewives who, if they would investigate commercial home canning, would be able to provide the very best food for their immediate families and also deliver to their city grocer—freight prepaid—all the soups, meats, vegetables, baked beans, etc., necessary to supply the local demands for such varieties, thus giving satisfaction to the consumer, saving expense for freight and drayage to the merchant, and last, making a complete and highly profitable market at home for every bit of the produce grown.

INTERNATIONAL CALENDARS.

We acknowledge receipt of a beautiful set of calendars from the International Harvester Co., of America, Chicago. Each one of these calendars is a beautiful example of the lithographer's art. Each one is a separate and distinct design representing the different makes of their harvesters—the Plano, Deering, Milwaukee, McCormick, Osborne and Champion. Every farmer can have one if he applies to the Company's Agent nearest to him.

DE LAVAL CREAM

SCORES HIGHEST

AT GREAT DAIRY SHOW

At the great National Dairy Show held recently in Chicago, cream skimmed with DE LAVAL separators won all highest honors. The cream exhibits were made in two classes and the winners in each were as follows, all being users of DE LAVAL hand separators:

MARKET CREAM.

- 1st Prize, Gold Medal, G. C. Repp, Ohio Score 98¾
- 2nd Prize, Silver Medal, W. R. Newberry, Ohio Score 94

CERTIFIED CREAM.

- 1st Prize, Gold Medal, Tully Farms, New York Score 94½

The contest was under the direction of the Dairy Division of the United States Department of Agriculture, Washington, and Mr. Repp's winning exhibit in the Market class was pronounced practically perfect and given the highest score ever awarded by the Dairy Division.

For the past twenty years butter made from DE LAVAL cream has won all highest honors in every important contest. Sixteen of the largest 1908 State Fairs awarded their first prize to DE LAVAL butter, and now comes this sweeping victory for DE LAVAL cream in the big Dairy Show contest, which only goes further to prove that DE LAVAL machines are head and shoulders above every other skimming device in every feature of separator use.

A DE LAVAL catalogue tells why DE LAVAL cream is always superior. Ask for it to-day, or, better still, let us demonstrate the merits of a DE LAVAL separator in your own dairy.

THE DE LAVAL SEPARATOR CO.

- 42 E. Madison St. CHICAGO
- 1213 & 1215 Filbert St. PHILADELPHIA.
- Drumm & Sacramento Streets. SAN FRANCISCO
- 173-177 William Street MONTREAL
- 14 & 16 Princess Street WINNIPEG
- 107 First Street PORTLAND, OREG.
- General Offices: 165-167 BROADWAY NEW YORK.

SHELLS EASY AND QUICK



Any man, woman—even a 6-year old child can run it. People have been doing it for 23 years. Black Hawk Shellers are so well made that I give repairs free. Shells 8 to 14 bu. per hour. Parts built for strain are malleable iron; bearings chilled iron. Clamped with a twist of fingers to box, barrel, tub or bin. Mighty convenient. If your dealer can't furnish a genuine Black Hawk, ask for price delivered your depot. Booklet Free. Write NOW. Agents Wanted. A. H. PATON, Clarksville, Tenn. Maker of Corn Shellers and Hand Grist Mills exclusively.



Black Hawk Corn Shellers

THE IMPROVED RANEY CANNING OUTFITS

The Simplest and Finest Process Ever Invented. Made in All Sizes, and Prices from \$5.00 Up, and Well Suited to Both Home and Market Canning—25,000 of Our Outfits Now in Use. The finest Canned Goods in the World put up by farmers and their families. Write now, and get our free catalogue, giving full information, and prepare for the next crop.

THE RANEY CANNER CO., Chapel Hill, N. C.
Western Address: Texarkana, Ark.-Tex.

CANNING MACHINES

\$500.00. Family Size to Factory Plant. Cans, Labels and complete supplies. Write for FREE Literature to day.

Start your own Canning Factory. Big Profits in canning for the Market with MODERN CANNER METHODS. Have won Highest Awards. Capacities 100 to 10,000 cans per day. Prices \$5.00 to

MODERN CANNER CO., Chattanooga, Tenn., Dept. M]

ENQUIRERS' COLUMN.

All inquiries must reach us by the 15th of the month previous to the issue, or they cannot be answered until the month following.

IRISH POTATO FERTILIZER.

In your January issue, page 74, in answer to a question from T. O. Merrick, you give formula for mixing Irish potato fertilizer in which one of the ingredients is fish scrap. Leaving this out, what would be the change in proportions.

I see no advertisement of muriate of potash in your columns.

Washington Co., Va. A. T. HULL.

1. The fish scrap was used to supply the nitrogen needed by the crop and if you leave this out you will have to use some other nitrogenous fertilizer to take its place, or your crop will fail for want of nitrogen. In this issue you will find an article dealing with this question in which other nitrogenous fertilizers are substituted for the fish scrap.

2. You can get the muriate of potash from any of the seedsmen or fertilizer dealers advertising in this issue. The German Kall firm are the primary source from whence the dealers get all the potash fertilizers and they will tell you their nearest agent to your location.—Ed.

NITRATE OF SODA AS A TOP DRESSING—BALING HAY—TOBACCO FERTILIZER.

1. What is the best time and manner to apply nitrate of soda as a top dressing to alfalfa seeded last fall?

2. Can hay, in this section, be baled direct from the windrow, or should it be stacked for awhile?

3. I expect to put in tobacco a lot which has been in corn two years in succession. What is the best fertilizer I could use? Mr. Massey says the 5-8-5 I thought of using is deficient in potash. How would it do to buy the potash and add to the 5-8-5? I grow dark tobacco. W.

Charlotte Co., Va.

1. Nitrate of soda should never be applied as a top dressing to any crop until the crop has commenced to grow freely. Nitrate of soda is an immediately available fertilizer, being the only one in which the plant food is already in that form in which the plant utilizes it. It is as soluble as salt and therefore the root action of the crop should be in an active condition when the fertilizer is applied so that it can take up the nitrate as it dissolves, otherwise there is great risk of loss. We have seen nitrate of soda to show the effect of its application in less than a week after being applied. It is questionable how far it is wise to use nitrate of soda on a leguminous crop like alfalfa. Usually it is not good policy to apply nitrogenous fertilizers to legumes. They can get their own nitrogen from

LARGEST VEHICLE MAKERS IN THE WORLD



THE STUDEBAKER PLANT COVERS 101 ACRES

**Buggies
Best
To Buy**

Everybody knows that the name Studebaker on a buggy or a farm wagon, or a set of harness, is an absolute guarantee of Superior Quality Long Service and Absolute Satisfaction. That's the best sort of Economy—it means a saving of money to you. Why then run any risk with "cheap" makes?

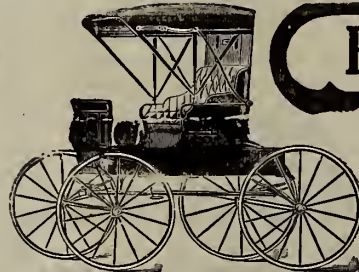
See the Studebaker Dealer

Let him show you how a Studebaker Buggy is made—its splendid construction, style and finish, and you can see for yourself how the purchase of a Studebaker Buggy means Economy for you. If you don't know a Studebaker Dealer, let us send you his name.

Mention this paper and send us two cents in postage and we will mail you FREE Studebaker 1909 Farmer's Almanac, containing "In Oklahoma," Cyrus Townsend Brady's inspiring story of pioneer days.

Studebaker Bros. Mfg. Co.

South Bend, Indiana, U. S. A.



ELKHART BUGGIES

are the best made, best grade and easiest riding buggies on earth for the money.

For Thirty-Six Years

we have been selling direct and are **The Largest Manufacturers in the World**

selling to the consumer exclusively.

We Ship for Examination and Approval

guaranteeing safe delivery, and also to save you money. If you are not satisfied as to style, quality and price you are nothing out.

May We Send You Our Large Catalogue?

Elkhart Carriage & Harness Mfg. Co.
Elkhart, Indiana



PLANT YOUR COTTON SEED IN HILLS

You will save half the labor and expense of "chopping out," save from three-quarters to one and one-half bushels of valuable seed per acre, and grow an extra bale for every fifteen acres planted—if, instead of sowing the seed wastefully in drills, you plant it in hills, with our

THIS DROPPER may also be used for planting Corn, Peas, Beans, etc.

Well Made Strong and Compact.

With One or Two Wheels



IMPROVED SEED DROPPER

The only Cotton Planter made that drops the seed at regular intervals—just where you want it and enough in each hill to insure a good stand. Seed don't have to be rolled or delinted

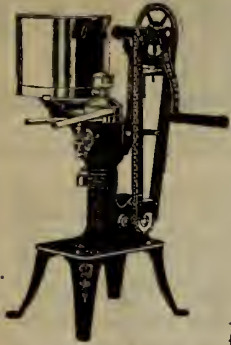
for use in this dropper, and 1 bushel will plant 4 acres.

The Improved Seed Dropper will save enough the first year—in labor, money and increased yield—to pay for itself three times over. Write TODAY and we will send full details—convincing proof—of the work of this wonderful, money-saving, crop-increasing Cotton Planter, and tell you where to buy it.

THE HARRIMAN MANUFACTURING CO.,
63 River Avenue, Harriman, Tenn.

When corresponding with our advertisers always mention Southern Planter.

How many cows can you keep?



Are you keeping the most possible? Would it not be possible for you to keep more cows on your present land if you adopted improved methods of dairying? If you will investigate the

I. H. C. CREAM HARVESTER

you will almost certainly find that you can increase your dairy herd, making greater profits with even less labor and less expense than you require under present conditions. I. H. C. Cream Harvesters are enabling hundreds of dairymen to enlarge their operations. They get at the butter fat, skimming closer than you can by hand. They save work, worry, time and trouble.

They give you the warm skim milk, fresh and sweet, as a nourishing food for your calves, pigs and chickens. It requires only the addition of a little oil meal to take the place of the butter fat extracted to make it an excellent feed.

I. H. C. Cream Harvesters are made in two styles: Dairymaid and Bluebell. Either machine will be a great help to you—will enable you to keep the maximum number of cows.

Dairymaid

This machine is chain driven and is made in four sizes: 350, 450, 650 and 850 pounds capacity per hour. The

chain transmits power from the crank through the gears to the bowl with minimum friction. This makes the Dairymaid exceptionally light-running, also very simple and durable. The crank and the supply can are at the most convenient height from the floor, and the spouts are high enough to permit the separated product to be discharged into ten-gallon milk cans. The frame is constructed to keep milk and dust out of the gears. In every feature the Dairymaid is a winner.

Bluebell

The Bluebell is a crank-drive machine and made in four sizes: 350, 450, 650 and 850 pounds capacity per hour. The gears are accurately cut from the finest material procurable. A-1 oiling facilities are provided, making the machine long-lived. The frame is constructed so that it is absolutely impossible for milk or dust to gain access to the gears—this eliminates about 90 per cent of ordinary separator troubles. Yet the gears are easily accessible. The supply can and crank shaft are in the most convenient locations.

Call on the International local agent and examine the machine he handles. If you prefer, write direct to the home office for a beautiful illustrated catalog fully describing these machines.

International Harvester Company of America, Chicago, U. S. A.

(Incorporated)

the atmosphere and one great object in growing them is to get the benefit of the saving thus effected in the cost of fertilization. It has been demonstrated that where these crops can get the nitrogen from the soil they will not largely take it from the atmosphere. They are like mortals in this respect. When they can get their living easily they prefer to do it rather than work for it.

2. There is too great a risk in baling hay direct from the windrow in our climate for us to advise it. Our atmosphere is too moist even in the hot summer months to make the hay so thoroughly dry as to exclude risk of moulding in the centre of the bales. However dry you may get your hay you will find that if put into a stack or mow it will heat more or less. This heating improves the quality of the hay, and when it cools off makes it perfectly safe to bale it.

Get more out of your garden

Use the Planet Jr. Combination Garden Tools, and you'll do better work; save two-thirds your time, and get a better yield.

There's nothing like a Planet Jr. for profitable gardening or farming. Made by a practical farmer and experienced manufacturer. Fully guaranteed.



