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DEVOTED TO

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

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SUBSCRIPTION, 50c. PER YEAR, IN ADVANCE.

The Southern Planter.

DEVOTED TO

PRACTICAL AND PROGRESSIVE AGRICULTURE, HORTICULTURE,
TRUCKING, LIVE STOCK AND THE FIRESIDE.

Agriculture is the nursing mother of the Arts.—XENOPHON.
Tillage and pasturage are the two breasts of the State.—SULLY.

69th Year.

Richmond, Va., March, 1908.

No. 3

OUR SUBSCRIPTION CAMPAIGN.

Since the opening month of the year, our subscription campaign has made great progress and we are adding names to our list with every mail. We are greatly gratified with the result and desire to thank our friends for the interest they are showing in our welfare. We desire, however, to impress once more, and for the last time this season, upon the farmers of the South the importance of at once availing themselves of the liberal offers we are making. Whilst the Southern Planter alone, at the price of fifty cents, is one of the best investments they can make in their own interest, yet when it can be had in connection with the other papers we offer at the prices named below, we fail to see how any farmer can be so blind to the interest of himself and his family as not to avail himself of some or one of the offers. Southern farmers have got to realize that they must use brains as well as muscle in the pursuit of their daily calling. In no way can they keep posted in the best way to conduct their business so as to realize the most profit but by reading the best agricultural literature, and in the South this means the Southern Planter. This journal is published for the express purpose of bringing to the notice of Southern farmers everything which can possibly be of help to them, and is edited with a special regard to the conditions affecting Southern agriculture and the best means of meeting these and making Southern farmers prosperous. That it has met and is meeting the requirements of Southern farmers is evidenced by the constant testimony of these men to the benefit they have derived and the help they have received from it. For nearly seventy years it has gone from this office to the farmers of the South, and we never open a mail without finding testimonials commending the Southern Planter. The letters of our special correspondents, Prof. W. F. Massey and Prof. Soule, are, in themselves alone, worth to every Southern farmer ten times the cost of The Planter every month. In addition to these men, our other correspondents are amongst the most successful

men in their special lines of work. We want each of our readers to make it his business to mention the Southern Planter to his neighbors and friends and ask them to join with him in subscribing for it. This results in a saving to all parties.

For one dollar you can have The Planter one year for yourself and two friends not already subscribers, or you can secure it for yourself alone for three years. In addition to this liberal offer, you can avail yourself of any of the following offers:

One dollar pays for the Southern Planter and Weekly Times-Dispatch one year.

Fifty cents pays for the Southern Planter and Farm and Fireside, or the Southern Fruit Grower, one year.

Fifty cents pays for the Southern Planter and Industrious Hen one year.

We wish also to repeat that we do not wish or expect our friends to work for us for nothing. It is to their financial advantage to avail themselves of one of the various clubbing offers and we will make it worth while to them if they will act at agents. Simply write for terms and samples.

Clubbing Arrangements With Other Magazines and Journals.

We have secured terms with publishers of the leading popular magazines and journals and with publishers of the leading newspapers in all the great cities whereby we are enabled to supply them in connection with the Southern Planter at prices considerably less than the published prices. In most cases we can supply them at such a price as will give The Planter free. In this issue will be found a clubbing list giving the prices of those journals and magazines which are mostly called for. If you do not find the magazine, newspaper, or journal which you desire on that list, write us, and we will quote you on what you desire.

Farm Management.

WORK FOR THE MONTH.

When writing our article on Work for the Month for the February issue, we remarked on the fine open weather which had characterized the month of January up to the time of our writing and the chance it had given to the farmers to continue the work of breaking the land intended to be cropped this year, and urged strongly that full use should be made of this opportunity so long as it lasted, so as to not only facilitate the spring work, but to permit of the soil being aerated and put into a better mechanical and physical condition with the last expenditure of labor later in the season. We had scarcely gotten this matter into the hands of the printers when a change in the weather took place, and for the three weeks which have elapsed in February we have had throughout the South severe cold and hard frost though with but little snow, and that not laying more than a few hours at a time. This change in the weather brought outdoor work practically to a standstill, and land not ploughed up to the middle of January still remains unbroken and will crowd the work in this and the following spring months. This coming of winter in February has now happened for several years and ought to emphasize what we have so often insisted upon, viz.: the utilization of every day in the late fall and early winter months for the breaking of the land. Where this has been done, the coming of frost and snow in February is welcome, as it can then exert its wonderful ameliorating influence to the full upon the newly broken land. A week or ten days hard frost will do more to fit the land to produce a profitable crop than can be done by several weeks' working with any implement. The disintegrating power of frost is marvellous. It can burst the hardest rocks to pieces and render available the plant food therein. How much easier, then, is it for it to make available the plant food in the soil when thrown open to its influence. Land broken in the late fall and early winter will now break down into a fine seedbed with one working with harrow or cultivator, whereas unploughed land will require many such workings before it is fit to receive the seed. The frost has also been a great godsend to the dairymen and fruit growers who need cold storage for their products. It has enabled them to get an ample supply of good, thick ice, which will keep well when properly stored. It has also had another excellent effect in that it will have destroyed myriads of the eggs and pupa of the troublesome insects and, where land was infested with cut worms, these will, wherever the land was ploughed, have been largely killed.

In our last issue we urged strongly the importance of pushing on with the work of breaking the land intended to be cropped so that later in the spring the work will not so overcrowd the capacity of the team and labor available as to cause much of this work to be badly and ineffectively done. We reiterate this advice. As soon as the land is dry enough, keep the plows running and, if drying winds set in (which is usual in March, watch closely the effect on the land and do not permit the reserve moisture

to be dried out too far, but put on the harrow and cultivator and cover the surface with a soil mulch, which keep loose until time to sow the crop. In the South we can never afford to go into the crop growing season with a shortness of moisture in the land, as the sun in May becomes very powerful and quickly exhausts moisture and often brings a crop to a standstill on land lacking moisture just at the most critical time in its life. A stunted crop at starting rarely makes a full crop at harvest. In connection with this subject of breaking land, we wish we could in some way interest our farmers in striking out on a new line in the way of using heavier teams and double disc or furrow plows. Whilst it is true that the labor situation is not so acute as it was a year ago, as hundreds of hands have recently been discharged by the construction, mining and manufacturing concerns, and many of these will no doubt return to the farms again, yet farming in the South can never become as profitable as it ought to be until our farmers learn to follow the example of the Western men, who work three, four, or five horses in one implement and with only one man in charge, thus saving largely on the labor and doing three or four times as much work in the same time. Out West it is no uncommon thing to see a team of six or eight horses drawing a plow and behind that a harrow and thus fitting the land for the seed at one operation and with only one man in charge, where here in the South we see three teams and three men running plows, turning the same width of land as the one Western plow is doing, and behind these teams other like teams and men running the harrows and cultivators and thus adding immensely to the cost. The illustration given is not an overdrawn one, as we have seen numerous illustrations and reports of even more being done with one team and at one operation even to the extent of seeding and completing the work on the crop. As a further illustration of how the Western men utilize teams and economize labor, we are just in receipt of advertisements of reapers which are run by teams of eighteen and twenty-five horses (an eighteen-horse machine is called a small outfit). These machines are in regular use and cut the grain, thresh it, and bag it ready for market as they go across the field, and from three to five men handle and operate the whole outfit. With work done in this way the economy is so great that we cannot begin to compete with the prices at which these men can afford to sell and get clear profit. There is no reason whatever why we in the South should not make a start in the same direction and then we can afford to pay a few good men better wages and and yet save money on the cost of production. Human labor is the most costly and least effective and can rarely successfully compete against machinery. We can get the most effective machines from our implement dealers. They are advertised in The Planter every month. We must have heavier mules and horses to handle them until the time comes—and it is coming fast—when we shall use gasoline or alcohol motors to pull the implements. A large mule or horse costs little more keeping than a small one, and

can do much more work in the same time with much less wear and tear on it, and one good man can just as easily handle and control three or five mules or horses as he can one or a pair. We have got to get out of the old-time system of one man and one or two horses, or we can never hope to compete successfully. It is like the old spinning wheel endeavoring to compete with the modern spinning machinery, or the old hand loom making twenty picks in a minute endeavoring to compete with the modern loom making one hundred and twenty picks a minute. The horses, mules and men kept to run a Southern farm as now run eat up too much of the products of their labors to leave that profit which the farmer who owns and runs the farm ought to have. This can be and must be changed and the beginning of another crop year is the time to make the necessary change. When buying new plows, harrows and cultivators, select heavier ones and those so built as to cover more land each time they cross the field, and yoke three or more mules or horses to the these and thus economize on the man power required to fit the land for the crop. These bigger implements will do better work and enable larger crops to be made and profit will be made in two ways—by saving in labor cost and increasing the yield. There is a great opening in the South for this change, as we make at present a low average yield of products as compared with what we ought to make, and we do this at an extravagant cost as compared with that the Western man works at. If we can double the average yield of our grain and other crops—and this we certainly can do by proper preparation of the land and by the growing of leguminous crops, and the keeping of stock to make manure—and at the same time reduce the cost of production from one-third to one-half by the use of labor-saving implements, the result at the year's end, when the crops are harvested, will look much better and certainly feel so in the pocket.

The weather we have had during February will have prevented the doing of much of the work which we advised to be done in our last issue. We would urge our readers to refer again to that issue and act upon the advice there given in respect of the preparation of the land for the crops and the seeding of the oat and oat and Canada pea crops. These should now be gotten into the land as soon as possible. Where oats cannot be seeded by the end of March in the South, they should be left out of the rotation and forage crops be planted after the corn crop has been planted to supply the place of the oats and oats and peas. It is getting too late now to sow the Virginia grey winter oat and the Burt, Appler or Rust-Proof oats should be sowed. Either of these will make a profitable crop if gotten in at once on well prepared land and where it is not in a good state of fertility, with the help of some acid phosphate at seeding and a top dressing of nitrate of soda after the crop has started to grow freely. Use 250 or 300 pounds of acid phosphate per acre at seeding and 75 pounds of nitrate of soda per acre as a top dressing. Sow two or three bushels of seed per acre and cover well. We cannot too strongly emphasize the importance of a perfect preparation of the land before seeding. Plough deep and break as finely as possible and then the

the crop will be able to forage freely for plant food and utilize it. As showing the importance of a perfect preparation of the land for a crop and of feeding the same liberally, we may mention the fact that a subscriber of ours called upon us a few days ago and stated that on well prepared land fertilized with farm yard manure liberally he had, last year, make 3,100 bushels of corn on 30 acres of land, and that in addition there were 200 or more bushels of soft corn which failed to mature sufficiently to crib owing to being grown on a wet place in the field. A yield like this means a return for the labor expended, especially when coupled with the fact that the whole of the stalks and fodder were saved and have been utilized during the current winter in the feeding of stock.

Do not sow Canada peas and oats for a forage crop later than the middle of this month in middle or Eastern Virginia. The hot weather will come too soon to permit of the crop making a success. In the Western and Northern part of the State the crop may be seeded up to the end of the month.

Dwarf Essex rape should be seeded this month for a grazing crop for sheep and hogs. This is a quick growing crop and, with a favorable season, will be ready to graze in six weeks or two months from time of seeding. The land should be finely prepared, as the seed is very small and should be rolled after sowing, if dry enough to roll without packing on the roller. Sow about three or four pounds of seed per acre broadcast. The feeding value of this crop for sheep, lambs and hogs is great and, with some corn fed with it, quick and profitable returns are made. If wanted to be grazed very quickly, it is better sown in drills two feet six inches apart and cultivated two or three times.

Artichokes should be planted this month for a winter grazing crop for hogs. The raising of this crop will very materially help in producing hog meat cheaply. With a field of artichokes to follow the cowpeas or cowpeas and sorghum and fall-sown rape, hogs can be carried on pasture with very little corn nearly the whole year in this climate. We rarely have weather so severe as to hinder the hogs from rooting out the artichokes until January or February and then the period when the ground is too hard frozen is only for a short time, and if oats or oats, rye and wheat with crimson clover were sown in the early fall, this pasture will, in March or early in April, be ready to carry such of the hogs forward as have not been made into meat right off the artichokes. This is the only profitable way to raise hogs in the South. We cannot afford to feed 60-cent corn to even 6-cent hogs to merely make growth. It is all right to feed a little corn during growth along with the pasture. This is necessary in order to balance the ration and keep up a due supply of carbohydrates and thus lay on the fat quicker and make it firm, and a bushel or two can afford to be fed to finish the feeding and put bloom on the hogs. The artichokes should be planted in rows like corn and wide enough apart to allow of cultivation, and the sets should be dropped about two feet apart in the rows. It will take about six bushels of sets to plant an acre. They can be cut like Irish pota-

toes, as each good eye will make a plant. The land should be well prepared and, if not in a good state of fertility, some acid phosphate and potash should be applied broadcast, say, 250 pounds of acid phosphate and fifty pounds of muriate of potash per acre. If lime has recently been applied, the potash may not be necessary, but the crops is one calling for potash for its successful growth. If more artichokes are grown than are needed for the hogs, part of the crop may be ploughed out and fed to cattle. It is well always to plough out part of the crop and store like Irish potatoes in kilns or pies, so that if the frost be so severe as to prevent the hogs rooting them out for some time, the feeding with them can be continued. The crop, on good land, will make from 300 to 500 bushels to the acre, on the average. As much as 900 bushels have been made per acre.

Grass and clover not sown in the fall, which is the proper time in the South, should be seeded at once as soon as the land can be gotten into fine tilth. In our last issue we wrote fully on this subject and refer our readers to what we then said. If to be sown on fall-seeded grain, harrow the grain first to make a good seed-bed. This will help the grain as well as the grass. In seeding grass in the spring we strongly advise that it be sown without a grain crop with it. If this be done and the land finely prepared and made rich with manure and bone meal a stand can almost certainly be secured which will persist even though the summer set in early and be hot and dry and a fall crop may be cut. If seeded with grain this is doubtful as the grain grows faster than the grass and utilizes the moisture and fertility and thus starves the grass and it perishes in the first continued hot weather. If when the seed be sown the land is dry enough, it should be rolled to compact the soil around the grass and clover seed and to conserve the moisture. Do not skimp the seed. Sow at least two bushels of grass seed and ten to fifteen pounds of clover seed per acre. Our long experience in grass growing has convinced us that the way to secure a good sod is to sow plenty of seed and thus get the land well covered as soon as possible.

Land intended to planted in cotton should be broken as soon as it is fit to work and the work of fitting it for the planting of the seed should be pushed at every opportunity. The importance of early planting has been demonstrated in the work which has been done to get rid of the boll weevil. That cotton land should be deeply broken and finely prepared is just as certain as that such a course is necessary to secure the best yield of corn. What we have said as to preparing the land for the corn crop is therefore applicable to cotton growing. The failure to make a bale of cotton to the acre is as much to be attributed to poor preparation of the soil before planting as to lack of fertility. The old practice of merely breaking out a row in which to plant the seed at the first plowing and leaving the balks to be broken afterwards when cultivating the crop should be abolished. Plow the land and do it thoroughly so that all may be fitted to give up its plant food to the crop. It will all be needed to make the best yield possible. Better far to break and

plant less land and do it thoroughly. The resultant yield will make good the deficiency in area and the cost of cultivation and picking will be materially reduced. It is the heavy crop on the small area which gives the greatest profit. Land between the rows not broken and aerated until the crop is growing is not in a condition to feed the crop when it calls for help.

Tobacco plant beds not already sown should have attention at once or the plants will be too late. Burn the beds well and see that they are made rich so that when the seed germinates it will grow right away. Cover at once with plant bed muslin so as to have the plants protected from the insects. The indications are that it will be safe to increase the area to be planted in tobacco this year. Demand seems to have overtaken supply. See that you carefully select the seed to be sowed so that you may raise the variety in demand and let this be made as good as possible. There is every indication that for good tobacco there is going to be a good market.

NOTES ON THE JANUARY ISSUE.

Editor Southern Planter:

Reaching home on the 23rd of January, after several weeks of strenuous work at the Institutes in Pennsylvania, where I made forty-two lectures from the first of the month to the twenty-second, I get my first glimpse at the January issue of THE SOUTHERN PLANTER and its very attractive cover. The young man on the cover is a type of the young men that Mr. Lincoln set free when he thought he was freeing the negro, for it was a greater freedom for the young white men of the South than for the negro.

It is the young blood of the old South that is making what men call the New South of to-day. The young men on the farms are coming nobly to the front, and Virginia is fast getting again the thoughtful farmers she had in the days of Ruffin. In fact, she has never entirely lacked them, though the hard times of poverty and "reconstruction" robbery checked the advance for a time.

Men Are Thinking.

This is evident from the very thoughtful article of Mr. Hicks, which was, I think, fortunately, placed just ahead of my last review of the December issue. I thank Mr. Hicks for his kindly remarks, and I think that he will find my reply very largely in the article following his. But I think that he is in error in supposing that phosphoric acid is ever in inexhaustible amount in any soil. In fact, in all of our old cultivated soils it is generally the form of plant food that is most usually deficient. True, as he says, nitrogen is generally lacking, except in the deep reclaimed swamp soils, where the decay of vegetation through long ages in water conditions has accumulated vast stores of humus.

But while we can easily get all the nitrogen needed on a grain farm from the frequent use of legumes and their feeding on the farm, we cannot get the phosphorus, for this element cannot be had from the air, and every young animal raised on the farm stores it largely in his bones, and the milk sold from the farm carries it off,

until in all of our older farms there is a crying need for phosphorus, and it must be artificially replaced.

In many of our clay soils, especially such as are the result of the decomposition of granite rocks, there is an almost inexhaustible store of potash, and this being there in an insoluble silicate, comes very slowly into use under ordinary conditions, and, in fact, as shown in the Indiana experiments, where the soil abounded in potash, it is often necessary and profitable to use some soluble potash in combination with phosphoric acid for the best results in the crops.

I found on the red soils of Albemarle, which are very rich in this insoluble potash, that I could get the use of it through applications of lime, and where potash exists in such large amounts as in these feldspathic soils, one can often get the results of potash more cheaply through the use of lime than in buying potash. But in soils where there is a smaller store of potash, it will soon be found that such a course is too rapidly depriving the soil of potash, and it may be wiser to use the potash salts, while not neglecting an occasional use of lime in connection with the growing of humus-making crops, and the use of humus-making manures resulting from the feeding of the legumes.

It is the vast accumulation of humus that makes the soils of the Dismal Swamp fertile, as is shown by the great Cumberland Farm of Mr. Frank Lindsey, of Portsmouth, of which I have written. It is the gradual addition of humus-making materials that is enabling Mr. Tufts on the pine barrens of North Carolina to make a productive farm on barren sand, and in all of our efforts to improve our land and to maintain its productivity, it is the getting back to the humus conditions that prevailed in the virgin soil that is the most important thing.

The old fields all over the South were reduced to the bare skeleton of sand and clay by the using up of the humus, and when turned out as unproductive Nature goes to work at once to restore, through the broomsedge and the pine tree to restore the humus and make a living soil on the old dead skeleton. And man must take a hint from Nature and do the work more rapidly than the broomsedge and the pine tree will.

Nature Allows No Bare Land.

Men leave the soil bare in winter after a hoed crop, while if it had been left to Nature she would have grown some hardy plant on it to pass through the winter. Mr. Crockett is right in saying that even rye is better than bare land, for it does add some humus-making material and furnishes a winter-growing plant to catch the fleeting fertility and hold it for the coming season if turned under, and where it is too late to get a legume crop on the land rye comes in very handily.

In my recent trip in Pennsylvania—where, by the way, I have to return yet for six counties till March—I was pleased to see in York County every field that grew corn last summer is now green with a fine growth of crimson clover. This was especially the case in the section south of the Dutch part of the county, for the Dutch are very slow to adopt new ideas, and I saw them still laboriously hauling out manure in wagons and forking it off in little piles over the fields to be afterwards spread by hand,

when one loading into a manure spreader would have left it spread better and would have saved two handlings of the manure. Down near the Maryland line there is a very different sort of population, and at Fawn Grove, within a hundred yards of the Maryland line we had during the two days of the Institute an attendance aggregating nearly seventeen hundred intelligent farmers. I was glad to see that these men have learned the importance of getting manure out as fast as made, and many of them are using the manure spreaders. The safest place where one can have manure is out on the land, for there is nothing that loses faster in the hoarding than manure.

One peculiar practice I noticed in Pennsylvania. This was that while they cut and shocked the corn in the fall, they cut it about two feet high, and the great stubble left in the fields must be greatly in the way in seeding oats, as they do there in spring, while the stalks left might have been run through the shredder and if not all eaten would have made fine absorbent in the manure.

Saving the Whole Corn Crop.

And this brings me to what Mr. Sherman says on this subject. Down in the black reclaimed swamp lands of the Dismal Swamp region the general practice is to leave all the fodder in the field, merely snapping off the ears and hauling them in the husk.

On the great 6,000-acre farm of Mr. Lindsay, he esteems the shucks more than the fodder, for he runs a mattress factory in Portsmouth and uses all his shucks as material for the cheaper mattresses. But it does seem that there is fodder enough wasted on these swamp lands for roughage to feed all the beeves that Norfolk needs.

While the whole of the feeding value of the stover may not be utilized, the shredded stover would certainly be of more use as an absorbent of the manure than left in the field, even on these rich lands that do not seem to need it, and certainly a large amount of food is wasted. Then, where, as Mr. Sherman says, the stalks are fed in racks the long stalks go into the manure, and the man who can haul it out without using cuss words at times is rare. They tell a story of a man whose brothers had all been to a revival and had gotten religion, and they urged him to do likewise. He replied that all the others had become religious, and if he did so who would load that stalk manure, for he was the only man left to do the "cussin'."

Virginia Horses and Percherons.

For the benefit of "N." I would say that once in hot harvest weather I rode past two harvest fields in Piedmont Virginia. In one wheat field an Englishman, with his love for big horses, was using a team of Percherons to the binder. In the next field was a binder drawn by a team of wiry Virginia horses with a good deal of thoroughbred blood. I noticed that the Percherons were winded often, while the Virginia horses kept right on. In returning in the evening I found that the field where the little horses had worked was all cut, but the big Percherons had not finished a field of about the same size. Blood will tell, even if there is not the great weight. Percherons are profitable to raise for the city wagons, but on a Vir-

ginia farm give me horses with some thoroughbred blood in them, or mules.

Duroc Swine.

In regard to what Professor Quick says about this breed I would like to add that I have found the pigs far more hardy than other breeds, and one can save more of them in cold weather in spring than with any other breeds I have used. They are not so quick in maturing as Berkshires, but are even better rustlers, though the Berkshires beat the Poland-Chinas in that respect.

Dual Purpose Cattle.

I thank my old friend, Samuel B. Woods, for his well-meant effort to learn an old dog new tricks. But if I was going to breed animals for beef I would certainly take either Shorthorns, Herefords or Polled Angus, and on the other hand, if I was running a milk dairy I would take Holsteins and for a butter dairy Jerseys or Guernseys. I thoroughly believe in an animal developed for a definite purpose as much as I believe in a man with a distinct hobby. The Red Poll he names doubtless performed as he said, and fattened at the same time. But I do not believe she would have topped the market as beef, for a cow that performed so well in the dairy would certainly have laid on most of her fat inside in the form of tallow and not on the loins, where the beef men want it. Such cows would suit the men who want some milk and want to sell veal calves too, but I cannot think that the specialist in dairy or beef wants a dual purpose animal.

Devons, I have raised, and they are the finest of work oxen, stepping as quickly as a horse, and they make as fine beef as any, but I never had a deep-milking Devon. But if I was selecting a dual-purpose animal I think I would take the Devons, because of their beauty, horns and all.

Ground Rock.

Noting what the editor says in reply to a query (page 84, January) about the use of pulverized granite as a source of potash, I would suggest that most of our Virginia Piedmont soils are the result of the decomposition of granite rocks abounding in potash, and this potash is still in a very insoluble condition in these soils after untold ages in the breaking up of the rock. Then how can we expect to get results from the use of the freshly ground rock? Far better take some of the soil formed from the long decomposition of these rocks and use it as a source for potash and neither would amount to much. If some means could be used on the pulverized rock to cheaply release the potash it contains there might be some hope for it to compete with the potash salts that are already soluble. But mere ground granite is no better than so much sand, notwithstanding the potash in it.

I would say to Mr. Kyger that until recently the miners of phosphate rock in Tennessee have been delivering it in Eastern Pennsylvania for \$7.50 per ton in car-load lots. But I hear that the trust is getting control and that the price has greatly advanced. The fertilizer manufacturers want the pulverized rock themselves so that they can sell sulphuric acid and rock too, and they are using every means in their power to prevent the farmers getting it or getting materials for home mixing of fertilizers, and as yet we see no way out of the dominion of the fertilizer

trusts but the abandonment of the use of complete fertilizer mixtures by grain and cotton farmers.

ALFALFA.

Near York, Pa., Professor Menges has thirteen acres in alfalfa sown a year ago in August, and it gave a fine crop of hay the past summer. He attributes his success largely to the adoption of Mr. Clark's method of constant rolling and harrowing after the early ploughing in summer, going over the field with a spring-tooth harrow till the soil was well settled and as fine as dust on the surface, and the whole thirteen acres is a mass of alfalfa. The soil is strong clay loam, high and rolling.

Cowpeas and Sow Beans.

I am frequently asked if soy beans will not leave as much nitrogen in the soil as cow peas. I always say no, if the crop is cut off, for it is evident from what Dr. Stubbs writes that a plant that makes so much seed of a highly nitrogenous character must remove most of the nitrogen in the hay crop, and leave less in the soil than the cow pea roots do. Hence I am glad to note Dr. Stubbs' experiment showing this to be true.

Salt Marsh Mud.

I would say to Mr. Jordan (page 80) that the turf from a salt marsh piled in layers with lime and allowed to decompose through a winter and then chopped down will make an excellent manure for potatoes, sweet or Irish, but the water-soaked mud has little value. Without the lime the turf is very slow in decomposing.

Hairy Vetch.

I have had better success with vetch sown with wheat for hay than with oats. The oats do not grow tall enough, for I have had the vetch climb and hang over the top of tall wheat. But if wheat is of interest for grain on the farm I would avoid the vetch, for it will invariably seed before you notice it and will infest the land and come in the wheat field. It is a splendid crop where wheat is not grown for grain, but if my interest was in wheat I would avoid the vetch—the "tares."

Apple Growing.

In talking to the farmers of Bucks County, Pennsylvania, at an Institute, I urged them to grow more apples, as they were so near the city of Philadelphia. They replied that they were too far south and could not compete with New York in growing apples. This was very amusing to me, when I considered what is being done in Virginia and Western North Carolina in apple growing. They seemed to think that because the New York varieties of apples did not thrive so well there that these included all the apples that could be grown, and I told them something about the old apples of Southern Pennsylvania.

When I came to talk with the fruit men of Adams County, near Gettysburg, I found a different state of affairs, and men enthusiastic over apple growing. There and in York County I found that they are planting apples successfully, and the past season have had a fine crop and good prices. The varieties grown there are the York Imperial, Smith Cider, Winesap, Rome Beauty, Ben Davis, and here and there some Grimes Golden, and some are now planting Stayman Winesap.

Up in Warren County, on the high plateau just west of the outlet of Chataqua Lake, they are growing the New

York apples, for at Lander, where I attended an Institute, they are but three miles south of the New York line, and I had a number of New York farmers at the Institute. There I saw the finest samples of King and Northern Spy I have ever seen. And there, too, they had a fine crop and sold their apples to the West, where the crop was short.

At one Institute in Franklin County, a man spoke on apples and had one of his nursery trees to show. It was four-year-old tree, with a stem about four feet tall, and a head partly started. When he was through I took his tree and told the audience that I would not plant a tree like that if given to me without charge. It is strange that planters are so fond of getting big trees and tall stems. I have long ago learned that a one year old tree of any fruit is the best one can get. Such a tree is but a switch, with live buds all along its stem, and one can start the head wherever he wants it, and I want it near the ground. With the trees left in the nursery three or four years, I am compelled to take such a stem as the nurseryman had started, and in their desire to meet the demand for tall trees, this stem is always too tall. In these days of spraying, the low headed tree is an important matter for this alone, even if there was no other advantage. Any one who has tried spraying the old tall trees knows the difficulty of doing it well and knows too that the men and team get about as much of the blue as the trees.

In all my recent travels in Pennsylvania I saw but one orchard that had been properly pruned and trained. These trees had round open heads and stems, but a foot or eighteen inches from the ground, and one could easily spray them all over with a very short extension rod.

At a meeting of the Virginia Horticultural Society at Front Royal a year or two ago, I urged the making of low-headed trees. Mr. Hale, the peachman of Connecticut and Georgia, in the discussion of my paper, said: "What do we want with a stem to a tree more than enough to carry the top, for we get fruit from the head and not from the stem. In my large orchards in Georgia I have not a step ladder and do not need any."

I want a yearling tree, and then want to start the head not over two feet from the ground and some of the branches of the head below that, taking about four of the buds nearest the top after cutting it back to two feet, on which to form the head. With such a short stem the trunk of the tree is soon shaded from the sun, an important thing in the South. The trees do not blow over easily, and the fruit is more easily gathered, the pruning done with greater ease, and the spraying is a small job. Then, too, with such trees one can thin the fruit and thus promote the habit of annual bearing. And as to getting under the trees for cultivation, which is the great bugbear of some, there is never any need of cultivating any tree further than the limbs extend, for the feeding roots are all out where the limbs drip and beyond. Then, after I have the tree developed to a bearing state, I do not want any cultivation, but want a sod mown often and left to mulch the ground and gain humus to preserve moisture in the soil, aiding the sod annually by top-dressings of bone and potash, working for apples only and never for a pasture or hay crop.

The fruit growers of Adams county, Pennsylvania, have realized these things better than elsewhere and are making a success.

I am glad to note the great development in apple growing in Virginia, as given by Professor Phillips in the January Planter, and am proud of the place the Old Dominion is taking in this line of development.

W. F. MASSEY.

HOW LIME ACTS MOST EFFECTIVELY.

Editor Southern Planter:

Readers of your paper everywhere are taking your advice and are beginning to use lime on their soils, but unfortunately they fail in many respects to learn the exact manner in which soils are benefitted. You have explained this time and again, but perhaps a few remarks here would not be amiss.

The chief function in our coastal belt performed by lime is that of rendering sour or acid soil "sweet." In order to do this a chemical action takes place between the lime and the acids which exist in the soil. The metallic part of the lime (chemically called calcium) unites with the acid radicle displacing the hydrogen. Thus it is that in order to secure the best results along this line the calcium should be so applied that it can readily unite with the acid radicle, and the common oxide of lime which is simply calcium united with oxygen, at once suggests itself. The product formed by the union of a metal with an acid radicle is known as a salt, hence the product in this case is a salt of calcium. The metal calcium, like sodium and potassium, has a great affinity (or fondness) for oxygen so that it never occurs in the free state in nature, but always combined with other elements. Thus as soon as lime rock (carbonate of calcium) is burned forming the oxide of lime the latter at once—unless protected—begins to slake or combine with the moisture or acids of the atmosphere. If allowed to slake thoroughly only carbonate of calcium will be left which, as already explained, is a neutral salt.

Therefore only the the oxide of lime is active in "sweetening" (or neutralizing) soils, but, owing to its caustic nature, objectionable not only to those who handle it but also on account of its destructive action on the humus of the soil it is preferable to slake artificially the oxide before using. As this is done rapidly or with the exclusion of the atmosphere a hydro-oxide of lime is formed which, though not as active as the oxide, is sufficiently active and basic to unite with the acids of the soil, and at the same time it has not the objections of the oxide.

It must not be inferred, however, that lime stone or carbonate of lime has no neutralizing power, but though it is able to neutralize acids, its own acid, carbonic, is set free and must be liberated into the atmosphere or neutralized. Then, too, the great bulk of carbonate which would be required is prohibitive.

What we need is lime pure and simple but cheap enough to be within the reach of all.

Don't use lime in connection with (mixed in) any fertilizers.

Don't use lime instead of draining—it is extravagant, to say the least.

Don't use builders' lime unless you know it has no magnesia in it.

Benson, S. C.

LAWRENCE H. McCULLOCH.

A NEW RYE.

Editor Southern Planter:

In the February issue of the Southern Planter Mr. Percival Hicks has under "Crop Rotations" on pages 107 and 108 the following to say:

"The question is whether rye—a plant that loves the cold, and thrives where wheat and oats cannot be grown—will make a satisfactory showing when sown in this latitude during mid-summer.

I have never seen it tried and withhold an expression of opinion until I have some data upon which an intelligent one may be based."

I would like to call Mr. Hicks' attention to a rye, June rye, or more properly Johanna's rye, which is sown from the 26th of June until about the 8th of July. This rye makes a good pasture in fall, a good crop of straw the next year, and a fair grain crop. If Mr. Hicks wants to try this rye, he can obtain seed from the Werlick Seed Co., Milwaukee, Wis. They ask for fresh improved seed 75 cents per peck, \$2.65 per bushel.

Washington, D. C.

W. WINKELMAN.

THE NEED OF COVER CROPS IN THE SOUTH.

Editor Southern Planter:

"Nature abhors a vacant soil" and by leaving cotton and corn fields undeveloped by the roots of living, growing plants for half the year, we in the South violate the laws of nature. The loss of nitrates due to winter leaching from bare soil in any rainy climate is great. But in this hot and moist one the amount of plant food lost through heavy washing rains is enormous, and that beautiful and well-distributed rainfall, which joined with the warm sunny climate, should be the "gold and glory" of our Southland becomes when not rightly used of incalculable injury to her. As to soil washing, galled and gullied slopes mar the landscape on ten thousand square miles of the beautiful rolling lands of the South—the fairest country God ever gave to man. 'Tis true that here and there attempts have been made to stop soil washing by terracing. But were terracing never so well done it would be far from obviating the evil. I wonder why those who advocate terracing as a panacea never thought of the fact that there would be still a great loss of nitrates due to leaching even if they leveled that beautiful rolling country as flat as an Illinois prairie. For most assuredly water must escape some way. If not by washing over the surface soil and bearing it into the rivers, it must pass through the land and thus have a chance to dissolve out the nitric acid, also the lime and potash with which it combines, and carry them off to the Gulf or, worse still, stagnate on the land, smothering all life in it and stopping all the beneficent chemical processes which nature carries on in a healthy, breathing soil.

Many years ago I read what Sir J. B. Lawes had to say in regard to the loss of nitrates in the drainage water

of his experimental fields at Rothampstead when those fields were left bare in winter: I don't remember the particulars, but it was a revelation to me and an eye-opener. If the losses were so great with his light rainfall and cool climate, what may happen during our winter deluges, after our long sultry summers have oxidized the vegetable matter of unprotected soils? They have only twenty-five inches of rain per annum in the Midland and Eastern counties of England where Rothampstead is, and their July is almost exactly the same temperature as our October. Their rain comes in showers and mists, and ours, which amounts to sixty inches yearly, comes in heavy storms that wash and saturate the soil. Hence it is reasonable to infer that our losses through that cause must be greater. However, we are not left to mere inferences. The fact is only too well established by numerous analyses of soils that such is the case. This evil is at its worst when a pea fallow is left the following winter without a grain crop to save the escaping nitrates which are rapidly and abundantly liberated in the still warm soil during our soft fall weather. Indeed, it has been my experience that most, if not all, the good of an unprotected pea fallow on leaching bottom land, very liable to overflow, is all gone by the following spring, though this is an extreme case, for the loss on clay upland it not so bad. But nothing is surer than that the loss of nitrates is very serious in any soil, though one cannot see it with the naked eye as he can soil washing.

I have no doubt experiences like this have led many a farmer to doubt the efficiency of peas as nitrogen gatherers. (Whilst red clover is a nitrogen gatherer it is, what the pea it not, a nitrogen saver also.) I soon learned that rye sown on a pea fallow, when that fallow was not otherwise protected, made an admirable combination and hairy vetch or else crimson clover along with the rye was still better, all the twaddle about following legumes with legumes to the contrary notwithstanding. In fact, I use the rye and crimson clover combination regularly now. But for the cost and very poor quality of the vetch seed on the market I would prefer it to crimson clover. The latter fills the bill on damp but not wet soils, but hairy vetch is like alfalfa and unlike the clovers in being perfectly indifferent to heat. Alfalfa and it seem to have originated in the same sort of a climate. In fact, it does not sprout and afterward get killed by the hot sun to anything like the extent that the clovers do in dry, hot weather in our falls on cotton unlands. Your correspondent, Mr. Crockett, is surely right in advocating rye as a cover crop. It is a first rate nitrogen saver and a first rate humus maker and it is important to save as well as to make. Besides, seed of rye is cheap and everywhere to be found and suits cotton soils to perfection. One bushel of rye is enough for any acre in Dixie, especially if sown early enough. Even if sown too early on rich soil it may head and be killed to the ground by cold. Yet that does small harm to it as a cover crop. Besides the roots of rye fill the soil and grow almost uninterruptedly in winter here, preventing soil washing even more effectually than terracing at the time of year when soil washing is most destructive. On very droughthy land rye can be turned under early in spring and still

help the soil greatly. At times, owing to spring hurry, I have left my rye until it was dead ripe and then rolled a dense tall growth of it down the direction I was to plough it in, and after ploughing let it stand a few weeks and then planted or sowed it in peas or soy beans. Probably I got no immediate benefit from it, but it certainly did great good afterwards. In fact, I have used rye as a cover crop for many years and have not discovered a valid objection to it.

There is a point in this connection which I would like to emphasize. The roots of cover crops should fully occupy the soil. Sown too late or too thinly, or of a plant that does not grow vigorously in cool weather, the crop is likely to be inefficient as a nitrogen trap or as a humus maker. Neither will it arrest soil washing. In the order of nature plants are the protection of the soil and the conservors of its fertility, and whilst any kind of plant—even a weed—is better than bare soil they differ as soil protectors greatly. A neighbor in Missouri showed me a fine field of wheat of which he was justly proud. It was ready to head and I noticed that there were big roundish patches over many parts of it more luxuriant than the rest and I asked if he had not top-dressed them with manure. He said not, but that those were originally hazel brush patches and that their superior fertility was plain to be seen for eight or twelve years after the prairie was brought under cultivation. The dense growth and deep penetrating roots of the hazel brush filled the soil with humus and protected it from fire—the great enemy of humus—much better than the prairie grasses which were burnt every spring. In like manner the fertility of a brier patch is proverbial, though not so marked as a hazel bush patch.

The idea is common in the popular mind that it is the crops removed from the farm that make it poorer. No doubt "they have slain their thousands" but it is the wastes due to soil washing and leaching from the soil that "have slain their ten thousands." Of all crops cotton is the most destructive to land. Not by what it removes from the soil, for a 500-pound bale is almost nothing but carbon, etc., that comes from the air, and the thirty-three bushels of seed that accompany it are by no means as heavy a draft on two or three acres of land as what an ordinary crop of hay removes from the same number of acres, yet what a different condition the soil is left in. The losses of fertility in an ordinary cotton field begin when the land is first ploughed in February and last all spring, summer, fall and winter. The summer's sun and winter's rain "do a job for it," as the boys say and, paradoxical as it may seem, the weaker the crop the more harm is done. They say "cotton is king." Yes; a more tyrannical despot never breathed. Everybody defers to him here and everything is sacrificed to his interests. Men descended from men who whacked the head off Charles the First and kicked King George out of this country look on supinely and let "King Cotton" ruin the great heritage of their fathers. JOSHUA FRANKLIN.

Clay County, Alabama.

SOME COMMENTS ON MR. SANDY'S REPORT ON THE DEMONSTRATION FARMS.

Editor Southern Planter:

Having read and thought over the report of Mr. T. O.

Sandy published in your January issue, I would like to make a few remarks on that subject as the result of knowledge gained from observation, study and personal experience. Mr. Sandy's work is probably a great benefit to some Virginia farmers but without doubt a greater benefit to the men who sell raw bone to the farmers for growing corn.

Raw bone will certainly make an increase in the yield of corn on nearly any land unless the weather is too dry, in which case it will help the clover considerably any way, but cannot the increase be made cheaper? I say yes. At least on most of our soils. I tested it for myself three years ago. The Experiment Station also has found that it can. The Southern Planter teaches that it can. A little study even without demonstration will teach any farmer that it can. Now with these facts outstanding does it not seem strange that Mr. Sandy should try to teach the farmers of Virginia to buy nitrogen with hard cash to raise corn with when he ought to try to teach them to get it for practically nothing out of the air by the use of acid phosphate or floats under leguminous crops. If as many farmers as Mr. Sandy would naturally expect to do so, would buy 500 pounds of raw bone per acre to grow their corn crop, it would mean a right snug little sum expended for nitrogen which could have been drawn from the air as a clear profit to the farmers.

Of course we know that pure raw bone is a splendid fertilizer being rich in phosphorus, also containing nitrogen and lime, but Virginia farmers who can grow two crops of legumes a year and thereby get their nitrogen free of charge cannot afford to buy raw bone at \$30 per ton to use on corn and crimson clover.

Why should a man promiscuously recommend a high priced fertilizer for any and all soils in the State without making inquiries as to what crop it had previously grown?

I am personally acquainted with a man who said he raised sixty bushels of corn per acre on a field of several acres without the use of any fertilizer or lime, but with good cultivation. This man said that Mr. Sandy wanted him to use the field as a demonstration plot and recommended a ton of lime and 600 pounds of raw bone per acre.

I do not know much about that piece of land as it is in a different county from where I live, but I would be afraid to recommend \$9 worth of bone meal per acre to make a paying increase on land that would bring sixty bushels of corn without anything. Wouldn't you? You would likely recommend a ton of lime per acre and a leguminous crop at last cultivation if it was not desired to follow corn with wheat or other small grain. Specially selected seed and liming might have brought this crop up to seventy-five bushels per acre, and a leguminous crop at last cultivation would probably increase fertility at a small cost.

This example is to illustrate the unwisdom of a promiscuous recommendation of bone meal for all lands.

I may be wrong, but in my opinion we do not need "Demonstrations" on land that will produce sixty bushels of corn per acre without anything except good cultivation. It seems as though that work ought to be carried on with land that falls below half that amount.

I think we Virginia farmers had better let the man that is not blessed with our climate and long seasons

use the bone meal for corn, at least till it costs considerably less than \$30 per ton.

I have used bone meal with good success on clover and grass here and elsewhere but found that the same end can be accomplished cheaper (here) with other materials.

Please compare my method as given below with that given by Mr. Sandy in his report.

As it is spring let us begin in the spring. Say that we want to raise a crop of corn followed by meadow in the fall of next year on a field that was cropped last year and left without winter cover as has largely been the practice. I give my experience as based on shallow sandy loam soil with red clay subsoil, rolling enough to drain well, situate about five miles south of Manchester in Chesterfield county.

Plough the land as soon as dry enough a little deeper than it was ploughed last year. Do the ploughing very carefully. Follow with subsoil plow if team is available and let it go as deep as the team can stand. After ploughing has been done work with disc and harrow whenever dry enough, after each rain if possible, until ground gets warm, say some time in May, and then plant your carefully selected seed corn. At any time while you are preparing the land for the corn crop drill in about 600 pounds of floats per acre and a little while before you plant, say two weeks, sow broadcast about 400 pounds acid phosphate per acre and work in mixing well with the soil.

The fertilizer applied and corn planted, it should be worked as often as possible, shallow and level as can be done, until it gets too tall. Just in front of last cultivation sow about three pecks of cow peas to the acre, broadcast. If a disc cultivator is used properly it will cover almost every one without ridging very much.

The peas grow up rapidly as the ground has been well worked and supplied with phosphoric acid. They keep down the weeds and grass, lessen the damage done by heavy summer rains, keep the ground from getting hard, draw more nitrogen than crimson clover and furnish as much or more humus to the soil when ploughed in.

The same amount of money that clover and bone meal would cost if spent for acid phosphate or floats and peas will go farther in building up and maintaining the fertility of the corn field at least in this section.

The acid phosphate increases the yield of corn and peas. The floats will gradually become available for the succeeding crop when the pea vines and corn stubble are ploughed in.

The pea pods, when ripe, can be gathered by chickens, pigs or picanninnies at profit enough to more than pay for the seed, so that the nitrogen and humus supplied to the soil are a clear gain.

When the corn crop and pea pods have been harvested straddle each corn row with disc to level the ground and cut up surface and follow with turning plow, going as deep as can be without over-taxing beam. After the ground has been carefully ploughed let it lie fallow till it gets dry enough to work in the spring, then apply a ton of lime to the acre, as Mr. Sandy says, and work in with disc or any other implement that cuts rather than drags. Land should be worked after rains as soon as dry enough

till about June 1, then drill cow peas about two feet apart, work them with small cultivator when they are well up and about ten days after sow a half or three-quarters of a bushel of German millet per acre, work it in covering lightly and let Providence take care of the patch for a little more than sixty days, when the crop will be ready to cut and will make safe feed (when cured) for brood mares or any other stock that eat hay. I almost forgot to say that 400 hundred pounds of acid phosphate should be applied per acre before planting the peas and millet as if not taken up by that crop it does not leach out in our soil and benefits the succeeding crop. After the hay crop is taken off, the land should be raked so that no trash will choke the harrow when covering grass seed which can be sown at once, using Mr. Sandy's mixture of seed, and harrowing in with drag harrow and letting nature do the rest. We now have a meadow sown on land which is free from weeds and well supplied with available plant food and lime hence may reasonably expect a paying crop of hay. We have spent for fertilizer excluding lime \$9.40 as against \$15.00 if we followed Mr. Sandy's advice. We raise our humus and nitrogen with our corn crop and plough it under when we have plenty of time and the weather is cool as against Mr. Sandy ploughing under crimson clover in June. We keep down weeds and add more nitrogen and protect what we already have from the hot sun of July and August by raising a good crop of millet and cow pea hay to feed to our stock while the meadow is growing. We have saved \$5.60 in cash, have made a crop of hay worth from \$15.00 to \$30.00 above cost of seed and harvesting with the same amount of labor and part of that done when time is not so pressing and last but not least our soil is as rich if not richer in phosphates, nitrogen and humus as if we had used the raw bone and clover. Crimson clover is a splendid plant but I find it is far behind the cow pea for building up poor land that is in corn, especially if it is inclined to wash more or less.

Mr. Sandy is right when he says the farmers of Virginia ought to raise their own hay, but why should they fertilize and work land without getting anything for a whole year?

In conclusion I will say that I hope to find time to write more on this subject at a future date and get those "thinking farmers" to think more deeply.

Chesterfield Co., Va.

K. A. BERGMAN.

AT PENNSYLVANIA INSTITUTES.

Editor Southern Planter:

For two weeks past I have been continually "on the road," as the drummers say. In Franklin county we held two Institutes, one at Fayetteville and the other at Marion both within a few miles of Chambersburg.

The Institute at Fayetteville was held on the 6th and 7th of January. The farmers crowded the church in which we spoke though all day on the 7th there was a blinding snow storm and we had to plunge on foot through the snow half a mile from the hotel and back and at night it took the trolley car three and a half hours to get me back to Chambersburg, seven miles. But the farmers seemed particularly anxious to hear me talk about the Southern cow pea for in all this tier of counties they

are taking a great interest in this crop because of the general failure of red clover. All through the Cumberland Valley and in this county what I particularly noticed was the Pennsylvania farmers' love for a big barn. Many of these barns are not only immense but are very elaborately ornamented and gaily painted. Among the Dutch farmers in York red is the prevailing color, but in the Cumberland Valley many are more fancifully painted. And these great barns, which must have cost thousands of dollars, are not the property of millionaires but the thrifty owners of small farms. In many cases the barn yard is surrounded by a wall of stone set in cement and capped with slate. In one place we saw the curious notion of a basin in the center of the yard from which a ditch led to an opening in the wall through which the barn yard drained to a stream. This was quite a shock to my ideas of the good farming which I had attributed to these Dutchmen. In many cases the great barn and the dwelling were very close together, evidently for convenience in cold weather. But I could not help thinking what would happen if either barn or dwelling took fire. It looked to me like having all "one's eggs in one basket," and I would much prefer our Southern plan of making the farm buildings more scattered. In fact, I do not see how the insurance men would take the risk on these farm buildings. In general, these Pennsylvania farmers are good farmers, but I notice one practice that shows how they stick to old and bad practices. Here and there I saw that they were still laboriously hauling out manure and forking it off the wagon in little heaps over the field to be spread later, when they could have loaded a manure spreader and have driven over the field and left it spread. The manure, of course, loses value in the heaps and will also make rank spots when small grain comes on the land and then lodging. The Dutchmen are slow to change their habits, but are the most contented of all people. They crowd the Institutes and seem to take a great interest in what is said. In York county we had five Institutes and at all of them there has been during the two days allotted to each an attendance of more than a thousand. At Fawn Grove, within two hundred yards of the Maryland line, we had in the two days about eighteen hundred people. There we were out of the Dutch section and the people were like Maryland folks. In fact, many of them came over from Maryland. At Loganville and Red Lion we were again in the Dutch section and heard that odd language on all sides. They would talk to us in English, but to each other in Dutch lingo. We had one speaker in our party, a lady, who at times spoke to them in Pennsylvania Dutch, though she spoke well in English too. At Red Lion, a cigar making town of three thousand people, nine miles from York City, I was much surprised to see hanging on the wall of the sitting room of the hotel a card in gilded letters: "Christ is the head of this house, the unseen guest at every meal, the unseen listener to every conversation." And in the next room was the bar, filled with Dutchmen chattering over their beer, and the place was well stocked with stronger liquor, and I wondered what the "silent listener" would think of the conversation. On Saturday night, in the same room where the gilded motto hung, there was a great carousal of beer drinking Dutchmen with fiddles and dancing. But I saw no drunken men, though all were in a jolly humor.