No. 4 Planet Jr. Combined Seeder and Wheel-Hoe saves time, labor, seed and money. Almost all useful garden implements in one. Adjustable in a minute to sow all garden seeds, hoe, cultivate, weed, or plow. Pays for itself quickly, even in small gardens.

No. 12 Planet Jr. Double-Wheel Hoe, Cultivator and Plow, the handiest implement ever made for truckers and gardeners. All cultivating parts are of high-carbon steel to keep keen edge. Specially designed to work extremely close to plants without injury.

Write for our 1909 free illustrated catalogue which describes 45 Planet Jr. implements, including Seeders, Wheel-Hoes, Horse-Hoes, One- and Two-Horse Riding Cultivators, Harrows, Orchard- and Beet-Cultivators.

S. L. ALLEN & CO.
Box 1107X Philadelphia, Pa

Planet Jr. Garden Tools

TELL THE ADVERTISER WHERE YOU SAW HIS ADVERTISEMENT.

3. You will find in this column several replies to questions as the best fertilizer to use for tobacco production and next month we expect to write fully on this subject. We are now making investigations in the matter. A fertilizer lacking in potash can be improved in this respect by adding sulphate of potash to it. The Peruvian guano now on the market makes an excellent fertilizer for tobacco in all other respects except that it lacks potash. We advised a grower to use forty to fifty pounds of sulphate of potash per acre with Peruvian guano last year and he said that he made the best tobacco he has made since the days of the old Peruvian guano sold before the war, which was a richer guano than that now on the market.—Ed.

ROTATION.

I have a ten acre lot set well in Herds grass and clover, off of which I got a very good hay crop last year. Can fence same with six bales of wire. Would it pay best to pasture that land to improve it while in sod, or would it be best to break for corn? I have other shifts for corn, but not quite so near by. Pasturing this land will put me on a four-year rotation instead of three years, which is best to increase fertility fastest? I have ten acres in grass and clover for hay crop this year, would you advise me to spread my manure on it to increase hay crop and fertility, or would you put manure on wheat? It is rather a difficult matter to get all on before April. Will sow timothy, Herds grass and clover on wheat and can use manure on sod next fall and winter. W. H. MOORE.

Person Co., N. C.

We prefer a four-year rotation to a three-year one, except upon very light land, which will not hold a sod well. We would therefore pasture the grass land this year and then in the winter get manure on to it for corn next year. Corn land is the best place upon which to use farm yard manure, as it always tells more effectually on corn than any other crop, as the great root system of a corn crop can most effectually utilize the coarse manure. This is the place where we would apply the manure you now have. If you have more than you need for this purpose use the best rotted part of it as a top dressing on your wheat. On the grass land to be mowed we would apply 300 pounds of acid phosphate and 100 pounds of muriate of potash per acre at once, and then when the grass commences to grow freely would top dress with 100 pounds of nitrate of soda, and this should give you a heavy crop of hay. The manure which you can spare for the wheat will help you to secure a better stand of grass.—Ed.

**FREE BOOKS
and
Farm Paper
Free**



JOHN DEERE

**Light Draft Plows
Standard For Two Generations**

TRADE MARK

WRITE for our handsome booklet. It is printed in colors and shows beautiful photos taken in many parts of the world. There are pictures of plows used in foreign countries as far back as 5000 years. The highest type of modern plows, both walking and riding, are also shown.

This Book FREE

If you are interested in farming, we will mail you our 16-page farm paper for one year absolutely free. Fine illustrations, valuable information. There is no other paper like it.

Write for Free Booklet No. 5

and get the paper free for one year. We will also send full information about JOHN DEERE plows. By actual tests the lightest draft plows made. Finest finish, longest life. Simply give number of the booklet and mention this paper.

DEERE & COMPANY, Moline, Illinois

Write for FREE BOOK on "HOT-BEDS"

Secrets of Success Growing Early Vegetables Under Glass for Profit and Pleasure

This book gives money-making suggestions on raising Vegetables, Flowers, etc. How to Prepare and Care for Hot-Beds. Where to Locate Them. How to Make Cold-Frames. Brimful of helps and hints. Free for the asking. Write at once. Our Hot-Bed Sash are made of Louisiana Cypress, with Blind-Mortised, Double-Shouldered Joints. No rotting at joints! Our prices are 50% less than at local dealer's.



"Ready for Business!"

**Start Hot-Beds Now
and Have Fresh Vegetables
Weeks in Advance of Others**

No time to lose! The earlier your vegetables are ready, the more they are worth. Send today for

"Hot-Bed Secrets" Book

Cut Prices on Hot-Bed Sash

- Size 3x6 ft., 1 1/2", 6x10 Glass . \$1.69
- Size 3x6 ft., 1 1/2", 8x10 Glass . 2.08
- Size 3x6 ft., 1 1/2", 10x14 Glass . 1.75
- Size 3x6 ft., 1 1/2", 10x14 Glass . 2.14
- Size 3x6, 1 1/2", with Bar, 10x14 Glass 1.87
- Size 3x6, 1 1/2", with Bar, 10x14 Glass 2.46

Glazed with Double-Strength Glass, add 20c net to above prices.

Send Quick for FREE Book

Be the first in your neighborhood to have fresh vegetables for your table. We make prompt shipment.



Hot-Bed Sash
Size 3x6 \$1.69
1 1/2" thick
Glazed with
6-in. Glass.
Dealers' Price \$3.50

Complete Outfit No. 1, \$11.90

Including Sash, Frames and Sub-Frames

Consists of our regular Hot-Bed Sash and complete frames (for above ground) and Sub-Frames (for the pit). Frames are of Cypress. Each part cut to exact size. Angle irons with holes punched for screws. Here are the items:

2 Glazed Hot-Bed Sash, 3x6 feet, 1 1/2", 6-inch glass; 1 Cypress Frame for 2 Sash; 1 Sub-Frame, all carefully crated for \$11.90 shipment

For Double-Strength Glass, add 40c net to price of each outfit. Hot-Bed Frames, \$5.70 each. Sub-Frames, \$4.25 each.

Don't fail to send at once for the best book on "Hot-Beds" that ever came off the press. It points the way to PROFITS.

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We wish every dairyman who reads this could come to our factory and see for himself the difference between Tubular "A" separators and other separators, thousands of which come to us each year in exchange. We would like to demonstrate to every dairyman the many points of superiority in Tubular "A" separators, a few of which we mention below:--



Tubular "A"

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- Freedom from complicated bowl parts,
- And twenty other especially desirable features.

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THE SHARPLES SEPARATOR COMPANY,

Toronto, Can.
San Francisco, Calif.

West Chester, Penna.

Chicago, Ills.
Portland, Ore.

TOBACCO AND COTTON GROWING.

I want to trouble you with two or three questions, having great faith in your suggestions as to farming, I have just read your article on tobacco growing in the January Southern Planter. You are doubtless familiar with the soil of Edgecomb. The farm I am now running is of the grey sandy loam subsoil. Will the formula mentioned in the above article suit this class of land? Will kainit answer for the potash and how much? Will fish scrap, answer in place of dried blood? As it is not convenient to get this. If so, will you kindly give me proportions? Will a crop of rye turned under be injurious to cotton, say turned under in March, cotton to be planted middle of April, rye followed cotton and peanuts, could not get it in until too late for clover.

SUBSCRIBER.

Edgecombe Co., N. C.

The formula mentioned in The Planter will do very well for light sandy soil in Edgecombe. It was used in Granville at rate of 700 pounds per acre. Kainit will not answer at all for the potash, as the chlorides will damage the quality of

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the tobacco. A man in Forsyth county, N. C., used this formula and put in the same quantity of kainit and, of course, did not get more than one-fourth the potash required, and that in a bad form for tobacco. Potash in kainit is a sulphate, but is associated with so much chloride of sodium that it acts like muriate would. Nor will fish scrap do as well as blood for the same reason. Rye turned under will help cotton.—W. F. Massey.

TOBACCO FERTILIZER.

I should be pleased to have Professor Massey's advice through your invaluable columns on following:

Land is medium fine sand and under-laid at about 12 inches to eighteen inches with clay. Has very little organic matter incorporated though it has been in cultivation for perhaps twenty-five years. It is purposed to grow togacco this season.

1. Is it advisable to sow Canada peas for green manuring?
2. Which seems to be most generally satisfactory source of nitrogen—
(a) cotton seed meal or dried blood?
(b) nitrate of soda or sulphate of ammonia?
3. Is it advisable to use sulphate of ammonia where land has never been limed?

I prefer to use the formula 5-8-7 (approx.) generally, but propose to double the potash on a test plot. How do you think this will serve?

Relative to query 1, the peas will probably be in before your reply is set up, but the chances are taken not so much for the sake of the tobacco crop as for the permanent improvement of the soil. ROSEMONT.

Williamsburg Co., S. C.

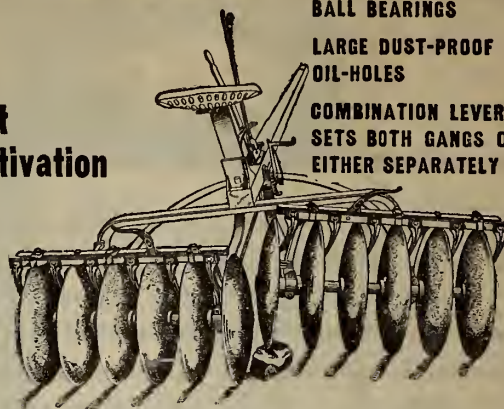
1. No. Cowpeas for summer and crimson clover in winter are far better than Canada peas anywhere, and especially in your climate. Crimson clover sown in September will make a far better winter cover than Canada peas and a better green manure crop.
2. Dried blood is better than cotton seed meal as a source of organic nitrogen for tobacco. Nitrate of soda is better than sulphate of ammonia.
3. Sulphate of ammonia often does harm where no lime is used, and I question the propriety of liming for tobacco.

In our experiments on similar land with tobacco, I found that the following formula gave the best results, and it was used by a tobacco grower in Granville Co., N. C., at the rate of 700 pounds per acre, and he grew a crop for which he got \$34.44 per 100 pounds, lugs and all. It is acid phosphate, 900 pounds, nitrate of soda, 100 pounds; dried blood, (not blood and bone), 600 pounds, and high-grade sulphate of potash, 400 pounds. While tobacco needs a good supply of potash in the form of sulphate, I think the above 10 per cent. is enough, and doubling your mixture

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Saves Discs
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You can get it only on the

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Disc Harrow



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LARGE DUST-PROOF OIL-HOLES
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The flexible gangs pass over stones (as shown in the above picture) without injury to the discs. They adjust themselves in like manner to uneven ground and always work at a uniform depth. The roughest field is tilled as nicely as the perfectly level one. By means of a foot lever the driver adjusts the spring-pressure on the inside gang-ends to suit the nature of the soil. This exclusive feature, together with the direct draft and the high grade sharp steel discs, makes the work very light for the team. Simple in construction, durable and easily adjusted, the *Walter A. Wood Disc Harrow* is the favorite of thousands of farmers. Examine it at our nearest dealer's. If you don't know his address, write us for it; also for illustrated forty-page catalog. Don't buy without investigating this harrow.

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THE IMPERIAL DOUBLE DISC HARROW
WITH FIVE TRUCK.

A Combination Of Out-Throw and In-Throw Disc Harrows in a Single Machine.



The Imperial Double Disc is a double machine with double capacity. It is handled by one man with three or four horses, doing the work of two men and six horses when using ordinary Disc Harrows. The soil is harrowed twice in one passage over the field, being cut and worked outward by the forward discs and then cut and thrown back by the rear discs. The surface of the ground is left smooth and level. This double harrowing is exactly equal to two workings of the field with a single machine. The saving in time is just one-half and in expense nearly as much. The quality of the work is better because the second harrowing follows immediately while the ground is mellow and because it leaves an even, level surface.

The rear gang frame is hooked to the main frame, forming a flexible connection that aids greatly in turning corners and follows the front gangs as the rear wheels of a wagon follow the front wheels. The ground is not thrown up in ridges when turning, as is apt to be the case with a rigid frame, but is as evenly and smoothly harrowed as in other parts of the field.

An important feature of this machine is in the quick and easy change that may be made into a single Harrow by detaching the rear gangs. This is done in a moment's time by removing a spring cotter and lifting the end of the rear frame bar where it hooks into the main frame. Having detached the rear gangs, the operator has a regular two gang Cut Out Disc Harrow complete in every particular and ready for work.

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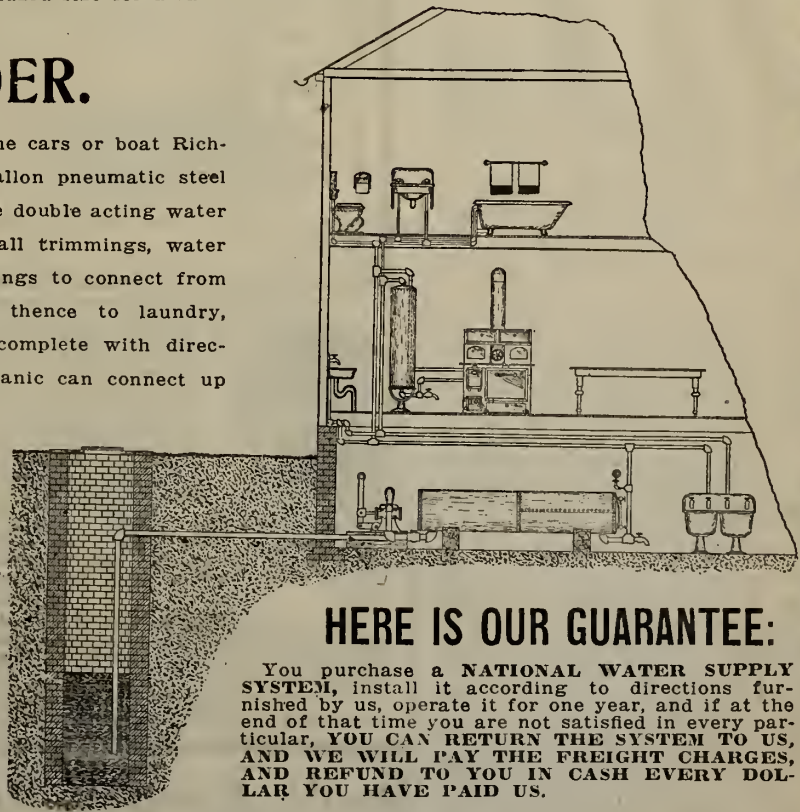
THOUSANDS OF THESE SYSTEMS IN SUCCESSFUL OPERATION IN ALMOST EVERY STATE. THE LUXURY OF A CITY WATER SUPPLY IN YOUR COUNTRY, SUBURBAN, OR TOWN HOME WHERE THERE IS NO PUBLIC RESERVOIR.

The system sketched here is the standard size for a family of six or seven persons, and is

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Let us know the source of your water, whether spring, cistern or well—depth of same, distance from your home and quantity of water desired and we will furnish detailed estimate of cost, without charge.

GRAHAM DAVIDSON & CO.,
Richmond, = = = = = Virginia.

would make 14 per cent., which is needless. The above will give less than 8 per cent. phosphoric acid and is an abundance. In fact, the tendency of phosphoric acid in excess is to make very thin papery leaves and big stems.—W. F. Massey.

DISEASE IN TOMATOES AND IRISH POTATOES.

Will some one tell me what land needs when tomatoes and Irish potatoes die off and make no yield. I planted three acres in tomatoes last year and I lost about one acre in this way. They would commence to die soon after being planted out, and some after the fruit commenced to ripen. Accomac Co., Va. D. P. MILES.

It is not your land that is at fault. The plants were killed by a fungoid disease. The tomatoes from Southern blight and the Irish potatoes from early blight. Bordeaux mixture sprayed on the plants is the remedy for both diseases. In our March issue we shall publish a spray calendar with particulars of the diseases affecting different crops and the remedies for them and directions how to make these remedies.—Ed.

DISEASED CHERRY TREES.

I send this cherry problem for you or Brother Massey to solve. Our cherry trees are almost destroyed by the pest. Augusta Co., Va. B. F. RUBUSH.

Your trouble is Black Knot. The only remedy known is to cut out every diseased twig or branch and burn it. If the trees are so badly infested as you describe you had better cut them down and burn them up, as you can never grow cherries with the disease about your place.—Ed.

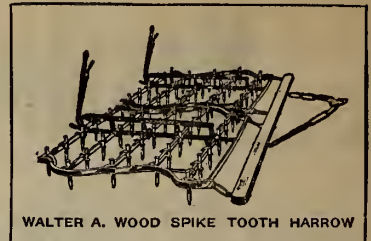
ASPARAGUS GROWING.

Four years ago I planted out some asparagus roots of my own raising, set deep and covered lightly at first, as generally directed. Most came up the first season, but since many have died and others make small growth. Digging, I find the roots dead. Sometimes all the roots on one side will be dead and the other living and the crown the same. Many roots left in the original or seed row are affected the same. Can you tell me the cause? I would like to set more. Will they be liable to same trouble? Would you advise setting missing places with the old roots living in other rows, thus consolidating and diminishing the size of the patch, or reset with young one-year roots, or plow up all and start anew? Essex Co., Va. C. C. WARNER.

We are of opinion that the soil in which you planted your roots is of too cold and wet a nature for the crops. Asparagus requires for its best success a warm, sandy soil. In

Don't Waste Money On Cheap Implements

Cheap materials and flimsy construction can't make a satisfactory implement. They cost a lot of time and temper and the saving in price is but trifling.

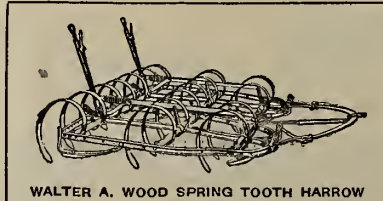


WALTER A. WOOD SPIKE TOOTH HARROW

WALTER A. WOOD IMPLEMENTS

are made of the highest grade materials and are carefully put together by competent workmen. A fifty-seven year experience is behind them. These are the implements it pays to buy, you get satisfaction in every respect. Take for example our Spring and Spike Tooth Harrows.

They do good work under all conditions and endure severest strain. The I-beam steel composing their frames has no equal for strength in proportion to its bulk, while nothing makes as good a tooth bar as the U-bar steel we use, as it is the only material that yields properly to the strain of the teeth. The relief springs on the adjusting bars (exclusive Wood feature) allow the levers to yield to unusual strain on teeth, saving the entire harrow from injury and greatly prolonging its life. The triangular tooth on the spike harrow cuts the soil easier and stirs more of it than any other; has three sharp edges to be used in succession and is held more firmly against the tooth bar than any other kind. The steel runners on the spring tooth harrow have renewable shoes, allow adjustment of height of harrow frame saving it wear, preventing gathering of trash. Have our dealer show you these harrows. If you don't know his address, ask us. Get illustrated forty-page catalogue.



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CLARK'S DOUBLE ACTION "CUTAWAY" HARROW.



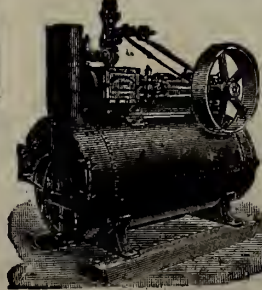
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All other disk harrows have to run in half lap. The jointed pole takes all the weight off the horses' necks, and keeps their heels away from the disks.



We make 120 sizes and styles of Disk Harrows. Every machine fully warranted. Entire satisfaction guaranteed. Send to-day for free Booklet with full particulars. CUTAWAY HARROW COMPANY, 861 Main St., HIGGA NUM, CONN.

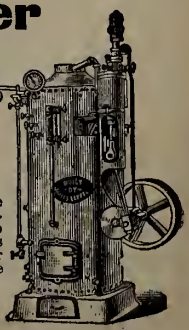
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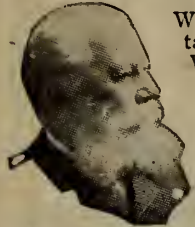
For Farm Use No planter ever thinks of exchanging his dependable Leffel for any other kind of power. He can understand his Leffel Engine. Quick, easy steamers. No other style of power so economical. The numerous styles and sizes of Leffels insure your getting a power that exactly fits your needs. Don't buy any engine till you write for our free book.



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They Are Turning the Cotton and Corn Ground Over at a Saving of HALF in Time, Men, Mules! Big Crops and Profits Follow the "True Blue" Everywhere!



Wide-awake planters have been quick to see the tremendous advantages of Blount's "True Blue" Middle-Breaker or "Splitter." Wherever this implement has been introduced, its success is unparalleled. It cuts the expense of Planting and Cultivating both Cotton and Corn at least half. This statement is backed up by letters from leading planters in every Southern state. Possibly you never before had your attention called to the advantages of my wonderful "True Blue" Middle-Breaker. If such is the case, We ask you to write for our free "True Blue" Books and the actual letters proving beyond the shadow of doubt that this is

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"They are very satisfactory. Their beams are short and you can make smaller turn-rows and ditch banks. I have plows of yours that I have been using for 17 or 18 years. I am using over 100, and would not change for any other make."—C. H. TEAL, Colfax, La.

"The plow is compact, the beam short, enabling me to get close to the fence without waste. We Southern farmers have small mules; many work hill lands, requiring much turning, and we want short-beam plows. The 'True Blue' is strongly made. Two yoke of oxen could not bend the beam! In cultivating, one mule does the work, the draft being wonderfully light."—JOSHUA MULLIGAN, Wesson, Miss.

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"Good-bye to the "Stock" or "Scooter"

A man can do double the amount of work with my Middle-Breaker that he can with a little Stock or Scooter. You will pay out more in a year for breakage on a Stock than the entire cost of a "True Blue."

Used from Bedding the Land to Laying by the Crop

Use it in the spring for splitting out rows that had the cotton stalks in the year before. Use it later in cultivation. It scrapes the grass off and cultivates between the rows. It's strong enough for breaking—light enough for cultivating.

Light
Enough for
One Mule—

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cold, wet soil the roots rot and die and this, we think, is your trouble. We would change the location of your bed and start afresh with year-old plants, which you can raise and which will give quicker returns than digging up and replanting the old roots. Old roots never replant well. Many of them will die. The young roots should be replanted as quickly as can be when dug out of the seed bed, as drying out soon impairs their vitality. Make your land rich with manure and bone meal and have it finely worked and do not cover the roots more than two or three inches deep. Then work the soil to them gradually after the shoots have come through. Heavy manuring and rich soil is the secret of success in growing asparagus.—Ed.

CHUFA GROWING.

Will you please publish in an early edition of The Planter an article on the cultivation of the chufa, soil required, how cultivated, whether or not it can be profitably grown in this part of Virginia? J. J. FRANKLIN.
Charlotte Co., Va.

Chufas are not much grown in this State. Further South they are more



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A. S. LEE & SONS CO., INC.

RICHMOND, VA.

Send for Circulars Department A.

largely grown. We have always had hesitancy in advising their growth, as we have had so many complaints of their becoming troublesome by permanently infesting the land and being difficult to eradicate. They grow best on sandy soil and no doubt make a useful hog pasture, but are not nearly so fattening as peanuts. We have no doubt but that you can grow them in your section, but doubt the wisdom of your doing so. We would advise the planting of artichokes instead. Chufas are planted in May or June in rows two or three feet apart, by dropping the nuts five or six inches apart in the rows and covering to the depth of two or three inches.—Ed.

COWPEAS—ARTICHOKES.

1. I want to plant about forty acres in peas this year in rows about thirty inches apart and give them two workings. Can I sow crimson clover at last working, and will the peas smother the clover?

2. About what time of the year do you plant artichokes, and how many sets are required to plant an acre? Do you set in rows? I have heard they will grow on marshy land. Is this correct?
A. P. G.

Calvert Co., Md.

1. Yes; you can sow the crimson clover at any time after the middle of July. When the growth of the peas is very heavy the clover is sometimes killed out. In such a case we would advise resowing the crimson clover later in the season after the pea vines have fallen down. The vines will shade the seed and keep the soil moist and a good stand is often gotten in this way.