What pleased me in the southern and central part of York county, for we left the snow in Cumberland valley, was that every corn field is green with crimson clover, for it has come to be the universal practice to sow crimson clover at the last working of the corn, and I wish that this practice could become common in all the upper country, at least in Virginia.

In the South especially there is almost as much loss of fertility from bare land in winter as from cropping. Of course, in sections where winter oats follow corn, they will save the loss of plant food in winter, but when oats are not sown in the fall, crimson clover is the best of substitutes. But I have come to regard this crop as one with which I would make an exception to my general rule of always using a froage crop for feed rather than to plough it under, for, in my experience, it is the one legume I could never cure satisfactorily as hay. Coming at a time when there is little hot sun and frequent showers prevail, it is the hardest of all crops to cure well. The general practice here is to turn it down for potatoes or for another corn crop.

When spring oats follow the corn as is common with some here, they do not like to have the clover and hence were very anxious to know about sowing cowpeas among the corn. I advised them that this would be a good practice provided they used an early bush variety, as the running sort might climb the corn and give them trouble in cultivating it.

About Fawn Grove I noticed that they cut their corn with a very tall stubble, generally about two feet from the ground. I asked why they did this and they told me in rather a boasting way that corn grows so big on their land that it was too heavy to handle if cut at the ground. I told them that they should breed it down to a better stature, as I had bred down Cocke's Prolific corn two feet. The practice here at the Institute is a good one; that is, at every meeting they make a show of farm products, grain, vegetable and fruits. They have caught the general fever for big and pretty ears of corn, and I talked corn breeding at every place and tried to show that big and pretty ears are not the only thing wanted, but that the important point was to breed an ideal plant and one that will make the most corn per acre and that after a hereditary tendency to prolificacy was established I had no objection to the pretty ears, and that some day we may have real corn shows when the whole plant is shown and statements of the yield of each sample per acre.

W. F. MASSEY.

COST OF PRODUCTION OF CORN.

Editor Southern Planter:

I will try to give as correctly as it is possible for a man to do the actual cost of my corn crop last year, not allowing anything for the use of farm implements, putting labor at \$1.00 per day and dinner, and horse power at 50 cents per day straight. I planted something like 25 acres. Some of it very good land, and some not so good. All farmers know that last spring was not very favorable to first planting of corn, and therefore the expense of getting

a stand was a great deal more than it ought to have been.

To 14 days ploughing (big plow), man and 2 horses, \$2.00 per day.....\$ 28 00

To 6 days harrowing, man and 2 horses, \$2.00 per day 12 00

To 2½ days laying off, man and 2 horses, \$2.00 per day 5 00

To 2½ days planting, 2 men, hand planters..... 5 00

To 7 days re-planting, 1st and 2d time..... 7 00

To 4 days ploughing, 1 time, 2 horses and man, \$2.00 8 00

To 5 days hoe work, 1 time..... 5 00

To 3¼ days thinning..... 3 75

To 3¼ days ploughing, 2d time, 2 horses and man, \$2.00 7 50

To 2½ days hoe work, 2d time..... 2 50

To 3 days ploughing, 3d time, 2 horses and man, \$2.00 6 00

To 1 day ploughing, 3d time, 1 horse and man (single plow), \$1.50..... 1 50

To 2 days hoe work, 3d time..... 2 00

To 2¼ days ploughing, 4th time, 2 horses and man, (part of it)..... 4 50

To 1 day ploughing, 4th time, 1 horse and man, (part of crop), single plow..... 1 50

To 1 day hoe work, 4th time (ends)..... 1 00

To 6 bushels seed corn for planting and re-planting, both times, 75 cents..... 4 50

To 64 dinners at 10 cents each, planting and working corn..... 6 40

To 9¼ days cutting corn..... 9 25

To 4 days cutting, 2 men, 1 horse and cutter..... 10 00

To 17 dinners, cutting corn at 10 cents each..... 1 70

To Husking corn by contract, 250 shocks at 6½ cents each..... 16 50

To 11 days husking..... 11 00

To 3 days pulling..... 3 00

To 8½ days hauling to crib, 2 horses and man \$2.00 17 00

To 22 dinners at 10 cents each, husking and hauling 2 20

To Twine to tie fodder..... 2 75

184 55

By 2,200 bdl's fodder at 3 cents, in field..... 66 00

\$118 55

carried out by me and which appear to be in every way applicable to southern conditions.

The system which I would suggest for the South—and particularly for those States lying near the Gulf—is shown in tabular form below, and at once contemplates the carrying of all the live stock of which the farm is capable.

FIELD.	FIRST YEAR.	SECOND YEAR.	THIRD YEAR.
1	Cotton with Crimson Clover last Plowing.	Corn with Cow Peas—two crops.	Oats followed by Cowpeas, winter-pasture Vetch and Rye.
	Same as 1 Second Year.	Same as 1 Third Year.	Same as 1 First Year.
3	Same as 1 Third Year.	Same as 1 First Year.	Same as 1 Second Year.

From the table cotton, corn, and oats are seen to be the main crops and are employed in the sequence given.

The crimson clover may be sown in the cotton at the last ploughing and if the fall is not too dry a good cover will be had throughout the winter. The clover hay will be cut in spring and fall. The stubble and resulting manures being turned under for corn.

The cowpeas in the corn may be sown in May and seed gathered, then another crop come later, to be cut for hay or silage, the latter being preferable.

Oats immediately follow the corn and cow pea crop, and are in turn followed by cow peas for hay. As soon as this last crop is out of the way the ground is immediately sown in vetch and rye or bur clover. If vetch is well adapted, the former being preferable. This furnishes six months pasturage prior to again planting to cotton. In this way cotton is the only money crop while in reality more money is to be had from the forage crops and pasturage in meat production.

It seems to me that this system embodies the ideal for land improvement and should meet all requirements in the South where a general farm is desired. No trouble will be had in growing any of the crops except perhaps vetch and that could perhaps be very well disposed of.

Criticism of the foregoing from those who know would be appreciated.

LAURENCE H. McCULLOUGH.

Williamsburg Co., S. C.

I made 925 bushels of corn at a cost of \$118.55, making the corn cost 124-5 cents per bushel. This includes all the corn that was raised; good and bad together. I pulled three days, as you will see, so I'd have it to feed in the shucks. I husked one load of them to see how much I had.

E. S. PORTER.

Bath Co., Va.

ROTATION OF CROPS.

Editor Southern Planter:

I have read with interest some recent discussions of crop rotation systems and am induced thereby to submit some ideas if my own which have been, in a measure,

W. H. Stanley, President and manager of the Spokane Canning Company, which is preparing to enlarge its plant at opportunity to a capacity of 1,250,000 cans, has contracted with growers in the Spokane Valley to pay \$13.50 a ton for tomatoes this season as against \$8 a ton in 1907. He will take the products from 250 acres, which are expected to yield 2,500 tons, an average of ten tons the acre.

Trucking, Garden and Orchard.

WORK FOR THE MONTH.

The severe weather of February has rendered it practically impossible for any thing beyond the hauling and mixing of compost and fertilizer to have been done in that month, therefore what we advised in our February issue as proper to be done in that month remains to be done in March. This means crowding the work of the month, for if we are to have something like normal weather for this latitude in March there will be some planting of crops to be done on the top of the February work. Whilst it is of importance to all truckers and gardeners that they should be in a position to catch the earliest markets for their products as then prices are the best and to do this they must plant early, yet we have always felt that it was unwise to plant a full crop of anything so early as March. The chances of frost and cold rains saturating the land and rotting the seed are so great that prudence dictates only planting part of the most hardy crops and leaving the full crops to be got in in the beginning of April. The products of the Florida and Gulf Coast trucking lands now command the earliest markets and it is wisdom to so time the putting of our earliest crops on the markets as to follow these and not try to come in conflict with them. Their early crops are better matured and more taking on the markets than ours can possibly be at the first of the season, that conflict with them even if we succeed in raising them in time, is rarely profitable. Put out therefore only a part of the full crop intended to be planted of those vegetables like Irish potatoes and English peas, which are hardy in the first part of the month. Then wait ten days and plant again, and later follow with the full crop. If the weather becomes mild and seasonable the first plantings will come along early and catch probably an extra good market and the later ones will catch the normal market for the normal products from this section at which time Florida and Gulf Coast products will be out of the way. If the first planting should be cut off the later ones will come in alright and the space occupied by the first planting can be again planted when the full crop is set out.

In setting out the early crop of Irish potatoes select a piece of land which drains well and quickly and after putting it in fine order throw it up in ridges to warm and aerate for a week or ten days and then split these ridges, fertilize and mix the fertilizer well with the soil and then plant, putting the sets only so deep in the soil that they will be nearly on the natural level of the land. This places them where the sun will keep them warm and push their growth. As they begin to come through the land, throw a light furrow on them so as to keep them protected from late frosts for a week or ten days longer. The sets should be sprouted for this crop before being planted as this tends to earliness in growth and saves them from rotting considerably. To sprout the potatoes spread them out in a thin layer where the sun can reach them and they will put out short, stubby, green sprouts which are not

easily broken off in cutting and planting. If there are indications of scab on the sets or if the land is apt to produce scabby potatoes dip the sets in the mixture advised in our spray calendar for the disease before cutting. Do not cut the early varieties closely. Each piece should have at least two good eyes and should have a good piece of the tuber left with the eyes to maintain growth until the roots take hold of the land. In our February issue we gave the formula for a fertilizer for this crop. For the benefit of the hundreds of new subscribers who have come on our lists since that issue was sent out, we repeat this formula. Nitrate of soda 300 pounds, cotton seed meal 600 pounds, acid phosphate 500 pounds, and muriate of potash 300 pounds to make a ton. Apply at the rate of from 500 to 1,000 pounds to the acre. In our February issue the printers made the mistake of saying 100 pounds where we wrote 1,000. As to the variety to plant. This is a question which each grower must decide for himself. Local conditions vary so much that general advice is misleading. We have excellent reports as to Irish Cobbler, Early Sunlight and Early Ohio for first crops, Improved Peach Blow, Beauty of Hebron, Green Mountain and Burbank are well spoken of for later planting.

English peas should be planted as soon as the land can be put into good order. This crop does best on land which was heavily fertilized for a crop last year and has since grown cow peas or some other legume. Too heavy fertilizing at the time of planting has the effect of making them run to vine and be later in maturing the crop. Sow deeply and tread the seed well into the soil before covering.

Fall set cabbages should be cultivated as soon as they show signs of growing off and after they have made a good start give a top dressing of 100 pounds of nitrate of soda per acre. This will soon put them out of the way of the worms. Cabbage plants held over in cold frames during the winter or raised in frames this spring should be set out as soon as the land is ready.

Strawberry beds should be worked as soon as the land is in good order and the plants commence to grow. If the land is not in good fertile condition a top dressing of 400 pounds of acid phosphate, 200 pounds of muriate of potash and 100 pounds of nitrate of soda per acre should be applied down each side of the rows and be worked in. Mulch with pine tags or marsh hay between the rows to keep the berries clean and conserve moisture.

Sow patches of lettuce, radishes, cresses and other salad plants in sheltered positions.

Keep this issue handy for reference to the Spray Calendar which will be found therein.

FORMULAE FOR SPRAY MIXTURES.

Copper Sulphate Solution.

Copper Sulphate (bluestone).....2 to 4 pounds.
Water50 gallons

Dissolve the copper sulphate in a bucket of hot water, as it dissolves more quickly in hot water; and dilute to the desired quantity. Use wooden or earthen vessels for copper sulphate solution. This solution is to be used on dormant plants, before the leaves have expanded.

Bordeaux Mixture.

1.
Copper Sulphate..... 4 pounds.
Unslaked Lime..... 5 pounds.
Water.....50 gallons.

2.
Copper Sulphate..... 3 pounds.
Unslaked Lime..... 6 pounds.
Water.....50 gallons.

For all stone fruits, after leafing out.

No. 1 can be used on these plants during the dormant season.

Dissolve the copper sulphate as mentioned above, slake the lime in a bucket of water and dilute with several gallons of water and strain through a coarse cloth to free the mixture of the small lumps. They interfere with the free flow of the mixture through the spray nozzles. Mix the two solutions together after diluting each to 25 gallons. Use this for rots, molds, mildews and all fungus diseases. For potato blight add two pounds more of copper sulphate.

A combined fungicide and insecticide for biting insects may be made by adding 8 ounces of either Paris Green or London Purple, Green Arsenoid or Arsenate of Lead to the above.

Ammoniacal Copper Carbonate Solution.

Copper Carbonate.....6 ounces.
Ammonia.....about 3 pints.
Water.....50 gallons.

Dissolve the copper carbonate in ammonia in a closed wooden or earthen vessel and add to it the required quantity of water when ready to apply. As ammonia varies in strength, some care is necessary to use no more than is needed to dissolve the copper carbonate. This preparation is used for the same purpose as Bordeaux, but is intended to be used only when fruit is nearly grown, as Bordeaux sometimes affects the skin of ripening fruit.

Kerosene Emulsion.

Hard Soap.....½ pound.
Boiling Water.....1 gallon.
Kerosene.....2 gallons.

Use "soft water" (preferably cistern water). Dissolve the soap in the boiling water; add the kerosene and churn violently until the mixture becomes like buttermilk—not less than five or ten minutes. Dilute with water ten to fifteen times before using. For sucking insects.

For scale, use strong emulsion and apply while the insects are still in the larval stage. For plant lice, mealy bugs, red spider, etc., the weaker solution may be used.

Soft bodied insects like the cabbage worm may be destroyed with this solution.

Lime, Sulphur and Salt Mixture.

Lime, 15 pounds (unslaked); sulphur (flowers), 15 pounds; salt, 5 pounds; water, 50 gallons. Put four or five gallons of hot water in an iron kettle (20 gallons capacity), add 15 pounds lime. Stir with wooden paddle so as to spread it about, then, as soon as in full boiling from slaking, add 15 pounds sulphur and mix briskly with lime, adding boiling water as needed to bring the whole mass into a thick paste, then add water enough to make 10 or 12 gallons and boil from 30 to 40 minutes. Add the salt when the paste is diluted. When the wash is cooked, strain and dilute to 50 gallons.

Paris Green.

For biting and chewing insects.

Paris Green.....1 pound.
Water.....160 to 200 gallons.
Lime.....2 pounds.

If used dry, as a powder, mix it with 100 times its weight of dry flour, plaster or air-slaked lime.

London Purple may be used in the place of Paris Green, but should have more lime mixed with it.

Persian Insect Powder.

Fresh Powder.....1 ounce.
Water.....2 gallons.

Spray on plants for soft bodied insects. The powder is frequently dusted on plants and is probably preferable to the liquid form. The material is not poisonous to man, hence can be used in dwelling houses to kill house flies and mosquitoes. For such cases, first close all doors and windows and dust the room well with the powder (usually at night) and leave it so for several hours. It is a good idea to burn a spoonful or two on hot embers so that the fumes may fill the room. Be sure that the powder is fresh, because when old it often falls to kill.

Prevention of Irish Potato Scab.

Mix 2 to 2¾ ounces of corrosive sublimate with 15 gallons of water. Dissolve the poison first in 2 gallons of water and then add the rest to make up 15 gallons. Let stand for 5 or 6 hours, stirring several times during this time. The seed potatoes should be dipped in this solution and let remain in it for from an hour to 3 hours before being cut. After the potatoes have been dipped, they should be kept out of the reach of cattle or live stock of any kind and should not be left where they can be taken by any one for human consumption, as the solution is a violent poison and sufficient of the sublimate will remain on the tubers to cause death if they are eaten. Successive lots of seed potatoes may be dipped in the same solution until it is all used up. Do not mix the solution in metal vessels. Formalin may be used instead of and in the same way as the corrosive sublimate if more convenient to be had. It is prepared by mixing 8 ounces of 40 per cent. solution with 15 gallons of water. This mixture is also poisonous.

SPRAY CALENDAR FOR 1908.

PLANT.	DISEASE.	What to Apply.	First Application.	Second Application.	Third Application.	Fourth Application.	Fifth Application.
APPLE	Bitter Rot.	Bordeaux Mixture.	First appearance of rot.	10 days later.	Repeat as necessary		
	Scab	Bordeaux Mixture.	When buds swell.	Just before blossoms open.	After blossoms have fallen.	Repeat if necessary	
BEAN	Codling Moth.	Paris Green.	Just after fall of blossom.	8 to 10 days later.	Destroy all windfalls	ills, and pick off wormy fruit.	
	San Jose Scale.	Lime Sulphur and Sait Mixture.	Just before buds swell.	At this time	also good for scab.		
BLACKBERRY	Anthraxnose.	Bordeaux Mixture.	When plants are 2 to 3 inches high.	10 days later.	Repeat as needed.	{ Soak seeds 1 to 2 hours, in double strength Copper Carbonate solution before planting.	
	Rusts.	Copper Sulfate.	Before buds open.	Bordeaux after blossoms have fallen.	Repeat as needed.	Dig up and burn all badly diseased pits.	
CABBAGE	Cabbage Worm.	Pyrethrum or Persian Insect Powder.	When worms appear.	Repeat as needed			
	Harlequin Bug.	Hand pick them; also plant an early crop of mustard or	When first few lice appear; spray	Repeat in 10 days.	turnips as trap crop	s, and spray with Kerosene Emulsion, when the bugs are on them.	
CANTALOUPE	Melon Aphis.	Destroy all plants on which first few lice appear.	Repeat in 10 days.	Before blossoming.	Just after fruit has set.	of all nearby plants with strong Kerosene Emulsion.	
	Beetles.	Paris Green.	Before buds open.		After fruit has set.	10 days later.	Repeat if necessary every ten days during growing season.
GRAPE	Anthraxnose.	Bordeaux Mixture.	Before buds open.		10 days later.	which will at once answer for all.	
	Black Rot	Bordeaux Mixture.	Before buds open.	After fruit has set	must be adopted when and pick and burn	folded leaves to prevent second brood.	
PEACH	Downy and Powdery Mildews.	Paris Green.	First appearance.	When buds are partially opened (3-6-50 formula).	Repeat 3rd when fruit sets.	{ Ammoniacal Carbonate at intervals of 10 to 14 days till fruit is nearly ripe.	
	Leaf Folder.	Weak Paris Green.	First appearance.	Repeat as needed.	The loose cotton around trunk of tree and	and trunk of tree and apply Kerosene Emulsion to it.	
PEAR	Bitter Rot.	Arsenate of Lead.	Before blossoming.	When fruit has set	Gather and destroy all windfalls every	15 inches below affected parts. Apply 16% acid phosphate.	
	San Jose Scale.	Lime, Sulphur and Promptly remove and burn all diseased limbs. Best done 5 to 10 lbs. per tree	When fruit has set	ly before buds start.	In winter. Cut off	hot season.	
PLUM	Blight.	Same as for Peach	When leaves appear	At intervals of ten	to 14 days through	hot season.	
	Fruit Rot.	Bordeaux Mixture.	When plants are 6 inches high.	10 to 14 days later.	Repeat as needed.	Destroy badly diseased plants in bed and spray the remaining ones.	
POTATO, IRISH	Curculio.	Strong Bordeaux Mixture.	When plants are 6 inches high.	Repeat as needed.			
	Colorado Beetle.	Paris Green.	When plants are 6 inches high.	Repeat as needed.			
POTATO, SWEET	Black Rot.	Grow slips from clean healthy potatoes.	To get clean potatoes.				
	Rust and Mildews.	Bordeaux Mixture.	When disease appears before bloss'g.				
STRAWBERRY	Blight.	Bordeaux Mixture.	When disease first appears.	10 to 14 days later.	Repeat as needed.		
	Fruit Rot.	Bordeaux Mixture.	When fruit is set.	10 to 14 days later.	Repeat if needed.		

The efficiency of spraying will depend upon the time and thoroughness of the applications. Spraying for diseases must be in the nature of prevention and not as a cure. All sources of infection, such as diseased wood, diseased leaves and diseased fruit, should be removed and destroyed. Keep this Calendar for reference during the year. You may need to refer to it. By combining treatments recommended for scab and bitter rot all other fungous disease attacking the foliage and fruit of apple are kept well under control.

THE PIEDMONT FRUIT EXCHANGE.

Editor Southern Planter:

On December 5th at Staunton, Virginia, the initial steps were taken for organizing the Piedmont Fruit Exchange, the object being to bring together the fruit growers of certain sections of the State in one organization for the proper packing and marketing of fruit, and other mutual interests.

It is well understood that the marketing of fruit is an entirely different business from growing the product. Some men may succeed best in growing the fruit, while others would succeed best in marketing it. While the marketing of fruit is not, I think, more complex than producing it, the former requires an organization to get the best results. Some of the benefits that might be expected to accrue to the fruit growing interests through such organizations are brought out by the following extracts taken from an article in the Daily Sentinel published at Grand Junction, Colorado. It relates to the Grand Junction Fruit Growers' Association.

"If each Grand Valley fruit grower was shipping out his fruit independently of every other grower, making his own prices and dealing with his own market, how long would Grand Valley fruit be commanding high and good prices? Not very long. For then each of the six hundred growers would be competing with the others, prices would be slashed and pretty soon there would be no prices at all. Hence, the undisputed advantage of the Fruit Growers' Association formed along such lines as the Grand Junction Fruit Growers' Association.

"Lack of organization and poor management have been the ruin of many a fruit growing district of this country. The members of the Grand Junction Fruit Growers' Association does not have to worry about his prices. He raises his fruits and delivers them to the Association, knowing that competent men are in charge of every department and knowing that he will get the best possible prices. In good time his returns come in, and, in nine times out of ten, these returns are eminently satisfactory to the grower.

"Again, through the Association, the grower can purchase his needed supplies, such as boxes, wrappers, spray materials, wagons, etc., at practically wholesale prices, such goods being bought by the carload by the Association.

"The Grand Junction Fruit Growers' Association, above all other things, is noted for good fruit and honest packing. It has always been its policy to ship out no rankly inferior fruit, and it will not accept such for shipment. It gives its members the advantage of the knowledge and guidance of experts as to how to produce the very best fruit; how to care for the orchards and make them yield the greatest amount of good fruit. * * * Unless the fruit in every box measures up to the standard of quality, it is rejected by the inspector. * * * * *

"The Association demands that the grading be good, the packing systematic and honest, and every effort is made to develop the very best color and flavor, etc., etc.

"To this organization Grand Junction, the Grand Valley, and one of the most important industries of the vast West owe a mighty measure of their development, fame and prosperity. * * * * *

"The Grand Junction Fruit Growers' Association has

shipped the greater portion of the fruit raised in Mesa county every year since fruit raising, to any extent whatever, began in this locality. Something like twelve years ago, the Association was organized on a very small basis, and for two years it made very little showing. In the year 1897, the Association was re-organized. How wonderful has been the growth of the organization during these eleven years! The first year of the re-organized Association there were shipped out of the valley 167 cars of fruit by this Association, and, for these 167 cars, the growers were paid \$54,500. The crop that year was considered phenomenal.

"In 1906, ten years later, the Association shipped out of the valley 1,152 cars of fruit, and a total of \$555,313 was paid to the growers, or, half a million dollars more than was paid out for fruit in 1897; and, when all the returns are in for 1907, it will be seen that the growers will have been paid at least \$750,000 more money in 1907 than they were paid in 1897. Nearly 1,000 more cars of fruit were shipped out of this little valley in 1906 than were shipped in 1897—just ten short years before. What a mighty growth in eleven years' time!"

We have only to study results obtained by fruit growers' organizations in Colorado, Oregon, California, Canada, etc., to learn that, as in any other business, success depends largely upon business methods and organization.

The Eastern Shore (Va.) Produce Exchange, operated in Accomac and Northampton counties, in this State, shows similar development and success, but was organized only a few years ago. Prior to its organization, sweet potatoes often sold for less than the railway companies charged for freight, and the growers were actually requested to pay the difference. Though the Company has now been in operation for about eight years, there has been an active demand for their products during the entire time, notwithstanding the fact that the better prices caused three to four times as much stuff to be grown. The sales of this Company now reach about \$800,000 per year from the two small counties mentioned. There are two other similar organizations in the same section.

The development of the fruit industry in this State during the past twenty years has indeed been phenomenal and shows conclusively that our soil and climatic conditions are favorable. The quality of our fruit is unexcelled. If we are to hold our place in the markets of the world and get the best prices for our fruit, we must form some strong organizations and so conduct our work of both growing and marketing fruit as to get the best returns for the labor expended.

J. L. PHILLIPS, State Entomologist.

Blacksburg, Va.

Some of our greatest failures come from not being ready to do our work when it ought to be done; let's be ready. And yet it takes grit, sometimes, just to sit still and wait for land to dry off before starting the plow. It pays, though. Land ploughed too wet may be spoiled for a good many years. It bakes, lies hard, and is unprofitable.

Live Stock and Dairy.

LIVE STOCK IN THE SOUTH ATLANTIC COAST STATES.

We are in receipt of the statistics showing the number and value of the live stock in the country on the first of January, 1908:

Compared with January 1, 1907, the following changes are indicated: In numbers, horses have increased 245,000; mules increased 52,000; milch cows increased 226,000; other cattle decreased 1,493,000; sheep increased 1,391,000; swine increased 1,290,000.

In average price per head, horses decreased \$0.10; mules decreased \$4.40; milch cows decreased \$0.33; other cattle decreased \$0.21; sheep increased \$0.40; swine decreased \$1.57.

In total value, horses increased \$20,952,000; mules decreased \$11,125,000; milch cows increased \$4,560,000; other cattle decreased \$35,619,000; sheep increased \$7,526,000; swine decreased \$78,761,000.

The total value of all animals enumerated above on January 1, 1908, was \$4,331,230,000, as compared with \$4,423,698,000 on January 1, 1907—a decrease of \$92,468,000, or 2.1 per cent.

These statistics compare with those of January, 1907, which showed the greatest increase in stock for the country ever known, and, therefore, the comparison should not be thought to be an unsatisfactory one because, as compared with the last one, the increase in numbers is comparatively small, and the value shows a decrease. If compared with those for 1906 or earlier years, they would show a great increase in both aspects. The decrease in value is largely to be attributed to the financial flurry through which we are passing, which has caused a heavy drop in the value of almost everything which has to be sold, and on the top of this, a loss occasioned by the great decrease in the stock of corn and the much less satisfactory character of the corn saved. A very large proportion of the crop never matured sufficiently to keep and has had to be marketed at the best price that could be obtained for it instead of being fed to stock, and the stock has had to be forced upon a falling market. In a recent report received from Chicago, it was stated that 70 per cent. of the corn coming to the market would not grade at all until dried, and the whole of the drying plants in that city were running day and night to bring the corn up to grade at the lowest rate.

In the South Atlantic States there is generally slight increase in the number of stock of all kinds, but in nearly all cases a decrease in the values. We have received the statistics too late to allow us to analyze them carefully, but propose to do this in next issue. There is one thing certain, however, and that is that Southern farmers are taking a greater interest in purebred stock now than ever before in the history of the South. Our advertising columns show this, and the letters we receive daily enquiring as to the type and breed of animals to be kept confirm the inference. Breeders complain, moreover, that it is diffi-

cult to secure such prices for purebred animals from Southern farmers as Western and Northern farmers are willing to pay. This cannot be wondered at when it is realized that our people are only just getting to understand what is the difference in the profit to be made in breeding "scrubs" and purebred stock. They do not yet fully comprehend that a bull costing \$50 or \$100, or a boar costing \$25 or \$50 can, in a couple of years in the case of a bull, or in the case of hogs in a year, easily pay many times the cost involved in the purchase of the better bred animal by the increased price to be made by the produce. They fail to realize that the bull or boar is more than half the herd and that if he be one of the best of his breed the whole product of the herd will be enhanced in value at once. Again, many of the farmers of the South are not equipped to care properly for fine bred stock. The scrubs could take care of themselves and if they failed to do so the loss was small, whereas the purebred stock require to be housed and cared for and they then pay well for this care. The fact also that a large part of the Southern territory has been so badly infected with cattle ticks as to make the risk of bringing purebred stock into the section a serious one also, no doubt, has had a serious influence in keeping our farmers from going into better stock. This risk is now, however, being reduced. A communication in this issue from the State Veterinarian shows that many counties in this State are now to be taken out of the quarantined area as being free from the fatal ticks and this also is the case in adjoining States. When farmers are satisfied that they can buy purebred animals and bring them into this formerly fatal territory without risk, they will no doubt be much more willing to invest money in good stock. There is a grand opportunity opening for development of live stock husbandry in the South in all lines of animals, and steps are being taken to bring this to the attention of farmers. A dairy commissioner will be shortly appointed under the terms of a law now being enacted by the Legislature, and it will be his duty to bring to the attention of farmers the fact that we are at present only producing about 14 per cent. of the dairy products consumed in the State. The other 86 per cent. is imported from outside the State. We have already plenty of so-called milch cows in the State to make all the dairy products we need, but instead of keeping the farmers, by doing so, the farmers are keeping the cows, and the money which ought to go into our farmers' pockets goes North and West to farmers whose cows keep them. So it is with the beef breeds. Outside Southwest Virginia, where it is stated about \$60,000 worth of export beef is made each year, the rest of the State and the other Southern States only make a grade of beef so low that it cannot pay the cost of production. They are merely manure-making machines. The purchase of purebred bulls of the best dairy and beef types even at high prices is the remedy for these troubles and our farmers must realize this.

TICK ERADICATION IN VIRGINIA.

A Sketch of the Situation as it now Stands.

Editor Southern Planter:

According to joint recommendations from the State Veterinarian and the Federal authorities at work in the State of Virginia, the following list of counties will be released from quarantine this spring with the exception of the individual farms which have been quarantined, provided the said quarantined farms are properly conducted as to the movement of cattle. That is to say, the owners of cattle which have been placed in quarantine will have to observe the law to the letter, and not only not allow the cattle to be moved from the individual farms which have been quarantined, but the said owners have furthermore got to do as their neighbors have done—get rid of the ticks by early change of pasture, application of grease, hand picking, etc, in order to get the entire county out of quarantine, or to be enabled to ship the cattle from the said quarantined farms, even upon inspection.

The counties of James City, Prince George, Dinwiddie, Charlotte, Halifax, Henry, and Patrick, will be released from quarantine as a whole, provided the farms quarantined in these counties observe the law to the letter during the coming season.

The counties which will remain below the quarantine (though some of these did good work last year and I hope to relieve the counties which are at work next fall, provided the conditions justify it) during the season of 1908 are as follows, viz:

Counties now below the quarantine: Chesterfield, York, Surry, Sussex, Isle of Wight, Nansemond, Southampton, Greenville, Brunswick, Mecklenburg, Lunenburg and Pittsylvania.

While they are yet below the quarantine line as we found too many infected farms last year to recommend the removal of the quarantine from these counties, yet I wish to say that Chesterfield, Mecklenburg, Brunswick, and Pittsylvania all are at work and did good work last year, and if they will only see that the farms which were quarantined in the respective counties last year are carefully watched this year and that the owners of these farms are not allowed to move cattle from the said quarantined farms during this spring, summer and fall, and will also go to work to change the pastures, etc., as above explained, the result will be that next fall Chesterfield, Mecklenburg, Brunswick, and Pittsylvania will be relieved from the quarantine.

This season cattle from the counties which are still below the quarantine line must not be moved into the counties which we have just exempted from quarantine, for if this moving of cattle from the counties below the line into the counties which we have just taken out of quarantine is practiced then the result will be that said counties which have just been relieved will be at once placed again into the quarantined territory.

Our first work in any county is to inspect the cattle and thus locate all of the farms on which there are tick infested cattle. The next move is to quarantine these infected farms so as to prevent the spread of the tick; this is at once followed by practical methods of destroying the ticks which we have located.

This work of tick eradication is plain, practical, and indeed simple, but, nevertheless, it is work which requires constant attention on the part of the cattle owner who is so unfortunate as to have ticks on his cattle.

Without the cattle tick to kill the good cattle by infecting them with the dreaded disease known as Texas fever, and without the quarantine so that the cattle men may move their cattle when and where they please, Southside Virginia can and will develop into a live stock country. T. O. Sandy, at Burkeville, has kept his farm free from ticks and has developed as fine a herd of thoroughbred Holstein-Friesian cattle in the said county as any one may wish to see. Maj. A. R. Venable has developed some of the best Jerseys at Farmville, so has Mr. Gates, at Rice Depot. All of these men have kept their farms absolutely free from the cattle tick. Thus it is the tick, and the cattle tick only, that has kept the farmers of Southside Virginia from raising good cattle. Those who have kept the ticks off their farms and have given the proper attention to the cattle have met with success. We have got the cattle tick on the run from Virginia, but now is the time that we must work; to continue the field work of eradicating the tick. As State Veterinarian, I thank the people for their support in the past, but beg for it in the future. The Bureau of Animal Industry, Washington, D. C., is rendering the State of Virginia the greatest assistance in this work, so it is unquestionably the duty of all of us to unite in co-operating in this good work which means so much to the cattle interest of our country.

Messrs. Charles and Joseph Buiton, of Walker's Ford, Appomattox county, are meeting with success in breeding good beef cattle—Aberdeen Angus—as likewise is Mr. Wilson, of News Ferry, Halifax county. All these men keep their cattle free from cattle ticks. Thus the cattle tick is the only enemy that prevents any one from successfully breeding good cattle in this portion of the State.

Burkeville, Va.

J. G. FERNEYHOUGH,
State Veterinarian.

PORK PRODUCTION IN THE SOUTH.

We have received the following report of an experiment made at the Delta Station of the Mississippi Station in raising and feeding pork. It illustrates so strongly the position we have always taken as to the possibilities of profitably raising our own hog meat at home and that at a good profit that we present it to our readers. We do this also at this time so that steps may at once be taken to raise the necessary pasturing crops, for upon this method of raising and feeding the hogs hinges the whole question in the South. We cannot afford to grow hogs on corn in the South like they do in the West.

"We marketed during October, November and December one hundred and twenty-two pigs, receiving for the lot \$1,382.50. They were the produce of ten sows, farrowing two litters a year. The fall pigs were farrowed from September 20th to October 10th, and the spring litters from March 18th to April 22nd. Thirty-two were sold on foot and averaged 175 1-2 pounds. Eighty-five were dressed and averaged 135 3-8 pounds.

The financial statement showing proceeds of sale, cost of production, and net profit, is as follows:

32 pigs average live weight 175 1-2 pounds, at six cents	\$ 336 55
85 pigs, average dressed weight 135 3-8 pounds, at 8 cents	920 55

Total proceeds\$1,382 51

Expenses.

265 bushels of corn at 70 cents	\$185 50
260 bushels of corn (estimated) at 65 cents	169 00
3 tons of shorts at \$25.00	75 00
Rent on 13 1-2 acres of land at \$6	81 00
Seed used on pasture lots	29 50
Preparing and seeding pasture lots	39 50

Total expense \$579 50

If the five gilts, which averaged 196 pounds, had been sold at 6 cents, net profit would have been \$736 80

The corn in the above expense account, which is estimated, was grown on thirteen acres of land after a crop of oats had been harvested. Peas were planted in the corn, and the hogs were turned in the field in the fall eating the peas and corn together. In order to get the peas planted in time to mature the corn was given only one working, and twenty bushels per acre is a fair estimate of the yield.

Management of Herd.

The boar is kept in a separate lot, and the sows are bred to farrow in the spring and fall. The litters should be as near the same age as possible, as they can be handled and fed together to better advantage.

Each has a separate stall, six by eight feet, with a small lot adjoining. A few days before farrowing the sow is placed in the house, with access to the lot, and kept there until the pigs are about two weeks old; the gate is then left open and the sow and pigs go out to pasture at will, using the house as a sleeping quarter.

A box of hardwood ashes and salt is kept in a dry place, accessible to the hogs at all times. No medicine nor stock food is used, but regular attention is given to keep the herd free from lice. This we consider very important, as young pigs will not thrive when infested with lice. A cheap soap is stirred in boiling water, and to two gallons of this mixture one quart of kerosene oil is added. This is applied with an old broom as often as is necessary. In addition, a little kerosene oil is sprinkled on the floor of the sleeping quarters when cleaned.

Another important detail of the management is to keep the sleeping places free from dust. The houses have plank floors, and these are swept at regular intervals.

The actual work required to care for the hogs was small. The careful attention to details at the proper time is the important thing necessary.

Pastures.

Our pasture rotation, which furnishes grazing all the year, consists first of a Bermuda lot in which the houses are located, and which contains shade and water. Opening from this are three lots of four and one-half acres

each; one of these is seeded in Dwarf Essex rape and red clover in August, or early in September. The other two are seeded to wheat and red clover in September, or early in October. The rape lot is ploughed in April and planted in sorghum about the first of May. In addition to these pastures, every acre of corn is planted in peas, very thick, at the last working of the corn.

The rape will be ready to graze in thirty to forty days after seeding and will furnish grazing all winter. When the sows and small pigs are turned on the rape and clover, the market hogs are in the pea field. In April the hogs are turned from the rape lot into the red clover and wheat lots, which they graze alternately until August, when they are turned into the sorghum. By this time it will be maturing and is a most excellent feed.

Seven pounds each of rape and clover seed are sown together. In the wheat and clover lots we sow about one-half bushel of wheat and ten pounds of clover seed per acre. The beardless variety of wheat is sown. After it begins to joint, hogs prefer the clover and a considerable portion of the wheat will mature, when the hogs eat the grain, this and the clover making the very best pasture.

Feeding.

The sows are fed a little shorts in addition to corn, after farrowing, while they are kept in the farrowing pens. After two weeks they are turned back into pasture and are fed corn only. The pigs are fed corn and shorts as soon as they will eat the shorts being fed until the pigs are about three months old, each pig getting about fifty pounds. They are also fed liberally of corn while small, the idea being to give them a vigorous start that they may make good use of the pasture, which, after all, is the cheapest factor in pork production.

Up to the time the pigs were turned into the pea field in September to be fattened, they had eaten an average of 122 pounds of corn and fifty pounds of shorts each. From September until they were sold, they had the peas from a corn field of fifty-three acres (except eighty bushels picked for seed) and thirteene acres of corn, planted after oats, estimated, as stated above, at two hundred and sixty bushels. The peas and corn were harvested by the hogs, which method saved labor and left the manure where it was needed.

The above statement of feed consumed included what the sows ate.

Houses and Fences.

The houses consist of a row of stalls, six by eight feet, six feet high on the front and four feet on the back, floored. They were built by the farm hands out of cheap lumber, and are inexpensive but are sufficient for this climate. The small lots are fenced with one by six plank. The pasture fence consists of woven wire below and barbed wire above. In order to have a good wire fence, the corner posts must be large, set deep in the ground, and well braced. The wire should then be stretched tight, very tight.: The best time to stretch wire is in the summer on a hot day. If put up in winter in cold weather, it will become somewhat slack in hot water. The best adjunct of the fencing proposition is a good pasture on the inside.

We do not ring the hogs. It has been our experience

that hogs kept on pasture all the time will do very little damage by rooting.

For the benefit of farmers who have hill land that will not grow clover so well, I suggest that vetch and wheat be substituted for clover and wheat. This will make a good pasture, but it will not last so long in summer as the clover, nor will it carry so many hogs to the acre. It will only be necessary, however, to plant sorghum early and increase the pasture area in order to have grazing all the year.

Breeds.

In respect to the superiority of the different breeds, we do not advise, not having made any comparative tests. We are using Berkshires, the boar and most of the sows being pure bred.

It will be noticed, by referring to the figures given above, that the market weights of the hogs were light for the age; but the amount of grain fed to the pigs up to the time they were turned into the pea field to be fattened was also small. It is an open question whether it would have been more profitable to have fed more grain on pasture. We intend to test this next year by growing larger hogs at a greater cost, and will report the results in due time.

Some of the important features of the work which contributed to our profit may be recalled:

First. At farrowing time the sows were separated and given comfortable quarters, and the young pigs were given extra attention.

Second. The herd was kept free from lice, and were not allowed to sleep in dusty beds.

Third. Good pastures were provided all the year, thus insuring large, strong litters, and a healthy herd, and also cheap pork.

Fourth. The farm is fenced making it possible to fatten the hogs largely on peas planted in the corn as a catch crop for fertilizing purposes. This crop gives the South a distinct advantage over other sections, and this feature of the work cannot be too strongly urged. The fact that the peas can be converted into money without any cost of harvesting should add an additional incentive to grow more corn and peas and thus improve the land, handle the farm with less labor, and keep the cotton money at home. We are blessed by being able to raise cotton, the greatest staple money crop of any section. Let us make the most of this privilege by raising our hay, corn and hogs, in order that our cotton money may be our own.

The Delta Station asks that more consideration be given the Mississippi hog."

DAIRYING AS IT RELATES TO FERTILITY.

There is nothing of more importance to all humanity than the fertility of the soil; dependent upon it is the life of every living thing. The future strength, power and general welfare of this nation, in fact, all nations, great or small, is in the hands of men who till the soil.

Historians have paid great tribute to statesmen who have helped to develop and guard the political future of our country, but the very foundation of our nation is the soil, and the farmers who have it in charge have a greater

responsibility than the men who are shaping the legislation of our land. It therefore becomes the sacred duty of every man who owns a little spot of this earth to guard it well. He should leave it better than he found it.

But this is not the history of our soil. If the history of American Agriculture is ever written, it will be a story of destruction from the Atlantic to the Pacific oceans. There is no country that has destroyed the fertility of the soil so rapidly or used it more extravagantly than the American farmer. The far-sighted men of every age have observed this destruction and have given warning of its penalties.

But it is only recently that the average farmer has begun to realize the necessity of giving his attention to this all-important subject—preserving the fertility of our land.

In the beginning, this country, on the whole, had a rich soil, and most men thought it inexhaustible. Our modern methods of farming, which have brought in vogue the rotation of crops, better cultivation, better machinery, tile drainage, and with which has developed rapid and cheap transportation, opening markets to all parts of the world for our farm products, have increased our earning capacity, but have hastened and encouraged the depletion of our soil.

We are now brought face to face with the problem of developing a system of farming that will not make our land less productive, but more productive, for the old phrase, "go West, young man, and grow up with the country" is obsolete.

When 500 pounds of butter are sold from the farm only 15 cents worth of fertility leaves it. If 100 bushels of corn are sold, \$18 worth of fertility is taken from the land. It is not hard for the thinking man to observe what dairying will do for the soil as compared with grain farming.

Where dairying is properly carried on, the soils grow better, but with grain farming the soil is growing poorer and less productive each year.—Hoards Dairyman.

The great majority of farmers do not get more than three-quarters of a full stand of corn in their fields and the result is 20 per cent. less corn at harvest time than should be secured without any more expense in producing the crop. The cause of the imperfect stand nearly always lies in the use of poor seed for planting. If every farmer would get his seed corn properly stored by the middle of October, several millions of dollars would be added to the value of the corn crop next year.

WHAT DOES IT MEAN?

The Cow Census work in Hoard's Dairyman showed that out of 356 farmers keeping 5,417 cows, the average loss per cow per year was \$4.50. That is, these farmers, taking the whole lot, got from the creamery \$4.50 less per cow than the feed cost. Now, only 20 of the whole number read a dairy paper or tried in any way to be intelligent dairymen. Isn't there "cause and effect" for you?

The Poultry Yard.

POULTRY NOTES.

I have so many inquiries on poultry matters that I find it impossible to reply to every one fully by personal letter. I will answer, in a general way, many who ask about incubators and brooders. Many write me to tell them which is the best incubator, the best brooder, the size they should buy, are they practical, safe, how much trouble, must one sit up with them at night, how long will they last, etc., etc. One subscriber says he sent to six manufacturers for catalogues and every one claims to have the best machines made and claims that every large poultry plant in the world and every Experiment Station in the United States is using their particular machine. Now he writes me and says he don't know what to do. I cannot decide for him. One lady writes me for information about brooders. She says: "I bought what I thought to be the best brooder last spring. I paid \$12 for it, and I find, by sad experience, that it is a death trap of the worst kind. I will be glad to sell it for 20 per cent. of what it cost me." I made a careful estimate of the actual cost of manufacturing this particular brooder and found that any good box factory would build them complete for \$3.00 and make a fair profit. I figure it this way: Manufacturer's cost, \$3.00; manufacturer's profit, \$3.00; cost of advertising, \$4.00; agent's profit, \$2.00. In case the brooder is sold direct, then the agent's commission is credited on account of incubators and brooders donated to Experiment Stations and influential poultrymen. I have on file in my desk hundreds of letters from people from Pennsylvania to Georgia and from the coast to the Mississippi who write me about their troubles with incubators and one sentence is almost identical in every letter. Here it is, "I use the _____ incubator, and it seems to hatch the eggs alright till about the twentieth day then very many die in the shell, can you tell me what is the trouble? I have written the manufacturers in regard to it and they say it is because the germ was too weak." This complaint is made of the high-priced machines in the same proportion as the cheap ones. Now, what is the trouble? Who is to blame? Not the eggs certainly, for any old hen would hatch good strong chicks out of these same eggs. Some years ago I had this difficulty and had to test the matter. I took fifty eggs out of the incubator on the eighteenth day and put them under hens. They hatched out forty-eight good strong chicks. I had 132 eggs in the machine after taking out fifty and of these sixty-one died in the shells, seventy-one hatched out and fifteen of these died within forty-eight hours. Clearly, this was the fault of the machine.

I honestly believe that more chicks are killed every season by the various contrivances called brooders than are raised to brooder size. I know I have carried away (with a heavy heart) many bushels of them. One good brother (F. M. A. Pa.) says "we can't all afford to experiment to find out which is the best." This is true. If our Experiment Stations would take up some of these problems and work them out under normal conditions it would be appreciated very much. Where one has a good incubator

cellar, a modern brooder house, a corps of trained assistants, with chemists and doctors to look after feed rations and sanitary conditions, it is not very helpful to the average man or woman who have none of these, and barely enough money to buy the incubators and brooders and who depend on the sale of these products to buy bread for the family.

Now the question before us is how may we hatch chicks in incubators and have them strong enough to live and thrive. It is a mistake to put the blame all on the eggs. No doubt some eggs fail to develop because of weak germs but not all of them, hence the trouble is with the machine. Two conditions are absolutely necessary to life, first, warmth, heat; second, a constant supply of pure air. For the embryo in the shell this heat, warmth, must be uniform and constant. Many incubators do not and cannot keep the temperature uniform in the egg chamber. I made a very careful experiment some years ago with tested thermometers of the temperature in different parts of the egg chamber in a hot air incubator of the approved diffusion plan and found the temperature at different points to vary approximately seven degrees. Thus when the thermometer near the glass door registered 103 the one in the rear of the machine at the lamp end marked 106 and the one at the other end at the rear marked 99. We may say this is also true of eggs in the nest in natural incubation, but we must remember the hen rolls these eggs nearly every hour during the first two weeks of incubation thus giving them exercise and heat and abundant air all the time. In the incubator we turn the eggs twice daily and air them once.