2. Artichokes should be planted in March or April. They are grown from sets like Irish potatoes in rows, four or five bushels will plant an acre. They will grow on wetter land than Irish potatoes, but we do not advise their being planted on marsh land, as the object in growing them is to make a grazing crop for hogs in the


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CAST IRON


Strength to the square inch
16,000 pounds

STEEL

STRENGTH TO THE SQUARE INCH
120,000 LBS.



THIS SQUARE REPRESENTS THE POWER OF AN IRON STUMP PULLER



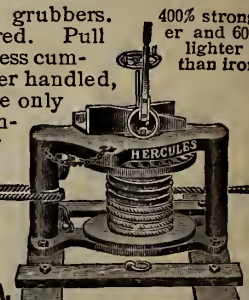
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do the work of three iron grubbers. No staking down required. Pull trees as well as stumps. Less cumbersome than iron, easier handled, price almost as low. The only steel grubber and it's unbreakable. We pay freight and guarantee for three years.

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400% stronger and 60% lighter than iron.



Pulls Stumps or Standing Trees.


Clears a two acre circle with one sitting—pulls anything the wire rope will reach; stumps, trees, grubs, rocks, hedges, etc. A man and a boy with one or two horses can run the

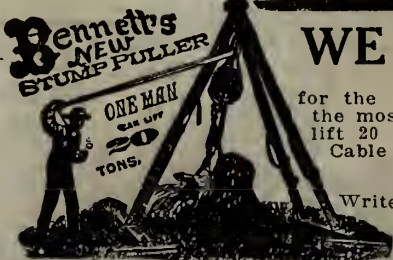
COMBINATION STUMP PULLER,

Stump Anchored or Self Anchoring.

A minute and a half is all it takes for the ordinary stump. No heavy chains or rods. Note the strong wire rope with patent coupler—grabs the rope at any point. Does not chafe rope; far ahead of old-style "take-ups." Smallest rope we furnish stands 40,000 lbs. strain. It generates immense power and it's made to stand the strain. We also make the Iron Giant Grub and Stump machine, the I. X. L. Grubber and Hawkeye Grub and Stump Machine. Write for free illustrated catalogue. Largest manufacturers of Stump Pullers in the World.
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MILNE MFG. CO.,
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ONE MAN CAN LIFT 20 TONS.

WE WANT AGENTS

for the **BENNETT STUMP PULLER**, warranted the most practical machine made. One man can lift 20 tons. Made in 3 styles, 10 sizes. Screw, Cable and Hand Power.

Fully Guaranteed

Write today for catalog and special proposition which we know will interest you.

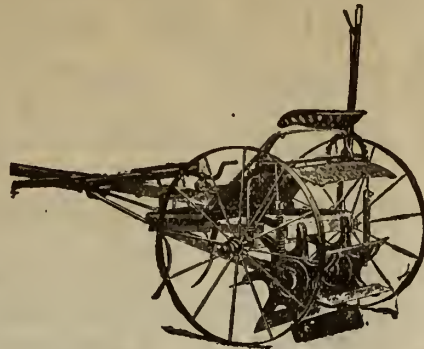
We also manufacture a **Tile Ditcher** and best **Corn Harvester** ever made. We warrant our machines to do what we claim for them or your money back. Write to-day for any information wanted. No trouble in answering your questions.

H. L. BENNETT & CO., Box 14, Westerville, Ohio.

LEADING 1909 UP-TO-DATE LABOR SAVING TWENTIETH CENTURY MACHINERY.



ONE AND TWO-HORSE PLANTER, PLAIN OR WITH FERTILIZER ATTACHMENT.



BROWN 6 or 7 Knife Stalk Cutters. Write for circulars and prices.



We carry in stock all sizes and styles of Scientific Mills.

The No. 20 Power Mill

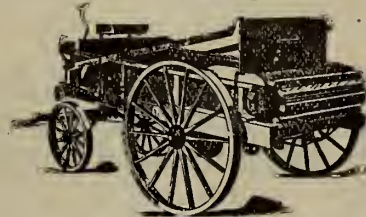
This is the latest addition to the line of Scientific Feed Grinding Mills, and has been designed to meet the requirements of those having horse power small engines.

With a two-horse sweep power or with a two- or three-horse engine the mill will grind shelled corn, oats, rye, barley, wheat and all small grains at the rate of 10 to 20 bushels per hour, also grinds corn and cob.

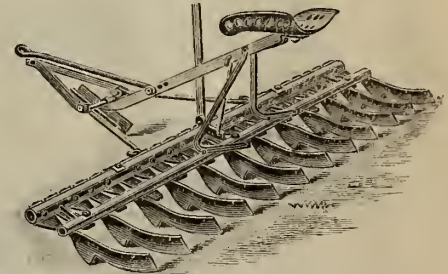


DON'T FORGET! All the merchants in town who claim to sell Oliver Chilled Plows and Repairs only sell the imitation, bogus, cheap goods. The only store in Richmond, Va., to buy Genuine Oliver Plows and Repairs is at.

HENING & NUCKOLS.



Kemp's Twentieth Century Improved Manure Spreader. Made in three sizes. Write for special catalogue and prices.




H.J. SMITH & CO. CHIC.

"The" Improved All Steel and Iron ACME Harrow. It crushes, cuts, tears, smooths and levels, all in one operation. The cheapest riding harrow made. Write for circulars and price.



OLIVER SULKEY PLOW NO. 11.

Light, durable and effective. Simple and novel device for turning. Plows the most difficult soils and does it well. Can be used with or without tongue. Depth easily regulated. Turns square corners without lifting out of ground. Made in both right and left hand. The No. 11 Sulky Plow can be fitted with either the No. 20 or 40 regular steel beam plow. Write for circulars and prices on riding and Gang Plows.



ECONOMY SILO

The most novel, practical and perfect doorway of the 20th Century. Continuous hoops with hoop support. Perfectly air tight. Built on scientific and mechanical principles. Fully warranted. Write for illustrated catalogue and information.

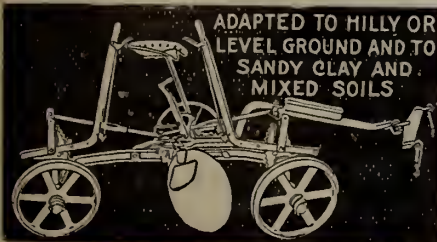


THE SIMPLEX PRESS.

Simplex Little Giant Baling Press for farmers' own use. Has large capacity. Write for circulars and prices.



BROWN Steel Lever Harrows, Wood Harrows, Case-Ring Bearing Disc Harrows, Spring Tooth Harrows. All sizes, plain or with levers, Acme Harrows of all styles kept in stock at lowest net prices.



ADAPTED TO HILLY OR LEVEL GROUND AND TO SANDY CLAY AND MIXED SOILS

The Celebrated Avery "PLUTO" Disc plows, all styles and sizes. Write for circulars and prices.



SUPERIOR GRAIN DRILLS.

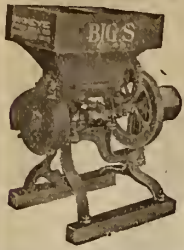
Plain and Fertilizer Hoe and Disc Drills, all sizes.

Write for our General Catalogue, mailed free to everyone. We sell only "A" grade goods, fully warranted and our prices are right.



The "Genuine" Reed Spring Tooth Cultivator. Thousands used every year, giving perfect satisfaction. The Reed Spring Tooth Cultivator can be converted into a spring tooth harrow by buying the center gang at a small cost making it a Spring Tooth Harrow on wheels. Write for the Reed Special Cultivator Circular and Catalogue. "AVERY" Disk Cultivator with 6 or 8 disks and spring tooth attachment. "The" Genuine Brown Riding and Walking Cultivators, all styles. Write for circulars and prices.

HENING & NUCKOLS, 1436-38 E. Main St., Richmond, Va.



BUCKEYE FEED MILLS---SAWS---HORSE POWERS

At the present price of grain, farmers must study economical methods of feeding. By grinding you save 15 to 25 per cent. of the grains you feed. Buckeye Mills grind ear corn and all small grains and soon save enough to

PAY FOR THEMSELVES.

All sizes and styles feed mills for horses or engine, also a complete line of horse powers and safety saw frames to suit the farm. Our machines are all strong, well built and capable—**FULLY GUARANTEED.** Send for catalogue and prices. Full stock carried at Richmond, Va. Prompt shipments.

Made by The Buckeye Feed Mill Co., Box W. Springfield, Ohio. Sold by The Implement Co., Richmond, Va.



winter and they could not root them out well in such land in winter as it would then usually be too wet for the hogs to run in.—Ed.

HORSE FORGING.

I should be greatly obliged for information as to what can be done to prevent a horse from forging and projecting the tongue. I have an otherwise valuable and suitable horse which forges so badly in trotting that he is wearing away the face of the hind hoof half way to the coronet (by, I presume, kicking it with the cast-up of the fore foot toe), and he pokes his tongue two inches forward (does not hang it out) when bridled. For the forging I have tried the measures in shoeing stated in the book on The Horse issued by the Bureau of Animal Husbandry, but all to no purpose.

New Jersey.

H. E. T.

So far as we know, the only way to prevent forging is by adjustment of the shoes. There are some blacksmiths who are adepts at this work, but the majority of those who shoe horses know practically nothing of the science of their work. If you could find a smith who had had experience in shoeing racers and trotters you would probably be able to get the trouble remedied. As to the poking out of the tongue, we don't know of anything you can do to stop this. It is an acquired habit, and will be difficult if not impossible to stop.—Ed.

WINTER VETCH—CRIMSON CLOVER.

What time of year does winter vetch mature to cut for hay?

Is it safe to turn stock in on crimson clover? I have read in your paper that it is not safe to pasture when in bloom. Is it safe before.

T. A. T. JUDD.

Washington, D. C.

Winter vetch will mature for hay in June. Crimson clover is a perfectly safe pasture before the seed heads have formed and the seed begun to harden.—Ed.

PHOSPHATE ROCK.

W. B. Alexander & Co., Mt. Pleasant, Tenn., advertise in The Planter ground phosphate rock, claiming 28 to 30 per cent. phosphoric acid. Please state in next issue of The Planter if

FOUR MOVING PARTS

That's all there are to the McVicker's valve action.

That's why the McVicker is the simplest engine—the easiest to understand and run.

There are 499 other makes of engines, yet each has 12 and more moving parts to its valve action. And that's where most gasoline engine trouble occurs.

You have but to compare the McVicker with one of these and you have compared it with all, for all are practically the same—our engine, only, is different. You can decide in this way which is the best engine made.

We invite comparison, for we know of no better way to sell you one of our engines.

The McVicker is made in the largest and costliest gas engine factory in the United States. Nearly 3,000 were sold last year.

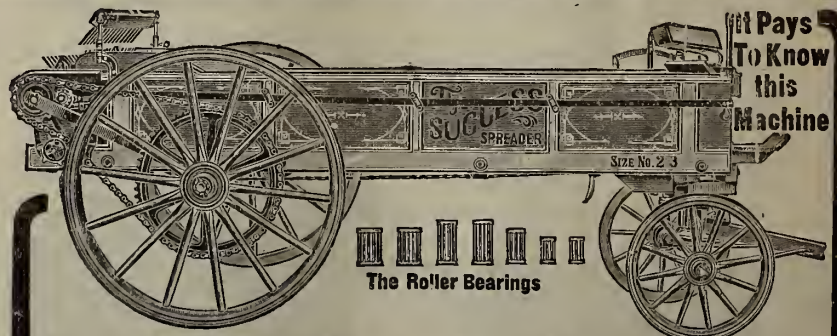
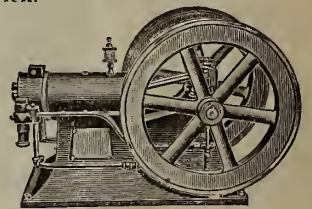
Thousands of farmers who never used engines before have bought ours. Also thousands who have used others. The McVicker appeals to the latter most, for they have had experience. They know.

The McVicker is the simplest engine in the world.

Our marvellous patents do away with all cams, gears, ratchets, tumbling rods and other such mystifying "jim-cracks."

All others must employ them, for they can't run without them.

THE McVICKER



The Roller Bearings

The SUCCESS SPREADER

First choice of everybody who knows spreaders. In use at nearly all Agricultural Colleges, Government Stations and Experimental Farms. Used at all Iowa State Institution farms. The only roller-bearing spreader. Recognized as being a horse lighter draft than others. Working parts strong and simple. No cog wheel gears. Power applied direct by strong chain drive. It cuts in half the time and labor of spreading manure and doubles manure value. Makes it possible to keep up soil's fertility with home-produced manure alone, no need to buy commercial fertilizers. You need a success spreader. It will make money for you—is doing it for thousands of farmers. **Success Book Free.** Write for it to

KEMP & BURPEE MFG. CO., Syracuse, N. Y.



Let Me Pay the Postage on My Big Free Buggy Book to You

Though these books cost me 8c each for postage alone, yet I'll gladly send you one free because I want you to know about Split Hickory Vehicles—made-to-order—sold direct from factory to you at home on 30 Days' Free Road Test—guaranteed 2 years.

Book Tells How I Save You \$26.50 on Split Hickory Buggies

—tells why I can save it to you and just where the saving comes in—also tells how I save you at the same ratio on over 100 styles of Split Hickory Vehicles—more vehicles than you could see in 10 big store rooms. Better send for this book, sit down of an evening and look it over. It's full of actual photographs of Vehicles and Harness of every description. It's my latest and best book—for 1909—and it's truly a Buggy Buyers' Guide. It not only gives descriptions and prices in detail, but also tells how good vehicles are made—why they are better made my way—all running parts made of second growth Shellbark Hickory, split with the grain, not sawed across it, thus giving extra strength and long wearing qualities. It tells about one of my latest features—Sheldon Genuine French joint automobile springs, making the easiest riding buggy on the market—even riding over rough roads is a pleasure with a "Split Hickory."

Buying direct from the factory brings you in touch with the people who make your vehicle. My two years' guarantee is to you direct—my 30 Days' Free Road Test is to you direct—my price to you direct—no roundabout transaction as when buying through a dealer—keep the dealer's profit to buy other things with—all meaning a big saving and more satisfaction to you.

Will you let me mail you the book? Will you write for it today. Address me personally

H. C. Phelps, President,

THE OHIO CARRIAGE MFG. CO., STATION 294, COLUMBUS, OHIO



Split Hickory Vehicles Sold Direct from Factory to Home. 30 Days' Free Road Test—Two Years' Guarantee.

Write For Split Hickory Buggy Book Today-Free

this acid is equal to that found in raw bone meal and ready mixed fertilizers.

I have been a reader of The Planter for nearly twenty years, and think it the best and safest guide for the farmers of the South.

J. F. WATKINS.

The phosphoric acid in raw phosphate rock is in the same unavailable condition as in raw bone meal. It is not like the phosphoric acid in mixed fertilizers, which is in large part available at once from having been treated with sulphuric acid. When the rock is, as it ought to be, very finely ground, the action of the root acids and vegetable matter in the soil makes the phosphorus available slowly, and it is therefore a good permanent improver of the soil.—Ed.

TEOSINTE.

Will you give your readers what information you have at your command about "Teosinte." I see it advertised at 50 cents per pound. The description is something like what we call in the mountains fodder grass, others call it Texas millet. I would like to know if this can be bought from our seed houses. I want a mixture of seed for mountain land just chopped out and deadened that will take the blue grass, but requires about five years to form a sod. I think of trying to hasten a sod by sowing the following mixture. Would be glad to have a suggestion to improve the mixture. Tall meadow oat, red top, white clover, and blue grass. Will not sow until February or March. How would it do to mix timothy, as it is cheap and gets out of the way soon.

Bristol, Tenn. A. D. REYNOLDS.

Teosinte is a plant which much resembles corn or the sorghums in its growth, but is more leafy and suckers

AMERICANSAW MILLS

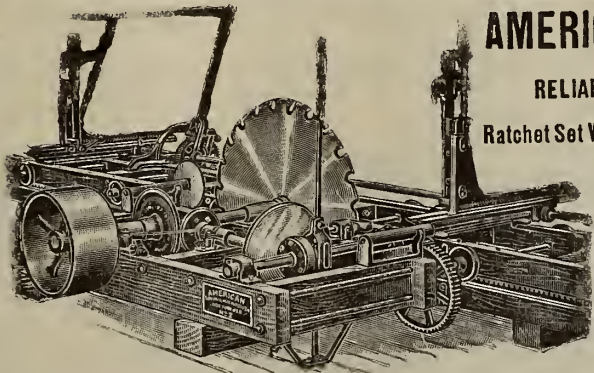
RELIABLE FRICTION FEED

Ratchet Set Works, Quick Receder, Duplex

Steel Dogs. Strong, ACCURATE AND RELIABLE

Best material and workmanship, light running; requires little power; simple, easy to handle; won't get out of order.

BELT FEED MILLS in all sizes.



Log Beam Carriages can be furnished with any of our mills.

No. 1. Warranted to cut 2,000 feet per day with 6 H. P. engine. Seven other sizes made. Also Edgers, Trimmers, Shingle Machines, Lath Mills, Rip and Cut-Off Saws, Drag Saws, Cordwood Saws and Feed Mills. Catalogue sent free.

"Rowe, Mass., October 24, 1905.—I have a No. 1 American Saw Mill and send you an order for another just like it. I run it with my 8 H. P. portable gasoline engine; have sawed 5,000 feet of lumber in ten hours with it without any trouble. I use a 48-inch saw.

Yours truly,

BRADLEY C. NEWELL.

AMERICAN SAW MILL MACHINERY CO., 137 Hope St., Hackettstown, N. J.

OUR AGENTS.—Watt Plow Company, Richmond, Va.; R. P. Johnson, Wytheville, Va.; Hyman Supply Company, New Berne and Wilmington, N. C.; Gibbs Machinery Company, Columbia, S. C.

Planet Jr.

Bigger crops with less work

Planet Jr. implements are the greatest labor-savers and crop-producers ever used in the garden or on the farm. They do the work of six men, and do it better than by old methods. Invented and manufactured by a practical farmer. Strong and lasting. Fully guaranteed.

New No. 10 Horse-Hoe, Cultivator, Hiller, and Vine Turner is the lightest, strongest Horse-Hoe made. Works great as a furrower.

Write today for free 1909 catalogue of all Planet Jr. implements.

S. I. Allen & Co.
Box 1107X Philadelphia, Pa.



No. 33 Single-Wheel Disc-Hoe Cultivator and Plow is a handy tool for quick thorough garden cultivation. Discs are adjustable for depth, and throw to or from the row.

Calvert Co., Md., Dec. 5, '08. I regard the Southern Planter as the most useful and instructive farm journal in the country. I always read it with great interest.

THOMAS PARRAN.

much more freely than any of these. It is not adapted for sections North of Virginia and succeeds best in those sections of the South where the sorghums and corn flourish best. We doubt much whether it would be found to succeed well in your elevated section. In North and South Carolina it makes a heavy yield of feed and can be cut two or three times in a season. We have seen it growing luxuriantly in the James River valley near this city. It does not usually mature its seed in this section, but as it is not grown for the seed, but merely as forage, this is not of any moment. It is not so palatable or so readily eaten by stock as the saccharine sorghums. It is much like the non-saccharine sorghums of which Kaffir corn is the best known. We have often advised its growth in sections south of this latitude. As to the grass mixture, we would add meadow fescue to the varieties named.—Ed.

PIGS WITH COUGH.

Will you please tell me through your query column what to do for hogs that have a persistent cough that seems to be catching? The hogs have not been sleeping in dust and have fairly comfortable quarters and plenty of exercise. The boar pig I bought of the Woodside Stock Farm had this cough when I bought him and pretty soon every hog I had commenced coughing. J. W. NASH.

Mecklenburg Co., Va.

Give the hogs a little saltpetre in their slop two or three times a week, say about half a teaspoonful per hog. It is no doubt some bronchial affection from cold taken.—Ed.

DEHORNING—PEANUT FERTILIZER.

1. Is there any danger of death to cattle in dehorning, and what do you think of the method and effects of doing so, and is there much pain and cruelty attending it?

2. What analysis of guano would you use under Spanish peanuts on a good weed fallow?

GEO. R. HATCH.

Prince George Co., Va.

1. To say that there is no danger of loss from dehorning would be making an assertion which would not be strictly true, as occasionally death occurs, but this is so rare that practically it may be said that it is not dangerous. Use either one of the patent dehorning clippers which you will find advertised in The Planter or a sharp saw. Fasten the animal so that it cannot move around and hold the head fast against a post and cut off the horns as close to the skull as possible and then set at liberty. If done at a season of the year when there are no flies around, the wounds will heal in a day or two, no dressing being

BUY BATTLE AXE SHOES.

Solid Made BATTLE AXE Shoes
SAVE FARMERS MONEY.

THEIR—

SPLENDID STYLE

COMFORTABLE FIT

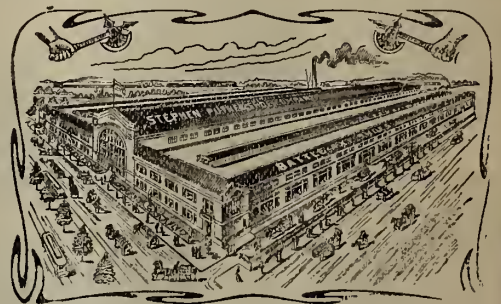
LONG WEAR

LOW PRICE

Explain why the Celebrated, Solid Made BATTLE AXE
Shoes are so widely known and called

“The Farmer's Friend.”

STEPHEN
PUTNEY
SHOE
COMPANY,
RICHMOND,
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GROUND PHOSPHATE ROCK

23 to 30 Per Cent. Phosphoric Acid.

Higher in Phosphoric Acid than Bone or Acid Phosphate, and at one-third the cost. Unequalled for composting, mixing with barnyard manure, or direct application. For prices write,

W. B. ALEXANDER & CO., Mt. Pleasant, Tenn.

AGRICULTURAL LIME.

from

MANUFACTURER TO FARMER CHEAP

No Agents

Lime Screenings and Run of Kiln.

TAZEWELL WHITE LIME WORKS, - - - - - No. Tazewell, Va.

Direct To You—At Reduced Price—A Quaker City Feed Mill On FREE TRIAL No Money Down

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40 Years The Standard
We Pay Freight

But let us tell you first how big a cut in the price to you our direct selling plan means.

A Double Advantage For You

Although Quaker City Mills have been given added improvements recently, which put them still farther ahead of any other mills—although the price would have to be higher than before, if sold through dealers—yet you can get one now for less, much less, than ever.

And we pay the freight, remember. We take all the risk. We ask for no money in advance, no bank deposit, nothing but that you try the mill. Here is as liberal a proposition as you could get from any home dealer and we know that we offer better value. Let us prove it at our expense.

That, in a nutshell, is the story of our new business policy, *Reader*. We have cut out Jobbers, Retail Dealers, Middlemen of all kinds. We come direct to you this year, the user, and offer you, on the most liberal terms you could wish, the best grinder built and at the factory price. We need hardly argue the quality of Quaker City Mills. They have been the standard for over 40 years.

Besides, we are offering to send one to you on trial without trying in any way to tie you up to keeping it if it isn't satisfactory. "Claims" are a drug on the market. We want you to see that Quaker Quality means faster grinding, better prepared products, less trouble—more satisfaction and more profit from your investment. We want you to see that a Quaker City Mill has the widest range of usefulness—that it is the best adapted to all kinds of grinding.

THIS IS THE QUAKER CITY FAMILY OF GRINDING MILLS BUILT IN THE SAME PLACE AND BY THE SAME PARTY SINCE 1867



11 Sizes—22 Styles From Hand to 20-Horse Power

THE STRAUB COMPANY 3737 Filbert Street W. Philadelphia, Pa.

Write For Free Book

—Guaranty—Trial Offer and Prices. One of the Quaker City Mills will just meet your needs and fit your pocketbook.

Say that you want the FEED MILL Book.

required. No doubt there is some pain caused, but it cannot be serious as it rarely affects the flow of milk in a milch cow for more than one or two days.