Next we come to pure air. Heated air is not pure air. Air that comes in contact with lamp flame has the oxygen burned out of it and is deadly in its effects on embryonic life. Hence we must have some way to introduce pure warmed air into the egg chamber without having it come in contact with the lamp flame. Every one knows who has ever given a serious thought to the subject that a given number of chicks in the shell will require very much more fresh, pure air from the eighteenth to the twenty-first days than from the first to the third days; yet many incubators make little or no provision for this extra supply. I do not believe that the question of moisture is of any importance if we can get plenty of pure, warm air through the egg chamber all the time, at least ten times as much during the last three days as during the first three, but the air must be pure and warm when it comes in contact with the eggs. The entire incubating and brooding problem hinges on this question of abundance of pure, warm air. The chicks, like the mature fowl, must have pure vitalizing air, the more the better. This is the trouble with nearly all brooders. The lamp is in the box with the chicks, it burns the oxygen out of the air and the chick breathes carbonic acid gas and dies or gets stupid and is trampled to death or smothered by piling up. Here is my answer to this whole question in a nut-

shell. Keep the top of the egg, all the eggs, at a uniform temperature of 103 degrees, or nearly so, the bottom of the eggs as much cooler as possible, have a constant current of pure, warm air passing through the egg chamber all the time and very much more during the last five days than any other period of the hatch. Do not introduce this air from the vicinity of the lamp flame. Keep the incubator doors closed after the morning of the nineteenth day.

In the brooder the chicks must have plenty of pure air, have their backs warm and their feet cold. I have seen broods of chicks with hens hover under the hen standing on snow and ice with their heads protruding on all sides of the mother hen, but with their backs against her warm body and feathers, yet these chicks were strong lusty fellows. Give them something warm on their backs, a cool floor to stand on and fresh air to breathe and they will thrive and be as healthy as hen-raised chicks. The heat must be generated outside the brooder or in such a way that none of the lamp fumes can reach them and the air that enters the brood chamber must come from a source where it is not burned out before it reaches the chicks. We do not heat our living apartments with heat and air taken from the fire box of the furnace, but bring pure air in from outside and warm it, then introduce it into our apartments. Let us give the chicks this same arrangement and the natural warmth on their backs and they will live and thrive and try to crow at ten weeks old. Feed them broken corn, broken wheat, pin-head oats or oatmeal flakes, grit, charcoal, meat in some form and give them a clean house and grass run or in winter chopped cabbage and keep them free from lice and mites and 95 percent. of them will grow to frying size in ten weeks, then fry some of them and enjoy the fruits of your labor.

Selling Fancy Eggs.

I have received many inquiries about selling eggs in Northern markets. I wish to say that I know of but one way that one can get so-called fancy prices for eggs and that is, first, one must know what this fancy market demands; second, be prepared to produce the kind of eggs demanded in sufficient quantities to justify a dealer in establishing a trade in your brand of eggs; third, be ready and willing to fill your part of the contract to the letter. Let me say right here that it will not pay to undertake anything in his line with less than 100 dozen per week. Eggs for a fancy trade must be fancy eggs, all the same color, size and shape. Every egg must be spotless, clean and not over four days old in winter and three days in summer, must have a rich yellow yolk and free from any trace of taint. Hens that have access to wild onions, rape or are fed decayed cabbage, turnips or musty grain will lay tainted eggs just as sure as a cow will give tainted milk if fed on these same feeds. A few commission men make a specialty of such eggs but the producer must be willing to ship several consignments to prove his goods before the commission man can make a market for them at an advanced price. Some people seem to think that there is but one round in the ladder, the top one. Let me tell you. It is a long ladder. The one I have been climbing has about forty rounds. I am on the twenty-

seventh one. Each round is a year. Some men try to go four or five per year and the foot of the ladder is soiled with the grey matter out of the heads that have been broken in the numerous slips and falls of these high rollers. If possible, sell direct to the consumer. Sell to some one who does sell direct to the consumer, if you cannot sell direct, then make your product so good, so attractive that the consumer will demand it, then be sure to be on hand with the goods, your goods. You can only guarantee your eggs. I can recommend another's goods, but cannot guarantee any but my own.

CAL HUSSELMAN.

MAKING A HOT BED.

Make up the bed for raising tomato, egg, pepper and other tender plants and for striking sweet potato plants. Throw out the soil to the depth of a foot, the size of the bed required, and pile this around the sides of the bed. Then fill in with fresh horse manure and strawy litter and tread solid. Leave a week or ten days and then fork over and tread soil again and cover with a sash raised on a frame a foot above the bed. After the bed has heated up cover part with wood's mould or other good soil and part with sand. When the heat has moderated so as to be a steady, gentle heat then sow the seeds of the plants to be raised either in the bed itself or in shallow boxes to be laid in the bed. We prefer to use the boxes as these can be lifted out to harden off as they become fit and be returned to cover in case of hard weather. Reserve the part of the bed covered with sand to strike the sweet potatoes slips in. These make much healthier slips grown in sand than in soil. Very little rot will be found in slips raised in sand. It will be soon enough to bed the sweet potato sets next month as the slips will not be wanted before the end of May.

LICE.

Every wide-awake poultryman knows the worry that lice and mites can cause poultry. It requires only a few minutes to thoroughly dust the fowls with lice killer and insect powder, and to spray the roosts and supports with liquid lice kiler, so that no one should allow these pests to be present in any considerable numbers on, or about their poultry.

The fumes of liquid lice killer will remove the lice from the feathers of poultry and if the breeder wants to thoroughly rid his fowls of lice and mites it can be done in the following manner: Paint the lower half of the inside of a barrel with liquid lice killer, and tack a piece of burlap to make a cover for the open end. Place a piece of wire netting around the inside of the barrel to prevent the feathers of the birds touching the lice paint and cover the floor with paper. Then insert three or four birds in the barrel and lower the burlap cover. The birds should be examined in a few minutes, and removed when they show signs of being distressed by the fumes. The parasites will drop on the paper and they can then be removed and killed. They should be shaken into a dish of kerosene, as it is probable that they would revive if simply thrown on the ground. Lice are a frequent cause of low vitality in poultry and for this reason militate against strong-germed eggs for hatching.

The Horse.

THE HORSE.

The annual meeting of the Virginia Horse Show Association was held recently at the New Willard hotel, Washington, D. C., and a number of important details arranged. Charles Mullikin, of Boyce, Va., was elected president; Joel M. Cochran, of Orange, Va., vice-president, and Charles W. Smith, of Warrenton, Va., secretary. Dates for the different shows were assigned as follows:

Keswick, May 13-14; Leesburg, June 3-4; Culpeper, July 3-4; Manassas, July 15-16; Orange, July 22-23; Charlottesville, July 29-30; Harrisonburg, August 5-6; Front Royal, August 12-13; Berryville, August 19-20; Upperville, August 26-27; Warrenton, September 22-23; Petersburg, September 11-12. The date for the Richmond show was left open to be assigned later.

L. C. Watts, the sheriff of Albemarle county, Virginia, whose farm is near Charlottesville, will send a couple of well-bred and fast mares to the court of General Watts, 2:06 3-4, holder of the world's record for three-year-old trotters, during the coming season, and this through the courtesy of his brother, General C.C. Watts, who migrated from his native county in Albemarle many years since and settled at Charleston, West Virginia. The breeding establishment of General Watts, however, is known as Greenbrier Farm, at Lewisburg, near the famous White Sulphur Springs, one of the most picturesquely beautiful sections in this country. The rugged scenery is typical of the eastern part of West Virginia, where a number of fine saddle and harness horse have been bred, among the latter being the fast mare, Dainty Dolly, 2:09 3-4, who was bred by General Watts at beautiful Greenbrier Farm and which will be mated with his now noted namesake, General Watts, the son of Axworthy and Carpet, by Prodigal.

Hon. Samuel McMillan, the New York Congressman, who for many years bred trotters on his big farm near Calverton, Va., and was interested in stallions in Ohio, Pennsylvania and New York, has practically retired from the business and will only retain a few road and driving horses, including the fast gelding, Bowcatcher, 2:13 1-4. While Mr. McMillan's Millburn Farm was in existence at Calverton the number of horse owned there usually ranged from one hundred to one hundred and fifty head, many of which were richly bred, and these being widely distributed through that section of Virginia will likely make history as the years roll by.

W. H. Josey will have in the stud at Scotland Neck, N. C., the chestnut stallion, Headlight, a son of Kalaukau and Bessie B., by Cocher, 2:30, and with very little opportunity this horse has sired a number of good, useful horses, with fine size and good trotting action. Headlight is a full brother to Karnok, 2:21 1-4, and was a trotter himself, but met with an accident while young that threw

him out of training. His breeding is stout, his sire, Kalaukau, being a son of Allandorf, 2:19 1-4, a successful sire by Onward, a famous son of George Wilkes, while Bessie B., the dam, threw speed and size with uniformity.

J. Thack Snyder, formerly of Baltimore, but for a number of years past located at Charlotte, Winston and other points in North Carolina, where he handled a number of trotters and pacers, has engaged with D. A. Langhorne, of Lynchburg, but whose farm is near Sottsville, in Albemarle county, Virginia. Syndar attended the recent mid-winter sale of the Fasig-Tipton Company in New York and secured some half dozen or more richly bred trotters to add to Mr. Langhorne's collection, among the lot being the roan stallion, Ed. Gaylord, foaled 1900, by Jay Bird, dam Winsome, by Onward, 2:25 1-4; Bond Issue the bay colt, one year old, by The Bondsman, dam Diligencia, 2:27 1-4, by Expedition, and some young mares of good breeding and promise for speed. Some of these horses will be fitted for the shows, while others will be trained and raced.

T. M. Arrasmith, race secretary of the Central Carolina Fair Association, Greensboro, N. C., and circuit secretary of the North Carolina Circuit of Fairs and Race Meetings, is wintering the roan mare Edmee J., 2:21 1-4, by Glenbird, son of Jay Bird, dam Elfah, 2:15 1-2, by Elyria and the California bred pacer, Sweetheart, 2:16 1-4, by Baywood, 2:10 1-4, dam Sadie Haggin, by Algona, son of Almont, 33. Edmee J. was obtained from Harry K. Devereux, of Cleveland, Ohio, and Sweetheart from Farmer Bunch, of Pleasanton, California, who brought the daughter of Baywood East in 1906.

F. A. Burgess, of Ronceverte, West Virginia, who campaigned a stable of trotters and pacers through the Virginia and North Carolina Circuit last fall and did well with them, is in winter quarters at his home. Burgess developed and brought out the good young pacing mare, Nancy Bee, 2:15 1-4, by Great Heart, with whom he won some hard fought contests he thinks she is good enough for the big meetings in 1908. This mare, who is well formed and handsome enough for the show ring, is wintering in fine shape for Burgess, as are St. Louis, 2:14 1-4, the bay pacing gelding by Lord Wilkes, and others.

A NEW IMPORTATION OF PERCHERON HORSES FOR VIRGINIA.

We have a letter from Mr. Westmoreland Davis, of Morven Park, Leesburg, Loudoun county, Virginia, written from France, in which he informs us that he is in the Percheron section of that country selecting a number of horses for shipment to Morven Park. Mr. Davis already owns some excellent Percherons, and when his new purchases arrive, he will have one of the finest studs in the country.

Miscellaneous.

THE FARMERS' CO-OPERATIVE DEMONSTRATION WORK.

Editor Southern Planter:

It frequently occurs that in attempting to do something every method is tried but the simple, direct and natural way by which alone it can be easily accomplished.

Agriculture has ever had a host of friends and well-wishers who tried almost every method to foster the interests of farmers except going directly to them and proving there was a better way than following the old methods, which yielded little profit, disgusted the overworked children and ruined the farms.

The necessity for doing something to thwart the boll weevil caused the general application of the Farmers' Co-operative Demonstration work to the South.

The object of the Farmers' Co-operative Demonstration work is not only to place a practical object lesson, illustrating the best methods of producing standard farm crops before the farm masses, but to secure their active participation in such demonstrations to an extent that will prove that the average farmer can do better work and will do it if properly approached. These demonstrations must show that better and larger crops can be raised on the average farm, and at vastly greater net profit per acre. Incidentally, they are designed to prove that there is no necessity for this widespread deterioration of the farms and the general poverty of the masses on the farms. Like all great reforms, this demonstration work can not be done for the people to be benefitted, but it must be done by them to be effective. The sick man must take the proper medicine to effect a cure. It will not do for his neighbor to take it from him.

The remedy for the poverty of the farm is:

1. Better drainage of the soil.
2. Better tillage of the soil.
3. Rotation of crops and soil renovation by the use of legumes and winter cover crops (oats, wheat, etc.).
4. The judicious use of commercial fertilizers.
5. Greater care in selecting and planting seed.
6. The use of more horse power and better machinery.
7. The raising of more and better stock.
8. The production by the farmer of the food for his family and for his stock.
9. Keeping an account of the cost of farm operations.

The Co-operative Demonstration Plan.

The Co-operative Demonstration plan is a method adopted by the United States Department of Agriculture, Bureau of Plant Industry, to reach and influence farmers to accept and follow better methods of farming.

This is organized upon the following plan: A general director, with a competent office force, State agents, district field agents, sub-agents, demonstrators, and co-operators.

A district field agent is a special agent of the United States Department of Agriculture, who superintends "The Farmers' Demonstration Work" in a certain district.

A sub-agent has in charge a more limited territory than a district field agent.

A demonstrator is a practical farmer who works a portion of his farm under the supervision of a field agent or sub-agent, which tract he is expected to inspect at least monthly and report on same.

A co-operator is a farmer who agrees to follow the instructions of the Department and make a general report at the end of the season.

The work is in no sense experimental; no experiments are tried; the instructions are not new nor doubtful; everything recommended has been fully tested by practical farmers.

The agents are expected to visit as many centers of influence in their districts as possible, and, by personal effort, secure the co-operation of bankers, merchants and farmers in this co-operative work; also, always interest the editor of the local paper. Second, establish near these centers the special demonstration farms, then secure co-operators. Small, thrifty and energetic farmers will generally do better as special demonstrators. Large farmers have too much business to give our work the requisite attention. The agent must use judgment in selecting co-operators and secure men who will follow instructions and report.

Field agents must keep a firm hold of two things to be accomplished: First, that the special farms and co-operators follow our instructions. Second, they must secure the report of these farms so as to prove that the increased crop is due to our methods.

Special Demonstration Farms.

It is our plan to establish, in the most advantageous locations, not less than two special demonstration farms of from one to five acres each near some small town or trading point. If there are several different types of soil in the community, the number of these farms may be increased so as to include each type. The party accepting a special demonstration farm is to furnish the land, labor and fertilizers that may be deemed necessary, free of charge. The amount of land agreed upon is to be prepared, planted and cultivated by the owner as directed by this department or its special agent. The owner is also to keep as accurate an account as possible of all the soil and crop history, of all cost of cultivation, and of the yield of the crop, and furnish it to this Department at the completion of the demonstration. The products of the field belong to the owner.

Co-operators.

In addition to securing these special demonstration farms, as many farmers in the immediate vicinity as will agree to co-operate with us are enrolled. These co-operators are to plant any area they may prefer, but it is not best for them to plant more than they can till well in any crop in co-operative work. They are to make reports to this Department of the growth, cultivation and yield of such at the close of the season, when requested to do so, and are also to agree to follow the instructions of this Department or its special agent, in the cultivation and preparation of the agreed area. The Department will furnish all information and plans for the crop. Each agent

should so gauge the number of special demonstration farms that he will be able to visit them at least one day a month. He should notify all co-operators of that community in advance, just when he expects to be upon the special demonstration farm, and request them to meet him at that point. He will thus be able to illustrate the improved methods more effectively, and we think such instructions will be better understood.

To have this plan inaugurated, farmers should be encouraged to establish special seed plats on every farm and special seed farmers in every county.

The importance of using the best seed cannot be too strongly emphasized.

That the work of this Department is bearing good fruit is evidenced not only by the favorable reports constantly coming in, but also by the fact that we are daily receiving requests for its extension into new territory. It is believed that an adherence to the plan outlined above will not only make our work more effective, but will enable us to extend that work, even with the means at our disposal.

Remember that our work is in no way experimental. Its object is to teach the farmers the best and most improved methods as determined by the various Experiment Station and the United States Department of Agriculture. To this end it is well to impress upon all the advisability of not planting too large an area and confining operations to the more common and better-known crops, to-wit: cotton, corn, cowpeas, and oats, where these are the usual crops.

There has been some misapprehension among farmers in regard to the Farmers' Co-operative Demonstration work. Many have supposed that the instructions all come from Washington, and were not adapted to Southern conditions. This is not correct. The instructions given out for this work are made upon the following plan:

First, there is a compilation of all the information obtainable in the United States Department of Agriculture and all the experiments relating to a given crop by the Experiment Stations in States is carefully made, then the experience, in planting, of a large number of the best farmers in the United States working along the same lines is carefully noted; in addition to this, the observation and experience of all the travelling agents of this Department are brought to bear upon the instructions to correct any defect. Thus our instructions have the following elements of perfection: First, what the Department at Washington knows from its vast stores of information about field crops; secondly, what the State Experiment Stations have demonstrated to be the most advantageous; thirdly, what the best farmers have tested and proven the most successful upon the farm; fourth, the knowledge obtained by the travelling agents of our demonstration work, who especially visit and have personal knowledge of the States in which they are stationed. Even then our instructions are along the lines of correct principles, leaving many details to the good judgment of the farmer.

In this co-operative work great stress is laid upon a more thorough preparation of the soil in the fall. The effect of using good seed is not sufficiently appreciated, nor perhaps is it understood just what makes good seed.

It must be the very best variety, carefully selected, early in the fall, and stored in a dry place.

Our reasons for very frequent cultivation are the admission of air, the conservation of moisture in the soil, and the preservation of surface mulch. The farmer may say that this frequent cultivation is so much work for nothing, but he will find in the fall, in the crib and granary, abundant pay for every day's toil.

Young plants require excellent cultivation, just as young animals require the best of food and care.

The judicious use of commercial fertilizer is one of the most important improvements in modern agriculture, for it furnishes plant food directly and indirectly to the young plants.

No farmer need wait for some chemist to analyze his soil, and tell him what to do. The cotton and corn tell the whole story, and explain to the farmer even more than the chemist can tell. If the plants are vigorous, then a fertilizer with considerable phosphoric acid and very little nitrogen should be used in the fertilizer. For soil building, we must depend largely upon barn yard manure and leguminous plants, such as cowpeas. They put nitrogen in the soil and, when ploughed under, add humus. An intelligent following of the foregoing suggestions will double the crop of the average farmer.

It is recognized that the reforms necessary to revolutionize agricultural conditions are mainly changes in farm equipment and practices: It will be noted by referring to our remedy for poverty on the farm that the first thing is to get the standing water out of the soil. No use in theorizing; everybody knows that wet land will not successfully produce an agricultural crop. The remedy is to open-ditch or tile the tract. The second remedy is better tillage of the soil, which involves deeper fall ploughing. Several ploughings, pulverizing all clods and making a garden land of the soil before planting; then cultivate the crop intensively. This may require better implements and more teams and stronger teams and undoubtedly will require more energy on the part of the farmer. Just so to the end of the list; it is something to be done in every instance. How is the farmer to be influenced to do these things?

There is but one sensible way, and that is to send men to him in whom he has confidence and show him on his farm what is required. Even then only a few will fall in line the first year, but the second year men who could not be reached through their judgments are reached through their pocket books, and more follow, until all finally follow or quit farming. The world's competition is becoming more strenuous every year, and it will increase geometrically as the years go on. In every division of the world's work, wherever it is necessary that there be specific accomplishments, men are sent to see that the work is done. This is true whether in lines of trade or morals. This is especially important in agricultural reforms. The farmer lives remote from reliable sources of information; he is liable to imposition from interested agents and he has learned the lesson of distrust; he is subject to waves of depression that sweep over a community; just when or how they arise no one can tell, but they are disastrous. I have known the farmers of a

county to be paralyzed by the rumor that no cotton crop would be made that season, and half the tenants prepare to abandon their crops when one of our agents visited that territory, restored confidence, and a profitable crop was made. Of all classes of men the farmer is benefitted the most by this personal element in the work. The farmer who works his land by a lot of antiquated notions, requires the personal element to induce him to substitute modern methods, and the farmer who begins to awaken is in a dangerous condition, for he is apt to believe too much. For example, he is impressed with the great value of commercial fertilizers and he depends upon them solely for increased production; or, he becomes enthused over better seed and he purchases at high prices every year for his entire crop. The average farmer who depends solely on purchased fertilizers and high-priced seed will eventually learn his mistake. The gardener may do it and succeed; not the average farmer. He should plough under green crops; he should manufacture fertilizers by using vegetable mold, the leaves, the straw, the barn yard manure and the waste of the farm and supplement with commercial fertilizers.

Every farmer should buy enough of the best variety of seeds every year for a seed plat. He thus tests the plant and produces his own seed for the following season. In our Farmers' Co-operative Demonstration work all our agents are drilled not only in successful crop production, but in thrift, economy on conservative lines—in values as well as methods, and these lessons are taught to the people.

The results have been phenomenal. Tens of thousands of individuals have changed their methods and have passed from poverty to comfort.

Recently a farmer wrote that he took instructions from us four years previously and had made a good crop every year since, even the present year, and that he taught the plan to a neighboring colored farmer and this colored farmer had, in four years, bought and paid for a farm.

Business Men's Clubs have taken a hand and have given influence and financial aid. Within a few days the President of such a Club has written that the Club is trying to establish one thousand demonstration farms of one acre each on our plan.

Counties are aiding the work and apparently all the Commonwealths of the South are uniting to place agriculture upon a high plane of prosperity. Much credit is due to that body of great philanthropists, the General Educational Board of New York, which has placed its money and influence at the service of the farmers of the South to help them to secure a fair share of the wealth, comforts, education and all the good things of the present age by earning them through a more remunerative toil.

S. A. KNAPP.

Bureau of Plant Industry, Washington, D. C.

Dr. Knapp is the special agent in charge of Demonstration farm work in the South. He has local agents in the different States. Mr. T. O. Sandy, of Burkeville, Va., is the local agent in charge of the work in Virginia, and inquiries should be addressed to him with reference to the establishment of demonstration farms in this State.—Ed.

NITROGEN AND ITS RELATION TO THE SOIL.

Editor Southern Planter:

The atmosphere consists largely of two substances—nitrogen and oxygen. When we breathe the fresh air, we use the oxygen to purify the blood from certain products which result from the action of the muscles of the living body. We do not use any of the nitrogen that passes into the lungs during the process of breathing, but this substance simply acts to dilute the oxygen.

If the atmosphere consisted of pure oxygen the person breathing it would die, as the action would be so great. The stoves in which we burn wood or coal would burn themselves in a few minutes in an atmosphere of oxygen.

A pure atmosphere of nitrogen on the other hand would not support life, for the oxygen is necessary for the life processes.

Nature has given a mixture of nitrogen and oxygen for an atmosphere, consisting of about four parts of the first and one part of the second. This mixture of the gases gives us the means of supplying the proper amount of oxygen to the lungs for the vital processes and for the burning of wood and coal in our stoves.

It appears rather strange to one that the atmosphere containing 80 per cent. of nitrogen in the form of a gas should surround the growing plant, yet the plant is unable to absorb it in its leaves and make use of it. The plant in many cases will die in a soil containing potash and phosphoric acid but no nitrogen, yet its leaves may be surrounded by the atmosphere containing it.

The purchase of nitrogen as a fertilizer requires that the farmer must invest more for this substance than for the other two necessary elements of plant growth—potash and phosphoric acid.

The nitrogen in a fertilizer may be in the form of ammonia or as a nitrate. The percentage of nitrogen in a fertilizer is usually stated in the form of ammonia. Ammonia being a chemical compound of nitrogen (one part) and hydrogen (three parts).

The cost of ammonia in the substances used for fertilizer materials is as follows:

	Per unit.	Per lb.
In sulphate of ammonia.....	\$3.00	15 cents.
In nitrate of soda.....	3.15	15¾ cents.
In dried blood.....	3.30	16½ cents.
In cotton seed meal.....	3.00	15 cents.
In mixed fertilizers.....	3.10	15½ cents.

The use of the unit offers a ready means of calculating the value of a fertilizer from its analysis. One per cent. is one part in an hundred, while a unit is twenty pounds per ton, therefore, the price per pound multiplied by the percentage gives the value for one hundred pounds while the percentage multiplied by the price per unit gives the value per ton.

It will be noticed that the cost per pound of nitrogen as ammonia is over three times that of potash (five cents) and nearly four times that of phosphoric acid (four cents). One of the interesting characteristics of nitrogen is that it ever tends to return to the atmosphere as a gas. Suppose its history be traced in a brief space. Let nitrogen be present in leaves, vines, wood, or any other vegetable matter and it is burned. There remains the ash which contains the potash and phosphoric acid,

but the nitrogen has disappeared. Let an explosive, as dynamite or powder, be exploded and the nitrogen present in the material disappears as a gas, as the basis of the explosive is the substance containing the nitrogen.

It is well to bear this characteristic of nitrogen in mind when one is tempted to burn the vegetable matter on a field, as the nitrogen is not only lost, but the vegetable matter itself.

One of the most important materials required for the soils of the South is vegetable matter turned under the soils, as it locks the nitrogen in a most stable form as well as acting in a most beneficial manner on the physical properties of the soil.

Recently, in passing a field that lacked to a very great extent vegetable matter, it was noticed that the dried grass was being burned. The remark was made that the burning would cause a loss of at least \$10 in the nitrogen. The reply was that it would come back in the increased crop, but, from the appearances of the resulting crop, it did not do so.

Practice too often overlooks such small scientific matters with resulting losses, which are many times expensive.

There is not the loss alone from the burning of vegetable matter, for after this material is turned under the soil the bacteria gradually change the nitrogen present in the vegetable matter to the form of nitrates. This change is a constant one in the soil, the rapidity, however, depends largely on the temperature; during the summer it is much more rapid than in winter. The roots of growing plants will absorb the nitrates as they are produced.

If growing plants are not present there may be, and there generally is, a loss of nitrogen in the form of nitrates in the drainage water. Nitrates are dissolved by water and in this form may be washed from the soil so it is well to have a growing crop of some kind on the land at all times if possible.

The experiments at Rothamstead showed that from a depth of twenty inches there was a loss of 5.91 pounds of nitrogen per acre from March to June; 8.81 pounds from July to September, and 22.57 from October to February. A total loss of 37.29 pounds per acre for the year.

The drainage waters naturally finally reach the rivers. It is calculated that the river Rhine discharges each day 220 tons of saltpetre into the ocean, while the river Seine, 270 and the Nile 1,100 tons.

It was shown by the Rothamstead experiments that where a crop such as grass is growing on the soil there is a gain of nitrogen. In pasture for eight there was an increase of 282 pounds of nitrogen; for eighteen years, 814 pounds; for twenty-one years 1,589 pounds, and for thirty years, 2,231 pounds.

Besides the loss of nitrogen by the drainage waters under certain conditions there is the loss by denitrification.

The process of denitrification is exactly opposite that of nitrification. In nitrification the vegetable matter in the soil containing nitrogen is changed to ammonia and then the ammonia is changed to nitrates. (The ammonia is first converted into nitrous acid and then nitric acid.)

In order that nitrification may take place under the most favorable conditions, there should be present in the soil air and lime. (The oxygen of the air is necessary to allow the bacteria to change the ammonia to the nitrous and nitric acids, and when these acids are produced lime or some alkali being present will combine with the acids to produce salts. The change of the acids into salts will allow the bacteria to continue the formation of nitrates, while, on the other hand, the presence of acid would reduce or prevent bacterial action.)

Denitrification takes place in soils which are water-logged. Such soils will naturally exclude the air. The presence of water in large amounts and the absence of acid are conditions favorable to denitrifying bacteria. The result is that free nitrogen is produced from the vegetable matter and is lost. Where the soil even is moist and the air kept from it, the nitrates will be changed to nitrogen.

The process of nitrification takes place in clay soils in the surface layer while in sandy soils it may take place to a greater depth.

The roots of the plants are useful in rendering the soil more porous and thus aiding nitrification by allowing the air to penetrate into the lower layers of the soil. Drainage, wherever needed, serves to get rid of surplus water, and the resulting conditions will cause the air to penetrate and favor the nitrifying organisms.

Certain plants as the legumes have been known for a long time as plants which have the power to take their supply of nitrogen from the air. This power is due to the presence of certain organisms forming a part of the plant. Cultures for inoculating the seed are sold. Many experiments in this direction have not given favorable results.

The investigations on the capacity of the legumes to absorb nitrogen from the air have been of such great value that it has led some investigators to hope that some means of inoculating oats, wheat, corn, and similar plants could be found. With this object experiments were made with "Alinit" which was supposed to contain the organisms that would act as those on clover, peas, alfalfa, etc., but the results were unfavorable.

The problem of obtaining nitrogen for the production of food for the race is one that is receiving great attention at the present time.

It is claimed that with the present increase in population that the present producing area will be just sufficient to feed the races using bread in 1910. The statement is made that the wheat producing regions amount to 240,000,000 acres. This area producing an average of twelve and one-half bushels per acre will produce 3,000,000,000 bushels. Each person consumes 41-2 bushels or in other words the total wheat raised will supply 666,000,000 persons. At the present time it is estimated that there are 585,000,000 souls who require wheat for food.

The population increased in twenty years 28.8 per cent., while the increase in the area devoted to wheat growing was only 23.7 per cent. The average yield of wheat in the United States is twelve bushels per acre, in India, Russia, South Australia and Algeria the yield is nine

bushels. In Denmark the yield averages 41.8 bushels per acre. In the other countries the yield is above that of this country.

The problem which must be met in the near future is that of feeding the race. In the past the wheat crop has been in excess of the demand. When the period is reached where the demand is in excess of the supply then there is a new condition which the farmer must meet. In the increasing of the yield of the wheat crop nitrogen must be used extensively as a fertilizer. The increase from the use of this material as a fertilizer is shown from the experiments made by Lawes and Gilbert at Rothamstead. A field for thirteen years averaged 11.9 bushels per acre. The following thirteen years the same field received an application of 500 pounds of nitrate of soda in addition to the other minerals required. The result was that the average yield of wheat was 36.4 bushels per acre, an increase of 24.5 bushels. It is estimated that to raise the yield of wheat from the average, at present, of 12.1-3 bushels per acre would require the use of 12,000,000 tons of nitrate of soda per annum. The question is: Where can this supply be found? The nitrate fields of South America, as large as they are, cannot meet the demand.

Two sources are possible, the use of the legumes on the farms and the manufacture of nitrates from the nitrogen of the air.

The crops that are the most valuable as the nitrogen gatherers are the cow pea, soy bean, crimson clover, horse bean, etc. It is estimated that these crops when used for green manuring will give the following results from an average crop:

	Nitrogen.	Potash.	Phosphoric Acid.
Cow peas	62.0 lbs.	36.0 lbs.	20.0 lbs.
Soy beans	168.0 "	142.0 "	40.0 "
Sweet clover	108.0 "	101.0 "	31.2 "
Crimson clover	84.6 "	76.2 "	20.1 "

It is of interest from above results to note that the soy bean is one of the greatest of the nitrogen gatherers, gathering 168 pounds. It is possible to have the plant get the greater part of this nitrogen from the air if not all of it. However, it is also well to note that the plant in order to have conditions for the greatest growth requires 142 pounds of potash and forty pounds of phosphoric acid.

The same condition is found in the study of the other plants. Or, in other words, to obtain the greatest amount of nitrogen from the air by means of these crops, the soil must either have it in it or be supplied with potash and phosphoric acid.

Sometimes it is not the best policy to turn under the entire crop, but to cut it for hay and use it for feeding purposes.

The stubble and roots will add considerable material to the soil as shown by the following table:

	Nitrogen.	Potash.	Phosphoric acid.
Timothy and redtop	90.1 lbs	25.2 lbs.	55.8 lbs.
Buckwheat	9.4 "	1.3 "	3.8 "
Cow peas	25.9 "	7.5 "	20.6 "
Clover	60.2 "	15.1 "	45.4 "
Soy beans	8.6 "	2.2 "	5.7 "

The interesting fact to be noted is the large amount

of nitrogen that is added to the soil by clover and timothy and redtop sod when these are turned under.

It is the business of the farmer to watch carefully the nitrogen supply of the soil and to supply the potash and phosphoric acid that is necessary for the plant to be the greatest gatherer of this valuable element of plant growth. At the same time a crop of some kind should be growing on the land to prevent the loss of nitrates which would be washed from the soil by the drainage waters.

Nitrate of soda is one of the most valuable of nitrogen salts which are used for fertilizers. In value as it affects the growth of the various crops it is the most satisfactory of all the materials which have been used as sources of nitrogen in past years.

Many attempts have been made to produce this material from the nitrogen of the atmosphere. Of recent date some of the processes have been promising but difficulties have been found which have prevented a practical application of the resulting product.

The electrical process for producing nitrates from the atmosphere requires a large amount of energy. The electrical energy is supplied from water powers and even with this source of cheap power it is claimed that the process is too costly to be a commercial success.

There is another product produced from the nitrogen of the atmosphere which at the present time is claiming attention as a source of nitrogen for use as an element of plant growth. This substance is called Calcium Cyanamid. It is produced by heating coke and a high quality of lime in an electric furnace at a temperature of 6,000 degrees Fahrenheit. The product produced is calcium carbide (carbide of lime). This substance is in general use for producing acetylene gas in common use for illuminating purposes. When the nitrogen from the atmosphere is allowed to come in contact with the carbide of lime there is produced a new substance consisting of one part of calcium (lime is composed of one part of calcium and one part of oxygen of the air) one part of carbon and two parts of nitrogen. About 20 per cent. of the product is nitrogen.

The Calcium Cyanamid is used as a fertilizer with very satisfactory results. The factories of Europe have a capacity of 158,000 tons per annum and it is claimed for the new enterprise in America that it has a factory with a capacity of 5,000 tons per annum. The development of this new product and its value as a source of nitrogen for fertilizers will be of great interest to the farmer.

The experiments, to show its availability, which have been made with Calcium Cyanamid show that it compares very favorably with a number of other well-known materials used as sources of nitrogen in fertilizers.

Calcium Cyanamid	94.40 per cent.
Dried blood	91.36 " "
Cotton seed meal	83.92 " "
Tankage	90.35 " "
Dried fish	88.85 " "

An analysis of the Calcium Cyanamid shows that it contains 18.95 per cent. of nitrogen, of this amount 17.89 is available. In terms of ammonia there would be present 23.01 per cent.

The new sources of nitrogen are interesting to the farmer in many ways. As the supplies of this valuable ma-

terial become more abundant the price will undoubtedly be reduced and he can use more of it in fertilizing the land. However true this may be, the fact remains that it will be a business measure on his part to make use of the nitrogen absorbing crops in every manner and form to improve the land. For all time to come the legumes will furnish the cheapest and the best means of adding nitrogen to the soil and the progressive farmer will use them at every opportunity. The products containing nitrogen will be useful in supplying nitrogen where the soil is deficient in that material and can doubtless be used with profit in many ways, but at the same time nitrogen will remain for some time the most expensive of the elements of plant growth and the far-sighted farmer will let the plants gather it for him.

Nottoway Co.

J. B. WEEMS.

CORN BREEDING.

Editor Southern Planter:

In Professor Massey's article, page 12 of your January issue, his suggestion to have the whole corn plant shown, I think a very good idea, also would suggest for the information of those who go to these shows to study, that data of manner of cultivation together with crops and amounts of fertilizers used for the past two years.

But when in the same article he says of the present shows and breeders, "These exhibitions of ears of corn show that score card breeding has improved the type of ears only, this and nothing more." I can hardly see how so practical a man in many ways as Professor Massey can be sincere in this. I am generous enough to think that those of our corn cranks who spend much time during winter studying types of ears and almost know each ear of seed corn as a good shepherd knows each of his flock, and spends many a hot afternoon pottering around in his corn field after it tassels, studying the character of stalk, length of shoot, amount of blade below and top above ear, whether there is too much or too little shuck, then as his hobby ripens, with the ear, or with the ear that hardens with the stalk yet green and knows which makes the heaviest, firmest ear that is early and well dried. These men not only take a pride in having perfect ears but always aim for a greater yield per acre. From Professor Massey we would learn that the corn breeder who really makes it a study and gives it his personal time (not simply a warm office thought in winter or a shady dream in summer and when autumn comes accidentally finds a few well-shaped ears) does not think of barren stalks or calculate the quantity per acre. To have a perfect ear, of "Leaming" we do not call it of a recognizable quality unless it has twelve hundred or more kernels of the proper shape and the ear must carry its size and be correct at the tip. And we corn breeders are striving to have corn that on proper land with good cultivation will produce one of these ears on each stalk and some are breeding for more. But with corn planted three feet six inches each way, two stalks to the hill, an acre will produce more than one hundred bushels of corn of this character. Professor Massey speaks of the Maryland Agricultural Station's exhibit of varieties at the Baltimore corn show, and we would judge that his "pet" went unnoticed. If I am not incorrectly informed, the variety that won in

the most perfect type of ear class, not grown by the Station, was the variety No. 35 that made the largest yield per acre at the Experiment Station. Again he says, "It is about time this corn show foolishness was stopped and some effort made to introduce real corn breeding." Who is it that wins at these score card shows? Is it the one-mule, broomsedge, dirt floor, one-suspender farmer? Or the man who has for ten or more years been striving for more corn to the acre and more perfect, uniform ears of corn? That we should introduce "real corn breeding" I am sure there are quite a number of your readers who would like to have Professor Massey give them the proper instructions. Neither can I agree with Professor Massey that a planter would probably be disappointed if selecting his seed corn to plant on upland. For some of this same prize corn is grown on upland. But, if I may, I would suggest that seed corn buyers must not expect to grow corn altogether like the seed unless they give it something like the same care and nourishment as is the case if buying a herd of prize-winning cattle. I would say send off for your seed if you can find any better than yours within two hundred miles. I have been experimenting with and breeding corn since a boy and have tried many Western as well as Eastern varieties, and I say to the average farmer beware of seed west of the Alleghenies. There are plenty of good varieties offered in the East that you will not have to nurse through the acclimation period.

J. B. McCOMB.

Orange County, Va.

THE VIRGINIA STATE VETERINARY MEDICAL ASSOCIATION.

The regular semi-annual meeting of above society was held in the office of its President, Dr. Thomas Fraser, of Richmond, January the eighth.

After the reading and adoption of the minutes, many interesting papers were discussed on the treatment of different diseases of the horse and dog.

The greater portion of our time was taken up on discussing the inadequacy of our State law regarding the practice of veterinary medicine and in proposing amendments. The said amendments were presented as resolutions and a committee appointed composed of the following gentlemen: Dr. J. G. Ferneyhough, Dr. Charles Eppes, and Dr. Thomas Fraser, to present same to the Legislature.

The next feature of the programme was the election of officers which resulted as follows: President, Dr. S. C. Neff, Staunton, vice-president, Dr. G. C. Neville, Norfolk, secretary and treasurer, Dr. W. G. Chrisman, Charlottesville.

At the conclusion of the election the following gentlemen were recommended to the governor for State examiners: Dr. S. C. Neff, Staunton, Dr. H. Bannister, Roanoke, Dr. H. Willis, Rapidan, Dr. J. G. Ferneyhough, Burkeville. Meeting adjourned to meet in Norfolk, July 17, 1908.

W. G. CHRISMAN, Secretary.

LUCK ON THE FARM.

Editor Southern Planter:

Farming, like many other occupations of life, has difficulties to overcome if success is desired. How many times

do we hear a farmer complain that the corn crop is poor because he had bad luck with it when the true cause is the fact that he did not apply anything to the soil to feed the plant when he knew the soil was poor.

Taking crop after crop from the soil for years and then blaming the resulting crop to bad luck is a poor method of business.

The destiny of the farmer these days is largely a matter of realizing that to get good crops, it is necessary that the plant be supplied with the best forms of plant food. We are apt to think that if the soil is given, for example 200 pounds of a low grade fertilizer, that we are supplying the same quantity of plant food. If the fertilizer contains 1 per cent. of nitrogen, 2 per cent. of potash, and 8 per cent. of phosphoric acid there will be two pounds of nitrogen, four pounds of potash and sixteen pounds of phosphoric acid, a total of twenty-two pounds of plant food instead of 200 pounds.

If the crop is on a soil lacking nitrogen the harvest will be governed by the two pounds of nitrogen in the fertilizer and the fertilizer and not luck will determine that the crop will be a poor one.

If nothing in the way of plant food is supplied to the soil, which is too often the case in many localities, then the farmer will experience hard luck to a greater degree than the farmer who applied a small quantity of low grade fertilizer.

By giving thought to a subject like that of plant food the farmer will find that it pays to buy the best material and supply the crop enough of the elements of fertility to allow the seed sown on the soil to produce the largest crop.

It is a good policy for the farmer to have for his motto in farm work. "The best food for the plant, the best food for the stock and the best food for the farmer and his family." Such a motto applied to farm life will place the farmer on a business basis for happiness and good health and luck will be placed in the background. Bad luck is closely associated with a lack of plant food for the crop, not enough feed for the farm stock and lack of suitable food and clothing in the farmer's family.

Nottoway County, Va.

J. B. WEEMS.

THE SOUTHERN FARMER AND HIS OPPORTUNITIES.

Editor Southern Planter:

After reading the many excellent articles in *The Planter* of the last several years in regard to the profits and pleasures to be derived from the poultry and dairy business, I have wondered why our Southern farmers have been, and are, so slow to engage their time and intelligence in a pursuit which, if intelligently pursued, means sure profits.

I do not wish to speak concerning the man who devotes his entire time to cows and chickens. For him the problem has been solved already, but the small farmer of to-day—the one who uses from one to three or five horses to his farm; the one who has never given a single minute of unprejudiced thought towards his selling a pound of butter, or a basket of eggs—he is the man who needs resurrection.

The Southerner, the descendant of the slave-holder, is

a complicated being. Because, in the days of his grandfather and father, a false standard of a gentleman prohibited a man's being seen selling butter and eggs at his local market, he yet harbors the tradition with foolish pride that none of his family were ever known to condescend to trade a pound of butter or a dozen eggs. And where is the wisdom in persisting in such a custom? The paupers of fifty years ago have become, through utilizing the advantages of a few cows and hens, the princes of to-day, and they speak with pity of that man, mortgaged beyond redemption, whose father was their father's landlord. The typical Southerner considers it a slur upon his social position and an impeachment of his character to be seen taking such products of the farm to market as butter, eggs, chickens, pigs, mutton, etc., but depends entirely upon custom-honored and debt-increased cotton and tobacco as his entire money crop. That it is a disgrace to sell the products of your farm, no matter what they should be, even if it were red dirt from some hillside gully, is in itself the most unreasonable foolishness. Wherein is the wrong? Have you not an unquestioned right to sell whatsoever your farm should produce? Because a pound of butter should bring only twenty-five cents, and a dozen eggs fifteen, is it any disgrace to sell them? I know numbers of men who would be caught stealing as quick as they would be seen selling such, and yet it was and is absolutely necessary that these very men should do this, but a false pride and family tradition prevent their doing so. So much for a relic of slavery.

Suppose the big department stores of our big cities refused to sell only fifty and hundred dollar articles, would you, Mr. Editor, consider this a wise plan?

It is a God-given duty that a man should provide for his family, and that honestly, and in the entire scope of human endeavor there is no labor to pursue that is a disgrace provided it is honest. If custom and tradition are not founded on reason, drop them as dead-weights immediately. It is your duty that you should give your labor to that from which you can reap the most profit, and that honestly. There is no disgrace attached to honest work, let it be what it may. Sell everything that the farm will produce, even the persimmons, provided you can find a market for them; whatever is worthy of your labor, is worthy of a price.

I suppose no one will complain that there is no profit in stock. Fifty years ago, when there were no markets in the towns and country stores, such an objection could have been considered, but to-day no one would listen to such a statement. And there is no true reason why every Southern farm should not sell from one to five pounds of butter each week through the year. Break loose from the chains of custom and let the motto be: "Whatever occupation is honest is honorable."

H. C. COLEMAN.

Warren Co., N. C.

THE

Southern Planter

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RICHMOND, VA.

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WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. Rejected matter will be returned on receipt of postage.

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A NEAT BINDER.

If you will send 30 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 these a useful device, as they always save their copies for reference.

BOOKS.

It is one of the most pleasing features of modern educational progress that authors and publishers are now turning their attention to providing books from which the elementary principles of agriculture can be taught in the rural public schools. This is one of the great needs of the day. The country boys and girls have, up to this time, been sent out into the world to make their livings without even the most rudimentary knowledge of agriculture, upon the pursuit of which calling the majority of them are called to fight the battle of life. They have been taught the three "R's" and then sent out as educated. The true end of education is to fit a man or woman to pursue a calling from which he can obtain a livelihood. Without a knowledge of the basic principles of farming how can it be said that a country boy or girl is educated? The result of the existing system has been that the boys and girls have left the country and flocked into the cities to swell the already overcrowded ranks of workers and there have been unable to earn more than the barest subsistence, whilst the land in the country from which they could have got a good living has been wasted. A change is now demanded and is going to be met, and the first thing needed to make this feasible is the text books for the teachers and student. Two of these have reached our table.

Agriculture—Its Fundamental Principles. By Andrew M. Soule, President of Georgia State College of Agriculture, and Edna Henry Lee Turpin. Published by the B. F. Johnson Publishing Company, Richmond, Va.; Atlanta, Ga.; Dallas, Texas. Price, 75 cents. This is a book of 320 pages, and its aim is so to state the scientific facts and principles which underlie the processes of agriculture that they will be intelligible and interest-

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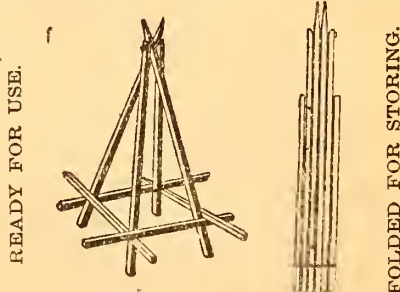
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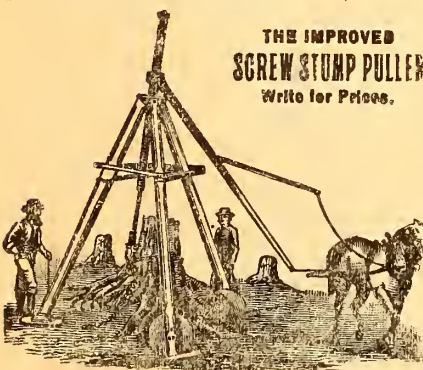


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ing to young people. The principles are stated briefly, but clearly, illustrations and examples are drawn from common crops and methods. We have made a fairly close examination of the way in which the authors have carried out this aim and are satisfied that the work is one which we can heartily commend to the educational authorities of the States of the South as being well fitted to meet the needs of teachers and pupils in all country schools.

Elements of Agriculture—Southern and Western. By W. C. Welborn, B. S., M. S., Vice-Director and Agriculturist of the Texas Experiment Station. Published by The Macmillan Company, New York. This is a book of 330 pages. The author takes the position that agriculture has an educational or mind training value fully equal to geography or history and that it can be taught in the schools as easily as any other subject if it is put into simple language and arranged in fairly logical order. The book aims at these results and on account of the want of preparation on the part of many teachers has a full list of questions at the end of each chapter. The author seems to have carried out his aim well and the book will, no doubt, be found to fill a much needed want in all country schools.

Progressive Poultry Culture. By Dr. A. A. Brigham. Published by The Torch Press, of Cedar Rapids, Iowa. Price, \$1.50. This book is carefully and ably written by one of the oldest and best known specialist in the field to-day. Dr. Brigham is an acknowledged authority on the subject, not only in this country, but in both Europe and Asia. He writes from large experience gained while resident at different times in six States of the Union and after having been Professor of Agriculture in Japan.

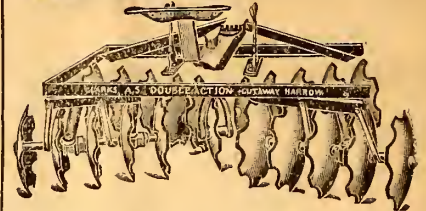
The first chapter considers in a practical way the basic factors of success in the general business of poultry raising. A plan of procedure is fully outlined and will, we believe, if studied carefully, determine definitely whether the reader is qualified to succeed in the business which he has chosen or contemplates.

From the end of the first chapter until the index, there are points which every working poultryman, or poultrywoman, should be conversant with, in a word, the whole domain of poultry culture is covered and in a style which is neither obtuse nor technical, yet quite to the point and thoroughly systematic.

The illustrations, many of which are in half-tone, include numerous fine plates of prize birds, also line drawings of brooder houses, etc., outline plans of sections, appliances and the like.