2. Plow the land and then apply from 1,000 to 2,000 pounds of lime per acre., and harrow in lightly and let stand a week or ten days. Then work into fine order and mix a fertilizer made up of 300 pounds of cotton seed meal, 80 pounds of acid phosphate, and 240 pounds of kainit, or 65 pounds of muriate of potash in the place of the kainit and apply this quantity per acre.—Ed.

COAL DEPOSIT.

We think that there are indications of coal on our farm. Will you please tell me in the next issue of the Southern Planter to whom I might write as to having the deposits examined, etc.?

H. A.

Dinwiddie Co., Va.

Write the President of the Virginia Polytechnic Institute, Blacksburg. They have a Geological Department in the College and might be willing to help you.—Ed.

MARL.

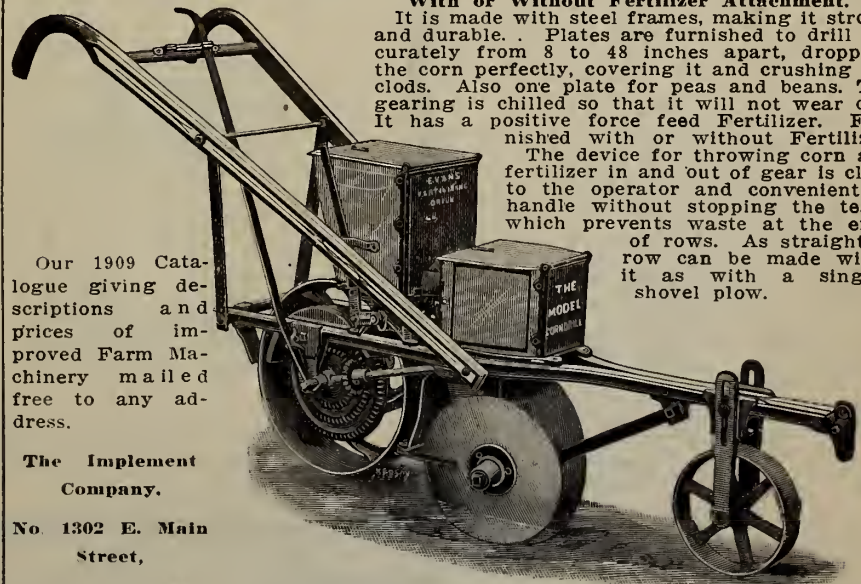
In Prince George county, Va., I have a farm, a part of which at least, is underlaid with marl. The soil is sandy with a clay subsoil. I am contemplating covering the place with this marl as I have been informed that it is an excellent fertilizer. Can you tell me whether I have been rightly informed or not? If I cover the place how thick is it best to spread it?

Evan's "Model" Disk Corn Planter for Corn and Peas.

With or Without Fertilizer Attachment.

It is made with steel frames, making it strong and durable. Plates are furnished to drill accurately from 8 to 48 inches apart, dropping the corn perfectly, covering it and crushing the clods. Also one plate for peas and beans. The gearing is chilled so that it will not wear out. It has a positive force feed Fertilizer. Furnished with or without Fertilizer.

The device for throwing corn and fertilizer in and out of gear is close to the operator and convenient to handle without stopping the team, which prevents waste at the ends of rows. As straight a row can be made with it as with a single shovel plow.



Our 1909 Catalogue giving descriptions and prices of improved Farm Machinery mailed free to any address.

The Implement Company.

No. 1302 E. Main Street,

Richmond, Va.



Something New

Starts or Stops the Spray Instantly

The "Kant-Klog" Sprayer

Gets twice the results with same labor and fluid. Send postal today for free interesting booklet, explaining how the "Kant-Klog" gives

Nine Sizes of Round or Flat Fine or Coarse Sprays

or solid streams all from the same nozzle. Ten different styles of sprayers for all kinds of spraying, whitewashing, etc., etc.

AGENTS WANTED

Rochester Spray Pump Co., 21 East Ave., Rochester, N. Y.

What is the best time of year to do this, and is there danger in getting too much on? How long will a coating last, and will I need other fertilizers in connection with the marl? The place has been pretty badly run down and I want to build it up as rapidly and permanently as possible and any suggestions you can give me will be appreciated. I have just started your valuable paper and, judging from the numbers so far received, must say that it is certainly chock full of good, solid matter. H. J. WHITTIER.

Peoria, Illinois.

The Virginia marls are all valuable as sources of lime for improvement of the physical and mechanical condition of the soil, and some of them are also valuable as sources of phosphorus. You can safely and with advantage apply a heavy dressing of the marl on your land. It is slow in action, but very lasting in its effect. You will need to use acid phosphate and may be some potash in connection with the marl in order to ensure a good growth of the leguminous crops like cowpeas and crimson clover. It is upon these leguminous crops that you will have to rely for the permanent improvement of your land. They supply the humus which all our soils lack and without which they cannot be made productive. The lime in the marl puts the land into condition to grow these crops when they have phosphoric acid and, in some cases, potash added to feed the plants.—Ed.

IRISH POTATO CROP.

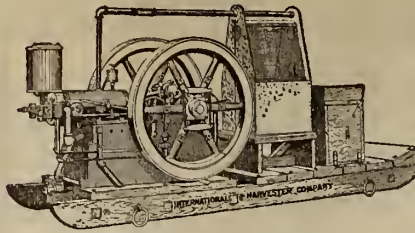
I wish to submit to you a plan I have for preparing land for Irish potatoes. I have already been very materially helped by following the advice given in your valuable paper, therefore desire to have your opinion on this plan.

The land in question lays on both sides of a small stream, but is in no way wet, except in case of a flood, when some part is in danger of an overflow. The soil is a light loam, but, I think, deficient in vegetable matter. My plan is to sow Canada peas as soon as I can in the spring, upon which I will either use Lee's Prepared Lime or acid phosphate (whichever you say is best). In May or the first of June, I'll turn the peas down and then use some good commercial fertilizer, say 1,000 pounds per acre, 500 broadcast and 500 in drill. This, in short, is my plan.

BENJ. F. NEVITT.

Fairfax Co., Va.

We doubt much whether you can get a Canada pea fallow by May which will be of sufficient value to your crop to warrant the labor and cost. You ought to have sown crimson clover last fall and then you would have had a fallow worth turning down in May. If your land is in a good state of fertility and light and warm enough to force the pea growth, it may be that



Needed
on
Every Farm

How a Reliable Engine Economizes Labor

Of course, you, like other farmers, want to economize your time.

Think in how many places a power would be a help to you—would save time and work—if you had it in a handy form ready for use in a minute.

Think how much hard work it would save you in cutting feed—in sawing wood, posts or poles—in running the cream separator or churn—in operating shop or other machinery.

The I. H. C. gasoline engine is a power that is always ready at your hand. It is not necessarily stationary, like the windmill, and on that account adapted to doing only one kind of work.

The engine is built in many styles—there are portable engines on trucks and skidded engines which can be moved wherever the work is to be done. Then there are stationary engines, both vertical and horizontal, in sizes from 1 to 25-horse-power, air cooled and water cooled, and also gasoline traction engines 12, 15 and 20-horse-power. Besides, there are special sawing, spraying and pumping outfits from which you can select

The engines are simple in design so that they can be easily understood.

They are strong and durable—constructed with a large factor of safety, inasmuch as they have greater strength than would ordinarily be required. Yet they are not clumsy or too heavy.

All parts are accessible and easily removed and reassembled. Every engine will develop a large per cent of power in excess of its rating—you get more power than you pay for.

They are absolutely reliable—you cannot find one inefficient detail. They are unusually economical in fuel consumption—less than a pint of gasoline per horse-power per hour. This means that a 2-horse power engine will produce full 2-horse power for five hours on only one gallon of gasoline.

Would it not be a wise plan for you to investigate and learn how an I. H. C. engine will save time and lighten the labor on your farm?

International local agents will supply you with catalogs. Call on them for particulars, or write the home office.

INTERNATIONAL HARVESTER COMPANY OF AMERICA

(Incorporated)

Chicago, U. S. A.

SPRAYERS AND WHITEWASHERS

We are the largest manufacturers of all kinds of Sprayers, Whitewashers, Prepared Spraying Mixtures, Feed Cookers, Poultry and Brooder House Heaters, in the Central, Southern, or Western States.

Write to-day for 1909 CATALOGUE, it tells you when, and how to spray. We give Government Whitewash Recipes and Spray Calendar with each Sprayer.

SPECIAL OFFER—No. 20-4 gallon Galv. Steel Sprayer as shown spraying trees, \$4.50, express paid. 4 gallon brass, \$6.00, express paid.

Ripley Hdw. Mfg. Co., Box V., Grafton, Ill. Manufacturers Sprayers and Feed Cookers.



TELL THE ADVERTISER WHERE YOU SAW HIS ADVERTISEMENT.

the growth may be heavy enough to be of help. You should be able to turn it down in May in order to get the Irish potatoes planted in time to mature before frost. Acid phosphate—200 pounds to the acre—worked into the land before planting the peas and a top dressing of nitrate of soda—75 pounds to the acre—applied as soon as the peas start vigorous growth, will help the crop most. In this issue you will find advice as to the proper fertilizer to use for the Irish potato.—Ed.

CORN GROWING.

Please tell me how to plant two acres of rich land in corn to make the biggest yield? Land is rich and well manured. I want to get the premium. When must I plant.

Halifax Co., Va.. X. Y. Z.

If you have the rich, well-manured land, then the whole problem of raising the biggest yield will be solved by perfect preparation of the land before planting and repeated level, shallow cultivation during the growth of the crop. If the land is not already plowed and subsoiled have this done at once. Do not bring too much of the new soil to the surface now, but let the bottom of the furrows be deeply broken by the subsoil plow. Apply a ton of lime to the acre as soon as the plowing is done and harrow in lightly and let lay for a week or ten days. Then commence to work the land with the disc cultivator harrow at least once in every week or ten days crossing the working at each different cultivation. It may be well, although you say your land is rich, to work in 200 or 300 pounds of acid phosphate per acre during the preparation of the soil. Do not plant before the first week in May, and have the land in prime order when planted. Plant only tested seed and use a planter that will put it in at an even depth so that all may come up at one time. See that you have no missing hills. Plant in rows three feet nine inches apart and drop the seed two feet apart in the rows. Cultivate with the weeder before the plants come up and regularly once every week afterwards using the weeder as long as you can and then a tooth cultivator.—Ed.

FERTILIZER FOR MEADOW.

I have a lot of several acres in orchard grass, what kind of commercial fertilizer would be best to use on it to increase the hay crop. It was not cut last year, but pastured by colts.

King George Co., Va. B.

Apply 400 lbs. of bone meal per acre and 50 pounds of muriate of potash broadcast and then when the grass begins to grow freely, give it a top dressing of 100 pounds of nitrate of soda per acre.—Ed.

WATER-CRESS GROWING.
Would like you to tell me when to sow water-cress seed.
Pittsylvania Co., Va.

DAVID JONES.

The best way to get a water-cress bed is to plant cuttings of the plants and then turn the water on to them. They will root at every joint and you will soon have a bed from which you can cut and it will spread rapidly if the ground is suitable. The seed can be sown in damp ground or, better, on the edge of a stream, where the

water will flow gently on to it any time after the first of April.—Ed.

DOG FOR PROTECTING CHILDREN.

What kind of dog in your opinion is the best for protection for children going to school, and where can I get one?
SUBSCRIBER.

Southampton Co., Va.

We should prefer a collie for this purpose. You will find them advertised in The Planter.—Ed.

CHICKEN PASTURE.

I have a piece of plowed land on



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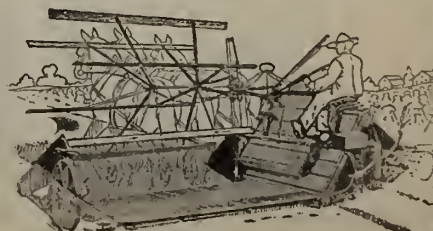
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Box 528, BATAVIA, N. Y.



which I wish to turn growing chickens through May, June and July. Ground fairly good, having been in sod for some years. Would there be a chance of corn getting a sufficient start so that chickens would not greatly damage it? If not, what would you sow, and when, for a good and permanent poultry range? Would like not too rank a grass growth, but a dependable one, and a grass liked by the fowls.

SUBSCRIBER.

Nottoway Co., Va.

If you will prepare the land finely and make it rich by an application of 400 or 500 pounds of bone meal to the acre and then sow two bushels of mixed grass seed—orchard grass, tall meadow oat grass, Herds grass, meadow fescue, and Virginia blue grass, in equal parts, and ten pounds of mixed red clover, alsike and white clover per acre and have this sowing completed by the middle of March you should get a stand of grass which will make good grazing for the chickens through the summer and a permanent stand for future years. A top dressing of nitrate of soda at the rate of 75 or 100 pounds to the acre applied in April or early in May, just when the grass gets fairly started to growing, would greatly help it. In the fall top dress with well rotted farm yard manure with 40 pounds of acid phos-

phate with each ton of the manure applied. It will be useless to attempt to get a stand of corn if the chickens are turned on in May, and, if kept off and corn planted, you will get no grazing for the chickens, as grass and corn will not grow together. If you have corn you must have no grass in it.—Ed.

ONIONS—IRISH POTATOES—CORN AND COTTON.

Will you please give me the kinds of fertilizers and the way to mix it, for an acre of onions? Also, the kinds and mixture for an acre of Irish potatoes? I will not have any stable manure. When should I set out Prize Taker onion sets so I can harvest by August 1st to 15th? How many bushels will it take of sets per acre? How many bushels of Irish potatoes will it take to plant an acre. Can you give me some points about how to cut the Irish potatoes for planting. The farmers here simply peel them and drop the peelings in the ground.

What is the best corn I can plant and the fertilizer I can use? What is the best cotton I can plant, and the fertilizer I can use? I go out in the country and ask the farmers what kind of seeds they use for cotton and corn. They don't know. I am only going to try twelve or fifteen acres. Prepare it right and work it right,

and see what I can do with it. I may fail, but I don't think I will.

O. L. McFARLAND.
Cleveland Co., N. C.

We would not advise you to plant Prize Taker onion sets in the spring. They should have been planted in the fall. The best way to grow a crop of onions now is to sow the seed either under glass and then plant out the young onions in April, or to sow the seed in the field where the crop is to be raised in March. The Prize Taker is one of the best varieties for sowing under glass in February and then plant out the young plants. It makes an early, good crop handled in this way. It will also do well grown from seed sown in the field, but will not be so early. The land should be finely prepared and then be laid off in furrows wide enough apart to admit of horse culture. In these furrows not less than 1,000 pounds of fertilizer per acre, made up of 200 pounds of nitrate of soda, 750 pounds of cotton seed meal, 750 pounds of acid phosphate (12 per cent.), and 300 pounds of muriate of potash to make a ton should be spread. Two furrows should then be lapped over the fertilizer furrow and the ridge thus made be flattened down by rolling or with a hoe. On this ridge the seed should be sown. Sow plenty of seed and

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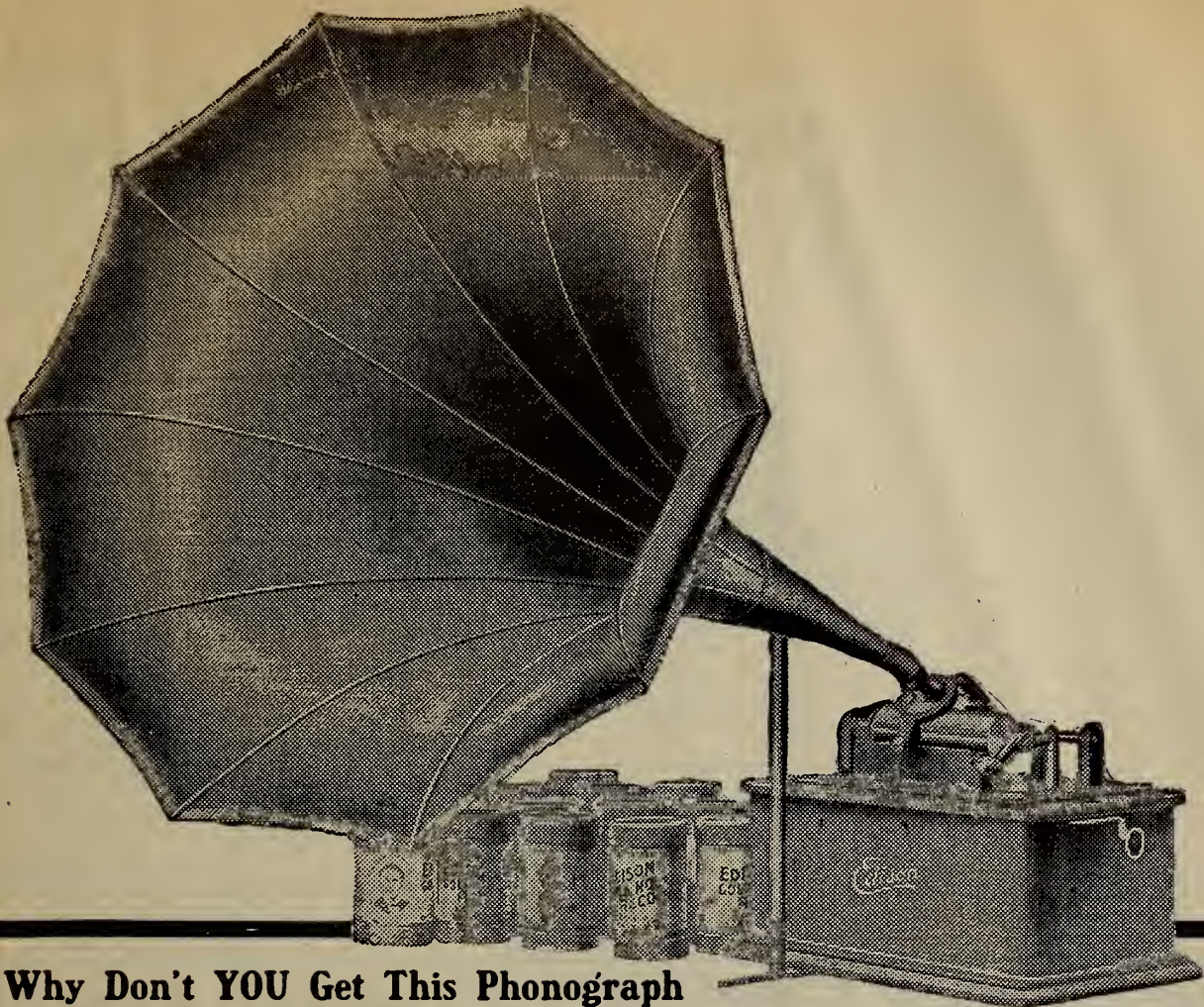
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a dozen records of your own selection on a free trial so that you can hear it and play it in your own home. I can't make this offer any plainer, any clearer, any better than it is. There is no catch about it anywhere. If you will stop and think just a moment, you will realize that the high standing of this concern would absolutely prohibit anything except a straightforward offer.

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then thin out when the size of a lead pencil, so as to leave the plants three or four inches apart. The thinnings can be planted out on other ridges made in the same way. Cultivate the crop repeatedly so as to keep free from weeds. The soil should be worked away from the bulbs when they begin to form so as to leave them to mature on the surface of the ground and not under it.

In this issue you will find an article dealing with the question of the fertilizer to use for growing the Irish potato crop. This crop in your section should not be set out before June so that the crop will mature in the fall. You will require from ten to twelve bushels of potatoes to plant an acre. If the potatoes are large and have few eyes, more seed will be needed. If they have many eyes the sets will cut out further and less seed be required. The sets should be cut so as to leave two or three eyes in each piece and leave as much of the potato with the eyes as possible. It is ridiculous to expect to grow a crop from peelings. The eyes must have the substance of the potato to support the sprouts they send out until the roots are formed and have taken hold of the ground.

In this column you will find advice as to the variety of corn to plant and as to preparation and fertilizing of the land. As to varieties of cotton to

plant, Russell's Big Boll and Culpeper's Improved have been found to be good varieties for planting on light land. For heavier land, King's Improved has been found a good variety.

If you prepare your land well and make it rich and give the crops the proper attention, you ought to succeed.—Ed.

VARIETY OF CORN TO PLANT.

Please advise through your columns as to the best variety of field corn for this section, Westmoreland county, Potomac River land. Soil is sand and clay loam with clay subsoil, and is much run down. The best is none too good. A. B. C.

Westmoreland Co., Va.

The best variety of corn to plant in any section is one carefully selected from a crop grown in the immediate locality. Corn is very susceptible to local influences and a new variety, however good it may be, will rarely make as good a crop for the first year or two after change of location as it will later. The introduction of newer and better-bred seed in any section ought therefore to be made experimentally at first and only a small area be planted in it so as not to risk the loss on a whole crop whilst it is becoming acclimated. Boone County White is proving to be one of the best of the newer varieties introduced into

the State, but it is a corn calling for land in a good state of fertility to make its best showing. We think on your lands that probably Hickory King would be likely to make the best crop. We would, however, test a small plot of the Boone County White as well and grow it for two or three years to ascertain its possibilities in your section.—Ed.

TOBACCO FERTILIZER—O A T FERTILIZER.

1. I would like to have a formula for a fertilizer for bright tobacco. My land is gray to white sandy soil, underlaid with red and yellow subsoil. I cannot produce a heavy tobacco, but can raise a bright light tobacco. So you see why I want a fertilizer that will grow a bright, silky, fine leaf tobacco. The land I wish to plant this year is what is considered in a fairly good state of fertility for the above-described land, with a fair amount of decaying vegetable matter in it. I think maybe Professor Massey can help me in a formula for this section as he is somewhat acquainted with the nature of the land in this section, as he has visited Yanceyville in the interest of the Farmers' Institutes. What I want is the best fertilizer for bright tobacco on gray land.

2. Is kainit mixed in equal parts with bone meal and 300 or 400 pounds

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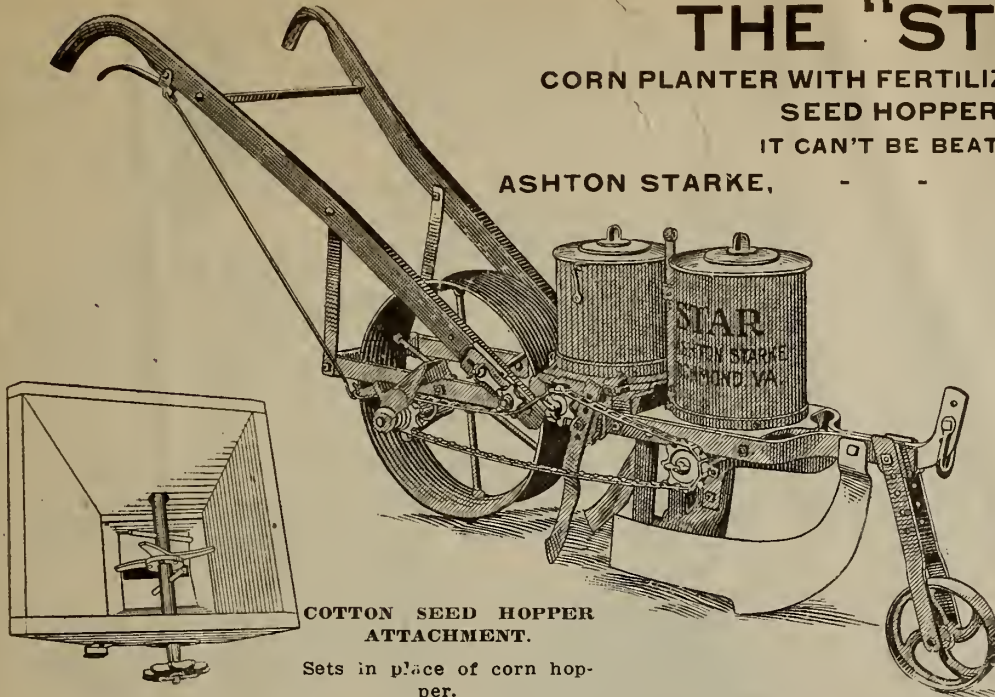
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WM. A. WALKER,
9 N. Belvidere St., Richmond, Va.

per acre drilled with oats a good fertilizer to use for that crop?