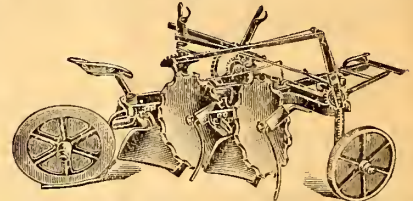
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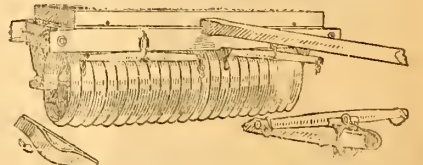
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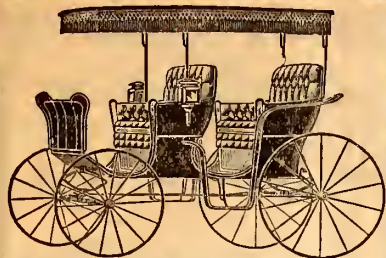
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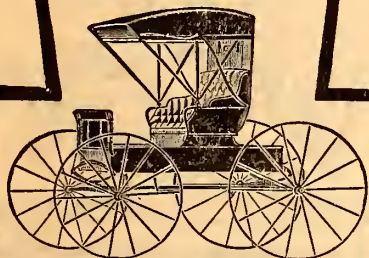
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especially appeal to students of poultry culture as a text book, and for schools or correspondence courses. The arrangement is such as to facilitate its use along these particular lines, and Dr. Brigham is one of the pioneers in actual school work.

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J. M. Thorburn & Co., Seedsmen, 33 Barclay St. and 38 Park Place New York. This is the oldest seed house in the country and has always had the highest reputation for sending out reliable seeds.

Griffith & Turner Co. 205 to 215 N. Paca St., Baltimore, Md. A fine catalogue from a reliable house doing a great business through the South.

W. F. Allen, Salisbury Md. Catalogue of choice Strawberry plants and other small fruit. Allen's Strawberries have always had a high reputation. Mr. Allen is himself a large Strawberry grower and therefore knows what the markets want.

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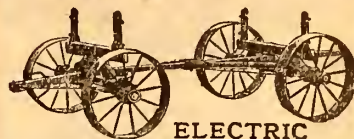
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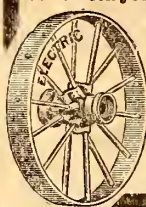


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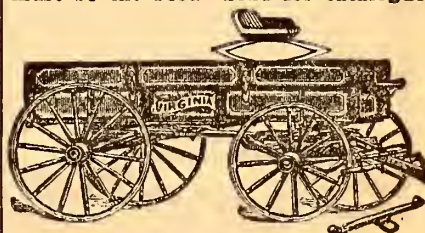


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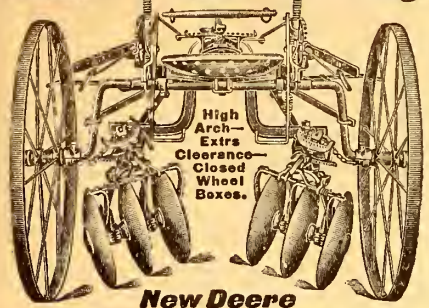
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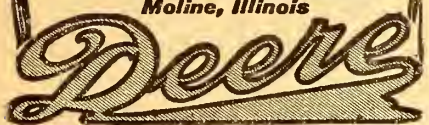
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WITH THE ADVERTISERS.

An attractive advertisement of Mica Axle Grease will be found in another column.

The Binghamton Seed Co. has several advertisements in this issue, to which attention is invited.

Lynnwood Stock Farm has a card which will interest breeders of purebred stock.

Moore's Brook Sanitarium Co. is advertising its two magnificent herd boars as well as a lot of young Berkshire stock of superb breeding.

The season's advertising of Eureka Harness Oil starts with an attractive announcement in this issue.

The Alexander Seed Co., has an announcement on another page of special interest to truckers and farmers.

De Laval Separator Co. advertises its 1908 patterns of cream separators in this issue.

The Superior Drill Co. has an interesting card on another page.

The Implement Co. has several ads. in this issue, to which attention is asked.

Among the prominent announcements of this issue is that of the American Steel & Wire Co.

The Evergreen Farms have several advertisements in this issue, to which attention is invited.

The "International" line of farm machinery, including wagons and separators, is extensively advertised this month.

Lindsey & Sons are advertising their compost drill in this issue.

The thoroughbred stallion, "Judge Times," is offered for sale by the Heartland Stock Farm.

The Cycle Hatcher Co. has a prominent announcement on another page.

The Lovejoy Co. has a couple of reasonable announcements elsewhere in this issue.

Look up the advertisement of the Call-Watt Company.

The Chicago House Wrecking Co. offers an endless variety of seasonable stuff for the home and farm in its ad, on the second cover page.

Note the change in the advertisement of the Superior Fence Co.

T. C. Andrews & Co. is advertising agricultural lime, rock and shell.

Royally bred Berkshires are offered by the Sunnyside Farms.

The Watt Plow Co. has a seasonable announcement on the third cover page.

Poultrymen are out in full force this month, offering all varieties of poultry and eggs. Be sure and look over these advertisements before sending your order elsewhere.

"The Want" columns are growing in popularity and many bargains are offered this month.

MODERN SILAGE METHODS
Revised and Enlarged Edition—224 pp.—library size—copyrighted 1908—over 40 illustrations. "Modern Silage Methods" is reliable—used as a standard Text Book by many State Agricultural Colleges. Contents by chapters follow:
1. Advantages of Silo, 25 pages.
2. Silos: How to Build, 76 pages.
3. Concrete and Cement Silos, 10 pp.
4. Silage Crops, 16 pages.
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6. How to Feed Silage, 22 pages.
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A vast amount of knowledge in plain, practical language. Nothing ever published so complete—answers every question you can think of on Silos and Silage.
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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 uniformly, and best of all never bruises or punctures the seed. Send a postal for our 1908 Free Book.
IRON AGE
No Misses
No Doubles
No Troubles
SAVE HIRED HELP
Iron Age (Improved Robbins) Potato Planter
BATEMAN MFG. CO., Box 167PGreenloch, N. J.

ECONOMY SILO
Medal and highest award at the Jamestown Exposition
Air tight all over, keeps ensilage absolutely sweet. The doors are continuous, easily handled, and have no clumsy rods. A sufficient number of strong, well supported hoops form a permanent, safe ladder. Economy Silos are strongly built and easily put up.
Fully guaranteed. Write today for free illustrated catalogue with experience of users.
Economy Silo & Tank Co.
Box 38G Frederick, Md.

ONE MAN
Can sow more grain with a Cahoon hand broadcast seed sower than six men can sow by hand. 5 acres per hour is a fair average for the Cahoon, and the seed is distributed evenly, with a great saving of time.
The Cahoon Hand Seed Sower
is a practical machine for any size farm. It increases the farmers profit both ways. In better crops raised, and time and seed saved. Write for new book "Sowing for Results" and 50th anniversary Souvenir.
Goodell Co. 63 Main St., Astoria, N. J.

Fertilizer Sower

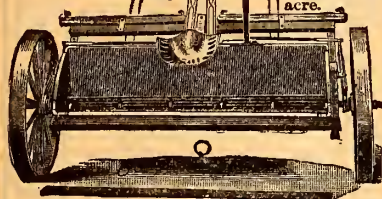
Handles All Commercial Fertilizers

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

PERFECT
Lime Sower

For Broadcast Top-dressing

or Drilling in Rows. Spreads to width of 5 ft. 10 inches, 200 to 4000 lbs. per acre.



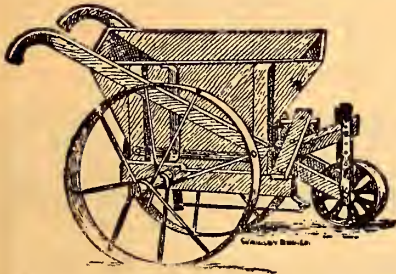
LOW-EASIEST TO LOAD

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.

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

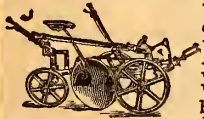
Reduce Your Guano Bill.



Use a Lindsey Compost Drill and get the greatest returns from your stable and lot manure, etc. Fully guaranteed. A postal will get our catalogue.

LINDSEY & SONS, Box 28, Crystal Springs, Ga.

ROYAL 2-HORSE DISC PLOWS



Were new and different, but they made good. All seeing them want them. Write for free booklet, "Disc Plows and Royal

Disc Plows." Tells about Disc Plows of all kinds and descriptions.
Chattanooga Implement & Man'g Co.,
Dept. M CHATTANOOGA, TENN.

Make Your Own Fertilizer

at Small Cost with

WILSON'S PHOSPHATE MILLS

From 1 to 40 H.P. Also Bone Cutters, hand and power for the poultrymen; grit and shell mills, farm feed mills, family grist mills, scrap cake mills. Send for our catalogue.

Wilson Bros., Sole Mfrs., Easton, Pa.

VETERINARY COURSE AT HOME.

\$1200 year and upwards can be made taking our Veterinary Course at home 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.**

GREAT ROOFING OFFER.

Gordon, Van Tine Co., Case Street, Davenport, Ia., want to get the name of every reader of this paper who plans to roof any building or repair the roof of any building this season. Gordon, Van Tine Co. sell by mail order at just one-half the regular price all kinds of roofing that are good enough to carry their guarantee of satisfaction.

They sell Gordon, Van Tine's Flint Coated Rubber Roofing under 10, 3, and 5-year guarantee, according to weight, as low as \$1.41 per square.

To every inquiry for their Flexible Flint coated, fire-resisting, water and weather-proofed roofing they give free samples, and a complete book which is pronounced by many to be the greatest publication on economical roofing ever issued. It not only describes and tells all about Gordon, Van Tine's Flint Coated Rubber Roofing, but is a guide to the proper laying of the material. Roofing is shipped from stock in Davenport, Chicago, Philadelphia, Minneapolis, Kansas City, Memphis, getting quick delivery at lowest rates to every locality. They will tell you all about their metal roofing material for many purposes and under certain weather conditions. Write them and get full information about it.

Right straight through Gordon, Van Tine sell warranted quality roofing, guarantee safe delivery, ship anywhere in the United States, at about one-half regular price. Write for catalogue and roofing information to-day.

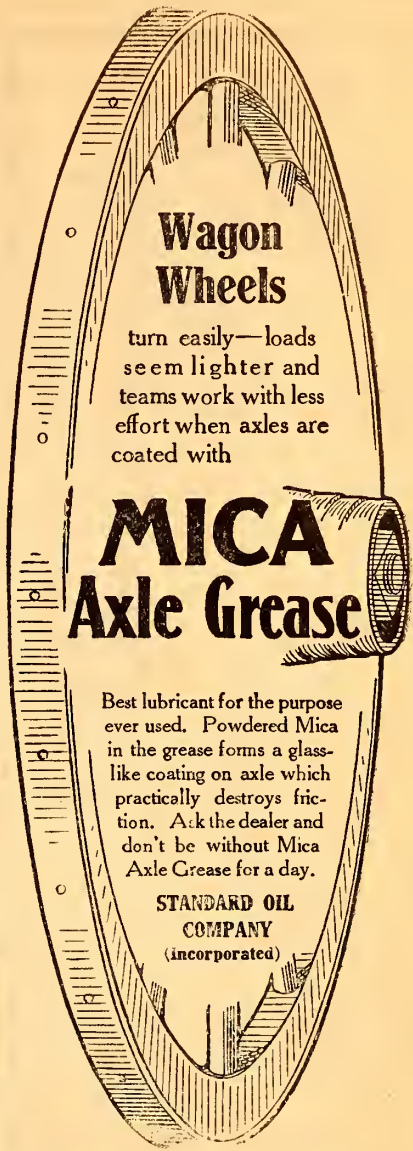
LOW PRICES ON HIGH GRADE VEHICLES AND HARNESS.

There are few business concerns in this country that have a stronger hold upon the public than the Elkhart Carriage and Harness Manufacturing Company. For over thirty-five years—over a third of a century—they have been manufacturing vehicles and harness and selling them, not to jobbers, wholesalers and dealers, but always direct to the people who use them.

Direct dealing would not alone have given them the hold they have upon the public. But they have dealt honorably. They have been manufacturing high-class goods and selling them direct on narrow margins of profit. People all over this country have learned to know this and the result is that the Elkhart Carriage and Harness Manufacturing Company now enjoys the proud distinction of being the largest manufacturers in the world doing business direct with the people.

The vehicles and harness are known everywhere as high grade. As to prices, no one can read the advertisements regularly appearing in this paper without being convinced that they are right.

The Company's great catalogue shows 200 styles of Vehicles and sixty-five styles of Harness. The time honored Elkhart plan is to send everything on approval. It costs you nothing



Wagon Wheels

turn easily—loads seem lighter and teams work with less effort when axles are coated with

MICA Axle Grease

Best lubricant for the purpose ever used. Powdered Mica in the grease forms a glass-like coating on axle which practically destroys friction. Ask the dealer and don't be without Mica Axle Grease for a day.

STANDARD OIL COMPANY
(Incorporated)

BEATS THE Grindstone

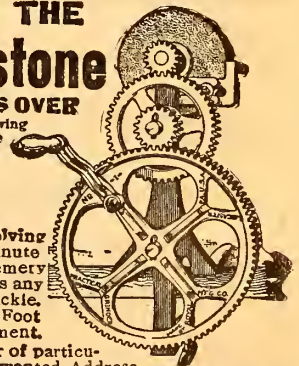
TEN TIMES OVER

No pressure, no drawing temper, if you use the

Practical Alundum Grinder

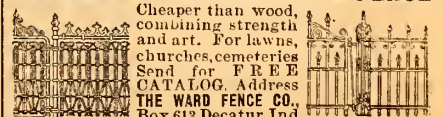
with wheel revolving 3,000 times a minute. Far superior to emery or stone. Grinds any tool, knife to sickle. Different sizes. Foot power attachment.

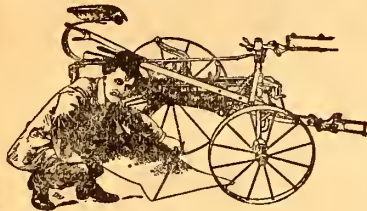
Write for circular of particulars. Good agents wanted. Address, **ROYAL MFG. CO., 35 E. Walnut St., Lancaster, Pa.**



ORNAMENTAL WIRE AND STEEL FENCE

Cheaper than wood, combining strength and art. For lawns, churches, cemeteries. Send for FREE CATALOG. Address **THE WARD FENCE CO., Box 613 Decatur, Ind.**





JOHN DEERE
MOLINE, ILL.

Lightest Draft Plows

Over 75 per cent of the draft of a plow comes in front of the line at which the man in the illustration above is pointing.

This is the "wedge" that cuts, lifts and starts the furrow-slice to turning.

The shape of a plow at this point determines whether the draft is to be heavy or light.



All John Deere Plow Bottoms

are "narrow waisted" and shaped to enter the ground the way a thin wedge splits a log. John Deere plows are the lightest draft plows in the world.

The Finest Booklet of the kind ever published will be sent free to you for the asking. It is full of handsome pictures of ancient and modern plows, plowing scenes from all countries and contains an interesting story. Write for booklet.

Ask for it by number **10** Mention this paper.

Deere & Company, Moline, Ill., U. S. A.

Fuller Brothers

DANVILLE, VA.,

Are sole agents for the

Imperial Chilled Plows.

Made by Bucher & Gibbs Plow Co., Canton, Ohio.

No BETTER Plow is made or sold.

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

ing if you are not satisfied on style, quality or price. Write the Company for the big catalogue, at Elkhart, Indiana. It means the saving of from a third to a half on the price on everything you may want to buy in the vehicle or harness line.

LOW FACTORY PRICES.

There is a growing tendency for direct factory dealings, as two to three unnecessary profits are eliminated. For instance, a Standard High Grade Cream Separator with all the latest improvements and made of the very best materials by the best workmen, may now be purchased under this plan at an actual saving to the purchaser of 20 to 50 per cent. Nothing is cheapened in order to sell at these reduced prices; it is simply the cutting off of unnecessary profits which when added to the cost of a Cream Separator does not add to their value in the least. The Original and Leading Separator to be sold on this plan is—The Davis—made by Davis Cream Separator Co., 56B North Clinton Street, Chicago, and catalog No. 126, which we have before us, fully describes the machine and the plan, and states that a copy will be sent absolutely free to any one requesting same. If you need a separator write for one.

Every farmer in this great republic who is in the market for farm implements should have a copy of the 1908 catalog of the Johnston Harvester Co., Batavia, New York. The catalog of this great independent manufactory is a thing of beauty, being printed on specially made paper and beautifully illustrated. The descriptive matter is written in a concise yet interesting manner and cleverly shows the advantages of this great "Not in the Trust" concern's machines. The sales of this concern have increased so fast that enormous additions are being added yearly which shows that they make the right kind of machines and farmers know it.

THE CARE OF A WAGON.

The useful life of a wagon or dray employed in heavy hauling depends very largely on the care of its wheels and axles.

Hosts of farmers and teamsters, who ought to know better, think that "grease is just grease anyway," and so cut the boxes out of their wagon wheels by using some inferior lubricant which runs off and leaves the spindle dry, or forms a stiff, almost gritty substance in the wheel which is just as bad.

A proper axle grease for use on every type of heavy wagon should have just the right "body"—that is, it ought to be neither so thin as to run, nor so heavy as to stiffen.

First Class Farm Implements at reasonable prices.

You save Labor, Time and Money when you buy implements that wear well and work well. The kind that we sell.

We issue one of the best and most complete of Farm Implement Catalogues. It gives prices, descriptions and much interesting information. Mailed free upon request. Write for it.

The Implement Co.,

1302 East Main St., RICHMOND, -- VIRGINIA.

We are headquarters for V. Crimp and other Roofing, Wire Fencing, Barb Wire, Poultry Netting, etc.

Write for prices on any supplies or Farm Implements you require.

ASPINWALL POTATO MACHINERY

GREATEST LABOR SAVERS

World's Largest Makers of Potato Machinery

CUTTERS, PLANTERS, SPRAYERS, DIGGERS, SORTERS.

WRITE FOR FREE BOOKLET "POTATO CULTURE"

ASPINWALL MFG. CO.

302 Sabin St., Jackson Mich.



THE HOOVER POTATO DIGGER

The most successful digger made. Saves time, labor and potatoes. Satisfaction guaranteed.



Send for Catalogue of Diggers, Pickers and Sorters

HOOVER MFG. CO., Box 69, Avery, Ohio.

Well Drills

For Horse, Steam or Gasoline Power

Well Augers

For Horse Power

Address

LOOMIS MACHINE CO. TIFFIN, OHIO



TO GROW A GOOD GARDEN

good cultivation is absolutely necessary, but it can't be done with poor tools. Here's an Iron Age Tool especially made for garden work. It not only does good work, but it is easy to operate. The boys and girls can do the gardening and produce big crops, if you'll equip them with Iron Age Tools. Send for our 1908 catalog.

IRON AGE

No. 1 Double or Single Wheel Hoe

Bateman Mfg. Co., Box 167G, Grenloch, N. J.

SAVE HIRED HELP



Warriner's CHAIN HANGING Stanchion

Gives animals perfect freedom, absolutely no chafing. Thousands have testified to its simplicity, completeness and durability. I. B. Calvin, Vice-Pres. State Dairyman's Ass'n., Kewanee, Ind., says: "I think them perfect." The purchaser takes no risk, the Stanchions are shipped subject to 30 days' trial in your own stable. Send for descriptive pamphlet.

W. B. CRUMB, South Street, Forestville, Conn.



MONEY SAVED IS MONEY EARNED

Order direct. We make Engines from 2 to 15 H. P. Stationary and Portable. Send for Catalog.

BAUROTH BROS., 61 Fisher St., Springfield, Ohio.



FOR SALE

A complete canning plant in good shape, including cranes, valves, steam and water pipes, kettles, steam vats, trays, tables, fire pots, gasoline tank and pump, good stock of cans, cases and solder. Can be removed with small cost.

ALFRED L. BUTLER, DREWRY'S BLUFF, VA.

It should have, too, a long-lasting quality if it is to be economical.

It is claimed that no preparation for the purpose is quite as good as Mica Axle Grease. A very little of it goes a long way and saves the teamster much loss and trouble.

One valuable quality of Mica Axle Grease is the anti-friction property which it possesses aside from its lubricating power. It contains powdered mica, which coats the wagon axle with a smooth glass-like surface on which wheels turn easily and with the minimum of wear.

TO MAKE HARNESS LAST.

Harness oil serves an important purpose in stable economy.

It is one of those little things that mean a great deal when profit and loss accounts are balanced up.

Every one knows how a water-soaked shoe hardens, and how much more liable it is to crack or wear through when in that condition. The leather and making may be the best, but continued use in all weathers—wind, rain, sun and cold tend to harden and dry out the leather and leave it without "life" or elasticity. Just at this point the destruction of the harness begins, because the open pores in the leather readily absorb moisture and animal sweat and decay at once sets in.

If a harness is kept soft—the pores filled with Eureka Harness Oil—it will go through daily service under the most trying weather conditions and last very much longer than it otherwise would.

"Eureka" is a heavy bodied oil made especially for treating harness. There are no acids or anything whatever in it that can injure leather, but it does contain elements that are positively beneficial.

When a harness is cleaned, an application of Eureka Oil makes it pliable—soft as a glove; tough as new leather. In point of fact—barring wear on the stitching—just as good for looks and actual service as a new harness.

THIS CUT REPRESENTS
MASTERS



TOBACCO, CABBAGE, TOMATO AND SWEET POTATO TRANSPLANTER.

Has been thoroughly tested in the field during the past three seasons and every suggested improvement has been adopted, so that we now offer the dealers and growers the grandest little tool ever devised for setting all kinds of plants. Does better work than can be done by hand and more than twice as fast. Will set plants cheaper than the horse planter, acre by acre. Will do perfect work where the horse planter will not work at all—amongst rocks and stumps and on side-hill land, and far more satisfactory in every way. For full particulars, wholesale and retail price, address

COUNTY AGENTS WANTED. MASTERS PLANTER CO. COMPANY, 178 So. Water St., Chicago, Ill.


SAVE MONEY on Berry Boxes and Baskets

Fruit and Vegetable Packages and Growers' supplies of all kinds. Write for free money-saving catalog and price list. New Albany Box & Basket Co., New Albany, Ind. Largest Factory of its Kind in the Country.



DEHORNING STOPS LOSS

Cattle with horns are dangerous and a constant menace to persons and other cattle. Dehorn them quickly and with slight pain with a **KEYSTONE DEHORNER**. All over in 2 minutes. Not a harsh method. Leaves a clear, clean cut. Cows give more milk; steers make better beef. Send for free booklet. M. T. Phillips, Box 45, Pomeroy, Pa.



"Columbus" THE BUGGY

FROM FACTORY AT FACTORY PRICES

COLUMBUS QUALITY ONLY \$52.50

OF QUALITY

NOW SOLD DIRECT TO CONSUMERS



COLUMBUS BUGGIES

BUILT BY US

The Standard for Quality Everywhere

NOW SOLD DIRECT FROM OUR FACTORY TO YOU SAVING YOU THE HOME DEALER'S PROFIT

A "Columbus" is the vehicle you should buy. Don't take chances when you can go direct to the manufacturer, getting the genuine Columbus Quality and Columbus Style, saving the 40% to 60% Dealer's Profit.

Every Vehicle Sold on One Full Month Approval Trial and Guaranteed Two Years.

We want you as a customer—once a Columbus customer—always a Columbus buyer. When you do business with this company, you are dealing with an old reliable manufacturer with a reputation built on quality and square dealing. We have buggies now in use sold over 15 years ago. We have thousands of customers who would not have anything else.

FREE OUR CATALOGUE OF COLUMBUS BUGGIES, Runabouts, Phaetons, Surreys, Stanhopes, Carriages and Harness will be mailed to you absolutely free. Write for it now.

THE COLUMBUS CARRIAGE & HARNESS CO. 2028 So. High Street, Columbus, Ohio

"Columbus" THE BUGGY

FROM FACTORY AT FACTORY PRICES

COLUMBUS STYLE ONLY \$50.00

OF QUALITY

NOW SOLD DIRECT TO CONSUMERS





A Good Spray Pump earns big profits and lasts for years.

THE ECLIPSE is a good pump. As practical fruit growers were using the common sprayers in our 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, Michigan.

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 Enraving attachment. Write for free Catalog illustrating Sprayer and other

IRON AGE

SAVE HIRED HELP

Iron Age Tools. A postal brings it. Write today.



Iron Age Four Row Sprayer.

BATEMAN MFG. CO., Box 167S, Grenloch, N.J.

Spraying Made Easy

By Using **STAHL'S Excelsior Spraying Outfits and Prepared Mixtures**



Save your trees, vines and plants from the ravages of scale, fungi and worms by spraying, and thus insure an increased yield. Every farmer, gardener, fruit or flower grower should write at once for our free catalog, describing Excelsior Spraying Outfits, and containing much information on how to spray fruit and vegetable crops.

WM. STAHL SPRAYER CO., Box 165-0, Quincy, Ill.

Defender Sprayer



All brass, easiest working, most powerful, automatic mixer, expansion valves, double strainers. Catalogue of Pumps and Treatise on Spraying free. AGENTS WANTED.

J. F. Gaylord, Box 22, Catskill, N. Y.

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.

Tell the advertiser where you saw his advertisement.

MAN'S FOOD ASSURED.
 Gravest Problem of Science Solved
 By Discovery of Vast
 Nitrate Deposits.

One of the greatest problems which has in late years occupied the attention of scientists has been solved by the discovery of new deposits of nitrate of soda. "How can the exhausted fields and farms of the world be replenished with the nitrogen which alone can produce food for the race?" was the question. The finding of the new deposits in Chile, covering a vast area, is the answer.

Nitrate of soda is not as visibly connected with the welfare of the race as sunshine, but it is almost as important an element in the development of the individual and the perpetuation of the race. Some scientists have gone so far as to compare the effects of the exhaustion of the nitrate beds with those which would follow upon the withdrawal of the sun from the earth. "No sunshine, no growth," says science. "Without nitrate of soda to fertilize the exhausted fields and farms, there will be a long series of constantly diminishing crops and a consequent dwindling, degenerating, starving, and dying-out population," says agricultural chemistry.

Some specialists have said that the Chilean beds, as heretofore known, would be exhausted in fifty years, and that the era of decreasing crops would then begin, with terrible consequences to the race. As a matter of fact, new nitrate of soda deposits have been discovered continuously for many years, so that there has actually never been a time when the American farmer's supply of nitrate was in danger of failing. The new discoveries, however, place the certainty and immensity of his supply beyond all question. He can now secure unlimited quantities of this most effective and most easily applied of all fertilizers at a more advantageous price than ever before. In fact, overproduction is in sight unless new uses are found for nitrate.

The Chilean government, for purposes of revenue, took charge of the vast nitrate deposits soon after their discovery. It has ever since not only controlled the known nitrate beds, but has systematically searched for others. Deposits of nitrate, of varying size, were constantly being discovered; and now comes the discoveries of nitrate of soda beds which will last not only hundreds of years, but longer. Two immense areas have only recently been discovered. Together they contain more than one billion tons of nitrate of soda. It would seem that nature had placed the deposits in Chile for the use of farmers all over the world at just the time the needs of a growing world-population would require it to renew their acreage and grow larger



APPLE and all other fruit trees do their best when properly SPRAYED

Have you any fruit trees that yield poor, wormy, knarled, blighted and imperfect fruit? Do you spray them? If not you are

LOSING MONEY

All kinds of spray pumps at prices from \$3 up.

Our Spray Pumps are reliable, simple and durable.

Used by the Virginia and North Carolina Agricultural Departments.

SYDNOR PUMP & WELL CO.,

DEPT. B.

RICHMOND, VIRGINIA.

E. F. KIRWAN & CO.,

33 South Gay, Baltimore, Md.

OFFER YOU THEIR SERVICES AS

Purchasing Agents

And will secure for you the benefit of lowest prices and best quality for all supplies.

MACHINERY, FERTILIZERS, SEEDS, GROCERIES, ETC.

All enquiries promptly answered.

Drop us a postal whenever you need anything.

**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,
Bradstreets and Dun.

and better crops. From the best in formation obtainable, the nitrate mines are good for 200 or 300 years, even at double the present rate of production, which it about 2,000,000 tons per year. A new process has been invented that will do for the nitrate business what the cyanide process did for gold production. Heretofore from 9 per cent. to 10 per cent. has been left in the waste, but with the new process it is claimed that there will not be a loss of 2 per cent., and at a less cost of production than by the old method. Even the waste or tailings can be worked with a great profit.

Nitrate of soda is the world's leading fertilizer and it is gratifying to note that the American farmer may now secure unmeasured supplies of his best fertilizer—contrary to the general rule—at rates cheaper than ever before.

A LOW WHEELED WAGON.
is the thing in the spring mud as well as in summer heat. With wide fast metal tires they go over the mud and the tires stay on in summer and always. A new steel wagon with steel wheels and broad tires is desirable. One may have all the advantages by using ordinary gears and buying steel metal wheels to fit. The reader should correspond with and get particulars as to the measurement and prices from the Havana Metal Wheel co., Box 46, Havana, Ill.

IT WILL DO THE SAME FOR YOU.
Chas. E. West, Goteba, Okla., writes under date of November 15, 1907: "I purchased your ABSORBINE from the druggist and applied it according to directions for Bog Spavin and had grand success. One bottle was enough to do the work. I can give high praise for your ABSORBINE and shall recommend it for Bog Spavin above all other medicines that I tried, and I tried a good many different kinds." At all dealers or express prepaid upon receipt of \$2.00. W. F. Young, P. D. F., 109 Monmouth St., Springfield, Mass.

FIX YOUR ROOFS.

Before the spring rains come on set a day aside to go thoroughly over all your roofs and put them in sound shape. New roofs cost money. It's business to save the old roofs.

The Anderson Manufacturing Co., of Elyria, Ohio, are publishing a book on fixing the old roof. Write them, saying you are a reader of the Southern Planter, and they will send you a copy free. Write to-day.

Brunswick Co., Va., Dec. 27, 1907.
I read The Southern Planter with great interest, and wish that it were so that it could be read by every farmer in Virginia.

R. TURNBULL.

The Steel Shoe
Wear Resisting—Foot Protecting
Guaranteed for a Year



6 INCHES HIGH \$2.50 Per Pair
9 INCHES HIGH \$3.50 Per Pair
YOUR MONEY BACK IF NOT SATISFIED

BOTTOM made of pressed steel, studded with steel rivets; uppers of soft, pliable, water-proof leather—on the \$2.50 shoe actually better than those of the regular \$3.50 leather shoes; our \$3.50 uppers equal ordinary \$5.00 leather shoes. Inside is a comfortable hair cushion. Weigh no more than ordinary shoes. They will save you money; keep your feet dry and comfortable, prevent colds and rheumatism. Do not require the usual "breaking in"; easy and soothing to the feet from the first minute you put them on. The Steel Shoe is certain to please and satisfy; you will wonder how you ever did without it. Sizes 6 to 12. Send us your size and \$2.50 for 6-inch high shoes (or \$3.50 for 9-inch) and you will promptly receive the best and most comfortable pair of working shoes the market has ever produced.

STEEL SHOE CO., Dept. 1 RACINE, WIS.

MYERS LOCK STITCH SEWING AWL




is the most practical little device ever invented, for mending harness, shoes, canvas, carpets, etc. Sews like sewing machine. Every family needs one. Sample ready to use \$1 postpaid. Book E. C. A. Myers Co., 6537 Woodlawn Ave., Chicago.

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Send sketch for free report as to patentability. **Guide Book and What to Invent**, with valuable list of inventions wanted sent free. One million dollars offered for one invention; \$16,000 for others. Patents secured by us advertised free in World's Progress. Sample free.

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PATENT WHAT YOU INVENT.



Our three books, giving full information in patent matters and containing many valuable suggestions to inventors, mailed free. Write for them.
Patent obtained or fee returned.
No charge for opinion as to patentability; send sketch or model. Patents advertised for sale free.
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PATENT YOUR IDEAS



\$100,000 for one invention; another \$8,500. Book "How to Obtain a Patent" and "What to Invent" sent free. Send rough sketch or report as to patentability. We advertise your patent for sale at our expense.
Patent Obtained or Fee Returned,
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(Established 15 years)
941 F. Street, Washington, D. C.

Old Harness Like New



Keep your harness pliable and lively with Eureka Harness Oil, and no matter what its age, it will be good as new

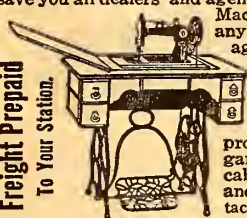
EUREKA Harness Oil

is a positive benefit to leather—Nothing injurious in it. Gives the fine dressy appearance every harness should have. Made by **STANDARD OIL CO.** (Incorporated)

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\$12.85

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SOUTHERN HUMORISTS.

Joel Chandler Harris, whom a Northern critic characterized as "the Dickens of the South," was born in Georgia in 1846. He was for twenty-five years on the staff of the Atlanta Constitution, and, during that time, wrote nearly all the editorials which gained such prestige and influence for that journal. The famous "Uncle Remus" stories were first published in its columns. The writing of them came about in the following way:

A series of dialect stories, under the signature of "Uncle Si," appeared in the "Atlanta Constitution," and were so popular that the editor suggested to Mr. Harris to try his hand at writing something of the same kind. Having been reared amongst the negroes of Putnam county, Georgia, Mr. Harris' memory was amply stored with materials for such articlets, and accordingly he began his "Uncle Remus" series. From the very start they made a great hit. In a few weeks people all over the country were talking about "Uncle Remus," and newspapers for and wide were copying the articles. Then "Brer Rabbit" and "Brer Fox" were introduced to the public, and at once took a firm hold, not only on the fancy of children, but of more mature readers. In "Uncle Remus" Mr. Harris has given us a true life representation of the old time plantation negro, faithful, affectionate, shrewd, jovial, and with a strong sense of humor. This latter trait, by the way, was very strongly marked in the old family servant whose shrewd and droll comments on persons and things around him often showed keen insight and real wit, but we see few traces of this under the new regime.

In 1878, Mr. Harris published "Uncle Remus" in book form, with the subtitle "His Songs and His Sayings." The book was received with pronounced favor all over America. Since then, despite his other engrossing work, quite a number of other stories and sketches in a similar vein have come from his pen, a list of which I sub-

- "Nights With Uncle Remus."
- "Uncle Remus and His Friends."
- "On the Plantation."
- "Plantation Pageants."
- "Daddy Jake, the Runaway."
- "Sister Jane, Her Friends and Neighbors."
- "Mr Rabbit At Home."
- "Little Mr. Thimble Finger and His Queer Country."
- "Story of Aaron."
- "Aaron in the Wilderness."
- "Tales of the Home Folks, in Peace and War."

On his Southern trip, in the autumn of 1905, Roosevelt showed such high regard and admiration for Joel Chandler Harris that if the latter had not already been famous it would hve sufficed to make him so. At the banquet given him in Atlanta, the President

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Doubles the life of fence posts, porches, tanks, sills, etc. Prevents warping of shingles. Use **AVENARIUS CARBOLINEUM**. Endorsed by the U. S. Department of Agriculture. On the market since 1875. Booklet free.
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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.
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CHARLES N. FRIEND, General Agent, Chester, Va.

Organized January 9, 1899.

urged and almost forced "Uncle Remus" to join him at the table, seating him at his right hand. In a speech made on that occasion, Roosevelt said, "Presidents may come, and presidents may go, but 'Uncle Remus' stays. Georgia has done a great many things for the Union, but she has never done more than when she gave Mr. Joel Chandler Harris to American literature. * * * I want to state one of the reasons why I like what he has written; because I rise up with the purpose of being a better man, a man who is bound to strive to do what is in him for the cause of decency and the cause of righteousness. Gentlemen, I feel too strongly to indulge in any language of mere compliment or flattery. Where Mr. Harris seems to me to have done one of his greatest services is that he has written what exalts the South in the mind of every one who reads it, and yet, what has not even a flavor of bitterness towards any other part of the Union. There is not an American anywhere who can read one of Mr. Harris' stories—I am not speaking at the moment of his wonderful folk tales, but of his stories—who does not rise up a better citizen for having read them, and with a more earnest desire to do his part in solving American problems aright. I cannot too strongly express the obligations I am under to Mr. Harris."

This is certainly a strong endorsement, and from illustrious authority, but the public had found out and recognized Mr. Harris' greatness before the President set the seal of his approval on it.

Although Mr. Harris belongs distinctly to the brotherhood, he has also, of recent years essayed the vocation of novelist, and his work, "Gabriel Tolliver," a son of the Reconstruction Period, has been received with great applause. "The Brooklyn Eagle" declares it entitles him to be called "the Dickens of the South," whilst another compares it to Mrs. Gaskell's charmingly humorous little tale, "Cranford." He has also written a novelle called "The Making of a Statesman," and a work on "Georgia from the Invasion of De Soto to Recent Times." It is probable that Roosevelt was referring more especially to the above named works in his speech.

Those who know Mr. Harris will affirm that his sunshine and sportiveness are not all reserved for his writings, but pervade his personality strongly and delightfully, making it a great pleasure to be in his proximity. He was greatly beloved by every one on the paper for which he wrote so long, from the editor-in-chief down to the office boy, and he has many warm friends wherever he is known, though he does not mingle much with the outside world, as he is a dear lover of home and stays there very closely. He cannot be called a handsome man,

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Bone Phosphate

22½ Per Cent. Phosphoric Acid, 4½ Per Cent. Ammonia. (Guaranteed Analysis.)

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In the manufacture of which NO CHEMICALS are used
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as he is under medium height, with red hair and a freckled face, still there is an attractiveness about his mobile mouth and expressive features that is lacking in many a so-called handsome face. He is still in his in his prime (Dr. Osler to the contrary notwithstanding), being at the present time about sixty years old, so we may yet look for many years of fruitful authorship on his part.

It is really remarkable how largely the humorous vein exists amongst the authors of Georgia. She has furnished the larger part of our Southern humorists, and besides that, has shown other rich veins of literary talent, as for instance Sidney Lanier, the foremost of Southern (or I might say American) poets after Edgar Poe, the two being like the divine twins, Castor and Pollux, two bright stars shining in the literary firmament of the South. It would seem as if the tutelary kind offices of Oglethorpe, the noble founder of Georgia, had brought down on that State a shower of good gifts of every kind.

Richard Malcolm Johnson (another Georgian) has so rich a vein of quiet humor that I think we are justified in admitting him into the coterie of Southern humorists. James Whitcomb Riley says that he is the Vicar of Wakefield of American literature, whilst Mark Twain, Thomas Nelson Page and others competent, have accorded him praise equally as high. Besides his "Studies, Literary and Social" and his clear and accurate work on "English Classics," Mr. Johnson has written many tales in which there is a decided vein of humor, as for instance "The Widow Guthrie," "The Chronicles of Mr. Bill Williams," "Mr. Fortner's Marital Claims," "Mr. Absalom Bellinglea," and others. He also wrote an autobiography that has been widely read by his numerous admirers. It appeared first as a serial in the "Conservative Review," and then in book form, the first and second editions being issued simultaneously on account of the author's great popularity.

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mix one tablespoonful of Foutz's Superior Poultry Food in the mash for fifteen fowls. This Preparation contains certain food elements which stimulate good production and prevent all diseases of the digestive organs. Sold by dealers everywhere at 25 cents per package.

Fauquier Co., Va., Nov. 19, '07.

To my mind, the Southern Planter is a very important factor in the development of the agricultural interests in our Southern land.

C. C. CLAYPOOL.

Northampton Co., Va., Dec. 2, '07.

I enjoy reading the Southern Planter very much.
HUBERT WYATT.

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Seven generations in ear-row breeding plots, under most intensive methods known in the breeding up of corn has produced in my **EXCELSIOR** a corn of greatest productivity and perfection. In a variety test plot of 35 leading varieties of corn conducted under the supervision of the Maryland Experiment Station, 1907, the **EXCELSIOR** far outyielded all other varieties. At the State Corn and Wheat Show, held 3d and 4th December last in Baltimore, **EXCELSIOR** won first prize in every class for white corn and won the beautiful **Boigiano Cup** as sweepstakes prize for the best corn, any color, in the show. The net winnings of my grains at the above show was \$135, which was paid in gold. This corn has never failed to take first prize at all fairs and corn exhibits wherever shown.

Corn Booklet upon application to
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The foundation stock is the best of the prolific varieties; thoroughly acclimated, true to type, bred to grow thick, seed carefully selected for six years; best for Southern planting.

90 acres in 1907 average 50 bushels per acre, and 16 acres made 100 bushels per acre, weighed at the shredder. Price, \$2 per bushel, \$1.25 per half bushel. Special price on large lots.

In ordering state whether seed is wanted for upland or bottoms.

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- White Maman Cochet, pure white.
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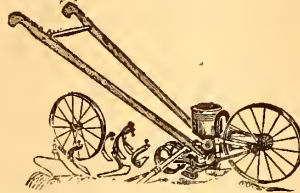
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Seeds of carefully selected varieties grown from the best stock obtainable which will surely please. Our 25c assortment of vegetable seeds is composed of 16 large packets, all choice varieties. Write today and ask for our \$45.00 prize offers open to all.

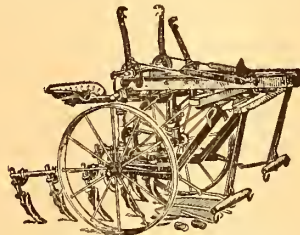
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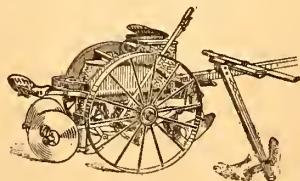
Now is the best time to get ready for your spring and summer work. Look over your farm and garden tools right now. See if they are in good repair and whether you will need any new tools the coming season. If so, right now is the best time to read up and get posted on the implements you will buy.



Don't put this off until you must have them. If you do, you will then, no doubt, be obliged to make hasty purchases and the chances are you won't get the best tools for the purpose. Much depends on them as to the success of your crop and the ease with which you accomplish your work, and there is not a better time than right now to decide what and where you will buy.



Here are shown some of the popular Iron Age Farm and Garden Tools. They have been on the market so long it seems unnecessary to introduce them to our readers. Their success and adoption by farmers all over the United States is simply the result of the genuine merit they possess. The Bateman Mfg. Co., have devoted a long lifetime to the manufacture of their line of implements, continually improving them wherever possible. As they have been at it since 1836 it is little wonder they now produce some of the most satisfactory tools of their line on the market.



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Write to-day for our free catalogue (B). You need it. It helps.

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High-Grade Seeds.

FRESH AND RELIABLE.

Headquarters for Garden and Farm Seeds, High Grade Fertilizers, Land Plaster and Nursery Stock. I want your orders and you want Grossmann's Seeds.

Write for Price List.

CHARLES F. GROSSMANN,
Seed Merchant,
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Raised in the open air from seeds of Long Island, Puget Sound, and England. Varieties: Early Wakefield, Charleston, Early Flat Dutch, Succession and Drumhead. Price, delivered express, Charleston:

\$1.25 per 1,000 to 5,000.
Above 5,000 only \$1.00 per thousand. Special prices on large quantities. Cash, please.

Clifford Jouannet, Mt. Pleasant, S. C.

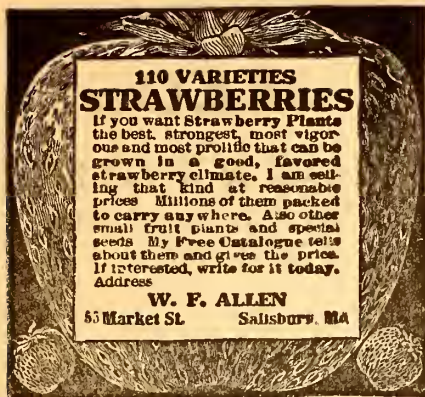
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Northern Grown, over 99 per cent pure. Should produce \$40.00 worth of hay per acre annually. Free instructions on growing. Write for free sample and Catalogue No. 35.

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Northern Grown and of strongest vitality. We invite you to get government tests on our samples. **THE J. E. WING & BROS. SEED CO.**
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Please mention the Southern Planter.



**110 VARIETIES
STRAWBERRIES**
If you want Strawberry Plants the best, strongest, most vigorous and most prolific that can be grown in a good, favored strawberry climate, I am selling that kind at reasonable prices. Millions of them packed to carry anywhere. Also other small fruit plants and special seeds. My Free Catalogue tells about them and gives the price. If interested, write for it today. Address
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I offer for spring of 1908, strong, No. 1 Plants at \$2 per 100 No. 2 at \$1.50 per 100. Send for descriptive circular of the Ward.

Full line of Fruits Trees and Small Fruit at planters' prices. Send for price list.

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6 EVERGREENS**

We grow them by the million. To prove they are healthy and vigorous we offer 6 fine Spruces 2 yr. Free to property owners. Mailing expense 5c, with sender not. A postcard will bring them. Catalogue free. The Gardner Nursery Co., Box 105, Osage, Iowa.

50,000 Keiffer Pear Trees for Sale!

These are in surplus, and I can make most favorable terms, if ordered quick. This pear is the great money-maker of the South.

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Fruit Trees, etc. Strawberry Plants. \$1.75 per 1,000 in 5,000 lots or over. Trees, 8c. each. Send for free catalogue. **JOHN LIGHTFOOT, East Chattanooga, Tenn.**

**TWO MENSAHIBS (LADIES) IN INDIA.
"Traveller."
No. 3.**

Whilst sojourning in Jaipur, the beautiful "pink city of the Empire," we made an excursion to Amber, the old capital, seven miles distant from Jaipur. We went on elephants from the Maharajah's stables, gaily caparisoned in red embroidered blankets. Their faces were painted and their tusks were bound in gold bands. The mahouts sat across their necks and prodded them with his goad to make them salaam to us as we came up, and they actually got on their knees, bowed their heads and groaned. A servant brought a ladder and we climbed into the howdah as soon as we could free ourselves from the boys with souvenirs for sale. Our guide sat behind and tried to keep the sun off us, but that luminary is master in India, and we could not get away from him.

The elephant took up his journey with stately tread, and we proceeded into the country, past ruined palaces and forts, and jungles where the tiger once had his lair. With even steps the elephant carried us over the hills where the city of Amber used to stand, and took us to Amber palace. It is no longer in use, but it is kept in good preservation. Leaving the elephants in the court, we ascended the broad stair, and passing a gateway inlaid with mosaics and sculpture, we were introduced within to the luxurious elegance of Indian architecture of the Mohammedan type, adopted after the conquest of the Empire by the great Moguls who crossed from Arabia, and took possession of the land. Slender columns, graceful arches, baths of creamy marble, panels of alabaster, doors of sandal wood, inlaid with ivory are some of its beauties. In the center of the palace is a garden with aloe, pomegranates and roses, where fountains are playing. Whole rooms sparkle and glitter with tiny inlaid mirrors and spangle work. The zenana, or woman's apartment is secluded and protected with galleries, with here and there a lattice through which the languid Eastern beauties might gaze on the outside world and bargain with silk and jewel merchants in the courts beneath. On the roof is a summer garden where the court adjourned on high nights with story tellers and musicians, to gaze on the stars and listen to the horoscopes of the astrologers. Returning from this realm of fancy, we had to make the return trip to Jaipur in the blistering midday heat, and we did not appreciate elephant riding as much as we had done in the morning. Nothing would induce them to mend their pace. Camels passed us with a supercilious smile and left



One thing more than any other, wrecks the hopes of thousands of poultry raisers—lice. A louse-infested hen is a tax—a drain on resources—a bit of property that represents loss. There's nothing in them but trouble and worry—don't keep one. It isn't necessary to be rid of hens because of lice however. Simply dust hens, roosts, nests and hidden cracks with

Instant Louse Killer

It destroys them completely. Instant Louse Killer was formulated by Dr. Hess (M.D., D.V.S.), and kills lice on horses, cattle, ticks on sheep, cucumber, squash, cabbage worms and melon pests, as well as rose slugs. It is also a reliable disinfectant and deodorizer. See that the word "Instant" appears on the can.

SOLD ON A WRITTEN GUARANTEE
In Shaker-top Cans

1-lb. can., 25c } Except in Canada and
3-lb. can., 60c } extreme West and South


If your dealer cannot supply you, we will forward one-pound can by mail or express for 35 cents prepaid.