Caswell Co., N.C. A. H. D. KING.

1. See Professor Massey's reply to "Subscriber" in this column. The nature of your soil seems to be much the same as that of "Subscriber," and the same formula should meet its requirements.

2. Acid phosphate would be preferable to bone meal to supply the phosphoric acid for a spring oat crop, as it is more quickly available and the period of growth of spring oats is very short. For fall seeded crops or crops having a long period of growth, bone meal is the best. To supply the potash, we would use muriate of potash instead of kainit. Twenty-five pounds of muriate will give you as much potash as 100 pounds of kainit, and will cost you about the same per unit of potash, and you will save on freight and hauling. The acid phosphate and muriate of potash will give you a cheaper fertilizer than the bone meal and kainit and be more effective.—Ed.

SIZE OF HEN HOUSE.

In your next issue please give me the size of a hen house in which to keep about fifty hens. How ventilated? A SUBSCRIBER.

Kenbridge, Va.

Four square feet of floor space should be allowed for each bird. Thus

a house fifty feet long by twelve feet wide will accommodate 150 hens. When free range is given and the hens are fed outside in fine weather, half as many more hens may be put in such a house, provided that care is taken to keep it thoroughly clean.—Ed.

FERTILIZER FOR TOBACCO.

In 1906 I plowed up a wheat field and planted it in corn and sowed crimson clover at the last working of corn, of which I got a real good stand, and after the clover died I turned it under and sowed it in black peas, of which there was a very heavy crop of vines. I want to plant the same land in tobacco and would be very glad for you to advise as the best kind of fertilizer to use. What do you think of planting this land in tobacco, and how do you think it would do.

TUCKER MORRISSETTE.

Prince Edward Co., Va.

Have the land plowed at once, going a little deeper than it was plowed last time and then work frequently with the disc or cultivating harrow so as to secure a deep and finely broken seed bed thoroughly aerated and warmed. In this issue you will find some advice as to the fertilizer to use, but in our next we intend to write fully on this subject, reviewing the experiments made and advising as to how the best results may be secured.—Ed.



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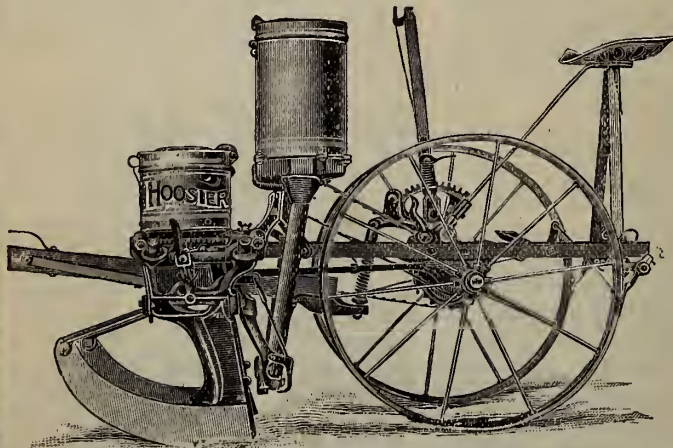
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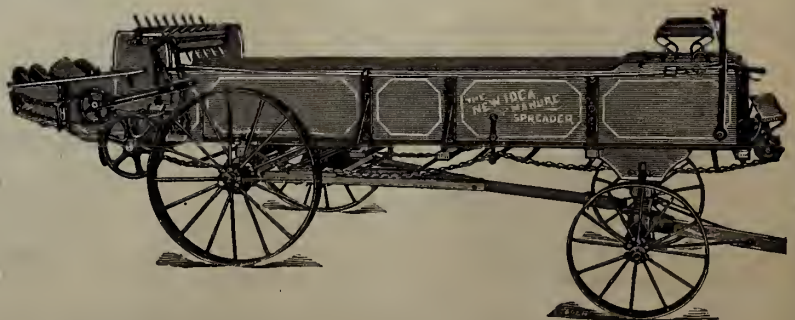
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ALMOST AS GOOD.

Little Ikey came up to his father with a very solemn face.

"Is it true, father," he asked, "that marriage is a failure."

His father surveyed him thoughtfully for a moment.

"Well, Ikey," he finally replied, "if you get a rich wife it's almost as good as a failure."—January Lippincott's.

Davidson Co., N. C., Mar. 21, 1908.

The Southern Planter is as welcome to me and as invaluable as my breakfast, dinner and supper.

W. B. MEARES.

HOW THE DEBT WAS COLLECTED.

One of the problems that may sooner or later engage the congressional attention is the servant maid question. While some of the Solons are busy formulating laws to furnish material for the 1912 campaign, William Alden Smith comes on the scene with a Michigan story of the domestic problem.

It seems that in the home of a certain influential family they arose one morning to find that no breakfast had been prepared—even the kitchen fire had not been lighted. Upon investigation the cook was discovered peacefully reclining in bed.

"Are you ill?" inquired the mistress.

"Not at all; I feel quite well," was the surprising response, but still no persuasion would induce her to arise.

After a time the doctor was sent

for. He put to her his usual questions but the girl insisted that she felt perfectly well.

"If, as you say, you are not ill," said the man of pills and potions, "then tell me in confidence why you won't get up and go to work."

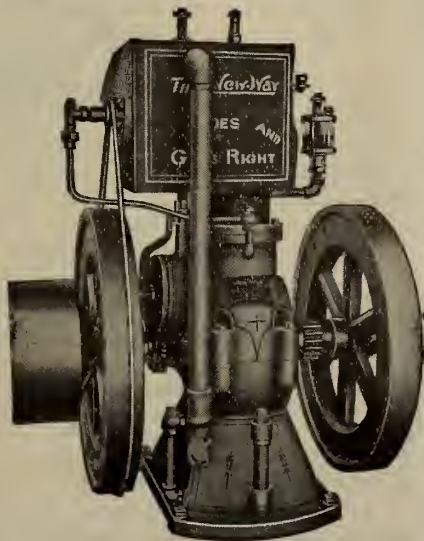
"Well," said the girl resolutely, "these people owe me twenty-five dollars, and I won't stir until they pay it."

"Do you think you'll get it quicker by staying in bed?" asked the doctor.

"I most certainly do," she replied, with a gleam of the eye that expressed determination "to fight it out on the same line if it takes all summer."

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DAILIES.

	ALONE	WITH S. P.
Times-Dispatch	\$6 00	\$6 00
Times-Dispatch (without Sunday)	4 00	4 00
News-Leader	3 00	3 00
Washington Post.....	6 00	6 00
Baltimore Sun.....	3 00	3 40

THRICE A WEEK.

The World, New York....	1 00	1 25
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WEEKLIES.

Times-Dispatch	1 00	1 25
Southern Churchman.....	2 00	2 25
Central Presbyterian....	2 00	2 25
Harper's Weekly.....	4 00	4 00
Breeders' Gazette.....	2 00	1 50
Country Gentleman.....	1 50	1 75
National Stockman and Farmer	1 00	1 00
Hoard's Dairyman.....	1 00	1 30
Memphis News-Scimitar..	50	75
Cotton Journal.....	1 00	1 00

SEMI-MONTHLY.

Standard (Poultry).....	1 00	60
Kimball's Dairy Farmer..	1 00	75

MONTHLIES.

Virginia Magazine.....	1 00	1 00
The Century.....	4 00	4 25
St. Nicholas.....	3 00	3 25
Lippincott's	2 50	2 50
Harper's Magazine.....	4 00	4 00
Delineator	1 00	1 40
Scribner's	3 00	3 25
American	1 00	1 35
Cosmopolitan	1 00	1 35
Everybody's	1 50	1 75
Munsey	1 00	1 35
The Strand.....	1 20	1 50
Argosy	1 00	1 35
Review of Reviews.....	3 00	3 00
Field and Stream.....	1 50	1 50
Woman's Home Companion	1 25	1 50
Modern Farming	1 00	1 00
Reliable Poultry Journal..	50	75
Industrious Hen.....	50	75
Poultry Success	50	75
Blooded Stock	50	65
Successful Farming.....	50	60
Amer. Fruit and Nut Jour.	50	75
Southern Fruit Grower...	50	85
Shepherd's Criterion.....	50	75
Commercial Poultry.....	50	75

When two or more publications are wanted, the price for them can be found by deducting 50 cents from "price with SOUTHERN PLANTER."

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NO. 18.

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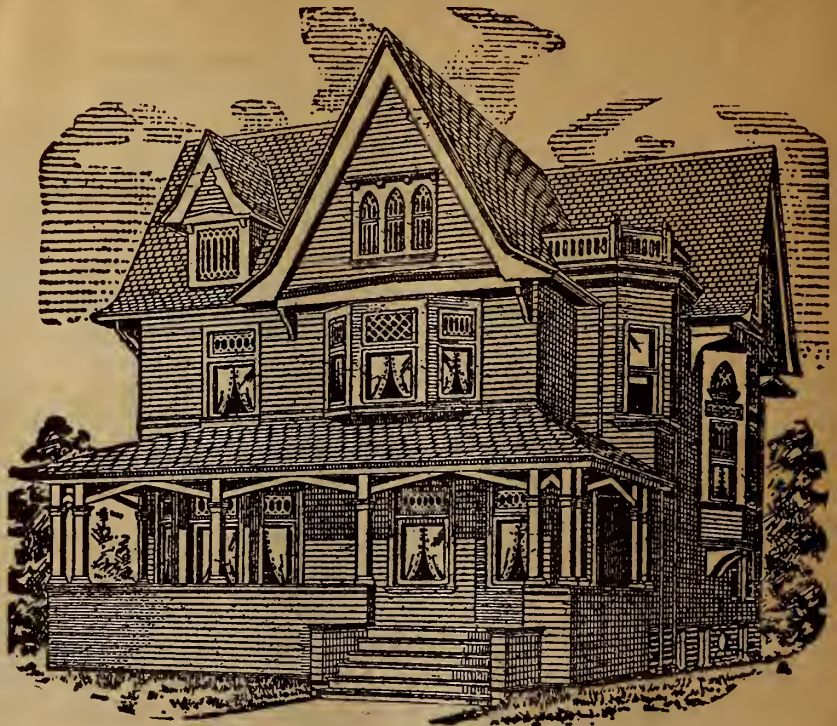
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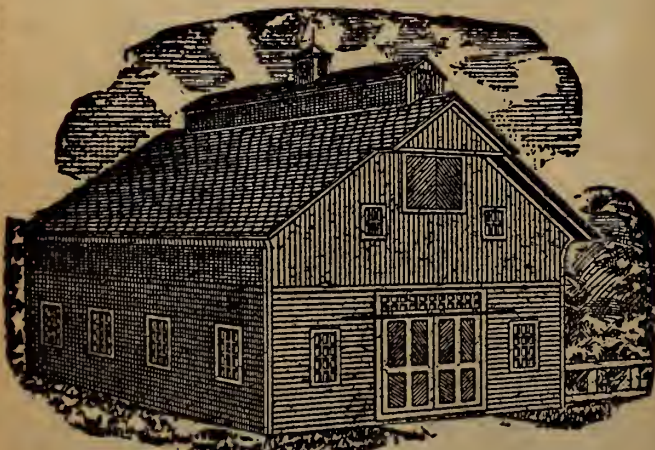
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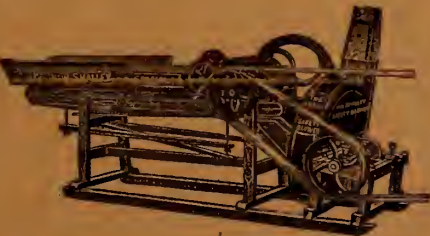


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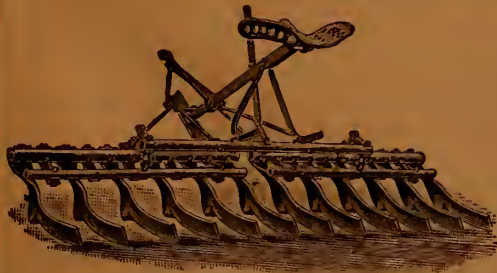


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