Manufactured by
DR. HESS & CLARK, Ashland, Ohio.



FRUIT TREES \$5

Freight Paid, Per 100
Free from disease; all fumigated before shipping—Apple, Peach, Plum, Pear, Cherry, Carolina Poplar. Order here. Catalog Free.
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No. 150. Directly on railroad, convenient to Washington, D. C., 600 acres good clay land; 200 cleared, balance logged, but much cord wood left; splendidly watered, and will make fine stock or dairy farm. Very cheap.

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Charlottesville, Va.

Please mention the Southern Planter.

us far in the rear. Donkeys and pedestrians disappeared in the distance while we crawled along on our huge beast.

Tiffin (or luncheon) was ready when we finally reached the hotel, and a flute player was playing some Oriental music to beguile the guests while at their meals. One kindly disposed gentleman sent him a douceur of two annas, while the rest of us promised him ten, if he would only go away. Men with old armor filled the court and offered us scimitars, daggers, spears and swords for almost nothing.

We spent the afternoon in the palace which covers a great space and has fine terraced gardens, with a series of elaborate fountains, dried up at that time. In one of the courts, the native troops were being paid, and they were a fine looking body of men. We saw them at drill later, undergoing a thorough course of exercise. We visited all parts of the palace open to the public, the various halls of audience, where foreign guests are domiciled. We then went to the stables and saw hundreds of beautiful thoroughbred Arabian horses, as well as the State elephants, and the elegant carriages with silver and jewelled trappings.

In the zoo there was such a collection of tigers as I had never seen before. They were huge beasts, with much more vivid colorings than those we see in the menageries at home. They seemed wild and untamed, with blazing eyes and gnashing teeth. All the jungle animals in the Indian zoos are magnificent specimens.

We were to take the night train away, and when we went to the carriage, a line of coolies salaamed to us and demanded "backsheesh." One carried a broom, another a duster, and a third a bucket. Our guide, who did our tipping, flung them down some pennies, explaining to us that they were the boys who had swept, dusted and brought water for us. As we drove away the soft voice of a beggar followed us through the night air, pleading "Mensahib, Mensahib, backsheesh!" but our guide waved his stick, crying out "chelo, chelo!" (go away) and would not give him a penny.

At 6 o'clock next morning, our guide aroused us with the announcement that we had arrived in Delhi, and that we had only ten minutes in which to dress and get off the train. As the whistle blew for departure, we emerged from the car, tripping over our shoe strings and dropping hairpins, belts, etc. in every direction. We drove to an English pension that had been recommended us in preference to the hotel, and here we got two sweet rooms and completed our toilet at our leisure.

Delhi is a fascinating spot, and we

Northern Virginia Farms

Here Are a Few Bargains.

No. 132. Contains 50 acres of smooth, gently-rolling, fertile land divided into four fields; pure running stream running through the farm. The land is all in good state of cultivation; chocolate clay with stiff subsoil. The house is a comfortable 6-room dwelling, excellent well at the porch; stable, corn house, granary, all in good condition. Farm is situated in Loudoun County on a good level road, 2 1/2 miles from the station. Price, \$2,000.

No. 130. This farm contains 270 acres; situated in Loudoun County, 7 miles from the station in a thickly settled community; close to school, church, post-office, store and two mills; rural delivery at the gate. This land is all comparatively level, all a good quality clay soil; adapted to bluegrass and grain of all kinds. It is naturally a fine quality of land, but has been worked hard, but there are no galls or gullies. It has one of the finest bearing apple orchards in the county. The dwelling is a 6-room house in fair condition; a large brick storehouse and a good stable with room for 8 horses. This property belongs to a widow lady, whose husband has recently died, and she desires to sell at once, and has priced the property at a very low figure to induce a quick sale. I can sell this property for \$12 per acre, one-third cash, and the balance on very easy terms.

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enjoyed every moment of our stay there. Besides being the capital of the great Mogul Empire, the chief interest of the mutiny of 1857 centers around this city. In this year various causes of discontent led the Sepoys or native high caste soldiers, to rebel against the English, incited thereto by Nana Sahib, descendent of the deposed Moguls. It required several years to thoroughly subdue this uprising, when the lands formerly held by the honorable East India Company were transferred to the crown, and Queen Victoria proclaimed Empress of India.

Delhi is one of the most ancient of cities, an Aryan settlement having been made on the spot in the 15th century, B. C. The present city within the walls was built by the Mogul Emperor, Shah Jehan, most splendid of builders. It is enclosed in high walls of red sand stone, and the fort and palace remain. Time has done some injury to the structures, but cannot destroy them. We entered first the "Hall of Public Audience" Diwani-Kam," where the famous peacock throne used to stand. It is so called from having figures of two peacocks standing behind it, with expanded tails, inlaid with rubies, sapphires, emeralds and pearls. The whole apartment is in a style of similar magnificence. The Hall of Private Audience is all in white marble, richly inlaid in colors and supported by rows of columns. The outer circle bears the Persian inscription:

"If heaven can be on the face of the earth, it is this, it is, this, it is this."

Out side the walls is the Jama Masjed, a great mosque, built of red sand stone, with an admixture of marble. Our guide, being a Hindu, was not allowed within, and we had to cover our shoes with canvas sandals before we entered. Several priests accompanied us through the spacious court with its fountains for ablutions, and showed us the shrines facing Mecca and some precious relics of the prophet Mohamet. From the minaret the muezzin sounded the midday call to prayer, and the faithful followers of Islam fell on their faces before the altar. Their creed imposes on them many prayers, fasts and pilgrimages, but the keynote of their religion is resignation to the will of God.

To the south of the city are the ruins of seven successive cities, once proud and gay, but now the abode of nomadic tribes of the desert. Part of this ground was used for the coronation Durbar in 1903. Some of the temples and tombs have escaped the general decay and well repay a visit. In an opposite direction are the localities connected with the mutiny, and the whole position may be reviewed from Falstaff's Tower where



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W. F. YOUNG, P. D. F., 109 Moz-mouth St., Springfield, Mass.

the English garrison, with the women and children so anxiously awaited the relief which never came.

Chadni Chank, the native settlement, is teeming with interest. The broad street leading to it is lined with shade trees under which groups of men talk seriously over their hookahs, whilst others, covering their faces with their draperies, sleep profoundly. A teacher, gathering the young around him, instructed them in Sanskrit. On the north side is a statue of Queen Victoria, and beyond it the Queen's gardens. In the center of the street is the flower market, and to the left the jeweller's bazaars whence apprentices ran after our carriage, clamoring for our custom. If we stopped an instant, a number surrounded us, each abusing the others, and lauding themselves. Also the most horrible deformities and emaciated lepers thrust themselves upon us, crying out piteously, "salaam, salaam, Mensahib, backsheesh." They are the curse of the land, the result of the frightful conditions of caste and of life among the outcasts. Side by side with these we would see a band of Nautch girls, in full plaited red dresses dancing in the street to the music of some wandering minstrel, with a gold spangled scarf over their perfumed hair, their arms and ankles heavy with bracelets and anklets. They swayed their bodies to the music with a sensuous motion, or sometimes broke out into wild dances, full of movement and action, tripping lightly to the tinkle of their silver ornaments.

In the bazaars we found the most wonderful carving and miniatures on ivory, golden embroideries, chuddars (the shawls worn by the women over their bodies and head) Kashmir shawls fine enough to pass through a wedding ring, not to mention Indian rugs, from the cotton ones used by natives to those of the softest silk and many brought across the border from Persia and Beloochistan.

The air is heavy with perfumes, spices and drugs. Dyes and lotions abound. A flourishing trade is carried on in the Areca nut which sprinkled in lime and rolled in the leaf of the Betel creeper is chewed by the natives and colors their teeth and tongues a bright red. Along with it are sold the paints which mark the castes. Each Hindu wears in his forehead the mark of his caste or of his God. Sometimes it is of yellow or white. The religious enthusiasts sprinkle themselves with ashes as the Romanists do on Ash Wednesday.

The bazaars were so poorly ventilated that we did not feel tempted to purchase any of their contents, but we went to a large foreign shop where we saw some fine beaten silver, with Hindu idols on it, and the repousse silver, done in Cutch, an

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Miller Pays Freight

art learned from the Dutch traders. There were also lace dresses, embroidered in beetle wings, and table covers done in gold and silver and vivid colors.

Amongst the other objects of interest in Delhi were the zoo and the museum, both of which we visited.

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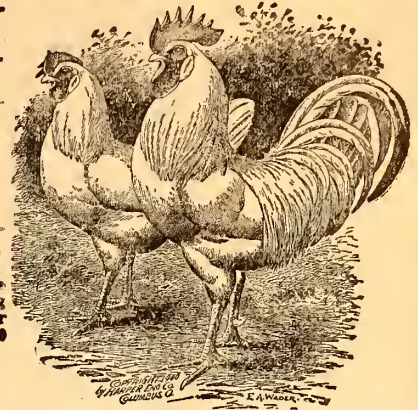
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LORRAINE, VA.

J. F. Dunston, Proprietor, Breeder of Prize-Winning

White Holland Turkeys, White China Geese, White Guineas, Mammoth Pekin and Wild Mallard Ducks, White Wyandotte and White Leghorn Chickens.
 Turkey Eggs.....\$2.50 for 12
 Goose Eggs.....\$3.00 for 10
 Wild Duck Eggs.....\$2.00 for 15
 Pekin Duck Eggs.....\$1.00 for 10
 Wyandotte, Leghorn and Guinea Eggs.....\$1.00 for 15

BARRED PLYMOUTH ROCKS

(Hawkins Strain)

S. C. White Leghorns (Wyckoff strain), S. C. Brown Leghorns (Biltmore strain), S. C. Buff Leghorns, Mammoth Bronze Turkeys, Mammoth Pekin Ducks Stock and Eggs for sale. Satisfaction guaranteed.
 MARION POULTRY YARDS, Marion, Virginia.

GOOD HOUSEKEEPING.

Potatoes and Beef.

Boil the potatoes and cream them with butter, cream and one or two eggs. Beat them very light and then line a pudding dish with them. On these lay slices of beef so that the potatoes will be covered, then add a layer of potatoes then beef again and so on till the bowl is full. Heap the potatoes up, rub them over with melted butter and a little cream and brown for forty minutes in the stove.

Irish Potatoes in Puffs.

Boil and cream the potatoes then add to one quart, three eggs and a cup of milk, salt, pepper and half cup of butter. Put them into a pudding dish and cook quickly about fifteen minutes. Serve very hot.

German Potatoes.

Take three ounces of butter and melt it, add two tablespoons of flour, and when it is well mixed, not browned, add a pint of milk. Let it boil up. Keep hot. Boil the potatoes after peeling them, do not cut or mash them, but while they are hot put them into the pan with the sauce, well covering them, add salt, pepper a dash of nutmeg, and a tablespoon of chopped parsley. Let them set on the stove a few minutes and serve hot.

Chocolate Custard.

To three pints of milk, which must be scalding hot, add four blocks of chocolate, either melted or grated. Set it in a double boiler and let it cook fifteen minutes. Sweeten with a cup of sugar, and let it get cold. Beat eight eggs and stir them into the milk, add two tablespoons of cornstarch, dissolved in a tablespoon of the mixture. Bake in cups and lay a macaroon on each cup when you serve. Serve cold.

Angel Apples.

Use the canned or stewed apples for this. Strain them through a sieve, sweeten and season them. To a quart

EGGS FOR HATCHING.

Barred, Buff and White Plymouth Rocks; White, Buff, Partridge and Silver Penciled Wyandottes, Black Langshans, R. I. Reds, Black Minorcas, Light Brahmans, Partridge Cochins, White and Brown Leghorns.

All Pens headed by High-Scoring Birds second to none.

Price—\$1 for 15, \$5 per 100. Two-thirds hatch guaranteed or order duplicated at half price.

SOME NICE COCKERELS OF THE DIFFERENT BREEDS FOR SALE.

OAKLAND POULTRY FARM, C. J. Wariner, Manager, Ruffin, N. C.

SINGLE COMB

WHITE BROWN LEGHORNS

Strong, healthy, farm-raised stock, bred for layers as well as the show-room. My birds won at Virginia State Fair, Richmond, 1906-7, and Virginia Poultry Association, Richmond, 1908.

Eggs from my best pens of both breeds, \$1.50 per 15 or \$7 per 100. Choice Cockerels from \$1.50 to \$5 each; Yearling Hens and Pullets, \$1.50 to \$3 each. Prompt attention to all orders.

J. A. ELLETT, BEAVER DAM, VA.

GREIDER'S FINE Poultry Catalogue

for 1908 is larger and better than ever. Tells all about pure-bred poultry and illustrates 60 varieties. Contains 10 beautiful chromos of leading breeds—pretty enough to frame. Tells of best Louse Killer, how to cure diseases, make money. Only 10c postpaid. Send to-day for a copy. B. H. GREIDER, Rheems, Pa.

S. C. W. LEGHORNS.

WINNERS WHEREVER SHOWN.

4,048 Eggs from 40 Hens from December to July, 1907—7 months.

EGGS AND STOCK FOR SALE. The hen that lays is the hen that pays.

W. R. TODD, 426 North Sixth Street, Richmond, Va.

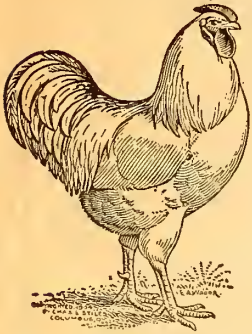
S. C. BROWN LEGHORNS, WHITE PLYMOUTH ROCKS.

HEAVY LAYERS.

Eggs \$1 Per 15.

WHITING'S POULTRY YARDS, Harmony Village, Middlesex Co., Va.

**EDGEHILL POULTRY FARM,
C. H. DICKINSON, PROP.,
Luray, Va.**



Eggs for hatching from the following high scoring birds: Dunston strain White Wyandotte, Silver Laced and Partridge Wyandotte; Biltmore Barred Plymouth Rocks, Buff and White Plymouth Rocks; Whitman strain Brown Leghorn, Buff and White Cornish

Indian Games, Buff Orpington, R. C. R. I. Reds; Northup strain Black Minorcas. Price, \$1 for 15. Special prices for large quantities. A few choice trlos for sale. Cockerels, \$1 to \$1.25; Pullets, \$1. Satisfaction guaranteed.

EGGS! EGGS! EGGS!

Strictly fresh eggs for sale from White Holland and Mammoth Bronze Turkeys of fine size and bone, \$2.25 per 9; from Toulouse Geese, very large and handsome, 30c. each; B. P. Rocks, beautifully barred, farm raised birds, \$1 per 15, \$1.50 per 30, \$5 per 100; from beautiful White African Guineas and B. B. Game Bantams, \$1 per 18; from M. Pekin Ducks, large and active, \$1 per 11, \$1.50 per 22, \$5 per 100.

A few choice B. P. Rock Cockerels and Pekin Drakes at \$1.50 each. All eggs carefully selected, well packed. Satisfaction guaranteed. State plainly what you want. A strong statement, but a plain fact, you get the worth of your money when your orders are filled from

**BLUE HILL POULTRY YARDS,
R. F. D. 1, Box No. 10, Somerset,
Orange County, Va.**

Poplar Hill Poultry Farm



Dr. H. H. LEE, Prop., R. F. D. 4, Lexington, Va. Breeder and shipper of Silver Laced Wyandottes. Fresh Eggs for hatching from high scoring birds, bred to lay, \$1 per 15. No more stock for sale at present.

EGGS EGGS EGGS

W. Holland Turkey, 25c. each; B. Plymouth Rock, \$1 per 15, \$1.50 per 30; Toulouse Goose Eggs, from large matured stock, 30c. each; Indian Runner Duck Eggs \$1 per 11.

My birds are of the best breeding, large in size, good layers and correct in plumage. Give me an order and you will be convinced as to their excellent laying qualities of my birds. Satisfaction guaranteed. Have a few B. P. Rock Cockerels for sale.

Mrs. M. F. GOOCH, Somerset, Orange County, Va.

Eggs For Hatching.

FROM NOTED WINNING STRAINS.

Barred Plymouth Rocks, \$1 per 15; Mammoth Pekin Ducks, \$1.50 per 15. Lower rates made on larger numbers.

A few choice M. B. Turkeys, Ducks and Cockerels for sale.

Leslie D. Kline, Vacluse, Va.

of apples add the beaten whites of four eggs, and beat very hard. With the yolks of the eggs make a boiled custard with one quart of milk, and one teaspoon of cornstarch, season with nutmeg and vanilla. Put the custard into a pretty glass bowl and drop the egg and apple mixture in dabs about on it and serve with sponge cake or lady fingers.

Old Fashioned Batter Fudding.

Boil one quart of milk. Stir in gradually while the milk is boiling, nine tablespoons of flour and six eggs beaten separately, very light and a teaspoon of salt. Pour into a pudding dish and bake quickly for fifteen minutes. Eat at once with wine sauce.

Wine Sauce.

Dissolve three cups of sugar in one cup of water and let it boil until it is almost candy. Just before serving add a half cup of butter beaten very light and cup of good wine and a dust of nutmeg. Do not let it boil again but shake until the butter is mixed and serve at once.

Spice Nuts.

One pound of sugar, one pound of flour, one pint of New Orleans molasses, three-fourths of a pound of butter, three tablespoons of ginger, one tablespoon of allspice, one tablespoon of cinnamon. Make into a batter and bake in small drops in a quick oven.

Dried Apple Fruit Cake.

Soak three-quarters of a pound of nicely dried apples (sun-dried), all night in cold water. The next morning chop fine and put on in a kettle with two cups of sugar and a cup of light molasses and stir constantly. Cook until thick as marmalade. Let them get cold. Cake: Six eggs beaten separately, one pound of sugar, half pound of butter, one and one-third pounds of flour, one cup of sweet milk, one teaspoon of soda and two of cream tartar, one-half teaspoon of cinnamon, one of nutmeg and six of cloves, half pound of citron, shredded, the grated end of a lemon. Make up and bake in loaves as you do any other fruit cake. This is really very good and the apples keep it moist a long time.

Cheap Cake for Sauce.

Six cups of flour, three of sugar, three of milk, half a cup of butter, three eggs, one teaspoon of soda and two of cream tartar. Bake in a loaf.

Cocoanut Cakes.

Grate one cocoanut, sift a quart of powdered sugar, and mix it with the cocoanut, then add the beaten whites of two eggs and the milk from the cocoanut. Mix well together and with the hands make into smooth little cakes; they will soon be dry enough for use. You may make it into oblong rolls and put a date or an almond on each side.

CARAVEN.

Eggs For Hatching

S. C. B. LEGHORN EGGS.
\$1. for 15, \$6 per 10, \$50 per 1,000.

S. C. W. LEGHORN EGGS.
\$1.50 for 15, \$8 per 100.

S. C. BUFF ORPINGTON EGGS.
\$2 for 15, \$10 per 100.

We are booking orders now for White Holland Turkey Eggs for March and April delivery—\$2.50 for 10.

We guarantee safe delivery, full count, fertile eggs from pure stock. Every male on the farm is new blood and not akin to the females. We ship from Richmond, Va.

**THE HUSSELMANS,
Route 1, Highland Springs, Va.**

S. C. BROWN LEGHORNS



Brace's strain of New York. Hens in my best pen are from Mr. Warren's birds. Prize winners at Virginia State Fair, 1907; Jamestown show, 1907; great Richmond show, 1908. Cocks direct from Mr. Brace's best pullet-bred M pen, that took first prize at Madison Square show, New York, last year. Eggs from this pen \$2.50 per 15. Eggs from nice birds, \$1 per 15; \$1.75 per 30; \$2.75 per 50; \$5 per 100.

**EVERGREEN FARMS, Rice Depot, Va.
BYRD'S**

FIRST-CLASS PURE-BRED

S. C. B. LEGHORN

and B. P. R. Eggs, \$1 for 15; four dozen choice Leghorn Hens at \$1 each or \$10 per dozen, and two nice Cockerels can be had at

**THE NEW ERA POULTRY FARM,
Pamplin City, Va., Mrs. L. G. Irving,
Manager.**

WOODLAND POULTRY YARDS.

W. E. Barrett, Prop., Farmville, N. C.
R. C. R. I. Reds, White Wyandottes, White Plymouth Rocks, S. C. Brown Leghorns. Eggs \$1.10 per 15.
One Hen, three Pullets, four Cockerels, S. C. Black Minorcas. The lot \$6.

Wilmington EGGS Wilmington
Tompkins' strain of S. C. R. I. Reds at \$1.50 per 15.

DeGraff & Shove strain of S. C. R. I. Reds and Bradley strain of B. P. Rocks at \$1 for 15. Three sittings for \$2.50. Only a few Red Cockerels for sale yet.

A Niagara Hydraulic Ram, No. 0, never been used, for sale.
Satisfaction Always Guaranteed.
Mrs. F. E. WILLIAMS, Charlottesville, Virginia.

EGGS FOR SALE

From Pure-Bred Brown S. C. Leghorns and S. C. Rhode Island Reds, Prize-Winners, at Hagerstown, Frederick, Rockville, and Washington Poultry Shows. I can also furnish Eggs from Fine Pens of Barred Plymouth Rocks and Black Javas. Write to-day for prices, and address

J. M. HEAGY, Rockville, Md.

SYSONBY GARDENS, PETERSBURG, VA. EGGS FOR HATCHING.



From A. C. Hawkins' Royal Blue Strain, Barred Plymouth Rocks.
Bradley and Fishel Strain, White and Buff Plymouth Rocks.
Wyckoff Strain, Single-Comb White Leghorns—heavy layers.

\$1.50 TO \$2 PER SITTING.

Our Buff Plymouth Rocks took premiums at Virginia Poultry Show, Richmond, 1908, as follows: First Pen, first Cockerel, first Pullet.
Young Chicks, just hatched, 15 to 25 cents. Shipped anywhere.



SYSONBY GARDENS, Inc., Sam McEwen, Mgr., Petersburg, Va.

"RINGLET"

BARRED PLYMOUTH ROCKS. EXCLUSIVELY.

E. B. Thompson's celebrated strain. Bred for high quality, not quantity. My winnings at Virginia Poultry Association Show, Richmond, prove it. I won 1st and 3rd prize Cock, 1st and 3rd prize Hen, and 1st prize Pen. Unexcelled in laying qualities, size, vigor and beauty. Grand yards mated for 1908 EGG season. They will produce results that will please you. Eggs \$2 for 15. All stock sold. Send for 1908 mating list. Satisfaction guaranteed.

Address **LESLIE H. McCUE, Box 4, Afton, Va.**

Member Virginia Poultry Association and American Plymouth Rock Club.

BARRED

Plymouth Rock

Pullets and Yearling Hens, bred from trapped stock, for sale at reasonable prices. Eggs in hatching season.

**R. S. SHOWALTER,
Dale Enterprise, Va.**

Cockerels at head of flock from hen A-26, laid 266 eggs, Sire B-14 from hen A-21, laid 271 eggs per year.

BARRED ROCK EGGS.

At the Virginia State Fair, 1907, in a class of 93, my Rocks won 3rd Ck., 3rd Ckl., and 2nd pen. At the recent show at Richmond in a class of 70, they won 1st., 3rd., 4th., and 5th Ckl.; 2nd and 3rd Pullet, 2nd and 4th pen. I am now booking orders for Eggs from choice matings. Let me have your orders. I guarantee to please you. A few choice Cockerels yet.

**CHARLIE BROWN,
Route 1, Cartersville, Va.**

EGGS, EGGS, EGGS.

If you are interested in Barred P. Rocks, Buff Wyandottes, Rose Comb R. I. Reds, Golden Wyandottes, S. C. White Leghorns, Silver Wyandottes, Mammoth Bronze Turkeys, write to me before placing your order for Eggs or Pows. Catalogue free.

**ALTA VISTA POULTRY FARM,
Mrs. R. B. Fray, Prop.,
Advance Mills, Va.**

ELBERON POULTRY YARDS.

Mammoth Bronze Turkey Toms.
Silver Laced Wyandotte Cockerels.
Silver Penciled Wyandotte Cockerels of prize-winning stock, for sale cheap.
CHICKEN EGGS FOR SALE.
OTHO M. COCKES, Elberon, Va.

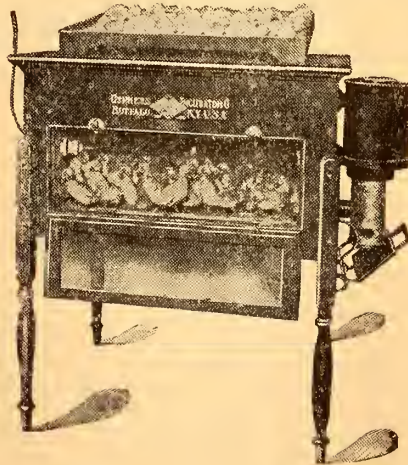
SLOW BUT SURE.

A Philadelphia clergyman is the father of a son whose habits of unpunctuality are a sore trial. Nevertheless the youth's ready tongue is a source of secret delight to the parent.

Once the young man appeared at Sunday breakfast twenty minutes after the appointed time. With a sorrowful face the minister contemplated the transgressor and then his watch.

"Son," said he reproachfully, as he held the watch so the youth might see its accusing face, "do you think this is right? Do you honestly think it is right?"

"Well, father," returned the young man, regretfully, "I wish it were about twenty minutes fast, but as you ask me to say honestly, I am afraid it is just about right."—Lippincott's.



DUCKS HATCHED BY ELECTRICITY.

Photograph showing ducklings hatched in a Standard Cyphers Incubator equipped with Cyphers Electroplane heater instead of the ordinary oil lamp. This electroplane can be attached to any make of incubator.

Write to the Cyphers Incubator Co., Buffalo, N. Y., for further particulars of this new invention.

BARRED PLYMOUTH ROCKS.

Fine large fowls, correct in plumage, crossed with prize-winners of Thompson and Bradley strain. Cockerels, \$1.50 to \$2. Yearling Hens, \$1.50; 10-Months Pullets, \$1.25; Eggs, \$1, per sitting, \$1.50 per two.

Imperial Pekin Ducks—large, healthy birds—Drakes, \$1.50; Ducks, \$1.25. Eggs, \$1 per sitting; \$1.50 for two.

Mammoth Bronze Turkeys, National Strain, unusually fine this year; beautiful plumage. Eggs, \$3 per dozen. Orders filled promptly.

Mrs. R. E. WILHOIT, Somerset, Va.

Barred Plymouth Rock

Eggs for Hatching from Choice 2-year-old Hens, descended from 230-Egg Trap-Nest Record Stock, mated to Park's April-hatched Cockerels. Price \$1 per 15; \$5 per 100. No better bred-to-lay B. P. Rocks in this country.

FRED. B. JONES, Gloucester, Va.

Barred Plymouth Rocks,

Rhode Island Reds,
Brown Leghorns,
Mammoth Pekin Ducks.

Eggs at 75c. per 15; \$4 per 100; Duck Eggs, \$1 per 13; R. I. Red Eggs, \$1 per 15; Buff Cochins Bantam Eggs, 5c. each. Few nice Leghorn and R. I. Red Cockerels, \$1 to \$2 each.

JOSHUA COOPER, Surry, Va.

EGGS FOR SALE

From Pure White Plymouth Rocks, \$1 per sitting of 15, and White Pekin Ducks, \$1 for 10.

Address **MRS. L. B. WILLIAMS, ..
R. F. D. 4, Louisa, Va.**

SPRING BROOK POULTRY FARM,

Culpeper, Va., H. H. Scott, Prop.
Breeder of Northup strain Black Minorcas, Whitman strain of Brown Leghorns, and the best Silver-Laced Wyandottes. Have been breeding Black Minorcas six years, always with the best type in view. Stock and Eggs in season at very moderate prices, considering the quality. Write me for prices and full particulars.

Rhode Island Red

—AND—

BARRED PLYMOUTH ROCK

Eggs, 15 for \$1, 30 for \$1.75, 50 for \$2.50. Pure-bred and strictly first-class.

C. L. BLANTON, McDuff, Va.

"EAST VIEW"

SILVER LACED WYANDOTTES.

Exclusively. Rob Biddy for wooden hen. Eggs \$1 for 15, \$3 for 50, \$5 for 100, \$7 for 150.

Mrs. W. S. Chichester, Aquasco, Md.



**SINGLE COMB
BROWN LEGHORNS.**

**STRAWBERRY HILL
POULTRY YARDS,**

Box 287, Richmond, Va.

I. Davenport Williams, Prop. and Supt.
Mem. Am. Leghorn Club,
Mem. Am. S. C. B. Leghorn Club,
Mem. Va. Poultry Asso.

At Richmond, January 9-15 (Judge Wittman), 1st Cockerel, 1st, 2nd, 3rd and 4th Pullet; 8 specials, including 2 silver cups for best display in class offered by Am. S. C. B. Leghorn Club and Virginia breeders. At Jamestown, 4th pen, 6th Cockerel on immature birds. Also highest awards Va. State Fair and Richmond, 1906. EGGS from exhibition matings, both pullet and cockerel line, \$3 per 15, \$5 for 30, \$7 for 50, \$10 for 75, \$12 for 100. From utility matings, \$1 per 15, \$6 for 100. Two-thirds hatch guaranteed or number of eggs duplicated at half price. Stock for sale at all times.

BELMONT POULTRY FARM.



S. C. White, Buff and Brown Leghorns; Barred, Buff and White Plymouth Rocks; White and Silver Wyandottes; R. C. Rhode Island Reds, S. C. Black Minorcas. Stock from best strains obtainable. Stock and Eggs for sale.

**L. W. NICHOLS,
Luray, Va.**

EGGS FOR HATCHING.

ROSE-COMB BROWN LEGHORNS Exclusively. From high scoring stock. Farm range, line bred. Great layers, \$1 per 15, \$5 per 100.

Prize pen, blue ribboned sire and dams, \$2 per 15.

Satisfaction guaranteed.

GARDNER POULTRY FARM, Ashburn, Va.

C. W. Gardner, Pres.; H. H. Gardner, Sec'y.

Member R. C. Brown Leghorn Club.

S. C. B. Leghorns.

Exclusively. Pens headed by Strawberry Hill Cockerels. Eggs for hatching at very reasonable prices. Place your orders with us for best results; they will receive our careful and prompt attention. Address

**LEVEL GREEN POULTRY YARDS,
Drewry's Bluff, Va.**

PEE DEE

POULTRY AND SEED FARM

Choice fresh Eggs for hatching from thoroughbred Silver Laced Wyandottes and Rose Comb White Leghorns. Famous "Pee Dee" strain. Unexcelled layers—egg makers, 15 eggs from either variety, packed to carry safely, only \$1.

**E. C. NEWTON, Proprietor,
Box 171, Bennettsville, S. C.**

Orders now Being Booked.

—FOR—

S. C. B. Leghorn Eggs.....\$1 for 15
Buff Rock Eggs.....\$1 for 15
Pekin Duck Eggs.....\$1 for 11
W. H. Turkey Eggs.....\$2 for 9

Stock of Above Breeds for Sale.
**LAUREL HILL POULTRY FARM,
Roxbury, Va.**

**HINTS BY MAY MANTON.
BLOUSE WAIST WITH GUMPE
5891.**

The over blouses that give a guimpe effect are in the height of style and this one is susceptible of great variation while it is both novel and chic. In the illustration louisine silk is piped with velvet and worn over a guimpe of thin lace, but for the blouse itself everything seasonable is appropriate while the guimpe can be made of lace, embroidery or the still simpler lingerie material or of chiffon as liked. It is entirely separate from the blouse and consequently it can be varied as often as may be liked so that really with very little labor the one blouse can be made to take on two or three quite different shapes. Again, the model is just as well suited to the odd waist as to the entire gown and consequently is an exceedingly valuable acquisition to the wardrobe. In this case the guimpe is made with the new long sleeves but it can be made quite sleeveless and those of the blouse only worn if liked.



5891 Blouse Waist, 32 to 40 bust.

The blouse is made with fronts and back, which are tucked on becoming lines and to which the pretty three-quarter sleeves are attached. These sleeves are finished with oddly shaped cuffs and to the lower edge of the blouse is joined a basque portion which keeps it perfectly in place. The guimpe is made with front and backs and plain fitted sleeves that are made with upper and under portions. It is closed invisibly at the back and the neck is finished with one of the new stock collars that rounds up back of the ears. The quantity of material required

Valley Farm

(RINGLET)

Barred Plymouth Rocks



Quality, not quantity.
S. C. B. LEGHORNS.
S. First prize at Harrisonburg. Eggs from my choicest matings, \$1.50 and \$2.50 per 15; Incubator Eggs, \$7

CHARLES C. WINE,
per 100.

Circular Free.
Mt. Sidney, Va.

BARRED PLYMOUTH ROCKS

EXCLUSIVELY.

Yard headed by some world renowned prize-winning blood.

Eggs from strong, healthy, beautifully Barred, farm-raised birds, unexcelled in laying qualities, size, vigor and beauty, selling at farmers' prices—\$1.25 for 15 or \$2 for 30. Toulouse Geese Eggs, \$1.25 for 7, \$2 for 14.

JOHN MAHANES, Trevillian, Va.

BARRED ROCKS

Hens and Pullets mated with first and second prize Cockerels at Virginia State Fair, 1907. No better or finer matings. Size, markings and laying qualities the best. Eggs, 75 cents for 15, \$4 per 100. Send check, postal or express money order.

MRS. WILLIAM P. BURKS, Route No. 1, Bedford City, Va.

White Rocks

Fishel strain. Ten years experience back of the breeding. Fine Cockerels at right prices. Eggs \$2 per sitting.

J. C. JOHNSON, Box S, Academy, West Virginia.

BARRED PLYMOUTH ROCK

Eggs for hatching. Strong and healthy. No better layers nor utility fowls. No other fowls on farm.

WILLIAM B. LEWIS, Route No. 1, Blackstone, Va.

PURE-BRED

Silver Laced Wyandottes

EGGS FOR SITTING AT \$1.25 PER 15

John M. Harshaw, Collettsville, N. C.

HOLLY GROVE POULTRY FARM



Headquarters for Standard Bred **Silver L. Wyandottes.** Eggs now at "panic prices"—\$1 for 13; \$2 for 30. I have shipped eggs for hatching every season since 1882. Business Motto: **The Golden Rule.** Circulars Mailed Free. **S. P. YODER, Denbigh, Va.**

DeWITT'S FINE POULTRY CATALOG. Sixty varieties of Pure-Bred Poultry. Illustrated. Prices of stock and eggs upon request. Catalogue 10 cents, redeemable on first order. **DeWITT POULTRY FARM, Highland Park, Richmond, Va.**

BUFF ORPINGTONS

THE BEST ALL PURPOSE FOWLS KNOWN.



Pens No. 1—Fancy Orpingtons that win. Eggs, 15 for.....\$5.00
 Pens No. 2—High Class Breeders. Eggs, 15 for.....\$2.00
 Pens No. 3—Pure-Bred utility stock. Eggs, 15 for.....\$1.00

THE ETHERMORE FRUIT AND S. C. BUFF ORPINGTON FARM,
 Henry J. and Cbas. G. Sanger, Props.
 Dale Enterprise, Va.
 Mention this paper when writing.

Glenview Orpingtons.

S. C. BUFFS EXCLUSIVELY.

My breeding pens this year include all my Richmond winners. Eggs will be shipped from nothing but the best. \$2.50 per sitting of 15.

B. S. HORNE, KESWICK, VA.

PURE-BRED

S. C. Buff Orpingtons.

Famous Willow Brook Strain. Best for laying, sitting and size. Excellent mothers. Eggs, \$1 Per Sitting of Fifteen. Book orders now. Could not supply demand last year.
 ALBERENE ORPINGTON FARM,
 Alberene, Albemarle Co., Va.

Black Langshans

Eggs for Sale from Prize-Winning Stock.

A Few Good Cockerels Left.

JOHN C. ADAMS,

Bristol, Virginia-Tennessee.

BLACK'S

BLACK LANGSHANS



Are the leading Langshans in the South. Improve your flock this season with blood from this noted strain. Bred for all standard requirements, combined with superior egg production. Choice Birds for Sale. Eggs \$2 per 15, \$3.50 per 30, \$10 per 100. Send for descriptive circular and show record.

A. M. BLACK, Tazewell, Va.

45 BREEDS BEST POULTRY

Fine book illustrates and tells all about poultry, feeding, care, diseases, our big premium offer. Low price for stock and eggs. Best way to rid poultry of lice, make money, etc., only 10c.
 JOHN E. HEATWOLE, Harrisonburg, Va.

for the medium size is 31-2 yards 21 or 24. 3 yards 32 or 17-8 yards 44 inches wide; for the guimpe 25-8 yards 21, 23-8 yards 24 or 15-8 yards 36 inches wide with 13-8 yards of all-over lace if the long sleeves are used, seven-eighths yards for the short sleeves.

The pattern 5891 is cut in sizes for a 32, 34, 36, 38 and 40 inch bust measure.

One-piece garments are being extensively worn this season and the negligees so made are exceedingly attractive and graceful, also they involve very little labor and consequently have met with enthusiastic welcome. This one is tucked over the shoulders to give becoming fullness and can be made from almost every material that is adapted to the ordinary kimono or negligee. In the illustration cashmere is bound with silk, but India silk, challis, and cotton crepe as well as the heavier wash



5886 One-Piece Kimono, Small, Medium, Large.

flannels, are well liked, and there are a great many inexpensive wash fabrics that many women prefer at all seasons of the year in our modern steam heated homes. Binding can be used as a finish or contrasting material cut into stripes as liked.

The kimono is made in one piece

SINGLE-COMB

RHODE ISLAND REDS.

Five years ago I purchased a \$50 Prize-Winning Trio from a noted egg-strain, with the intention of breeding the best Reds in the South. This strain has been so improved that my birds are now vastly superior to the trio. Buff Leghorns averaging over 200 eggs were discarded because the Reds were more profitable egg-producers. I believe I have the best fancy-utility strain on earth. It will pay you to investigate.

Big, Pink, Fertile Eggs, \$2 for 13. Book orders early. A few wonderful Males and Choice Females to spare.
 DR. J. H. C. WINSTON,
 Hampden-Sidney, Virginia. . .

S. C. RHODE ISLAND REDS

Bryant's strain of Massachusetts. Eggs from best pen—birds that are red to the skin and free from smut—\$2.50 per 15. Eggs from nice birds, \$1 per 15, \$1.75 per 30, \$2.75 per 50, \$5 per 100.



EVERGREEN FARMS,
 Rice Depot, Va.

JAMESTOWN WINNERS

Beautiful Buff Orpington Cockerels, \$3 each; Eggs, \$3 per 15. Also winners at leading shows. Handsome Rose and Single Comb R. I. Red Cockerels, \$2 each; Eggs, \$2.50 per 15, \$8 per 100.

GEORGE W. SWEETING,
 Locust Mount Poultry Farm, Sharon, Harford County, Md.

EGGS FOR HATCHING

FROM PRIZE-WINNING R. C. RHODE ISLAND REDS

At \$1 per sitting of 15 or three sittings for \$2.50.

MRS. L. E. SMITH, Appomattox, Va.

EGGS FOR HATCHING

FROM BUSINESS BIRDS. ROSE COMB R. I. REDS.

Four Pullets sold from my flock last fall averaged 27 eggs each in a period of 44 days. Price, 15 for \$1, 50 for \$3, 100 for \$6.

J. O. Barksdale, Red Hill, Va.

RHODE ISLAND REDS.

BOTH COMBS.

Eggs from pure-bred, high class stock at \$1.50 per 15, \$2.50 per 30, and \$4.50 per 60.

Also a nice home and store for sale or rent. Main building has 14 rooms. All necessary outbuildings. The whole nearly new. Write

CLINTON HENSLEY, Prop. Elkton Poultry Farm, Elkton, Va.

S. C. RHODE ISLAND REDS

DeGraff and Drisko Strain.

Choice Cockerels from \$1 to \$3 each, also several Cocks, fine birds, at reasonable prices. Well-Mated Trios, good foundation stock, for \$5.

Eggs from prize winners, \$1.50 per 15. Special mating, \$2 per 15.

A. S. HARRISON, Herndon, Va.

Rose and Single Comb

RHODE ISLAND REDSWHITE WYANDOTTES
AND B. P. ROCKS.

Pure-bred stock and good fresh eggs at \$1.25 per 15; \$2 per 30; \$3 per 50; \$5.50 per 100. R. C. R. I. Red and White Wyandotte Eggs by the 100 for incubators on short notice.

VALLEY VIEW POULTRY YARDS,

J. D. Glick, Proprietor,
Box 41, Route 1, Dayton, Va.**Rhode Island Reds**

ROSE COMB

Large, handsome fowls; splendid layers. Chicks grow fast and are unexcelled for the table.

PURE-BRED EGGS \$1 PER 15.
E. YOUNGLOVE, SCOTLAND, VA.

PURE-BRED R. C.

RHODE ISLAND REDS

Eggs at farmers' prices. Special rates for Incubator Eggs.

Miss LIZZIE G. SMITH,
R. F. D., Wellville, Va.

SINGLE COMB

Rhode Island Red

Eggs from the finest strains for sale at \$2 for 15.

These Eggs have the blood of prize winners at New York, Providence, Boston, Cincinnati and Jamestown.

ROBERT G. HUNDLEY,
Box 118, Farmville, Va.**ORPINGTONS, LEGHORNS**

and M. Bronze Turkeys from the best strains. Eggs from our S. C. Buff Orpingtons and S. C. B. Leghorns, \$1 per 15; M. Bronze Turkeys, \$3 per 15. Book your orders ahead for Turkey Eggs.

B. O. POULTRY YARD, Rapidan, Va.
R. F. D. Box 27.

ESTABLISHED 1882.

S. and R. C. R. I. Reds, White Wyandottes, S. C. B. Leghorns and B. P. Rocks. Eggs for hatching \$1 for 15; \$1.75 for 30; \$2.75 for 50; \$5 for 100.

RIVERSIDE POULTRY FARMS,

J. B. Coffman & Sons,
Props., Dayton, Va.**EGGS! EGGS! EGGS!**

Crystal Springs Poultry Yards, Stafford & Croy, Props., Trigg, Va. We will offer some exceptional values in Eggs for hatching during the season from following breeds: Barred Plymouth Rocks, per 15, \$1.50; White Wyandotte, per 15, \$1.50; S. C. R. I. Reds, \$2 per 15; S. C. Brown Leghorn, per 15, \$1.50; S. C. White Leghorn, per 15, \$1.75. Special rates on two or more sittings. Satisfaction guaranteed. Write us for further particulars.

Please mention the Southern Planter.

and the only seams are those at the under-arm. If narrow material is used, however, it is advisable to seam the widths at the center back as less material is required and the remaining necessary joinings fall in equally desirable places.

The quantity of material required for the medium size is 9 3/4 yards 24, 7 3/8 yards 32 or 4 1/2 yards 44 inches wide; or 6 1/2 yards 24 or 32 if cut with a seam at the center back, with 13/4 yards of silk or 5 1/2 yards of ribbon for the bands.

The pattern 5886 is cut in three sizes, small, medium and large.

These patterns will be mailed to any address by the Fashion Department of this paper on receipt of ten cents.

IMMATERIAL.

The janitor of a small church on the south side raises a few chickens in a small enclosure in his back yard. The eggs of these he sells to some members of the church in which he works.

Last Saturday one of his customers asked him if he could spare a dozen eggs within the next two or three days.

"Oh, yes, ma'am," replied the janitor. "I'll bring you a dozen fresh ones to-morrow morning."

"Oh, no," protested the housewife; "I shouldn't want you to bring them on Sunday—not on Sunday, John."

"Well," replied John, "all right, ma'am, if you say so, but it don't make no difference to the hens."—Harper's Weekly.

BEST APPLES TO PLANT.

People who have any opportunity at all to grow apples should not fail to plant at least a few trees. If only a few trees are planted, care should be exercised so that only apples of superior quality are planted. Among the very best are the Red Astrachan, Jonathan, the Yellow Grimes Golden and the McIntosh Red. They may be a little more expensive than some others, if you have to buy, but they are worth the price.

The Harrison Nurseries, Berlin, Maryland, are a good authority on apples. They are not only nurserymen but they are themselves large apple growers. They always advise the planting of the excellent hardy varieties above named, and they act on their own advice. They own and operate a number of large orchards, aggregating over a hundred thousand trees, and these varieties have the preference. In this they take a very different course from some nurseries which advocate the planting of the more delicate varieties of high quality merely because there will be an increased demand for the fruit. The tree that will stand your climate and be a regular bearer of good fruit for many years, such as

TAYLOR'S

WHITE WYANDOTTES.

Bred from Prize-Winning Stock. Small late hatched Pullets at 75 cents each. Larger late hatched Pullets at 90 cents each.

EGGS IN SEASON.

Also White Holland Turkey Eggs from winners at Jamestown, Virginia State Fair, and Virginia Poultry Association.

White Muscovy Duck Eggs from first prize winners at Jamestown, Virginia State Fair and Virginia Poultry Association.

Write for prices. Correspondence a pleasure.

HICKORY BOTTOM POULTRY FARM,

R. Randolph Taylor, Negrofoot, Va.
R. F. D. No. 2, Beaver Dam, Va.**OUR WINNINGS**

AT THE VIRGINIA STATE FAIR, Richmond, Va., October 7-12, 1907, were

First pen S. L. Wyandottes.
First pen Partridge Wyandottes.First pen S. C. Rhode Island Reds.
(The only three pens we showed.)

Virginia Poultry Show,

Richmond, Jan., 1908, we won 26 Ribbons with 29 birds of above breeds and Silver Cup for best Display, American Class.

Write for particulars.

EGGS FOR HATCHING.
ELLERSON POULTRY YARDS,

J. W. QUARLES, Prop., Ellerson, Va.

WHITE WYANDOTTES

Exclusively.—Bred for Business

As well as standard qualities. Will please the farmer as well as the fancier. Eggs from choice pens, 15, \$1.25; 30, \$2. Satisfaction guaranteed. Circular free.

J. H. YODER, DENBIGH, VA.

Carolina Poultry FarmC. H. PETTIGREW, Proprietor,
Route 5, Reidsville, N. C.

Eggs for hatching, \$1 per 15, \$5 per 100. White and Barred Plymouth Rocks, Rose and Single Comb R. I. Reds, Single Comb White, Brown and Buff Leghorns, Partridge Wyandottes, Buff Orpingtons and Single Comb Black Minorcas.

SATISFACTION GUARANTEED.

Poultry Profits!

Handsome catalogue which describes and quotes lowest prices on R. and S. C. Rhode Island Red Eggs; White and Columbian Wyandottes, White and Barred Rocks, Minorcas, Orpingtons, Anconas; White, Brown and Buff Leghorns; White and Buff Cochin Bantams; 25 varieties of pure-bred fowls. Will be pleased to mail catalogue on receipt of stamp.

C. L. SHENK, Box S, Luray, Va.

RIDER AGENTS WANTED

In each town to ride and exhibit sample Bicycle. Write for special offer. We Ship on Approval without a cent deposit, allow 10 DAYS FREE TRIAL and pay freight on every bicycle. FACTORY PRICES on bicycles, tires and sundries. Do not buy until you receive our catalog and learn our unheard of prices and marvelous special offer. MEAD CYCLE CO., Dept. R223 Chicago, Ill.

\$200.00 IN SIX MONTHS FROM 20 HENS

To the average poultryman that would seem impossible, and when we tell you that we have actually done a \$500.00 poultry business with 20 hens on a corner in the city garden 30 feet wide by 40 feet long we are simply stating facts. It would be impossible to get such returns by any of the systems of poultry keeping recommended and practiced by the American people, still it is an easy matter when the new **PHILO SYSTEM** is adopted.

THE PHILO SYSTEM IS UNLIKE ALL OTHER WAYS OF KEEPING POULTRY

and in many respects is just the reverse, accomplishing things in poultry work that have always been considered impossible, and getting unheard of results that are hard to believe without seeing. However, the facts remain the same and we can prove to you every word of the above statement.

THE NEW SYSTEM COVERS ALL BRANCHES OF THE WORK NECESSARY FOR SUCCESS

from selecting the breeders to marketing the product. It tells how to get eggs that will hatch, how to hatch nearly every egg and how to raise nearly all the chicks hatched. It gives complete plans in detail how to make everything necessary to run the business and at less than half the cost required to handle the poultry business in any other manner. There is nothing complicated about the work, and any man or woman that can handle a saw and hammer can do the work.

TWO POUND BROILERS IN EIGHT WEEKS
are raised in a space less than a square foot to the broiler without any loss and the broilers are of the very best quality, bringing here, three cents per pound above the highest market price.

OUR SIX MONTHS OLD PULLETS ARE LAYING AT THE RATE OF 24 EGGS EACH PER MONTH

in a space of two square feet for each bird. No green cut-bone of any description is fed, and the food used is inexpensive as compared with food others are using.

Our new book, the **Philo System of Progressive Poultry Keeping**, gives full particulars regarding these wonderful discoveries with simple, easy to understand directions that are right to the point, and 15 pages of illustrations showing all branches of the work from start to finish.

DON'T LET THE CHICKS DIE IN THE SHELL.

One of our secrets of success is to save all the chickens that are fully developed at hatching time, whether they can crack the shell or not. It is a simple trick and believed to be the secret of the ancient Egyptians and Chinese, which enabled them to sell the chicks at 10 cents a dozen.

CHICKEN FEED AT 15 CENTS A BUSHEL.

Our book tells how to make the best green food with but little trouble and have a good supply any day in the year, winter or summer. It is just as impossible to get a large egg yield without green food as it is to keep a cow without hay or fodder.

Upon Receipt of \$1.00 You will Get the Book by Return Mail and Your Subscription will Start at Once.

POULTRY REVIEW, 449 THIRD ST., ELMIRA, N. Y.

OUR NEW BROODER SAVES TWO CENTS ON EACH CHICKEN.

No lamp required. No danger of chilling, overheating, or burning up the chickens, as with brooders using lamps or any kind of fire. They also keep all lice off the chickens automatically or kill any that may be on when placed in the brooder. Our book gives full plans and the right to make and use them. One can be easily made in an hour at a cost of 25 to 50 cents.

A FEW TESTIMONIALS.

Your system of poultry keeping should appeal to all poultrymen. The advantages of your system are many, and the quality of the large flock of poultry you have raised on your city lot is the best evidence of its success.

GEO. L. HARDING, Binghamton, N. Y.

Valley Falls, N. Y., Sept. 5, 1907.

It was my privilege to spend a week in Elmira during August, during which time I saw the practical working of the Philo System of Poultry Keeping, and was surprised at the results accomplished in a small corner of a city yard. "Seeing is believing," they say, and if I had not seen, it would have been hard to believe that such results could have followed so small an outlay of space, time and energy.

(Rev.) W. W. COX.

Nov. 15, 1907.

The Philo System Book received to-day. It is beyond doubt the best thing of its kind that I have ever seen. There are one or two single items that I consider worth the full price of the book. I will begin to-morrow to remodel my plant, to follow the lines laid down in your book as nearly as possible and next fall I hope to have the business reduced to your exact methods to keep a flock of about 150 fowls.

M. R. BOND.

Jacobs Creek, Pa.

I received the Philo System Book mailed to my home address, Bechtree, Pa. I am highly pleased with it, and am anxious to spread the good news as far as I can. I am a preacher of the Gospel engaged by the Baptist Association to do evangelistic work. I am on the road all the time, have about 14 days in each town. I am very much interested in the hen and will do all I can to help the other fellow to know how, and to spread the good tidings received in the Philo System.

(Rev.) F. B. WILLIAMS.

SPECIAL INTRODUCTION OFFER.—By special arrangement we are able to give for only \$1.00 the book with the right to use all patents, and one year's subscription to **Poultry Review**—a monthly paper for utility breeders.

the varieties above named, is the tree for profit.

The Harrison Nurseries issue an excellent catalogue on apples and other fruits, which is full of sound advice. A copy will be mailed to any address for the asking.

SHEFFIELD CREAM SEPARATOR.

Attention of dairymen and farmers is invited to the advertisement of the Sheffield Separator Co., of Chicago. A most liberal trial offer is made. It doesn't cost a cent to try it. Further particulars will be found in the advertisement, or will be furnished on application.

Amherst Co., Va., Nov. 6, '07.

I take several agricultural papers, but find the Southern Planter the best and I try not only to be a reader, but a worker in your direction.

F. W. GARBEE.

WOODRIDGE POULTRY YARDS.

BARRED PLYMOUTH ROCKS, direct Bradley Bros. Strain.
SILVER GRAY DORKINGS from imported stock.
BUFF WYANDOTTES, RHODE ISLAND REDS, BUFF ORPINGTONS,
WHITE AND BROWN LEGHORNS and BUFF WYANDOTTES.
We have won more than our share of premiums on our fowls, and ship all stock on approval. We can furnish eggs in 100 or 1,000 lots. **FREE ILLUSTRATED CATALOGUE.**

J. S. YOUNG, 1110 EAST MAIN STREET, RICHMOND, VA.

EGGS. TOMS. COCKERELS.

OF PRIZE-WINNING STOCK.

M. Bronze Toms, Barred Rock, White Wyandotte, White Orpington Cockerels. Eggs for hatching of all varieties from grand matings. Finest I ever had. Turkey Eggs, \$5 per dozen.
MISS C. L. SMITH, Landon Poultry Yards, Croxton, Va.

MILLVIEW POULTRY FARM GOLDEN BRONZE TURKEYS

From prize takers at Chicago, Indianapolis and Virginia State Fair. Eggs \$4 per dozen.
MRS. S. F. BADGETT, Route 1, Farmville, Va.

ROSE COMB

RHODE ISLAND RED

Eggs for sale at \$1 per sitting of 15. No other chickens raised on the farm.

Mrs. JOSEPH M. HURT, Blackstone, Va.

200 Egg Strain

R. C. S. C. Rhode Island Reds

Bred by us; 50 fine Cockerels. Eggs for hatching in season.

THE VALLEY POULTRY FARM,
Route 1, Maurertown, Va.

THE WHITE HOLLAND TURKEY MAN.

G. W. MOSS, GUINEY, VA.
Eggs as follows: White Holland Turkey, \$2 per dozen, \$15 per 100; White Plymouth Rocks and S. C. W. Leghorns, 75 cents per 15, \$3.50 per 100; Pekin Ducks, \$1 per dozen.

Nimrod Hall, Milboro, Va.,
May 29, 1907.

G. W. Moss, Esq., Guiney, Va.:

Dear Sir,—I am just back from my farms, and thought it might interest you to know that out of nearly two thousand hen and turkey eggs I have bought, I have had better results from yours than any of the others. Of the 93 we had four broken and hatched and have living 79 young turkeys—that is the sort of result any man shipping eggs may be proud of. One lot I got from North Carolina hatched just four out of 100, and the man says it was my fault, when the eggs were set under exactly the same conditions as those gotten from you.

Yours very truly,

E. A. WATSON.

Mammoth Bronze Turkeys

Cannot be excelled for size and deep bronzing. Talk about large turkeys! Could you only see our lofty giants, you would, as others, say surely they have no equal. Special prices on Toms. Our hens are now laying eggs, \$3 per sitting.

We have mated for this season, the finest pens of Single-Comb Brown Leghorns, White and Barred Rocks we have ever produced—the grade that will lay, weigh, win and pay. Cockerels and Eggs for sale.

BYRD BROS., Salisbury, N. C.

MAMMOTH BRONZE TURKEYS

For sale. Ten large rangey, good bone, June hatched Toms. Correct in plumage. Weight 22 to 25 pounds. Price \$4 each. Orders filled promptly. Am offering you these fine Toms at a great bargain to close them out. Send for 1908 circular.

E. F. SOMMERS, Somerset, Va.

Prize Winning Stock

Mammoth Bronze Turkeys, Imperial Pekin Ducks, S. C. Buff Orpington and B. Plymouth Rocks. Fowls for breeding purposes. Satisfaction guaranteed or money refunded.

J. G. BUFORD, Dublin, Va.

ROSE-COMB

Rhode Island Reds

EXCLUSIVELY.

Best general purpose fowl known, having beauty, size, hardiness, quick maturity, egg producers in winter and small eaters. Eggs for hatching from prize-winning stock. Book your orders early. First come first served.

Last year the demand for my stock was so great I could fill only half the orders for March, April and May. MISS LOUISE V. SPENCER, Blackstone, Va.

Member of Rhode Island Red Club.



THE AUTOBIOGRAPHY OF A RAM.

It was just before Christmas that I was born. It was a cold frosty morning and patches of white could be seen here and there over the bleak old pasture field, but my mother had picked a cosy place on the hillside looking to the south, where the first rays of the morning sun came warm and cheerful. There were two of us, and I loved my little brother from the start because he was so soft and warm, but warmer still was the soft coat of my mother, and before the sun came out we had huddled up close to our mother's side and were almost asleep in the folds of her warm fleece, when a gentle mother call startled us and we struggled to our feet in wild alarm to see a great tall creature stalking toward us. We were turning to flee, but our mother seemed not afraid and her re-assuring bleats kept us by her. Our mother afterwards told us this was her shepherd. She seemed to be very proud of us, for she made every effort to display us and nodded and beckoned from one to the other, as much as to say: "You see what I have? Aren't they fine?" The shepherd came closer and spoke in a language so different from my mother. He seemed to caress our mother, then he took a good look at us and exclaimed: "My, what a fine Christmas present you brought me, Lady!" He then touched us gently with his hands, talking all the time in the same gentle tones, which took all our fear away. Then he said: "By Jove, they are both rams. I am good for a prize winner now." I didn't understand then, but do now. When he started off, we both raced after him and our mother had to run after us and head us off. We didn't know much then. I had a sort of impulse to jump up and run from anything I saw coming to me and to race after everything that moved away from me. This and how to get something to eat from my mother was about all I seemed to know on this first day of life. That evening the good shepherd came out to see us again, bringing something for our mother to eat and then he called to mother and started off. We were told to follow, and slowly we made our way across the field until we came into a big barn, where everything seemed different. There were many cozy corners about the place, which we proceeded to explore at once, and there was such a fine odor from stuff that was being thrown down from above and stuffed into big racks, where mother seemed so glad to eat. In a short while we heard a new voice. It struck terror to our hearts. It sounded so fierce and rough at times. I never liked a dog from that day. I peeped through a slatted door and there were a large number of creatures just like mother coming up to the barn, and romping and jumping in front of the approaching company

THE FOOD

TO FEED

TO FORCE

THE EARLY BROILER

"RARVA" MEAT MEAL.

85 per cent. Protein, 7 per cent. Fat.
Economic, Pure, Appetizing and Wholesome.

WILL KEEP INDEFINITELY.

Write for booklet and sample.

SACK, 100 POUNDS, \$3.00.

RICHMOND ABATTOIR,
Dep. M. Richmond, Va.

"Maplehurst"

The home of choice birds—B. P. Rocks, Buff Orpingtons and S. C. R. I. Reds. Eggs for sale at \$1 for 15, \$1.75 for 30, \$2.50 for 50. Write to

T. J. THOMPSON,

R. F. D. No. 7, Staunton, Va.

SUPERB

Squab-Breeding Homers.

Buy fine mated stock now for spring squabs. Guaranteed mated Homers \$1.25 per pair.

Registered Scotch Collie Dogs.
BRIGHTSIDE COLLIE KENNELS.
H. M. McManaway, Prop., Bowling Green, Va.

WHITE HOLLAND TURKEY

Eggs, \$2.50 per 10; Indian Runner Duck and White Guinea Eggs, \$1.50 per 15; Rose Comb White Leghorn Eggs, \$1.25 per 15, \$3 for 45.
MRS. LIZZIE DYER, Route 1, Rockvale, Tenn.

GOLDEN WYANDOTTES.

Heavy laying, thoroughbred stock. Eggs that will hatch, \$1 per 15, \$1.75 per 30, \$3 per 50, \$5 per 100. Packed to go any distance.

MISS KATIE THOMPSON,
Route 1, Clifton Station, Va.

Woodlawn Poultry Yards

M. B. Turkey (yard headed with a 45-pound Tom) Eggs, \$3 per 12.
Red Cuban Games (Mean's strain) Eggs, \$2.50 per 12.
500 Cabbage Plants, \$1; Strawberry Plants, \$2.50 per 1,000.

E. W. JONES NURSERY CO.,
Woodlawn, Va.

WHITE HOLLAND TURKEYS.

Still have two fine young Toms in best breeding condition, \$3 each. Order quick. Turkey Eggs, \$2 sitting; White Leghorn Eggs, \$1 sitting. Book orders now. One well-trained Pointer Bitch for sale. Bank reference.

J. B. WADDILL, Box 10, Tate Springs, Tenn.

HEAVES CURED! A remedy for lung, throat and wind

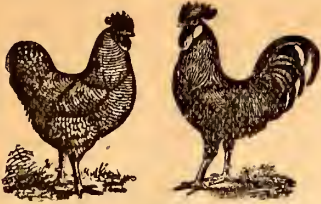


troubles. Cures Heaves, Coughs, Distemper and Indigestion. Veterinarians use and recommend.

PRUSSIAN HEAVE POWDERS

Druggists will get them. Price 50c at dealer, 60c by mail. Send for Free book.

PRUSSIAN REMEDY CO., ST. PAUL, MINN.



**MAMMOTH BRONZE TURKEYS.
WHITE HOLLAND TURKEYS.**

Choice Toms, 15 to 22 pounds in weight, \$5 to \$6 each.
Choice Yearling Toms, 25 to 35 pounds, at \$7.50 each.
Few Yearlings and Two-Year-Old Hens at \$5 each.
Fine lot of Young Hens of both breeds, 11 to 15 pounds, according to breed, at \$4 each. Special prices on Toms and Hens where two or more are taken.
Eggs of both breeds in season at \$4 per dozen.

PURE-BRED CHICKENS.

I have 22 White-Faced Black Spanish Hens and Pullets and 2 Cockerels, Greider's strain, and a choice lot. Will sell the 24 birds for \$30, or half of the lot for \$18, or single birds \$1.50 each except male birds, which are \$2.50 each.
I have choice Cockerels, also Hens and Pullets, of the following breeds at \$2 each and upwards, and special prices on Hens and Pullets in lots of six or more of a breed: White and Buff Orpingtons; Barred, Buff and White Plymouth Rocks; White, Buff and Brown Leghorns; White, Silver and Golden Wyandottes; Single and Rose-Comb Rhode Island Reds, Rose and Single-Comb Black Minorcas, Light Brahmas and Silver Spangled Hamburgs. Better order at once and get advantage of best birds and lowest prices.

EGGS FOR HATCHING
At \$1.50 to \$2 per 15 or \$8 and \$10 per 100.
Pekin and Rouen Ducks at \$3 each for best Drakes and \$2.50 each for very good Drakes. Female birds, \$2 to \$2.50 each. Eggs for hatching, \$2 per 15 or \$5 for 50. Special prices in lots of 100 to 500.

Pure-Bred Hogs and Sheep.

Choice Poland-China, Berkshire and Chester White Pigs, 2, 3 and 4 months old; Young Service Boars and Bred Sows, 150 to 200 pounds. I have some extra fine Poland-China and Berkshire Sows bred for March and April farrow, weight 200 pounds and over, and will sell selected specimens for \$30 each, and they are as fine as they grow and all eligible to registry.
I have some September Yorkshire Shoats at \$13.50 each, and Young Yorkshire Sows, bred, for \$25 each. Orders being now booked for Tamworth Spring Pigs.
In Pure-Bred Sheep I have some choice coming two-year old Shropshire and Southdown Rams at \$30 each, and now is the time to buy, as you get the wool clip, worth several dollars, and save \$5 to \$10 in price.
Fine 160-pound Shropshire Bred Ewes at \$28 each and good 130-pound Ewes, \$25 each. All Sheep registered at the prices named. Farmers, do not delay, but send your order to-day. It will pay you to improve your stock,
Address JAMES M. HOBBS,
No. 1521 Mount Royal Avenue,
Baltimore, Md.

were many little chaps just like brother and me, but they were larger and stronger and they seemed so rough. They would bump each other, jump straddle of each other's backs, and rear up and fall down as if they were crazy. If the shepherd had not come just then and hustled us into a pen with mother, I do believe those rough scamps would have trampled the life out of us when they got into the shed. Such a time as they had in that shed, while their mothers were eating. They seemed to be playing games of some sort. They would line upon one side of the shed and rush pell mell across to the other side, and then some would jump up on a big box and as fast as others would try to climb, the ones that got there first would butt them off. We got very much interested, and I noticed that one active, frisky lamb seemed to be a sort of leader. He could out run all the rest and butt harder than any of them. I looked at him and just longed to get big enough to crack him one right in the ribs. In a few minutes the mothers were through eating and one by one they called their little ones and I noticed that every time a mother called a little one answered and broke away from the game and ran to look his mother up. I wondered if I would not one day know my mother's voice from all the rest.

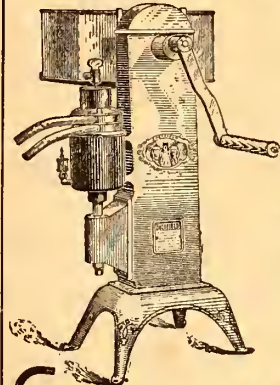
Our shepherd brought a tall fine looking man in to see us the next day, which must have been Christmas, for they were talking about the good dinner and the fun the children had up at the house, and about Santa Claus. Our shepherd seemed proud of us little folks, and the man was so surprised. He said he did not know that there were any lambs before Christmas. In his country the snows were gone in the spring before the lambs came. Our shepherd explained that we belonged to a breed that produced Christmas lambs and were famous the world around for this. Our shepherd then said he wanted to show him the prettiest thing in the shed and started toward our pen, remarking as he came: "This was my Christmas present." They leaned over the pen some minutes and the man said, "I never saw a finer pair of lambs than that." "Nor I," replied our shepherd. We certainly were proud that night. It was a happy Christmas for us.

So many things happened every day, but I can't tell about them all, but one day I will never forget. Our shepherd brought two of his boys down to the barn one morning. He was carrying a pair of big iron pincers in one hand. The boys stopped outside and built a fire into which they put the pincers and after a time the shepherd picked my brother up and carried him out there and in a few seconds I heard a pitiful bleat, and saw my brother jumping wildly about and his long, beautiful tail seemed to

**GREATEST
Separator Offer!**

This genuine Sheffield Cream Separator sent direct to your farm.

No Money Down!



We neither ask, nor want you to send a penny — we don't want a cent of your money. We will ship a genuine

**SHEFFIELD
CREAM
SEPARATOR**

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be gone. I hardly had time to think it over before the shepherd got me and as he carried me out he was saying: "My dear little chap, I hate to do it, but it is best for you. I want you to make a prize-winner some day." I recalled what he had said when he first looked at us out in the field. I knew what had happened as a keen pain shot up my backbone and I darted away and dropped prone on the ground in a fence corner. My whole hind end seemed on fire. I knew my tail was gone like my brother's, and I felt like crying, but I was too proud and I almost hated my shepherd for hurting me like that, but somehow I could not believe he would have done it if it hadn't been best. I felt funny with my stub of a tail, but it did not bleed any and it got well in a few days. It was a hard pill to take, though. I have seen some cut the tails off with a knife or with a hatchet. This way they bleed fearfully, if it is not done right. Some lambs have bled to death. If cut off right with a sharp knife and the stub is held between the fingers till the bleeding stops, it does not seem to hurt like those hot pincers hurt me. It is all bad enough. I often wonder what these tails were made for if they must be cut off just as life begins.

Well, I was soon a big lusty chap. My mother was considered one of the best mothers of the flock. I heard the shepherd say one day, "There is a ewe that can raise two lambs better than most of them can raise one." I had a pair of thick, strong horns, as sharp as a pin at the point. I loved to play out in the fields with the other lambs. We used to run around an old sink hole and then across the field to a ledge of rock, which was so steep that many of the lambs could hardly climb it on one side. What fights we used to have at that rock ledge! I was far from the oldest lamb but I could run with any of them and when I rapped one with my horns, he generally let me have way, but one day I got myself into trouble sure enough. That big lamb I told about got on the rock ledge first and when I tried to get up he knocked me head over heels. I could stand hard knocks as well as any of them, but somehow I thought this lamb had it in for me, because I had outrun him that morning. I knew he was strong but I got up blowing the dirt out of my mouth so mad I could hardly see. I determined I would get square with him, so I slunk away, as if I had quit the game, but all the time I was slipping around the rock ledge and soon mounted the higher ground right in the rear of the champion on the rock, who was so busy knocking the other lambs down that he did not see me. I crept along until I got pretty close and then I steadied myself and lunged at him with all the might I had. I cracked him fair and clean in the stern and

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he shot through the air like a rocket. When he landed I thought he would stand on his head. When he got to his feet and glanced up to the rock he found me standing in his place and knew what had happened. He fairly jumped up the ledge of rock and as he came I let him have it. Down he went. He was up and at me again. I had the advantage of him. He saw it and swore eternal enmity against me. He did not come up the rock again, but that evening I met him face to face in the field and he stepped back for a fight. I got ready in a hurry, for I was too foolish to run. When he struck me I staggered, saw twinkling stars, and almost lost my nerve, but I gathered myself together and backed back to meet him with the best I had in stock. We met. I went to the ground and before I could get up he was hunching me in the ribs with his harp horns and I believe he would have killed me if my mother had not have come along. I was bleeding at the nose, one horn was knocked loose and I could scarcely see, yet I saw enough to see blood trickling down the bully's face as my mother knocked him away. I knew I had hit him hard. I felt mean, because I was whipped and the consolation that could come to me was the thought of that mean rascal shooting through the air off that rock. Every time I saw him hit the ground I would say, "Um-m-m," and feel good clean to the bones.

I was a sorry looking lamb for many days after this and I kept out of all the games and behaved myself beautifully. I had the sneaking notion that some day I could whip that lamb and I did not propose to miss the joy of it, but something happened that changed the whole course of my life. One day the shepherd and his boy came down into the field, now green and beautiful in its spring dress. I heard him say, "I would hate to sell either of Lady's lambs, but no lamb in this flock answers the description like that larger one. He says, 'He must be wool all over.' We never had one that was woolled like that chap. Why, his fleece is so dense it is almost wrinkled. Then look at his legs and his belly. He is wool all over sure. Then he wants one hardy in constitution. That fellow is like iron. He wants a lamb that has a ram's head and large Look at his nose. It is wrinkled already and he will be a monster, twin as he is." His boy said he thought this was the one he was going to show and he thought it unwise to sell him. The father replied that that was true, but he promised to sell this man the sort he wanted, as he was a friend and he would have to use the brother in the shows, as the fleece won't count so big there now, and the best fleeced ram must go to his friend.

The next day the flock was driven up to the barn and I was caught and

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Any one wishing to purchase the very best strains of Berkshires at reasonable prices should write and get prices and description of my stock. I am offering pigs from the very very best imported and American strains for from \$5 to \$10 each. Pedigree furnished with each pig. My hogs have a range of over 400 acres, are always healthy and develop strength and muscle. All inquiries cheerfully and promptly answered.

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shoved into a little box. I fought like a tiger, for I did not know what this meant. That boy was puffing when he got me in. Soon I was nailed in and I pushed stubbornly against the slats, but it was of no use. The shepherd said, "He seems to be a good one." "Yes, I never laid my hand on a stronger one." Next I was lifted to a wagon and hurried off to the railroad station. When there I was weighed. "How is one hundred and twenty for a six months ram?" my shepherd said. "Bully," exclaimed an old grizzled farmer. "it can't be beat." The snorting engines almost scared the stuffing out of me, but I could not run nor hide, just had to stand to it. Soon I was on the fast express and it looked as if that shepherd could not leave me. I wished he would stay and I really did not know what he was going to do with me. I would have raised more sand than I did, if I had known I was to lose my good shepherd. My shepherd told me good-bye thus: "That man had better treat you right." I had a rough trip. I ate up all my feed the first day and by the close of the next day I was very hungry. I had arrived at another station and was unloaded and moved into a stuffy room. I was almost famished for water, but no one offered me a drink, though the express agent stood right by me drinking from a tin cup. I began to get mad again and about that time some one put his hand on the end of my box and I nailed him one, mashing one finger. He certainly did yell and then began to punch me in the ribs with a stick. As I could not get away, I got very sorry for losing my temper that time. After a long night spent in that close room I was dragged out on the platform and a very young man came up to me and looked me all over. He seemed to be kindly disposed towards me and spoke kindly and offered me water. He remarked to the bystanders, "He is a mean looking rascal, but I guess he is hungry and tired. He looks as if he has the Devil in his eye." I was soon on a wagon and was jolting along the road towards another home. The young man proved to be my new shepherd and he was very kind. He cut brush and piled them over the crate to keep the hot sun off and then he pulled clover along the road and fed me. It tasted so good. After a long ride I saw a beautiful field in which there were some sheep just like myself. I longed to get out, I was so cramped and tired. I don't see why men will make these shipping crates so small. I bleated as loud as I could. My new shepherd said, "You ought to make a ram some day judging from your voice." While I was still longing to get out into that beautiful field, the wagon turned into a gate I saw my new home. I was released from my crate and turned into a lot with a very large, wide-horned ram. I never will

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FINE TIMBER FARM FOR SALE—Farm has 600 acres and 3,000,000 feet saw-mill pine timber. Only 3 miles from Southern Railway. 6-room dwelling, 3 tenement houses, and all necessary outhouses; 200 acres arable land, responsive soil; well watered. Schools and churches convenient. Healthy country. Very cheap. Terms reasonable. J. B. Thomas, Drewryville, Va.

FOR SALE—30-ACRE FARM, HALF mile from new station on N. & W. Railroad. Has new 5-room cottage, put up at cost of \$1,000. Young orchard of 75 trees. Would make an excellent poultry farm. Three acres fenced in poultry wire; rest of fence is wire. Will sell for \$1,400 on easy terms if taken within next sixty days. Address Owner, Box 61, Cumberland, Va.

WANTED—TO RENT OR WORK ON Shares—Fine Farm on Dan river, close to fine market for milk, butter, etc., and all farm products. Good buildings, etc. Station on farm only a few hundred yards from dairy barn. A bargain for the right man. For particulars address Oak Hill Stock Farm, Wenonda, Va.

WANTED—TO RENT, WITH OPTION to purchase, an improved farm in Virginia; buildings must be good and in repair; near markets, schools, etc. Limited amount of stock and equipment will be purchased if price is right. State full particulars and terms. E. L. Winslow, Calle Barreto 133, Guanabacoa, Cuba.

FOR SALE—FARM, 55 ACRES, modern dwelling and good stable; 3½ miles from Richmond, Va.; ten minutes to electric cars and 5-cent fare to any part of city. Price \$6,000, including one horse, one mule, four cows, farm machinery and 300 chickens, with suitable houses and incubators. Address Bargain, care Southern Planter.

WANTED—TO TRADE STOCK OF A lumber and coal company in State of Washington for Virginia farm; par value stock \$5, trade on \$2.50 basis; trade up to 20,000 shares. Address Box 155, Fayette City, Pa.

FINE FARM OF 275 ACRES, TWO miles from Somerset, for sale. Address J. B. N., "Bloomfield," Somerset, Va.

CHEAP LAND WHERE SICK GET well without medicine, then raise \$200 worth of fruit per acre. Eden Fruit Colony Company, Dewberry, Harnett County, N. C.

POSITIONS—HELP.

WANTED—MAN AND WIFE, NO children, as caretakers on shooting preserve; man practical farmer, wife good cook. Fine opportunity for right party. Address B. M. Caldwell, Oxford, N. C.

WANTED—A POSITION ON POULTRY farm in Virginia or North Carolina where I can learn poultry business; willing to work. Address V. H., 615 North Sixth Street, Richmond, Va.

WANTED—WASHERWOMAN (Colored) to live on farm, also child's nurse and seamstress, also a gardener. Box 196, Charlottesville, Va.

POSITION WANTED BY A GENTLEMAN of small family, to work on a general, stock or dairy farm; am handy around stock. Best of references given. Address B., Box 86, Parksley, Va.

MISCELLANEOUS.

THE LOCKPORT PUBLISHING COMPANY is offering a book of analyses which is a money saver to the farmer. It contains the formulae of most of the veterinary remedies used in this country. It enables the farmer to make his own stock food, poultry powder, liniments, etc., at one-tenth the present cost. The book costs \$1 and will save several times that amount annually. Write the L. P. Co., Lockport, N. Y.

WANTED—TO BUY ALL KINDS Wild Birds and Animals, particularly Tame Deer, Wild Turkeys, White Squirrels, Peafowl, Otters, Red Foxes, Grey Squirrels, Partridges, Pheasants, Beaver. State price when writing. Dr. Cecil French, Naturalist, Washington, D. C.

SPECIAL OFFER ON FIRST ORDER for our new style automatic gate in any county. Address, with stamp, Manlove Gate Company, 272 Huron Street, Chicago, Ill.

SLIGHTLY-USED 5-H. P. MIMI GASOLINE Engine, mounted, guaranteed first-class condition. Stockdell-Myers Hardware Company, Petersburg, Va.

WE WANT THE NAME AND ADDRESS of every builder, carpenter, architect or any person interested in building. Will you write now? Robert A. Morrisette, Box 240 S. P., Richmond, Va.

WANTED TO EXCHANGE FIRST-class nursery stock, fruit, ornamental, asparagus crowns, etc., for mare, cow, calves, Berkshire sow. Horticultural Department, Franklin Davis Nursery Company, Baltimore, Md.

WANTED—ONE HUNDRED GRAY Foxes, either young or old ones. Will take any part of this number at any time. Write, stating how many you can furnish, and at what price. Address J. C. Goode, Boydton, Va.

FOR CHILDREN—WE WANT EVERY person who reads this ad. to send us the name and address of a child, so we can send free post card and book. Morrisette Subscription Agency, Box 240 S. P., Richmond, Va.

SEED CORN, DEPENDABLE AND acclimated, for sale. Boone County White, \$1.50; Hickory King, \$1.35 per bushel. Pure Plymouth Rock Eggs, 26 for \$1. Dr. Walter Stuart, Farmville, Va.

FOR SALE—ONE 25 H. P. CENTER-Crank Engine. Will take a 15 H. P. in part payment. Alfred L. Butler, Drewry's Bluff, Va.

RHUBARB ROOTS FOR SALE—Strong sets from 3-year-old roots, Giant Early variety, \$3 per 100. Cheap express rates on roots. W. S. Murray, Hollins, Va.

WANTED—LIVE WILD TURKEYS for breeding purposes. I will pay a good price for those not injured when captured. R. L. Blanton, Box 761, Richmond, Va.

FOR SALE—400 BUSHELS OF WHITE Majestic Seed Corn, \$1 per bushel. No orders for less than one bushel accepted. Satisfaction guaranteed. F. Hutchinson, Ozeana, Va.

FOR SALE—ARTICHOKES, PEACH Blow Potatoes, Dollar Incubator, Peach Trees. B. H. Walker, Stevensville, Va.

TWENTY BARRELS IRISH POTATOES, "Pride of the South," for sale. Price \$3.25 f. o. b. Painter Station. Good yielder. H. G. Smith, Mappsburg, Va.

PURE-BRED ST. BERNARD PUPS for sale by J. F. Schlisser, Centralia, Va.

FOR SALE—ONE CYPHER FARM Economy Incubator. Miss Clara Smith, Croxton, Va.

FOR SALE—"RELIABLE 400 CHICK Indoor Brooder; nearly new; cost \$17.50; well sell cheap. Jan. C. Moffitt, Moffitt, N. C.

FOR SALE—ROAD MACHINERY OF every description. L. A. Arthur, Leesville, Va.

GOING FISHING? OF COURSE YOU are, so mail us your orders for fishing tackle. Morrisette's Mail Order House, Box 240 S. P., Richmond, Va.

FOR SALE—PURE MAPLE SYRUP, guaranteed, \$1.10 per gallon. H. B. Rudolph, Mutton Run, W. Va.

A PAYING FARM PROPOSITION.

One of the best paying farm propositions an ambitious man can take hold of is cattle feeding either for market or for milk.

Now that agricultural science has given us an insight into the actual principles which lie at the foundation of the business, it is a mere matter of applying them in daily practice to get good profit for ourselves. Feeding corn meal, or any combination of feeds, won't necessarily make beef or produce milk. Your steer or cow has got to digest and use its ration or the manure heap will be the richer and you the poorer. In other words, the simple act of feeding doesn't always produce results.

Here is where farm science comes to the rescue. The new idea on feeding tells us, first of all, that the steer or cow is like a machine, and that the feed each gets is raw material which we wish to turn into flesh, fat or milk. Now if steer or cow, as machines, don't work properly, a greater or less percentage of your feed is bound to be wasted. That is animal digestion must be absolutely right if the greatest gain is to be made.

FOR SALE**JERSEY BULLS****BULL CALVES.**

Tuberculin tested by U. S. Government.

Forest Home Farm, PURCELLVILLE, VIRGINIA.

Duroc-Jerseys Shorthorns Shropshires.

Durocs are the most prolific hogs on earth. Our herd averaged 115-16 pigs to the litter last year. They are the most popular hog, and the great and increasing demand for them is due solely to their merits. We have forty bred sows and gilts for sale, three herd boars, ten young boars ready for service, and pigs of both sexes, five to seven months old—the blood of Ohio Chief, Beat Him If You Can, Orion, Commodore and the Colonels. The prices are right.

Short Horn Bull Calves by Imp. Best of Archers. Pure Scotch and Scotch Topped Bulls.

Shropshire Rams of the best imported blood cheap to close them out.

LESLIE D. KLINE, VAUCLUSE, VA.

TELL THE ADVERTISER WHERE YOU SAW HIS ADVERTISEMENT.

REGISTERED ABERDEEN-ANGUS BULLS

For sale at farmers' prices. Strictly Top Notch. Many of them Show Ring Animals. Also Good Females not akin to bulls.

We are closing out, at little over beef prices, twenty head of pure-bred, but ineligible, females, four months to seven years old. A rare opportunity for farmers to get pure-bred stock at little more than the cost of common cows.

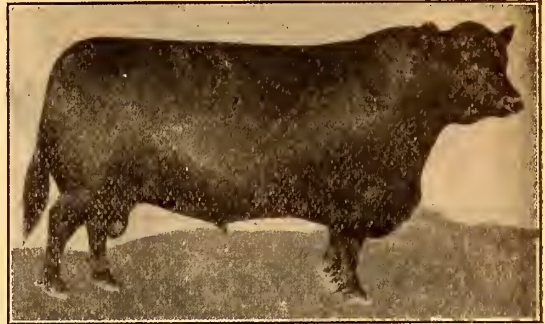
Special prices on March orders for Bull Calves.

To avoid inbreeding, we offer for sale our Herd Bull, "Kuobley's Editor," 66226. Age 4½ years, weight 2,000 pounds. A magnificent herd header—broad, block and royally bred.

Write for booklet.

CORRESPONDENCE AND INSPECTION OF THE HERD INVITED
ROSEDALE STOCK FARMS, JEFFERSONTON, VA.

Shipping Point, Warrenton, Virginia.



when they are constantly forced beyond natural limitations and that is what every feeder of live stock is doing when feeding for market or for milk.

From which it follows that anything capable of continuing the digestive function in healthy activity during the weeks or months in which the fattening process is going on, will solve the problem to the feeder's satisfaction.

Experiment has proved conclusively that a preparation containing true tonic elements, blood and nitrates (which are well known as cleansing the system) is an actual necessity in the cattle business. In fact, the greatest success is impossible without it. Just as well expect to preserve your own health and stuff with rich food for a period of months as to expect your stall-fed steer or cow to do so.

The "food tonic" idea has come to stay in the cattle business—success depends on it. Your animals must be "toned up" and strengthened by these mild elements which great medical writers like Professors Winslow, Quitman and Finley Dun, recommend as beneficial. Give it to the horses, it will make them fitter and more salable. Lambs grow faster, swine fat quicker—indeed all live stock profit depends upon this tonic.

Shenandoah Co., Va., Dec. 29, '07.

I consider the Southern Planter the best and most reliable agricultural publication I have ever read and will not be without it as long as I continue farming.

W. W. LANTZ.

Surry Co., Va., Nov. 13, '07.

I cannot get along without the Southern Planter. It suits me better than any farm paper I take, and I take several.

J. McELROY.

SUNNY HOME FARM

ABERDEEN ANGUS CATTLE

Are the sort that "breed on," because of the superior breeding of the animals comprising the herd.

The herd bulls are "Barou Roseboy" by the famous Gay Blackbird, and "Jester" by Imp. Equester (the best bred Eric Bull ever imported).

Females are by Gay Blackbird, Beau Bill (champion over all breeds in America in 1894), Ermoor by the great Royal Eric; Eulalie's Eric, a Columbian winner, and by the noted Heather Lad II., and some of the best in the herd are by our own Baron Roseboy. We have only young calves for sale, but want to book you for one of these finely-bred ones before they are all sold. Write

A. L. FRENCH, PROPRIETOR.
Staunton Draper, N. C.

Byrdville, Va.



THE DELAWARE HERD OF

ROYAL ANGUS CATTLE

is not surpassed either in breeding or individual animals by any herd in the East. At the head of our herd is

PRINCE BAR ARA, 68604,

the son of the great \$9,100 Prince Ito. Females of equally choice breeding. Write your wants. Remember, we take personal care of our cattle; keep no high-priced help; incur no expense of exhibiting, all of which enables us to offer stock at equitable prices. Send for pamphlet.

15 Bulls from 2 to 15 months old for sale.

MYER & SON, Prop.

Bridgeville

EVERGREEN
FARMS,
BREEDERS OF

Reg. Jersey Cattle

I am offering sons and daughters of the Pure St. Lambert's Bull, "Rinora's Rioter of St. L.," 69478, of Bowmont Farms.

OF EXCELLENT BREEDING. ALL AGES.

FANCY BRED POULTRY.

S. C. Brown Leghorns, Brace's strain, of New York.

S. C. Rhode Island Reds, Bryant's strain, of Massachusetts.

WRITE FOR PRICES.

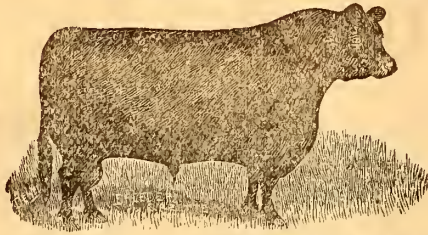
W. B. GATES, Proprietor, Rice Depot, Va.

Horsemen and Stockbreeders, Attention

We can save you big money on highest grade Veterinary Instruments, Milk Fever Outfits, Teat Instruments, Milking Tubes, Trocars, Syringes, Dehorners, Impregnators, Breeding Hopples, etc. Write to-day for large FREE illustrated catalogue. It costs you nothing and will interest you.

THE DETROIT INSTRUMENT COMPANY, 44 Congress St. W., Detroit, Mich.

RED POLLED CATTLE.



Will sell Thirty Head to reduce herd to fifty before stabling for winter. Special terms to those starting herds. Part cash, part time. The RED POLLS are best for the South or for the farmer anywhere. Examine their records for milk, butter and beef.

A few DORSET SHEEP for sale. We imported Buck and Ewes from England last year. First prize at Royal Counties and Royal Agricultural shows.

POLAND-CHINA HOGS, Pure-Bred Poultry, Albarle Prolific Seed Corn.

ARROWHEAD STOCK FARM,
SAMUEL B. WOODS Prop. Charlottesville, Va

ENQUIRERS' COLUMN.

All enquiries must reach us by the 15th of the month previous to the issue, or they cannot be answered until the month following.

ALFALFA.

Will you kindly answer the following questions:

1. Would you advise sowing alfalfa in the spring. I have a piece of good loam land that I seeded to alfalfa two years ago. I seeded it in September and next year I cut three fine crops of hay off the piece and three days after I cut the third crop off I could not find a live piece on the land. Can you form some idea of what killed it, and would you advise sowing the same piece of land again. I think a coat of agricultural lime would remedy the cause. What is your opinion?

2. Do you think it pays to sow crimson clover in last working of corn and followed by cow peas next year?

3. Does it do well to plant peanuts after crimson clover fallow of the same year.

GEO. R. HATCH.

Prince George Co., Va.

1. In all the Middle and eastern sections of the United States we think the early fall, August or September, a much better time to sow alfalfa than the spring. Sown in the spring, if there are weed seeds in the land, and very little of our land is without these, the weeds almost invariably outgrow the alfalfa and ruin the stand. In this issue in a reply to another enquirer from Loudoun county, you will find our views fully stated as to alfalfa growing. We can only surmise as to what caused your stand to die out. If the last cut crop laid on the stools saturated with water then the cause was the rotting of the crowns of the plants. Whenever cut alfalfa is caught in a rainy spell it should be got off the land as quickly as possible and be put into the cattle or hog pens to avoid this rotting which is fatal to the stand. Better lose one crop than the whole stand. Three weeks or a month will give another crop if the crowns of the plants are saved.

2. Yes. It is worth more than the

Silver
Spring

Herd

SHORT HORNS.

ROBERT R. SMITH, PROPRIETOR.

Charlestown, W. Va.
Jefferson Co.

-OR-

Wickliffe, Va.,
Clarke Co.



Three 1-Year Bulls to sell, all by the Scotch Bull Mina's Secret. These Calves are from 14 to 16 months and weigh 800 pounds each; are wintering under an open shed and doing well; six Bull Calves from 6 to 10 months, wintering under same conditions. Also a lot of Heifers for sale. I could sell a few Young Cows with Calves at foot at very attractive prices if a man would come to see them. Why not invest a few extra dollars in foundation stock of good blood and have your feed and care earn double the money common stock brings.

THE HOLLINS HERD

-OF-

HIGH-CLASS HOLSTEIN-FRIESIANS.

Cows with Official Records of over 21 pounds of butter in seven days.
Cows with Official Records of over 86 pounds (10 gallons) of milk in one day.

Heifers that have milked over six gallons of milk in one day (with first calf).

A son of the great Hengerveld DeKol, sire of 77 A. R. O. daughters, in the herd.

Five handsome, well-developed Bull Calves, from 6 weeks to 6 months old, for sale.

BUFF ORPINGTONS

JOS. A. TURNER, General Manager,
Hollins Institute,
Hollins, Va.

FOR SALE.

BILTMORE FARMS.

BILTMORE N. C.

Jerseys

A FEW CAREFULLY SELECTED YOUNG

Bulls and Heifers

At reasonable prices, representing rare combinations—Utility and Beauty—Milk and Butter on both sides as far back as they go—and the type that breeders are all after.

Berkshires

Representing combinations of Imported King Hunter on Western type of sows, and Premier boars on imported sows. Breeders need this kind of blood. Prices right.

Standard Poultry

Wyandottes, Leghorns and Rocks. For price lists, etc., address

BILTMORE FARMS, R. F. D. NO. 2, BILTMORE, N. C.

When corresponding with our advertisers always mention Southern Planter.

MORVEN PARK.

The Property of WESTMORELAND DAVIS, Esq.

Imp. Large White Yorkshires.

This breed of pigs is the one best adapted to supply the ever growing demand for bacon and hams. The displacement of lard for cooking, and the growing distaste for salt pork and the thick fat sides that used to be in favor, have caused the price of heavy fat hogs to drop while there is a sharp demand for light hogs of the bacon breeds from six to eight months old and weighing 150 to 175 pounds. Fortunately, the Yorkshires are the ones to make the farmer the most profit, and the introduction of a good Improved Large White Yorkshire boar into a neighborhood confers a greater benefit and makes the breeders more money than an investment often many times the amount paid for him. The result is a succession of crops of strong, hardy, thrifty and profitable pigs ready to turn off at six to eight months at the highest market price, and to make the most profitable fresh meat or bacon sides, hams and shoulders for the farmer's own use. It is the universal testimony of those who have raised Improved Yorkshires or crosses of that breed that the meat is superior to that of any other breed for home use or market. The requirements of the farmer and the bacon curer are identical. Both require a pig of quick growth and early maturity, (and by maturity is meant early fitness for market); both want pigs that dress handsomely and with little offal. No pigs shrink less in killing than Improved Yorkshires. The bacon curer finds that the best pig for use is one with a long, deep body, wide and square in the hind quarters and comparatively light in shoulder and neck. The farmer finds that such a pig is the hardiest, most prolific, most vigorous and most growthy of all the forms known to pigdom.

The herd which was founded on imported animals, selected with extreme care both for their individuality and breeding, includes representatives from the most noted herds of Great Britain.

With so many families we are at all times in a position to supply boars and gilts unrelated and make a specialty of foundation herds.

ALSO—

Regd. Dorset Sheep
AND
Regd. Guernsey Cattle.

Address

LIVE STOCK DEPARTMENT, MORVEN PARK,
LEESBURG, LOUDOUN CO., VA.

cost of seed and labor to have a cover crop on the land all winter to conserve and add to the fertility.

3. We have heard many peanut growers say that peanuts do not do well after crimson clover ploughed down. We do not know why this is so unless it be that the bacteria of the clover is antagonistic to that of the peanut. They are both legumes and we do know that each legume has its own specific bacteria and it may be that some of these are antagonistic to others. This, however, has not been determined, but it looks as though there might be some force in it if the peanut growers are correct in their conclusions from experience.—Ed.

PLANT FOOD CONTENTS OF FERTILIZER.

Please publish in your next issue how much phosphoric acid, potash and ammonia will be to the acre when one thousand pounds of 8-2½-2½ fertilizer is used. SUBSCRIBER.

Mecklenbury Co., Va.

In 1,000 pounds of 8-2½-2½ goods applied you will have 160 pounds of phosphoric acid, 25 pounds of potash and 25 pounds of ammonia.—Ed.

PEAR TREES NOT BEARING.

I have six standard pear trees, large and thrifty. I do not know how old they are, nor their name. They stand in ground that is being worked every year. They have been pruned. They blossom some every year but fruit never or have not fruited since I owned the farm (four years).

What can I do to make them bear?

JOHN J. KAFKA.

Chesterfield Co., Va.

We would root-prune the trees by cutting a trench round them at or near the extremity of the feeding roots and thus check their luxuriant growth and cause the formation of hard, short fruit buds which would mature thoroughly before frost. Stop cultivation of the ground in which they grow. The girdling of the trees by removing part of the bark from around the trunks is also advised in cases of this kind.—Ed.

ALFALFA.

I have about half an acre that I have been trying to get set in alfalfa. I have sown it twice but each time the crab grass took parts of it and I ploughed it up again last September. I ploughed it about eight inches following this with a subsoil which went seven inches deeper. I was, however, unable to get it sowed in time to get a start for the fall so sowed rye in it. I wish to sow fifteen pounds alfalfa on it in the spring and I would like to know how to put it in in the best manner and what fertilizer and how much to sow. It was limed two years ago. Had I best lime it again? Shall I plough it up or harrow this spring before seeding? The ground was tho-

Dimes Or Dollars

A hen does well or poorly according as her food supplies necessary nutriment in right proportions. Doubtless you give a nutritious ration, but does the *larger part of it digest*? If not, your profits will be in dimes rather than dollars.

It is easy to see why this is so. The domestic hen is a captive; she is denied the privilege of selecting food at times and in ways that Nature meant she should. Man attempts to coax and cajole her into laying many eggs under these unnatural conditions, and it is evident there can be little success until natural conditions are restored as far as possible.

If you make the hen derive from her food the same elements she would get when at liberty, your end is gained. This can be *largely* brought about by giving once a day a small portion of



DR. HESS Poultry PAN-A-CE-A

It is the prescription of Dr. Hess (M.D., D.V.S.) and according to the testimony of expert medical men, contains the elements necessary to make the hen *digest perfectly* by far the greater portion of her food, and to *derive from it* increased power to produce bone, flesh, feathers and eggs. Poultry Pan-a-ce-a contains also iron for the blood and nitrates to expel poisonous matter. It makes young chicks grow fast and fits fowls for market in the shortest time. It is also a germicide and prevents roup and other poultry diseases. Endorsed by poultry men in United States and Canada.

Costs a penny a day for 30 hens.

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.

Send 2 cents for Dr. Hess 48-page Poultry Book, free.

DR. HESS & CLARK, ASHLAND, OHIO.
Instant Louse Killer Kills Lice.

AT CHARLOTTE, N. C., 1908,

BURKE'S GARDEN CATTLE CO., TAZEWELL, VA.

WINS \$25 SPECIAL BEST DISPLAY
MAMMOTH BRONZE TURKEYS.

Three blues out of 4, 3 reds in 4, first prize Tom, weight 43½ pounds; weight of Hen, 25 pounds. Scores, 95½. Thirty Toms up to 3 years old; standard weight, \$5 to \$10, or mated to Pullets or Hens, no kin and to suit, \$9 to \$12.50 pair; 16 Pullets averaged over 15 pounds, stock scales, in January, selected from flock of over 200.

A few White and Barred Rocks, White Wyandottes, Black Langshans, Brown Leghorns, Peafowl and Ducks, either sex, any age, \$2 to \$5 each; in dozen lots, \$18. Eggs that will hatch, \$1.50 to \$2.50 per 13; \$3 to \$5 per 30; \$8 to \$13 per 100.

ORDER DIRECT FROM THIS AD., IT WILL NOT APPEAR AGAIN.

REGISTERED BERKSHIRE BOARS.

Ready for service. Berkshire Sows due to farrow in April. Also Registered Boars and Sows, five months old.

A FEW JERSEY COWS, FRESH AND TO COME FRESH

RIVER VIEW FARM C. M. BASS, Prop., Rice Depot, Va.

GREAT BERKSHIRE BARGAINS.

Two magnificent herd Boars at bargain prices owing to our inability to use them further, and lots of young stock of the finest breeding and individual merit.

King O' the Brook, by Master Lee of Biltmore, out of Flossie, 2 years old May 25th, first prize Virginia State Fair and first in breeder's herd. Perfectly marked and weighs about 700 pounds. Price \$100.

British Lord, by Uncle Sam, out of Imp. Kingston's Poetess, 3 years old April 23rd; second prize as 2-year old, Virginia State Fair. A good, active sire. Perfectly marked. Weighs about 750 pounds. Price \$75.

Two Young Boars, ready for service. Price \$25 and \$30. Seven Boar Pigs out of Princess Bonnie, first prize 2-year-old, by King O' the Brook, first prize yearling. Extra good. Price \$15 at 10 weeks old. Princess Bonnie and four of her under-six-months progeny took nine prizes at Virginia State Fair.

Lot of Sows in Pig to Rival's Premier (he by the noted Lord Premier's Rival), champion at Virginia State Fair, King O' the Brook and British Lord.

Orders booked for Boars by Rival's Premier, \$25; King O' the Brook, \$15; British Lord, \$10. All at 10 weeks old.

MOORE'S BROOK SANITARIUM CO. CHARLOTTESVILLE, VIRGINIA.

roughly inoculated by former seedings. There is not a good stand in this county and farmers say it will not make a crop but I am determined to try it again.

R. B. W.

Loudoun Co., Va.

The cause of nearly all the failures to secure alfalfa in the South is, in our opinion, seeding on land not sufficiently rich, not sufficiently alkaline and too much infested with weeds, and in some cases on land not sufficiently drained. If we were endeavoring to secure a stand we would first attack the weeds and to get rid of these run the land in a bare fallow for a whole summer. We would plough deeply and subsoil, then harrow finely and let the weeds germinate. As soon as the first crop could be seen we would harrow again on a hot day and kill this crop and so continue through the summer. During this time we would work in a ton of lime to the acre and after this had become thoroughly incorporated in the soil would apply 500 pounds of bone meal per acre broadcast and work this in. Then in August we would sow inoculated seed, or better, spread 500 pounds of soil from an alfalfa field on the land and harrow this in. The seed we would sow at the rate of twenty-five pounds to the acre, sowing half one way and half the other, and harrow lightly or cover with a weeder and then roll, and we would then expect to secure a stand. After mowing the first crop we would cut with a disc harrow with the discs set straight and then sow a mixture of 250 pounds of acid phosphate and fifty pounds of muriate of potash per acre. This would give a stronger and thicker stand and a good second and third crop, and we would then cut again with the disc and give more acid phosphate and potash and leave uncut for hay but would clip the tops off and leave for a mulch all winter. The cut-

No Finer Herd on Earth Than Mine.

The service boars or Imported Sir John Bull, II., No. 76416; Uncle Sam, No. 79671; Columbus Lee, III., No. 92309, right from the loins of Lord Premier, No. 50001; Fassifera Masterpiece, a fac-simile of his famous ancestor, Masterpiece, No. 77000. I have just added Belle of Biltmore, No. 100572, sire King Hunter, No. 79378. She should farrow November 10, 1907. Also a Canadian sow and additional imported Luster's Bachelor sows. I keep about thirty brood sows. A number of these are imported.



THOS. S. WHITE, Lexington, Va.

Glenburn Berkshires.

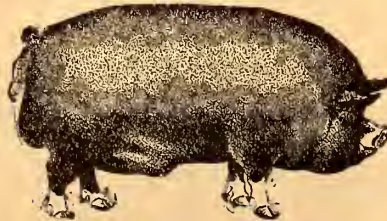
Lord Premier and Premier Longfellow are dead, but we have their best sons. Our **LORD PREMIER III.** is not only a son of Lord Premier, but is a litter mate to Lord Premier II. and a brother in blood to Lord Premier's Rival. Our **PREDOMINANT** and **DOMINANT** are probably the best sons of Premier Longfellow. **IMP. LOYAL HUNTER** is a great individual. We have Lord Premier, Premier Longfellow, Masterpiece, Charmer's Duke XXIII., and fine imported sows.

FORFARSHIRE GOLDEN LAD JERSEYS.

Write for Catalogue.

Dr. J. D. KIRK, Roanoke, 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.

HIGH-CLASS BERKSHIRE PIGS

At reasonable prices. We are now booking orders for spring Pigs sired by His Majesty, out of 600 to 700-pound Blue Ribbon Sows. Every litter is carefully culled and only the very choicest sold for breeding purposes. Address **ELKTON STOCK FARM, FOREST DEPOT, VA.**

ting with the disc and the fertilizing should be done each year.—Ed.

COW PEAS—CHIP DIRT.

Will you kindly answer and comment on the following:

1. I have in mind a permanent potato patch of about an acre. My plan is to plough it all up and put one-half in potatoes and the other half in cow peas. I propose ploughing them under in the fall and alternating each half each year in cow peas and potatoes. What time should they be ploughed under, i. e., in what state of development? Will they add sufficient humus to the soil that I can preserve the fertility of the soil by adding fertilizers? How much should I apply? When should cow peas be cut for hay?

2. I have been hauling chip dirt on my garden to add humus and retain moisture, but I have concluded since thinking on the subject, that it would be best to not haul the rest until the ground is broken up in the spring and work it in the sod. What do you think of it?

3. Will you kindly give me the names and addresses of some of the commission merchants. I want to correspond with them in regard to handling my maple syrup and sugar.

H. B. RUDOLPH.

Hampshire Co., W. Va.

1. The growing of the cow peas regularly on each plot and the ploughing of them down will keep the land sufficiently supplied with humus and nitrogen for the potatoes but to do this successfully for a series of years will call for a liberal application of the mineral fertilizers, phosphoric acid and potash, as both crops require these elements largely in their growth. For the pea crops you should apply acid phosphate at the rate of 250 pounds to the acre and muriate of potash at the rate of fifty pounds to the acre. For the potato crop you have to use the same quantity of acid phosphate and double the quantity of potash. Plough the peas down in the fall after they have become partially dead and when the soil is becoming cool. Cut cow peas for hay when the pods are turning yellow.

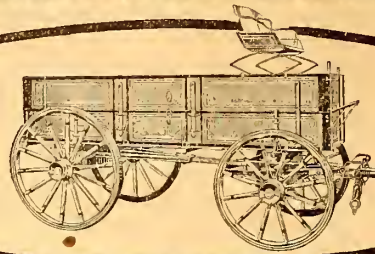
2. The chip dirt should not be used in excessive quantity or it will make your soil too open and cause it to dry out too quickly, unless well rotted when applied.

3. The Wallerstein Produce Co. and E. W. Evans & Co., of this city, would be likely to handle your syrup, etc.—Ed.

BASIC SLAG.

Is odorless phosphate (or Basic slag) the same thing as Fulton acid phosphate or phosphoric acid? Which is the best for corn and grass? Which is best for grass, odorless phosphate or pure ground bone? The phosphate

THREE HIGH CLASS FARM WAGONS



A FARM wagon has much hard work to do. It must haul heavy loads, travel over rough roads and be out in all kinds of weather. When you buy a farm wagon you want to get many years' service from it. You will not be disappointed if you buy any one of the three wagons described below.

The 63-Year-Old Weber

The King of all farm wagons. Only the very best and most thoroughly seasoned wood is used; ironed to make a wagon that lasts a lifetime. Light running, convenient and a wagon of fine appearance.

The Popular Columbus

Built in a factory where most exacting conditions are enforced. Air seasoned wood stock, ironing which gives great strength and durability, workmanship by thorough mechanics and every part thoroughly tested.

New Bettendorf Steel Gear Wagon

Front and rear gears made of steel. Parts riveted together, not bolted. A wagon that is proof against breakdowns. Nothing can work loose or rattle, and there can be no warping, drying apart, shrinking or rotting.

You should remember above everything else that a cheap, poorly constructed wagon is dear at any price.

Before you buy any wagon call on the International local agents and learn all the superior points of the Weber, Columbus and New Bettendorf wagons. They will show you the wagons and hand you printed matter giving all particulars. Or if you prefer write direct to the home office.

INTERNATIONAL HARVESTER COMPANY OF AMERICA, CHICAGO, U. S. A.
(Incorporated)

HIGH-CLASS POLAND-CHINAS

The prolific and industrious kind, possessing both quality and finish, bred from choice individuals of the celebrated Sunshine and Keep-On strains. Gilts ready to breed and Pigs of both sexes ready for delivery. Pullet and Eggs from that yellow-leg, blocky kind and heavy laying strain of White Wyandottes. Our prices guaranteed.

DUNNLORA POULTRY FARM,
N. P. Peebles & Bro., Prop., Carson,
Virginia.



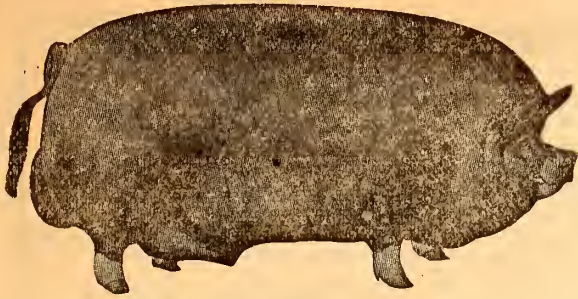
QUALITY POLAND-CHINAS.

The large, mellow kind—NOT the coarse and rough type. They must be good with such a herd header as BLACK PERFECTION, a son of the old king of Poland-Chinas, Chief Perfection II. A few CHOICE PIGS and BRED SOWS for sale.

H. B. BUSH & BRO.,
Michaux, Powhatan County, Va.



TELL THE ADVERTISER WHERE YOU SAW HIS ADVERTISEMENT.



WOODSIDE BERKSHIRES

EVERYTHING SHIPPED ON APPROVAL.

IT WILL PAY YOU TO READ THIS CAREFULLY.

We are now offering a grand lot of Pigs sired by our three boars—Charmer's Premier, 94553, 1-year old, weight 550 pounds; Master Lee, 79379, 2-year-old, weight 760 pounds; and Lustre's Carlisle, of Biltmore, 72057, 3-year-old, weight 790 pounds, and out of royally-bred sows weighing from 500 to 600 pounds each. Also Young Sows guaranteed safe in pig to Charmers' Premier and some extra good Young Boars from 4 to 8 months old.

We can always furnish pigs not akin. In order to show our confidence in what we offer, and insure satisfaction to our customers, we ship everything on approval. You need not send check until after you receive the pigs, and if they are not entirely satisfactory in every respect, you can return them at our expense and it costs you absolutely nothing. We leave it to you whether this is a fair proposition. Address

WOODSIDE STOCK FARM, R. S. Farish, Prop., Charlottesville, Va

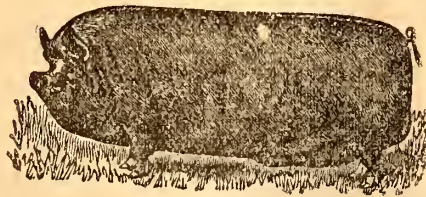
\$18.50 per ton in Richmond and the bone \$30 per ton.

MILTON McLAURIN.

Powhatan Co., Va.

Basic slag is usually advertised as odorless phosphate or slag meal, and is made from the refuse of the steel furnaces and carries from 15 to 18 per cent. of phosphoric acid. This material is very much like floats in that the phosphoric acid is only in a very slowly available form. The fineness of its grinding determines very much how soon the phosphoric acid is available. Used with green fallows turned down, it is effective much sooner than when used in any other way. In the case of acid phosphate, the phosphoric acid is almost immediately available. Basic slag has given good results upon grass where it provides slow feeding for a crop which has a long period of growth. For quick growing crops, it has not usually given the returns which were desired. If a green crop is turned under at the time the grain or other crop is planted, then the slag may be expected to become partially available during the growth of the crop. For immediate results, we prefer to use bone meal, which provides not only phosphoric acid, but also nitrogen. At the same time the bone is permanent in its action like the slag. Bone is more readily acted upon by the acids of the soil and crops than slag which, having been subjected to the heat of a smelting furnace, is much more obdurate. For permanent improvement of the soil, however, the slag is a valuable fertilizer, but it ought to be sold at a less price than is asked for it. It is largely used in some parts of England where it is sold at a cheap price. We believe that all the slag meal on the market here is imported

Splendid Berkshires.



Hunter of Biltmore, III., 86468, big, wide, long and deep; Valaria, 88706, extreme length, depth and finish. These two Boars are numbered among the greatest sires of the breed, both in blood and individuality, and pigs by either of them will be a prize in your herd. The Sows in my herd are of the noted Silver Tips and Storm King families and are not excelled in quality or up-to-date style. I am now booking orders for March and April

delivery and will send out only the choicest Pigs. Have a few very choice Young Boars for the fancy breeder.

EVERYTHING SHIPPED ON APPROVAL.
WRITE FOR PRICES.
D. E. EARHART, NOKESVILLE, VA.

LIVE STOCK AUCTIONEER.

I offer my services as a Stock Salesman to the breeders of the East. In doing so, I will say that I have equipped myself both by having taken a course at the Jones National School of Auctioneering, and by years of breeding and selling Pedigreed Stock. I make a specialty of Pedigreed Sales.

If I may be permitted to say it, I will suggest that I believe I can render Breeders better service than salesmen residing in remote parts of the country, as I am thoroughly familiar with conditions obtaining in this section. Then, too, I will probably not be quite as expensive as to railroad fare, etc., and besides, I must give satisfaction or I make no charge for my services.

Write me or 'phone me via Winchester over Southern Bell Phone for dates. Prompt attention assured.

Roy P. Duvall, : : : Stephenson, Va.



Keep Posted on
MODERN FIREARMS

By writing for our FREE Catalogues—Guns, Rifles and Revolvers.

MORRISETTE REPEATING ARMS COMPANY,
Box 240 S. P., Richmond, Va.

When corresponding with our advertisers always mention Southern Planter.

and pays a considerable duty. This is a gross injustice to the farmers.—Ed.

SORGHUM SYRUP.

In a recent issue a subscriber asked where he could get sorghum syrup. We are in receipt of several letters from parties having the syrup. We cannot undertake to negotiate the sale of this or any other article. Parties having goods to sell should advertise the fact in our advertising columns. Fifty cents would cover the cost of a sufficient advertisement in our Want Columns.—Ed.

SCAB IN CATTLE—LAND IMPROVEMENT.

1. Would you kindly give a remedy for scab on cattle? Hair comes off around eyes and in spots on any part of the body, but mostly on head and neck, and the skin gets scaly and thick. Would like to kill it with one application as it is a big job to go over thirty or forty several times. Is it ever fatal, or does it hurt the cattle much?

2. Give your remedy for foot-evil.

3. I am putting manure from fifty cattle and eight horses on a part of eighteen acres of land (have no spreader) that is not producing right.

My idea is to plow soon as possible, drill 300 pounds of fertilizer per acre, plant in corn; when corn is laid by sow to crimson and sapling clover. In fall of 1909, turn again and sow to wheat. Now, I know nothing about the land, more than it is clay and not doing as it should, and I will appreciate any suggestion from you that will improve it. What fertilizer and how much seed to sow; sow seed before or after plowing corn, etc., etc.

The Southern Planter is appreciated by all who read it in our section.

J. K. BRYANT.

Grayson Co., Va.

1. The disease which you call scab is, we think, ringworm. This is a contagious disease of which there are two or three forms. The remedy is to remove the scabs with soap and water and then apply acetic acid, sulphur ointment or nitrate of mercury ointment once a day until the spores are killed. Cleanse the stable and white-wash with lime to destroy the spores scattered by the scabs and burn up all the bedding. It is not a fatal disease but greatly hinders the well doing of the animals.

2. The remedy for foot-evil is to thoroughly cleanse the foot between the claws and then apply carbolic acid solution, one ounce to a pint of water. Soak a rag with this solution and bind it between the claws and the trouble will soon disappear.

3. After you have ploughed down the manure, apply a ton of lime per acre broadcast and harrow lightly in and let lay for a few days and then work and prepare the land for the

Brompton Stock Farm.

WE OFFER THIS MONTH

One Registered Polled Angus Bull, 3 years.

One Registered Jersey Bull, 2 years.

One Registered Guernsey Bull, 6 months.

Young Berkshire Sows to farrow in April.

A few Bronze and White Holland Gobblers.

Eggs from B. P. Rock and S. C. B. Leghorn fowls, Brown Chinese and Toulouse Geese, Pekin and Muscovy Ducks.

PEDIGREED COLLIE PUPPIES.

M. B. ROWE & CO., Fredericksburg, Va.

JERSEY CATTLE

The best herd in the world. Headed by two bulls that cost over \$10,000 each. BULLS AND HEIFERS for sale.

Also WHITE ORPINGTON FOWLS, the best general purpose breed; CORNISH INDIAN GAMES, the best table fowl; WHITE LEGHORNS, the world's greatest layers.

For particulars, address BOWMONT FARMS, Salem, Virginia.

Inaleside Herefords

OWNED BY S. W. ANDERSON, BLAKER MILLS, GREENBRIER COUNTY, W. VA.

A choice lot of Bulls, Cows and Heifers for sale; also, a few Polled Hereford Bulls, recorded in the National Polled Hereford Record.

Write for Catalogue and Prices.

FARM NEAR ALDERSON, W. VA.

Telephone and Telegraph, Alderson.



CASTALIA HEREFORDS

FOR SALE

At prices low enough to be within reach of all breeders and cattlemen generally.

A grand lot of Three and Four-Year-Old Bulls ready for active service.

Also Cows, Heifers and Calves.

Call and see this herd before buying elsewhere.

Keswick is on the C. and O. Railway, near Charlottesville. Visitors met at station.

MURRAY BOOCOCK, Owner,
KESWICK, VA.

IF YOU WANT THE BEST HOG

Buy from those who give their sole attention to the production of the greatest Berkshire type. We do.

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.

THE BLUE RIDGE BERKSHIRE FARMS, ASHEVILLE, N. C.

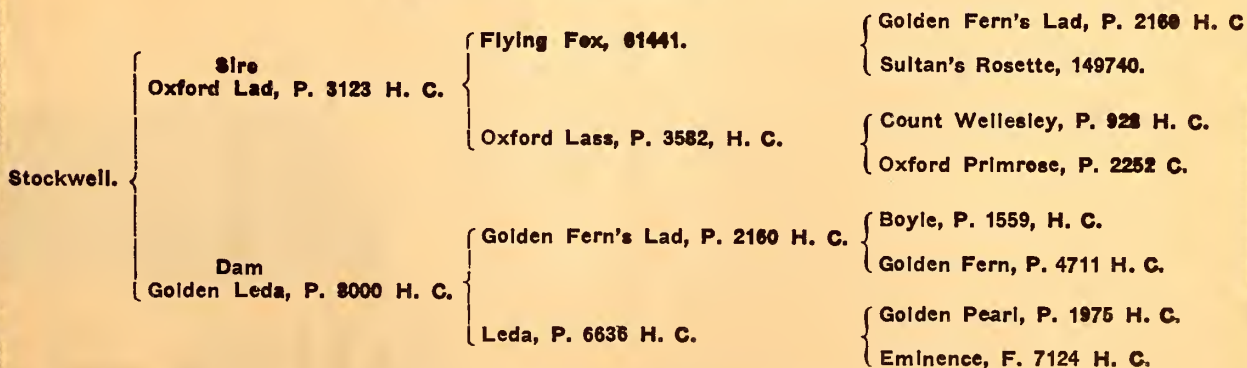
When corresponding with our advertisers always mention Southern Planter.

Wyldeewood Farm Jerseys.

Herd numbers 300, including some of the finest the island has produced, headed by the great sire Stockwell, whose abbreviated pedigree is given below. - - - . - - - .



Imported Stockwell, 75264.



For Particulars of Offerings, General Information, etc., Address

Wyldeewood Farm, Fredericksburg, Va.

ROSEMONT HACKNEY STUD.

JAMES WARBECK, Manager, Berryville, Clarke County, Va.
 "HIAWATHA"

Chestnut Hackney Stallion, E. H. S. B. 8893, A. H. S. B. 777, foaled 1903, imported 1905.

Sire, Rosador (4964) who won championship twice in England, and then, ten years later, when 15 years old, won it again, defeating all the intermediate champions.

Dam, Country Fashion (7733), by Garton Duke of Connaught, one of England's greatest Hackney Stallions.

HIAWATHA'S breeding is unexcelled and he is one of the greatest Hackney Stallions ever imported.

As a two-year old he won ten firsts, two seconds and one third in England and first in New York.

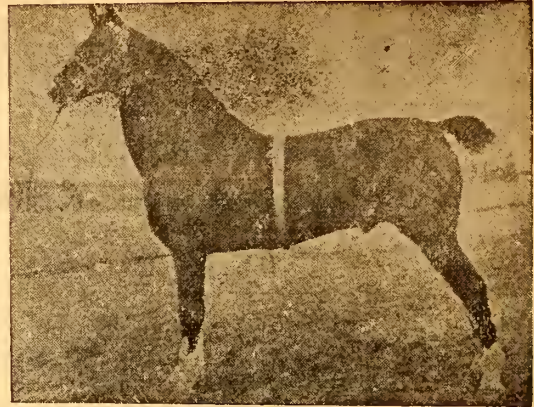
As a three-year old he won first at Berryville and second at New York.

As a four-year old he won first as Hackney Stallion, first as Harness Stallion and first as Stallion shown with three of his get; and three of his colts won first, second and third in class for colts.

His colts are simply wonderful, and a number of pure-bred and half-bred ones may be seen at the farm.

FEE—\$25, INSURING MARE IN FOAL.

Brood mares boarded at owner's risk for \$5 per month in pasture, or \$10 per month in stable.



seed. Before planting, say, ten days or a fortnight, apply 250 or 300 pounds of acid phosphate per acre broadcast and work into the land. The sowing of the crimson and sapling clover is good. The lime will help you to get a good catch and after this crop is grown the land should make a good wheat crop. Sow 12 to 15 pounds of the clover seed per acre. Sow before the last working and cover not too deeply, says, two or three inches.—Ed.

MILLET AND COWPEAS—SORGHUM AND CORN.

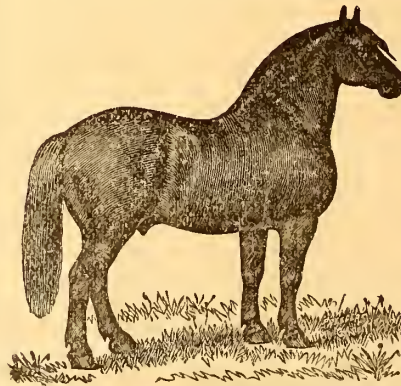
1. I find that when millet is sown with peas it ripens before peas are fully developed and I am thinking about sowing strips of millet alone through pea field to make grass to cover pea shocks with. Is this plan advisable? How long after sowing the peas should the millet be sown to have it at right stage for hay when peas are fully developed?

2. Would it be advisable to plant some sorghum among corn so as to have it mix with the corn stover in shredding? Would not this improve the corn stover by fermenting together by the absorption of sorghum sap by the corn stalks? Would the pollen from sorghum affect the corn for seedling purposes?
 A. BUFFAT.

Knox Co., Tenn.

1. The difficulty as to the non-maturing together of the millet and cowpeas can be overcome by planting the cowpeas in drills two feet six inches apart, using about half a bushel of the peas to the acre, about ten days or a fortnight before the millet is sown. The cowpeas should be cultivated once or twice to force the growth and then after the last cultivation the millet seed, at the rate of three pecks to the acre, should be sown broadcast and covered lightly. The two crops will then be ready to cut at the same time. Plant a quick

SELMA STOCK FARM



**PURE-BRED, REGISTERED
 PERCHERON STALLIONS,
 MARES AND COLTS.**

Imported and Home-Bred. Blue Ribbon Winners wherever shown in France and America. Postively Highest Quality.

COME AND INSPECT THEM.

**E. B. WHITE, Prop.,
 Leesburg, Va.**

At the Stud PILOSO 102

THE ONLY IMPORTED CATALONIAN SPANISH JACK IN THIS SECTION.
 DICK WILKES, JR.

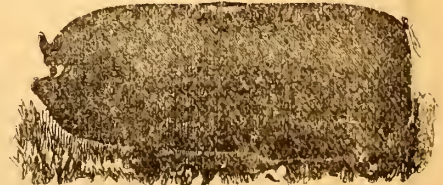
The perfect horse and a blue ribbon winner at State Fair. Sired by Dick Wilkes, 2:11; dam, Blackhawk Morgan Pet. Owned by W. J. Strain & Son, Route 1, Richmond, Va.

MECHANICSVILLE FARM.

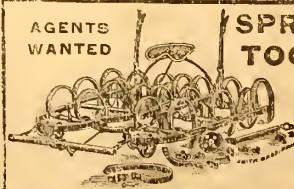
THE GROVE FARM

BREEDER OF PURE-BRED BERKSHIRE HOGS AND HOLSTEIN-FRIESIAN CATTLE. TWO FINELY-BRED BULL CALVES FOR SALE.

T. O. SANDY, BURKEVILLE, VA.



AGENTS
 WANTED



SPRING
 TOOTH

HARROW ON
 WHEELS

Lightest Draft Harrow made. Adapted to any soil. Saves a half-horse power. Seat adjusted without bolts. Used either as walking or riding harrow. Teeth controlled by lever. Easily cleared of rubbish. Made of very best materials. Awarded Gold Medals at St. Louis World's Fair. Write for free catalogue describing this harrow.

THE HENCH & DROMCOLD CO., Mfrs., York, Pa.

When corresponding with our advertisers always mention Southern Planter.

Lynnwood Stock Farm.

It appears that certain dealers or Fakirs, have taken offense at my advertising Prize Winning Percheron Stallions and Mares for sale. I not only advertise such, but I raise them, as evidenced by the fact that I have six stallions out of nine and nine mares out of thirteen that have won prizes at the shows and fairs. I am not responsible for these people who import and buy third class stuff to re-sell at exorbitant figures. I CAN AND DO UNDERSELL such people, as I have no agents, no partners, and no commissions and other big bills to add to the price of my stock as all of them of course have to do, "to keep even." I have no "crane-legged," "wasp-waisted," "lunk-headed," "nigger-toed," "goose-rumped" Percherons to sell at prices that should buy the *best*. I will sell any one of four Prize Winning Stallions, from three years old to seven years old, for \$1,500; this figure will buy a horse that has headed my stud for four years and, although never shown till last fall, has won four blue ribbons and a gold medal, and weighed 2180 pounds at 34 months old. I will sell any of the others named for less money, and imported or native bred mares at as reasonable figures. Come to the farm, and if you think I have misstated the case, I will pay your railroad fare.

I have prize winning

SHORT HORN CATTLE

Also Berkshire Hoos For Sale.

JNO. F. LEWIS, Lynnwood, Rockingham Co., Va.

On N. & W. R. R.

**TO BE SOLD AT PUBLIC AUCTION,
AT WARRENTON, VA.,**

MARCH 23, 1908,

At Callahan's Stables.

THE THOROUGHBRED STALLION

Judge Himes.

A rare chance to secure a big, good-tempered Stallion to infuse the best strains of thoroughbred blood into the horses of your neighborhood.

JUDGE HIMES is a son of the great imported Stallion "Esher," his dam was "Lullaby," by the famous "Longfellow." He is eight years old, nearly 17 hands high and will weigh close to 1,200 pounds. His good temper, kind disposition and courage are evidenced not only by his manners as a stallion, but also by his long career on the turf, where he ran over one hundred races and where he never failed to do his best under any conditions. This can be proven by a study of his performance in the Turf Guide. His most notable winnings were the Kentucky Derby and the \$10,000 Hawthorne Handicap, the same year.

JUDGE HIMES has proved himself a good average foal getter. One of his get took second prize for half-bred foals at the Warrenton Horse Show last summer.

HEARTLAND STOCK FARM,

Warrenton,

Virginia.



O. L. Chase
St. Louis, Mo.

Ready-Made Paint settles hard in cans—and mineral pigments and chemical acting driers in ready-made paint eat the life out of Linseed Oil—which is the LIFE of all paint.

Painter-Made Paint can never be properly

I Have a new way of manufacturing and selling house paint that's unique—that's better.

Before my plan Paint was sold in two ways—either ready-made—or mixed by a local painter. Both these ways are at fault.

made by a painter—because of lack of heavy mixing and grinding machinery.

My Paint is ready to use—but not ready-made. My Paint is made to order—after the order is received—packed in hermetically sealed cans—(extra size to insure a full gallon) and dated the day the Paint is made.

Pure Linseed Oil and pure, fresh paint ingredients are used in my Paint. Such materials, found at local stores, are usually adulterated.

I sell my Paint direct from factory to user—at very low factory prices.

I pay freight on six-gallon orders or over.

When the order of six gallons or over is received, use two full gallons to test it—and if you are not perfectly satisfied, in every particular,

return the balance of the order to me—and the two gallons you have used shan't cost you a penny.

No other paintmaker offers such a liberal proposition. My Paint is sold to responsible people on three months' time, if desired. I make three brands of Paint to suit the requirements of my immense trade.

My strictly Pure All White Lead Paint is absolutely the best paint in the world. My 40-60 Brand Zinc and Lead Paint is the best paint in its class on the market. My Durability Paint has an immense sale everywhere, and is sold under five-year iron-clad guarantee. The Purity of my Paint is guaranteed under a forfeit of \$100.00 in gold.

Send for my beautiful Paint Book and big Color Cards to select from—best Book—largest Cards ever published. They are FREE. With the Paint Book I send Free Book of all kinds of Painters' Supplies, sold at Direct-to-you Prices. Write TODAY. My Plan insures you satisfaction and lowest prices on Paint.

O. L. CHASE, THE PAINTMAN, DEPT. D38, ST. LOUIS, MISSOURI

growing variety of cow peas like the New Era, and not the old Black or the Wonderful which grow through a long season.

2. Whilst sorghum and corn can be planted together for a forage crop, yet we do not advise this course as the corn is a more robust growing plant at the start than the sorghum, and will overshadow and dwarf the growth of the sorghum. They should be sown separately and then shredded or cut into the silo, load for load. The mixed product makes fine feed. We do not think there is any fear of cross pollination of the two plants. They are botanically distinct varieties and make their seed in a different way.—Ed.

WHEAT -HAY.

At what stage should wheat be cut to make best hay? Have any experiments been made at any Experiment Station to determine this question? I have cut it in milk state, or a little later, and fed to chickens and hogs; also, fed to horses. For the latter, it does not seem to me to make the best of feeds. Here it is becoming more and more difficult to get machinery to thrash wheat, and labor to secure it for the machine. I want to cut with mower and feed without threshing, hence my question.

R. G. B. BROWN, M. D.
Louisa Co., Va.

The wheat should be cut when in the milk stage or a little before this to make the best hay, otherwise the straw is woody when cured. Wheat hay is not so nutritious as oat hay, but we have not been able to put our hand on any analysis of it giving the exact figures. Oat hay analyses 20 per cent. protein, 33 per cent. carbohydrates, and 4 per cent. fat, and makes a good feed. It is also softer than wheat hay and is therefore eaten more readily by stock. If cut early enough and nicely cured, wheat will make good roughage for cattle, but horses will not be likely to do well

CUTS and WOUNDS

Are Quickly Healed

There is no remedy so useful or necessary in the home as A. I. M. It is always ready in case the unexpected happens. For Cuts, Wounds, Old Sores, Burns and all external inflammation it is indispensable.

Applied to the inflamed parts, it immediately soothes and quickly cures. Disorders of this nature are dangerous, painful and often hard to heal.

NATURE'S MATCHLESS REMEDY

Acid Iron Mineral

Should Be Used in Time and a Lasting Cure is Certain to Follow.

A. I. M. is also a great relief for Indigestion and all Stomach and Bowel troubles caused by any form of inflammation. It is obtained from a Natural Mineral, found deep in the earth. It is more powerful than many of the celebrated mineral springs.

Test its merits in your case. Get a bottle from your druggist or general store. If your dealer fails to have it, send us your name and one dollar (\$1.00) for two fifty cent (50c.) bottles. Express prepaid to you.

Acid Iron Mineral Company
Richmond, Virginin.

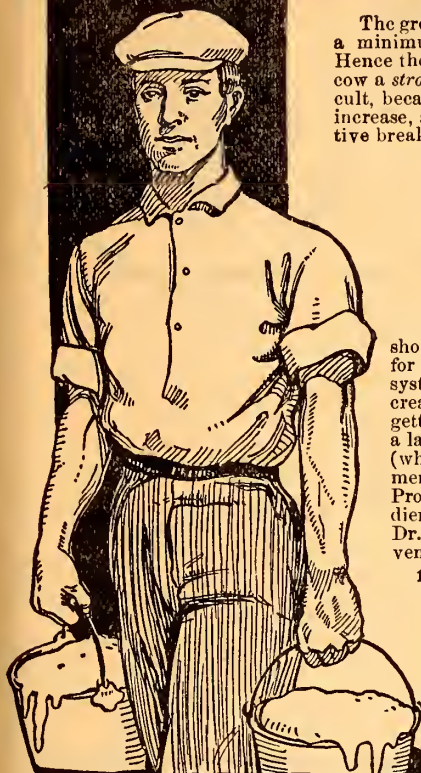
LONG ISLAND ASPARAGUS.

The Asparagus for which Long Island is famous is the FRENCH ARGENTUEIL strain modified by local influences of soil and climate. Three-Year-Old Roots of this well-tried, superior variety, \$1.00 per 100; 40 for 50 cents. Directions for cultivation by the Long Island Method sent with each order. Send-to-day for our 1908 Catalogue, which contains our \$45.00 FREE prize offers.

BINGHAMTON SEED COMPANY, 103 Court Street, Binghamton, N. Y.

TELL THE ADVERTISER WHERE YOU SAW HIS ADVERTISEMENT.

Two Pails From One Cow



The greatest yield of milk requires that food waste be reduced to a minimum and food assimilation increased to a maximum. Hence the road to success as a producer of milk lies in giving the cow a *strong digestion and increasing appetite*. This seems difficult, because we are continually overfeeding in our effort after increase, and consequently inviting nervous disorders and digestive breakdown. Here

DR HESS STOCK FOOD A TONIC

shows its value. A tonic and mild laxative, it contains iron for the blood and nitrates to expel dead matter from the system. Its use strengthens the stomach nerves and increases the secretions. A cow, steer, horse, hog or sheep getting Dr. Hess Stock Food is in condition to benefit from a large amount of food. It makes appetite for coarse fodder (which saves grain) and by improving digestion saves nutriment that would otherwise be wasted in the excrement. Professors Winslow, Quitman and Finley Dun endorse the ingredients contained in Dr. Hess Stock Food. It is the prescription of Dr. Hess (M. D., D. V. S.) and is valuable not only as a tonic but as a preventive of disease. **Sold on a Written Guarantee.**



100 lbs. \$5.00. 25 lb. pail \$1.60. Except in Canada and extreme South and West. **Smaller quantities at a slight advance.**

Where Dr. Hess Stock Food differs in particular is the dose—it's small and fed but twice a day, which proves it has the most digestive strength to the pound. Our Government recognizes Dr. Hess Stock Food as a medicinal preparation, and this paper is back of the guarantee.

Free from the 1st to the 10th of each month—Dr. Hess (M. D., D. V. S.) will prescribe for your ailing animals. You can have his 96-page Veterinary Book free any time for the asking. Mention this paper.

DR. HESS & CLARK, Ashland, Ohio.

Also Manufacturers of Dr. Hess Poultry Pan-a-cc-a and Instant Louse Killer. **Instant Louse Killer Kills Lice.**

on it alone, as it lacks protein for their best nourishment. Fed with oats as the grain ration, they might do fairly on it.—Ed.

PEANUTS AS FEED FOR HENS.

Will you kindly inform me as to the value of peanuts as an egg producing food? Analysis gives it about 42 per cent. protein, and as this element enters largely into the composition of the egg, it would seem to be valuable as an egg producer. I will appreciate your kindness.

Nansemond Co., Va. V. S. KIRBY.

We know of no experiments having been made with peanuts as a feed for poultry, but do not doubt but that meal made from the nuts would be good for them. The grains richest in protein, like cowpeas and oats, have been found to increase egg production.—Ed.

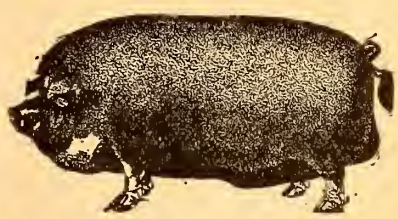
SAND-HILL LAND.

1. What can I do with an old sand hill with yellow subsoil of sand?
2. Is there anything that I could get to grow on it that will pay me anything?
3. Would be glad to keep sheep if

"Fat or Lean, You May Have Them."

POLAND-CHINA AND TAMWORTH

- Two Tamworth Boars, ready for service\$15
- Two Berkshire Boar Pigs, 3 to 4 months old..... 8
- One Poland-China Boar, 2 years old, registered..... 20
- Eight-weeks-old Pigs, April delivery 5



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BARBOURSVILLE, ORANGE COUNTY, VA.

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MADE BY SEIBERLING & MILLER COMPANY, DOYLESTOWN, OHIO. HAS NEVER BEEN USED. PRICE, \$90. TERMS, CASH.

CASTALIA STOCK FARM

KESWICK

VIRGINIA.

I could get something for them to graze on in winter. J. B. SWINDELL, Beaufort Co., N. C.

If you will read the article in the last issue by Professor Massey on the Tufts place at Southern Pines, you will see what it means to get anything out of an old sand hill with a sand subsoil. Nothing can be expected from it except with the expenditure of time and money to put fertility into it. There is nothing naturally there. It has all to be made and added to the sand. The first thing to be done is to get some vegetable matter into the soil and this will have to be raised elsewhere and put on in the form of strawy manure, and then perhaps you may hope to get a small sand vetch crop to grow. All that grows on it ought to be turned into it for several years. You can do nothing with sheep keeping on such land as you describe.—Ed.

CORN ON CLOVER FALLOW.

I have about six acres of rather rolling land seeded to crimson clover—a good stand. Will this get large enough in this locality to turn for corn in the spring? Could I plant the corn from 15th to 20th of May and raise a good crop of corn by using an early variety of corn? If so, what variety would you suggest? Should I mow the clover or turn down entire crop? Is it advisable to order seed corn grown in Northern States for planting in this section? E. M. BALL, Washington Co., Va.

The clover will, we think, make you a good fallow for the corn crop by the middle of May. Unless the land is already in good fertile condition, we would turn under the whole growth. You could no doubt make a matured crop of corn sown at the time named if you used one of the Yellow varieties, say, Golden Dent Improved. It is not advisable to buy seed corn from the North. The best course is to use seed grown in or near the place where the crop is to be raised. You should read the articles on the corn experiments made at the Blacksburg Experiment Station, which have appeared in The Planter during the winter months.—Ed.

ALFALFA.

I seeded a plat of land to alfalfa two years ago last August, which made a good stand and good returns the following year; not so much last year, and now it seems to be very near all dead. Would you advise this plat of land to be seeded to corn this year or re-seed it to alfalfa? Or, what rotation would be the best to get it into alfalfa again?

Halifax Co., Va. A. E. GARNER.

We would break the land again and then apply 250 pounds to the acre of

I. H. C. GASOLINE ENGINES

Are solving the hired help problem for hundreds of farmers.

Vertical Engines made in 2 and 3-Horse Power.
Horizontal Engines (Portable and Stationary) made in 4, 6, 8, 10, 12, 15 and 20-Horse Power.
Air Cooled Engines, 1-Horse Power.
Traction Engines, 10, 12, 15 and 20-Horse Power.
 Also sawing, spraying and pumping outfits.

YOU offer high wages, and still find it difficult to get hired men. Why not do as other progressive farmers are doing—let one of the dependable and ever ready I. H. C. gasoline engines be your hired man?

Suppose you want to grind feed, shell corn, shred fodder, pump water, operate the churn, grindstone, fanning mill, separator, bone cutter, or saw wood. With an I. H. C. engine you will need no extra help. You can run the engine and attend to the machine yourself.

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The engine will work for you indoors



or out, in wet or dry, hot or cold weather. You will have no difficulty in operating or controlling it.

Only a few cents per hour is required for fuel. All I. H. C. engines use either gas, gasoline or denatured alcohol.

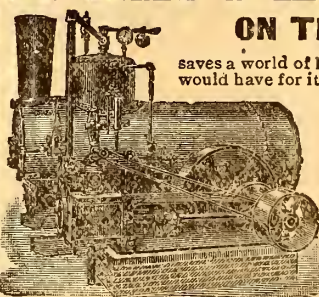
Please notice in the above list of styles and sizes that there is an I. H. C. gasoline engine adapted to practically every farm requirement.

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saves a world of labor. Count the little and big jobs you would have for it—they run the whole year round. Install one and it's good for your lifetime. You are always sure of power when you call upon it—and steam when you need it. Experience has demonstrated that the old reliable Leffel steam engines are safer, more reliable and more satisfactory in every way than any other style of power for farmers' and planters' use. A variety of styles and sizes adapt them to all needs. Power book free. Write for it.



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Cultivator, Plow, Rake. Change quickly made. Cultivate between or astride the rows. An depth, any width.



Note High Arch and Plant Guards Bent Oak Handles on all Tools.

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TELL THE ADVERTISER WHERE YOU SAW HIS ADVERTISEMENT.

acid phosphate and sow it in cowpeas. This crop we would cut for hay in August. When preparing the land for the peas, make as fine and deep a seed bed as possible so that it will not need to be ploughed again before seeding alfalfa. After cutting the peas, apply a ton of lime per acre broadcast and then cut the pea stubble into the land with a disc harrow, running the discs nearly straight so as not to turn up the deeper soil in which there may be weed seeds not germinated. After the lime has been on the land ten days, then apply 500 pounds of bone meal per acre and make a fine seed bed and sow the alfalfa seed at the rate of 25 pounds to the acre in August or at the latest in the beginning of September. The land should be sufficiently inoculated with the alfalfa bacteria, but it may be well to sow inoculated seed.—Ed.

MAKING FEED FOR STOCK—LIME.

I am not a practical farmer, but a business man. I have a small piece of land near town containing 16 acres, divided into three lots—two lots containing six acres each, and one four acres—with running water in each. One I keep for pasturage and the other two I cultivate, my sole aim being to make feed for my horses and cows during the winter. At present one six acre lot is in oats following corn and peas, and the four acre lot, which was in corn last year I contemplate sowing in peas this year. What rotation of crops can you suggest to improve the land and produce the largest amount of feed? I want to use a few tons of agricultural lime. Where can I buy it cheapest?

Halifax Co., Va. JOS. STEBBINS.

You cannot do better than to grow cowpeas and sorghum or sorghum and soy beans for hay crops to be cut and fed green or for hay, following these with oats sown in the fall for a grain and straw crop on part of the land and putting all land not sown in oats in the fall in crimson clover and a mixture of wheat, oats and rye for a winter and spring pasture and for an early hay crop to be followed in part by corn and in other part by the cow pea and sorghum and sorghum and soy bean crop. The mixed crop of crimson clover, wheat, oats and rye will give you a better feed crop than rye sowed alone, and this crop can be sown in the corn at the last working or after the cowpeas and sorghum and sorghum and soy beans have been cut for hay. Some of our subscribers grow cowpeas and millet for a hay crop and speak well of it, but as the two crops do not mature together unless the cowpeas are sown about ten days or a fortnight earlier than the millet there is more trouble in putting in this crop than cowpeas and sorghum. The crop no doubt makes good feed. The peas should be drilled in



Paint Can Be Easily Tested

Many people do not realize that good paint, the kind which wears and stays bright, is simply *metallic lead* reduced to a form in which it can be applied with a brush. Lead in this form is called "White Lead."

Likewise, many people who *do* know that the best paint is "White Lead and Linseed Oil," mixed fresh for each job by a good painter, are totally ignorant of the fact that much of the paint which they think is "Pure White Lead and Linseed Oil" is so grossly adulterated that if tested it would yield no metallic lead whatever. Such paint will not wear like genuine White Lead, and is very expensive in the end.

We desire to place in your hands, at our expense, the means of telling pure White Lead from counterfeit. Any man, woman or child can make the test—we want you to make it *now*, before spring painting begins.

You need not take anyone's word for paint. Test it yourself. No one else is half so deeply interested as you, if you have to pay the painting bill.

How to Make the Test

Subject the sample of supposed White Lead to the flame of a candle, gas jet or spirit lamp. Intensify the flame by use of the blowpipe. If globules of metallic lead appear, the White Lead is pure. If you can bring out no metallic lead, it shows that the White Lead has been adulterated.

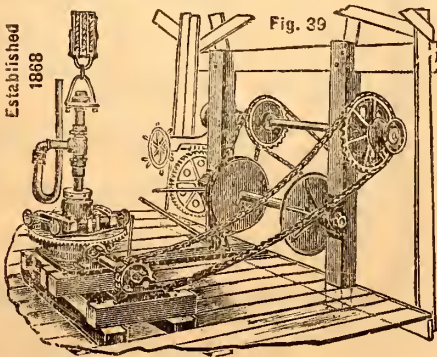
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The Dutch Boy Painter on a keg guarantees not only purity, but *full weight* of White Lead. Our packages are not weighed with the contents; each keg contains the amount of *White Lead* designated on the outside.

Write us for Test Equipment 14 and we will send free a blowpipe and detailed instructions for making this test.

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LIGHTNING WELL MACHINERY,

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rows two feet six inches apart and then the millet be sown broadcast and worked in after the peas have commenced to grow freely. In the next two or three issues of The Planter you will find fuller advice as to seeding these forage crops. You can get oyster shell lime in Nodfolk. See advertisements in Planter. Use this or rock lime.—Ed.

GREEN FEED FOR COWS.

I have ten acres of land I want to sow in something to furnish green stuff for my dairy herd this summer. Five acres are in rye now. Please suggest what and when to sow, so I will have feed all summer. I want to cut and haul feed to cows.

C. E. SHELTON.

Forsyth Co., N. C.

You will find nothing better for the purpose needed than cowpeas and sorghum or soy beans and sorghum sown at intervals of a week or ten days until the end of July or even into August. We would grow both crops so as to give a variety of feed. Teocinte also would, we think, succeed with you and this gives several cuttings of good feed. In The Planter during the next two months you will find advice as to seeding these and other soiling and hay crops.—Ed.

POISONING HAWKS.

Will you please give me the prescription for poisoning hawks by giving the poison to the little chickens? Accomac Co., Va. R. S. YOUNG.

Mix four or five drops of the tincture of nux vomica for each chick in the mash, to be given to the brood, or use half a teaspoonful of the dry powdered nux vomica to a quart of meal. Let the chickens eat this and then the hawk that takes one of them will soon be a dead hawk. The poison will not hurt the chickens.—Ed.

GRAZING CROPS FOR HOGS—COWS FOR CREAM.

1. What would be the best crop to sow in early spring to get the earliest crop to be grazed down by hogs?

2. What is the best breed of dairy cattle for the cream trade?

P. G. JEFFERSON.

1. Dwarf Essex Rape is the best. It can be sown this month. See this issue for advice as to seeding.

2. The Guernsey and the Jersey breeds give milk the richest in butter fat and are therefore the best adapted for the cream trade. The Short-horns and Red Polls are the next best and these breeds give a larger flow of milk. The Holsteins give the largest yield of milk and their quality as butter and cream producers is being greatly improved by selection



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Our materials contains the greatest amount of real plant food you could possibly buy at a given price. In buying them, you don't pay for "filler," as is the case of ready-made fertilizer. We give you the maximum amount of Ammonia, Potash and Phosphoric Acid, in minimum weight, saving you freight and handling. Confine yourself to our

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the only complete natural manure, and the finest known base for use in home mixing. Write for 78-page book giving our prices, etc., and save your good money.

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and breeding. They have made great advances within the past few years.—Ed.

CONCRETE TANKS.

I am brining cucumbers for pickles and have a good deal of trouble in getting barrels to brine in. Can tanks be made of concrete and if they can give me some information how to build. WM. H. MARTIN.
Hanover Co., Va.

Yes; concrete tanks can be made for this purpose and be thoroughly satisfactory. Send to the Department of Agriculture, Washington, D. C., and ask them to send you the Farmers' Bulletin on Concrete Work. This gives full instructions on the subject. Ed.

PREPARING LAND FOR CORN—SOWING GRASS SEED—THOROUGHbred AND PUREbred—DRAINING LAND.

1. We have just finished fallowing a twenty acre field for corn. Shall we harrow it now or just before planting?
2. Can red top be sown on frozen ground successfully? If so, in what month?
3. What is the difference between purebred and thoroughbred stock.
4. How deep should a blind ditch be cut? The land is level and holds water, how would it do to sink a well where it settles the most and fill it up with bricks?

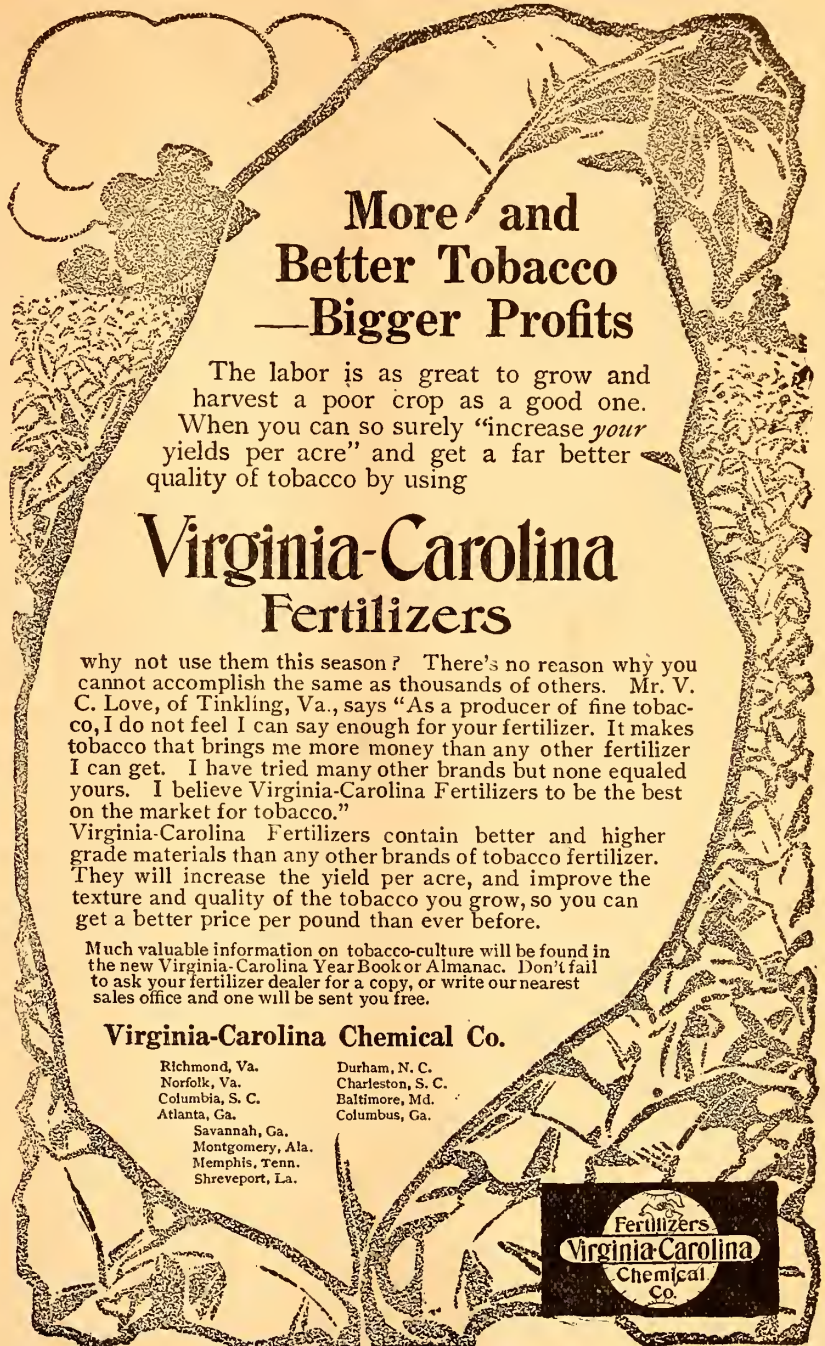
ARTHUR P. GIBSON.

Calvert Co., Md.

P. S.—The Southern Planter is always welcome in our home. It saves us from asking our neighbors advice.

1. We would leave the ground unharrowed for a time to allow the sun and air to penetrate it and dry and warm it, but care should be taken not to let this process go on too long to dry it out too much. Watch it, and when it is seen to be friable and in good working order, put on the harrows and make a fine surface mulch of soil to conserve the necessary moisture for the germination and support of the crop. From this time continue to work at intervals until the finest seed bed possible is made and then plant as soon as the soil is warm and the season permits.

2. We are strongly opposed to the practice of sowing seed of any kind on frozen ground. It is tempting Providence to thus waste seed. All seeds should be put into a well-prepared seed bed and be covered more or less deeply according to the size and char-



More and Better Tobacco — Bigger Profits

The labor is as great to grow and harvest a poor crop as a good one. When you can so surely "increase your yields per acre" and get a far better quality of tobacco by using

Virginia-Carolina Fertilizers

why not use them this season? There's no reason why you cannot accomplish the same as thousands of others. Mr. V. C. Love, of Tinkling, Va., says "As a producer of fine tobacco, I do not feel I can say enough for your fertilizer. It makes tobacco that brings me more money than any other fertilizer I can get. I have tried many other brands but none equaled yours. I believe Virginia-Carolina Fertilizers to be the best on the market for tobacco." Virginia-Carolina Fertilizers contain better and higher grade materials than any other brands of tobacco fertilizer. They will increase the yield per acre, and improve the texture and quality of the tobacco you grow, so you can get a better price per pound than ever before.

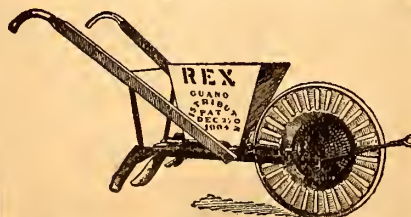
Much valuable information on tobacco-culture will be found in the new Virginia-Carolina Year Book or Almanac. Don't fail to ask your fertilizer dealer for a copy, or write our nearest sales office and one will be sent you free.

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acter of the seed and then they can be reasonably expected to grow. Sown on frozen ground or snow, a large proportion must necessarily perish.

3. "Thoroughbred" is the technical and proper description only of the race horse. All other perfectly bred animals of any breed are technically and properly described as "purebred," thus, a purebred Percheron horse, a purebred Shorthorn cow, or a purebred Berkshire hog is correct, and not thoroughbred.

4. The depth to which a drain or blind ditch should be cut depends on the natural water level of the land. Water underlies all land at some point and there stands at a level. If this point be too near the surface, the soil is water-logged and cannot produce crops, as it is impermeable by the air. To make such land productive, the natural water level must be lowered deep enough to leave at least two or three feet of soil permeable by the air. It is this underlying water which does injury to crops and not that which naturally falls upon the land except in cases of heavy floods. The object of draining, whether by tiles or by blind ditches, is to lower this water level and to do this the drain or ditch must be cut deep enough to go below the natural water level as only in that event can it lower this level of the water and dry the land. This depth can only be ascertained by cutting down into the land and observing where the water begins to flow from the sides of the ditch or hole cut into the hole or ditch and the bottom of the ditch and the out-fall of the same must be kept below this point for the work to be effective. To use the forcible and illustrative answer always given by an old drainer who used to work for us when we urged him to dig a deep ditch for his tiles, he replied, "Master, I will go deep enough to cut the throat of the water; never fear."—Ed.

CRIMSON CLOVER IN ORCHARD.

When is the best time to sow crimson clover in an orchard? I want to work the trees and at the same time do something to improve the land. How much per acre to sow it alone? How about sowing buckwheat in an orchard about July 1st? How much per acre? SAM'L S. GUERRANT. Franklin Co., Va.

Continue to cultivate the orchard until August and then sow 15 pounds of crimson clover per acre, if sown alone, and harrow in lightly. We prefer to mix some wheat, oats and rye with the crimson clover, as they are certain to make a cover crop if the crimson clover fails to stand as it sometimes will, notwithstanding the best of care in seeding. The grain protects the young clover during the hard weather, and adds to the vege-

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LEE'S PREPARED AGRICULTURAL LIME

Never fails to give good results when properly used. Wheat is now selling at a paying price, and from accounts of the present crop is likely to continue to maintain present prices.

The present troubles in Russia will, no doubt, reduce her exports, and the foreign demand will continue to be good. The use of \$3 or \$4 worth per acre will increase the yield eight to ten bushels per acre, thereby paying over 100 per cent. on the cost, besides improving the land and insuring a good stand and growth of CLOVER.

LEE'S SPECIAL WHEAT FERTILIZER.

Our sales for the season of 1906 were 62 per cent. larger than those of 1905. Those who have tried it bought more largely the next year, and say they have a better stand and growth of Clover and Grass than they have from any fertilizer they have ever used.

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FOR POTATOES, CABBAGE AND OTHER VEGETABLES.

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Millions of tons are used in Europe. It is the best and most lasting Fertilizer for Wheat, Grass and other crops on the market, having 16 per cent. Phosphoric Acid and 40 to 50 per cent. of Free Lime. It is a COMPLETE FERTILIZER.

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Pulls Stumps or Standing Trees.

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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. Established 1884.



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N. R. SAVAGE & SON :: RICHMOND, VIRGINIA

table matter in the soil when ploughed down. Sow 10 pounds of clover and 3 pecks of the grain mixture. Buckwheat adds nothing to the soil but vegetable matter when ploughed down, whilst the clover adds nitrogen also.—Ed.

ROTATION OF CROPS.

I think of adopting this rotation—plough sod for corn, sow crimson clover and rye at last working of corn graze clover and rye in the spring, then break up and sow cow peas, to be followed by wheat in the fall, and clover seed in the spring on the wheat. I particularly want to get good crops of red clover hay, and think of using lime.

Please comment on this rotation and tell me when you think I had better apply the lime to get most good from it, minimum amount I can apply with profit, and best method of applying it. How would it do to put on lime after corn is up and work in while cultivating the corn? I am engaged in dairy farming—shipping milk to Washington. Land is pretty fair; will produce 10 barrels corn per acre. Have been drawing manure from my stables on it all winter. You can readily see that I want good crops of clover and that I can use rye pasture in the spring and cowpea hay. If you will kindly give me the information I want in the March number of the Southern Planter, you will greatly oblige me. A SUBSCRIBER.

Fauquier Co., Va.

The proposed rotation will be a proper one and should result in giving you what you want and at the same time improve the land. The only suggestion we have to offer is that when you plough down the clover and rye pasture, which, by the way, would be a better one if you sowed some wheat

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BEEF, Perfected Red Turnip, earliest, best.
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ONION, Prizetaker, wt. 3 lbs. 1000 bush, per acre.
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S. T. BEVERIDGE & CO.

and winter oats with the rye, you should plough deeply and prepare thoroughly and use some acid phosphate, say, 250 pounds to the acre before sowing the cowpeas. By doing this you can save the cost and time of re-ploughing for the wheat. When you cut the cowpeas for hay do not cut close to the ground, but leave a good stubble and then apply the lime a ton to the acre on this stubble and cut in with a disc harrow run both lengthwise and across. In this way you will get a better seedbed for your wheat at less cost. Sow the clover when you sow your wheat and cover it with a light harrow or, if you have a drill with a grass seeder attachment, sow with the drill. Unless the winter should be a very severe one, the clover will stand and make a better and earlier crop than when sown in the spring. If it is killed out you can sow again in the spring. Use the lime fresh from the kiln and set on in lumps of about half a bushel at a place. Slake with water, half a bucketful to a heap will do, and spread with a shovel.—Ed.

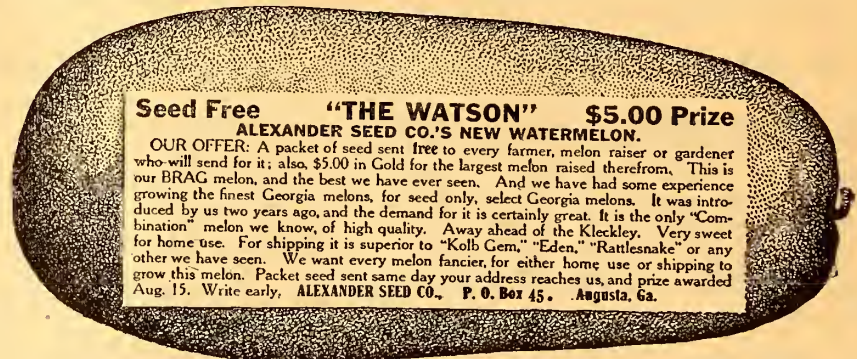
CRANBERRIES IN VIRGINIA.

May I, through your columns, bring to the attention of any one who may be interested, the great advantages offered by Princess Anne county, Virginia, for cranberry growing? There are along both sides of the North river thousands of acres of waste and cheap lands that grow these berries in abundance, wild. The land is naturally suited to their growth, and the fruit is perfect and keeps well. Transportation convenient, and lands well situated for drainage and culture. Should any one desire any information concerning this enterprise, write me, and I will do all I can to aid them.

Vine, Va.

A. O. BAUM.

We are glad to give publicity to this fact, as if the berries can be successfully grown in the South, there is no sense in our people buying this fruit from the North. We should grow them at home.—Ed.



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you can have by planting the James Ray Geraty Company's Frost-Proof Cabbage Plants. Guaranteed to stand 18 above zero without injury. Four hundred plants, express charges prepaid on Southern Express Company's lines, for \$1. Market gardeners in Tennessee and Kentucky are buying in orders ranging from 500,000 and 1,000,000 at a time.

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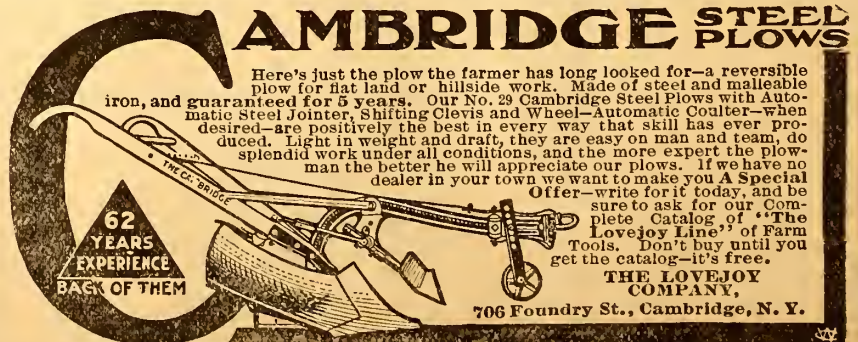
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C. M. GIBSON, Young's Island, South Carolina

WIND SUCKING HORSE.

1. Please advise me how to get a horse out of the habit of sucking wind. Two others are getting into that habit too, and please state how does that habit get on the horse. What I mean is, what makes the horse do it?

2. I have a number of hogs and one of them has been sick for four days and doesn't seem to get any better. She just lays all the time and seems to suffer with great pain in her head and blows very hard with her mouth wide open and will not eat anything.

ANDREW SHIPOS.

Prince George Co., Va.

1. Wind sucking is a bad habit acquired by many horses and is difficult to stop when once acquired. The cause of its acquirement is not certain, but if not stopped it often degenerates into roaring. Usually a wind sucker must have something upon which to fasten its teeth. The edge of the manger or a rail is generally the place chosen. To stop the practice, see that there is nothing in the stall upon which the horse can fasten his teeth. Feed out of bucket and take this away when through feeding. Some horsemen also advise fastening a strap tightly around the throat not sufficient to check normal breathing, but so tight as to prevent abnormal action of the windpipe.

2. The description of the ailment of the hog is too vague to allow us to form any opinion as to the disease. It is probably the result of cold.—Ed.

RINGWORM ON CATTLE.

I would be very glad to have a cure for ringworm on calves, as my calves are full of it.

CHAS. M. GETZ.
Shenandoah Co., Va.

In this issue you will find in a reply to another enquirer a remedy for ringworm.—Ed.

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HORSE EATING WOOD—SOY BEANS AND COWPEAS AS IMPROVERS OF LAND.

1. Please tell me what will prevent a horse eating wood. I have one that eats her feed box and gnaws all the wood in her stall.

2. Will soja beans enrich land as much as cowpeas?

W. B. PITTMAN.

Shenandoah Co., Va.

1. The eating of wood, dirt and other unnatural food is an indication that the horse suffers from indigestion in some of its many forms and the only cure for it is careful attention to feeding so as to bring the animal gradually into a healthy condition. Give a dose of aloes, one ounce in a ball, or a pint of linseed oil, and follow with an alkaline tonic made up of baking soda, powdered ginger and powdered gentian in equal parts. Mix and give in tablespoonful doses twice a day before feeding. It is best given dissolved in half a pint of water and given as a drench. The most important thing is to attend to regular feeding with good, sound feed.—Ed.

PARTIAL EVERSION OF THE WOMB OF COW.

I have an extra Guernsey cow. When she lies down her womb comes down and nearly out. Can you tell me the cause of it and if there is any cure for it, and if she will breed any more?

A SUBSCRIBER.

Warwick Co., Va.

The partial eversion of the womb is caused by the failure of the womb to contract after calving. When the womb properly contracts the mouth of the organ becomes so narrow that it cannot protrude. When it fails to contract part of the womb falls into the open internal cavity and, under pressure from the intestines and straining, is forced backward and out of the vulva. This is the condition of your cow. She should be tied in a stall with her hind feet much higher than her front feet and the protruding part of the womb be gently pushed back into its proper place. Before doing this, douch the protruding part with cold water to cause the blood to flow out of it and allow it to contract. The retention of the womb after it is returned can best be accomplished by tying a truss around the cow to hold in place a triangular plate of metal placed around the vulva, and thus keep it nearly closed. If there is straining to force it out again, this should be controlled by giving two or three ounces of laudanum. With the truss property adjusted to keep the metal plate in place and the hind parts kept higher than the front, the opening into the womb will gradually contract and the trouble cease. Give a laxative diet. A cow which has had this trouble should not be bred again, as the

Johnston

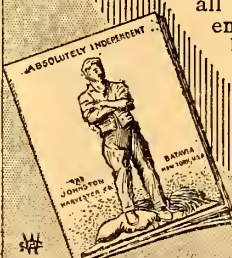


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The Cambridge Reversible Sulky Plow is the highest type of plow of the twentieth century—constructed on correct, scientific and mechanical principles. It is the result of a constant endeavor to produce a perfect riding plow, and has 62 years experience in plow making back of it. The demand of the times has been for a better riding plow—the Cambridge meets that demand and only needs to be tried to convince the farmer that it is the superior of any riding plow ever before produced. It will do splendid work equally well on level land or on the hill-side; will leave the soil smooth and free of ridges and dead furrows; works with lighter draft than any hand plow doing the same work—easy on man and team. Made in two sizes and from the best malleable iron and high grade steel; improved and extra heavy steel wheels with dust cap and removable chilled boxes. Easy to manage, always under perfect control.

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 YEARS
 EXPERIENCE
 BACK OF THEM**

**SUCCESSFULLY OPERATED
 BY ANYONE WHO CAN
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You'll want to know all about the Cambridge before you buy a new plow. Write today for special circular describing its construction and working points. We'll send it free also complete catalog of "The Lovejoy Line" of Farm Tools that will interest you. If we have no dealer in your town, we want to make you a Special Price Offer that will save you some money. Be sure and get price and circular before you buy a riding plow—when you buy, you might just as well buy the best. Write today.

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 Two
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GET THE GREATEST HARVEST

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The loss of golden hours in the field means the loss of golden grain and the loss of golden profits.

So the profits that you make from your grain depend upon your harvesting machines.

Trouble and tinkering, breakdowns and delays through unreliable machines would mean the loss of time and money—would mean needless expense and worry.

You cannot afford to risk your profits on doubtful harvesting machines.

And there is no reason why you should.

Because you know the machines you can always depend upon.

Since the click of the first reaper—more than two hundred concerns have offered harvesting machines to the farmers.

Out of these two hundred and odd, over one hundred and ninety, up to the present time, have disappeared because their machines were not right.

This means that thousands of farmers tried such machines, lost money through them and condemned them.

Through these years of "testing" the farmers found the best and placed their greatest confidence in six machines.

You know the machines that have earned first place through this test of time.

And you know that the

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hold their undisputedly supreme position to-day—

—Because they are right—

—Because they have always done the best work—

—Because they have always satisfied their users—

Because they have proved by many years of use that they can always be depended upon.

That is the reason (there can be no other) they have earned the approval of the farmers.

This means that they have withstood all the tests of all conditions of harvest fields everywhere.

It means that they are built on the right principles.

It means that, of the numberless types of harvesting machines put out in the years past, these embody the ideas that have been most successful in actual work.

It means that they are the net result of all the good that has been developed in a half century's experience and experiment and that there is no feature about them that is untried or experimental.

To-day these machines are more popular than ever.

This means that they have steadily led in improvements from year to year, thus holding the place they have established as the standard.

In order that these machines shall continue to be the best, the International Harvester Company pays more than \$350,000 a year to more than two hundred men in its Department of Improvements.

By working together the manufacturers are able to erect and maintain Experimental Shops and Laboratories to work out every principle and detail of harvesting machines, which would be far too costly for any one single manufacturer working alone.

Thus this company is able to discover and devise better methods of operation, better principles of construction so as to make these machines more efficient, more easily operated—better for you and better for your pocket-book.

This company and the interests it represents have spent many millions for improvements and no single manufacturer working independently could afford to pay even a fraction of the sum this company pays for the greatest inventive genius and the highest mechanical skill necessary to produce the most improved harvesting machines.

The demand for them is so great that it enables the International Harvester Company to own its own coal and iron mines, thus securing the best fuel and ore; its own iron and steel mills, thus producing the best iron and steel, and its own forests and saw-mills, thus securing the best lumber.

For the same reason this company is able to select the best of all raw materials and maintain factories equipped with machinery of the highest type, manned by workmen of the greatest skill.

Thus this company is able to produce a quality of construction, which could not possibly be maintained to supply the comparatively small demand which would come to an individual manufacturer.

In materials, workmanship, design and mechanical principle, in every feature of construction, the International line has a potent reason for its superiority and the satisfaction it gives you.

Call on the International dealer and secure a catalogue.

If you do not know an International dealer, write us, and we will be glad to give you the address of the one nearest you.

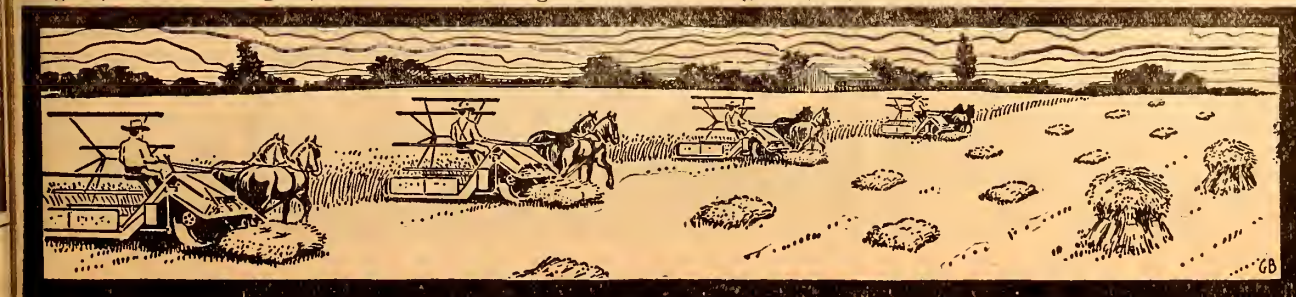
Equal in importance to a perfect machine is perfect twine. The most perfect twine made may be had in Champion, McCormick, Osborne, Deering, Milwaukee, Plano and International, sisal, standard, manila and pure manila brands.

INTERNATIONAL HARVESTER COMPANY OF AMERICA

(INCORPORATED)

CHICAGO, U. S. A.

International Line:—Binders, Reapers, Headers, Header-Binders, Corn Binders, Corn Shuckers, Corn Pickers, Huskers and Shredders, Corn Shellers, Mowers, Hay Tedders, Hay Rakes, Sweep Rakes, Hay Loaders, Hay Stackers, Hay Balers, Feed Grinders, Knife Grinders, Cream Separators, Gasoline Engines, Pumping Jacks, Manure Spreaders, Weber Wagons, Columbus Wagons, New Bettendorf Wagons and Steel King Wagons, and Binder Twine.



chances of a complete eversion of the womb at the next calving are more than probable.—Ed.

ALFALFA GROWING.

I have a field that I want to get in alfalfa. The summer of 1905 it was in corn—no manure used. After the corn was off it was ploughed and seeded to wheat, using 300 pounds to acre of 2-8-5—made 20 bushels to the acre. It was put in wheat again fall of 1906, and made 22 bushels to the acre. In the spring of 1907, seeded 20 pounds of alfalfa to the acre on the growing wheat. When the wheat was cut the alfalfa showed a good catch in spots over the field, but very poor and weak in others, although the seed was carefully sown, and the crabgrass and white clover soon killed out the weak places. Even where the stand was thick enough, it never grew high enough to cut except in one corner, where poultry had been cooped for several years previous, and there it grew sixteen inches high. Now, I have given the field a good coat of stable manure this winter and am going to plough it under as soon as the land is dry enough and have at hand a lot of oyster shells, which I intend to burn and apply 20 bushels to the acre of the lime to the ploughed land. At our Farmers' Institute recently, Mr. Edward Van Alstyne, of Kinderhook, N. Y., said: "Do not use lime with manure, as the action of the lime on the frish manure will not be beneficial.

Please advise me if you think my proposed plan is all right. After ploughing and liming intend to put the soil in perfect condition. How early would you sow the alfalfa to get it well started ahead of the crabgrass? Soil is a moderately stiff gray loam, but well drained. Please advise me as soon as possible, as the time is at hand for me to act. E. P. READ.
Talbot Co., Md.

In this issue, in reply to another party, you will find our advice and opinion on the proper way to proceed in order to grow alfalfa. It is quite evident that your land is not sufficiently fertile to raise the crop; this was most forcibly shown by the fact that where the land was rich, where the poultry pen had been there, and there only you grew good alfalfa. The giving of a dressing of manure to the field is not going to make it sufficiently rich. It wants this and more. It should be both limed and have plenty of bone meal applied. The advice of Mr. Van Alstyne not to apply both lime and manure at the same time is all right. We have always so advised. But there is no reason why, after you have applied the manure and worked it into the land and let it lay for a week or two, that you should not then apply lime and harrow it in lightly and then proceed to sow a crop on it. You

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If you are planning to do any building whatever, or to make improvements, write us fully what your needs are.

We will send you estimate of what job will cost you at lowest cash prices.

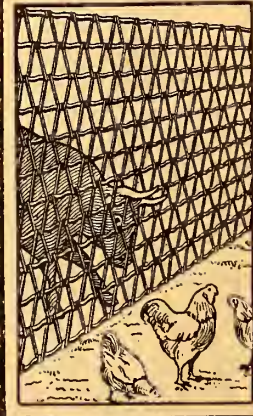


High Grade Door 80¢
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Your banker, or any banker in Davenport, Iowa, our home, will satisfy you that we are thoroughly responsible. Our catalogue will explain everything to you. Write for it today. You will receive it by return mail, postpaid.

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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

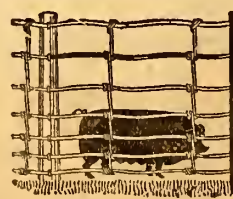
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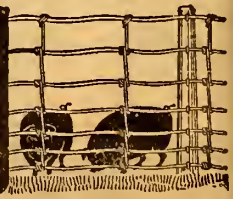
COILED SPRING FENCE COMPANY, Box 52, Winchester, Indiana.



Stability of Page Fence

Every Page Fence is woven of large, strong, high-carbon spring-steel wire of our own manufacture. Its power of resistance is greater than any other fence, because every horizontal strand is coiled spring and acts accordingly under strain. This Spring keeps Page Fence always rigid at top and bottom. There are other features you should know about Page Fence—write for catalog and folder.

Page Woven Wire Fence Co., Box 5116, Adrian, Mich.



cannot get ahead of the crabgrass and other weeds sowing in the spring. They will beat the alfalfa every time. Spend the summer in getting rid of them or, if you do not wish to lose a crop in doing this, plant in cowpeas and this crop will smother them, and cut this off for hay and then seed the alfalfa in August or September. Never seed alfalfa with a grain crop. Sow alfalfa alone in the South.—Ed.

DIFFICULTY IN CHURNING.

I was advised by a subscriber to your paper to write you concerning my cow. She will be fresh in about three months, and for four weeks I have not gotten any butter from her cream. I have never had any trouble of that kind with her before, and this will be her third calf since I have owned her. Will you kindly tell me what the trouble is, and oblige an admirer of the Southern Planter. S. H. TEAGLE. Gloucester Co., Va.

This enquiry comes from a person whom we do not find on our subscription list. We do not undertake to reply to queries from persons who do not think The Planter worth 50 cents per year to them. It is surely little enough to pay to get the paper and have the benefit of our instruction and advice. Thank you's and admiration go a small way in paying printers' and paper makers' bills. However, we will make an exception in this case. The cause of the failure to secure butter is the advanced period of lactation of the cow and the fact that she is now carrying another calf near at maturity for calving. The butter fat globules in the cream are small and few in number and do not separate readily from the milky portion nor gather together readily in such cases. Nature takes most of this matter for the support of the growing foetus. Sometimes the addition of some water milk-warm to the cream will help to secure the better separation of globules and their gathering, but you cannot expect to get both butter fat and a strong, healthy calf. This end is only secured by inherited tendency to a long period of lactation through selected breeding.—Ed.

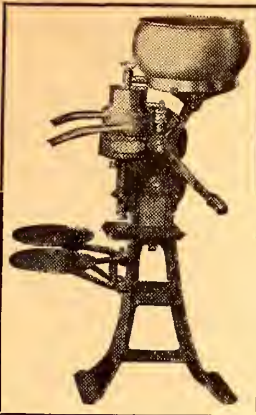
FERTILIZER FOR DARK TOBACCO.

Will you kindly give me in March issue a formula for dark tobacco on medium upland in Buckingham county, Va.? I have from 40 to 50 bushels of dry, pulverized cow droppings, free of litter scraped up and put under shelter last summer. I wish to know how much ammonia, potash and phosphate to mix with this mass to apply to four or five acres of tobacco land for best results.

Land had crop of peas, soja beans and sorghum cut for hay last summer. OLD SUBSCRIBER.

Buckingham Co., Va.

We take it that your land is very



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IN EVERY
FEATURE**

Have you seen and examined the New and Improved 1908 DE LAVAL Cream Separators? If not, and you own one or more cows don't further hinder your best interests by delaying longer but let us give you a free demonstration in your own home at once. You will marvel at the mechanical perfection, the wonderful simplicity and convenience of these new machines. These new machines show improvements in every feature, from the supply can to the base of the machine, and mark the greatest move forward in separator construction since the invention of the first practical separator by Dr. De Laval in 1878. If you have milk cows you cannot afford to be without one. The new De Laval skims closer, has greater capacity, operates easier and is more ideal in every way than De Laval machines have been even in the past. The Improved De Laval is actually ten years in advance of any other separator made to-day. There are ten new styles, ten new capacities and ten new prices. There is a machine for every dairy, from the smallest to the largest and at a price that will fit every pocket. Don't regret later that you didn't see the De Laval before you bought a machine but write us to-day for our handsome new catalogue describing the machines in detail and a free demonstration in your own home. You will be surprised. Don't delay.

THE DE LAVAL SEPARATOR CO.

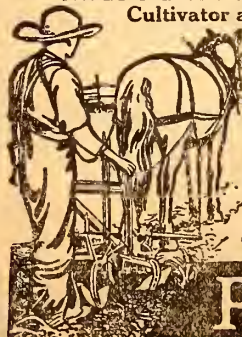
RANDOLPH & CANAL STS. CHICAGO	General Offices :	173-177 WILLIAM STREET MONTREAL
1213 & 1215 FILBERT ST. PHILADELPHIA	74 CORTLANDT STREET, NEW YORK.	14 & 16 PRINCESS STREET WINNIPEG
DRUMM & SACRAMENTO STS. SAN FRANCISCO		107 FIRST STREET PORTLAND, OREG.

The tools that increase results

No other farm or garden tools do such good work or so much work in so short a time, as Planet Jrs.

Strong and easy-running. Practical and lasting, and thoroughly guaranteed.

No. 25 Planet Jr. Combined Hill and Drill Seeder, Double Wheel Hoe Cultivator and Plow



opens the furrow, sows the seed accurately in drills or hills, covers, rolls, and marks out next row in one operation. A perfect Double Wheel Hoe, Cultivator and Plow.

No. 8 Planet Jr. Horse Hoe and Cultivator

will do more things in more ways than any other horse hoe made. Plows to or from the row. A splendid hiller; no equal as a cultivator.



Write today for our new illustrated catalogue of 1908 Planet Jrs—45 kinds—a tool for every gardener's need.
S L Allen & Co Box 1107 X Philadelphia Pa

PLANET JR.

TELL THE ADVERTISER WHERE YOU SAW HIS ADVERTISEMENT.

much the same type as that of the Tobacco Experiment Farm in Appomattox county and that therefore the conclusions reached at that place will be a safe guide for you. The experiments there made were considered and the conclusions reached were pointed out in our issue for May, 1907, page 440, to which we invite your attention, as also to an article on page 543, June, 1907 issue, Work for the Month. The fertilizer which gave the best results was made up of 1,200 pounds of ground fish 150 pounds of nitrate of soda, 100 pounds of bone meal, and 250 pounds of sulphate of potash. This quantity was applied to an acre of land and cost \$32.80. The acre made 1,335 pounds of tobacco, which sold for an average of 8.75 cents per pound. The material—dried, pulverized cow dung—which you have on hand and desire to use in fertilizing the land will go but a very small way in reducing the quantity of the constituents of the fertilizer above named, which it will be necessary to buy in order to make a like fertilizer. Fresh cow dung analyzes as follows. Nitrogen, 0.29 per cent.; potash, 0.10 per cent.; phosphoric acid, 0.17 per cent. The nitrogen in your dung will now have practically all gone in the drying process; the potash and phosphoric acid are there still. You will have two pounds of potash and 3.40 pounds of phosphoric acid in a ton of it. The fertilizers found to give the best results had 125.85 pounds of phosphoric acid in the quantity applied, of which 13.53 pounds were soluble and reverted and therefore more or less immediately available. Of potash, the fertilizer used had 130 pounds available whilst of nitrogen the quantity of fertilizer applied supplied 30 pounds. Had the cow manure been fresh and mixed with litter it would have been much more valuable in producing the tobacco, as it would have supplied humus to the soil and given microbic life to it. As it is, it is practically only so much dry vegetable matter with a little potash and phosphoric acid in it. The fact that the land grew peas and soy beans last year will enable you to economize on the nitrogen to be bought.—Ed.


HELPED HIM.

A physician out West was sent for to attend a small boy who was ill. He left a prescription and went away.

Returning a few days later, he found the boy better.

"Yes, doctor," said the boy's mother, "the prescription did him a world of good. I left it beside him, where he could hold it in his hand most of the time, and he can almost read it now. You didn't mean for him to swallow the paper did you, doctor?" Harper's Weekly.

YOU MUST CLEAN YOUR CREAM SEPARATOR
TWICE A DAY



Moral—Buy a Simple Machine.

No cream separators made are more easily cleaned than the two simple, close-skimming I. H. C. cream harvesters, Dairymaid and Bluebell.

The two brushes which go with the machines, and a pan of hot water, will enable you to thoroughly clean your separator in short order.

You can get at every part of the bowl and tinware with the brush.

You can't make too much of the matter of cleanliness in using a cream separator. It avoids odors and taints. It enables you to make high-grade products.

It is the worst kind of a mistake not to buy a separator anybody can clean easily and quickly.

The Dairymaid and Bluebell cream harvesters are not distinguished merely for their easy cleaning. They have every requisite to make them

right working and valuable to their owners.

They skim to a trace; that is, they get all the butter fat down to the thousandth part.

Their wonderful simplicity makes them most durable. One of the principal reasons why they are so popular with users is that it is almost impossible for them to get out of order.

The Dairymaid is a chain driven machine. The Bluebell is driven by simple gearing.

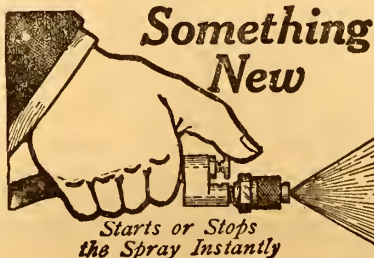
If you need a cream harvester, call on any International local agent and talk the matter over with him. He will supply you with catalogs and full particulars. Or, if you prefer, write direct to the Home Office. You will be interested in securing a copy of "Development of the Cream Separator" or colored hanger which will be mailed on request.

INTERNATIONAL HARVESTER COMPANY OF AMERICA, CHICAGO, U. S. A.
(Incorporated)

DON'T BUY A FENCE

until you have investigated the merits of SUPERIOR FENCES. Made of 8, 9 and 10 HIGH CARBON COILED SPRING STEEL WIRE, locked with SUPERIOR HEAVY WEIGHT LOCK — All styles, heights and spacings — unquestionably the BEST FENCE made for all purposes. Also a very swell line of STEEL GATES both plain and ornamental. Cheaper than wood. PRICES LOW. EASY TERMS. Write for illust'd catalog.

THE SUPERIOR FENCE CO. Dept. J CLEVELAND, O.



Something
New

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.

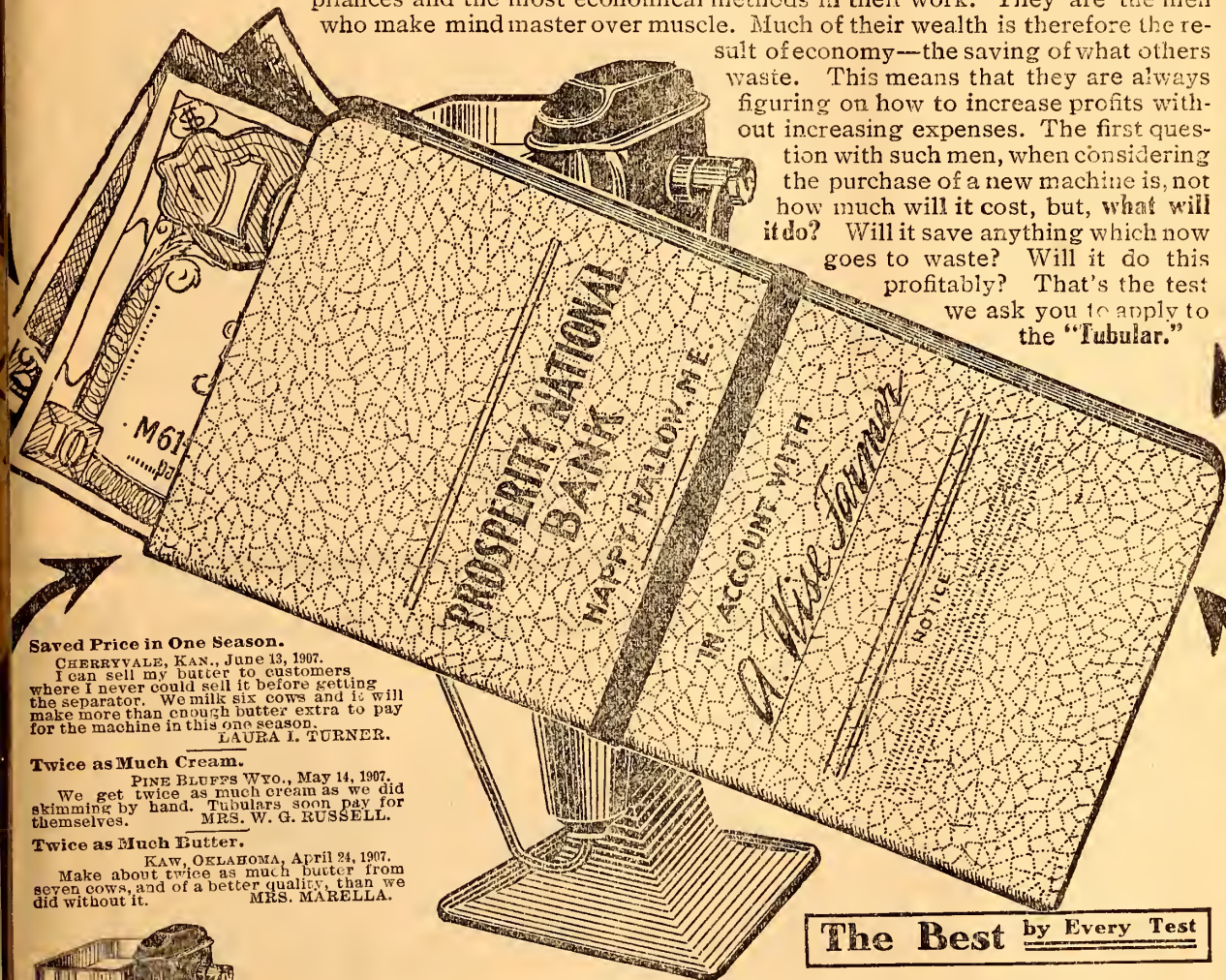
AGENTS WANTED

Rochester Spray Pump Co., 21 East Ave., Rochester, N. Y.

Back of the Bank Book

Is the "Tubular" Cream Separator

EVERY dollar of the farmers' and dairymen's money in the banks of this country represents hard labor and wise economy. It represents head work as well as hand work. But it is a fact that the farmers and dairymen whose balances in the bank are the biggest are not always the men who work the hardest with their hands—nor even the ones who farm the most acres or milk the most cows. They are mostly the men who make every move count by employing the latest appliances and the most economical methods in their work. They are the men who make mind master over muscle. Much of their wealth is therefore the result of economy—the saving of what others waste. This means that they are always figuring on how to increase profits without increasing expenses. The first question with such men, when considering the purchase of a new machine is, not how much will it cost, but, what will it do? Will it save anything which now goes to waste? Will it do this profitably? That's the test we ask you to apply to the "Tubular."



Saved Price in One Season.

CHERRYVALE, KAN., June 13, 1907.
I can sell my butter to customers where I never could sell it before getting the separator. We milk six cows and it will make more than enough butter extra to pay for the machine in this one season.
LAURA I. TURNER.

Twice as Much Cream.

PINE BLUFFS WYO., May 14, 1907.
We get twice as much cream as we did skimming by hand. Tubulars soon pay for themselves.
MRS. W. G. RUSSELL.

Twice as Much Butter.

KAW, OKLAHOMA, April 24, 1907.
Make about twice as much butter from seven cows, and of a better quality, than we did without it.
MRS. MARELLA.

The Best by Every Test

We ask you to apply this test because it will be to your interest to do so. If the "Tubular" will increase your profits without increasing your expenses you ought to have it. It will. It will make every cow you milk earn more money. That's why we want to put a "Tubular" back of your bank book. Thousands of farmers and dairymen testify to the merits of our machines. They say the "Tubular" pays for itself in a short time. When it has paid for itself all that it saves is clear profit for there's no expense—it won't cost you a dollar a year for repairs. We've built it so that it can't.

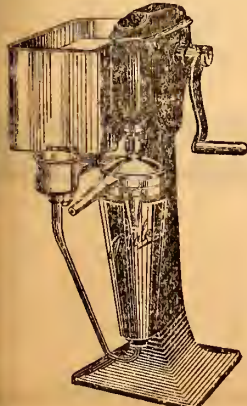
If you are economically inclined; if you want to save money and increase your bank account here's your chance. Our valuable book, "Business Dairying" will show you how, and our latest catalog tells all about the "Tubular." We'll send them both free if you will write today, ask for book No. 290.

The Sharples Separator Co.,

WEST CHESTER, PA.
San Francisco, Calif.

Toronto, Canada

Chicago, Illinois



TWO LABOR AND TIME SAYING FARM IMPLEMENTS.

On farms all over the country, the firm name, Hench & Dromgold, stands for all that is latest and best in farming machinery and tools. In this connection their new catalogue will prove of interest to farmers, as there are but few things for which the farmer spends money that pay such sure and large profits as good machinery.

This catalogue, which is sent free upon request to The Hench & Dromgold Co., Mfrs., York, Pa., will be found helpful in studying how to increase the profits of farming by decreasing expenses. It also describes two farm implements that are used by hundreds of progressive farmers—Hench's 20th Century Steel Ball Coupling Pivot Axle Cultivator, with double row corn planter and fertilizer attachment complete in one machine—a wonderful improvement in cultivators, combining every possible movement of gangs and wheels required, and the Spring Tooth Harrow, on wheels. This Harrow, which is adaptable to any soil, is claimed to be the lightest made and to save a half horse power when in use. Hench's Cultivator and Harrow were both awarded Gold Medals at the St. Louis World's Fair.

Write today for catalogue and learn all about these two great labor and time saving farm implements.

Hening & Nuckols, Implement Dealers, Richmond, Va., announce a full and complete line of seasonable, up-to-date, labor saving farm machinery.

BEFORE YOU BUY YOUR NEW BUGGY.

Write to the Ohio Carriage Manufacturing Co., Columbus, Ohio, for their new 1908 192-page Vehicle and Harness Catalogue.

You don't have to buy your buggy from them if you don't want to, and your sending for their catalogue will not obligate you to buy their goods, but if you want to get posted, if you want to find out just how buggies are made, what they are made of, and the lowest price at which they can be sold, namely, the wholesale price from manufacturer to you, get this large catalogue and post yourself before you spend your money.

This large catalogue will quote you the prices at which buggies should be sold—that is, the rock-bottom, wholesale manufacturer's price to you, without any middleman's profit between—the prices that will save you from 33 1-3 to 50 per cent.

It can do no harm and will only cost you a penny for a postal or a two-cent stamp to write for this catalogue. And if you do not want to buy from this Company after you have received their catalogue, you can place your order anywhere you please and wherever, in your opinion, you will get the

No Tin Caps Required With

Vulcanite ROOFING

Making an Old Roof Better Than New

No matter how badly decayed the shingles or tin on the old roof Vulcanite Roofing restores the roof and makes it better than new, because

Vulcanite Roofing is better than shingles—better than tin. It costs considerably less in the first place, and is cheaper in the long run because it does not require annual re-painting and constant repairing to keep it in good order. Vulcanite Roofing is made from a mineral substance—wears like the everlasting rocks and is wind, water, weather, acid and fire proof—won't freeze in cold weather or crack and peel off in dry weather. It is ready to lay and can be easily laid by anyone who can drive nails—packed in each roll are the nails and cement, all ready to begin business—nothing more to buy.

For every building on the farm that needs a good roof there is nothing that compares with Vulcanite Roofing in price, appearance and wearing qualities—it makes a handsome roofing—a better building. Try it on the new roof and save repair bills—on the old roof and make it better than new. For more proof write for samples and booklet—“The Right Roofing and the Reasons Why” giving a lot of good reasons why Vulcanite is right. The are both free.

Ask your dealer for Vulcanite, if he does not handle it, write to us.

Birmingham Supply Co., Dept. 39
 2014 Avenue A., Birmingham, Ala.
 7 N. Forsythe St., Atlanta, Ga.

The Celebrated DeLoach Mill

The World's Standard for 20 Years

Saw Your Own Lumber

For lumber is lumber nowadays, and you can do it better than the other fellow, with our help.

We Set the Pace—Others do the Best They Can

A 15-year-old boy can operate successfully. Two hands over 5,000 feet per day. 15,000 mills in use the world over.

Variable Feed, Friction Set Works, Automatic Steel Triples, Dogs and Diamond Track products results impossible with other mills. Send for catalog of Saw Mills up to 20 H. P., Steam Engine and Boilers, Gasoline Engines, Portable Corn and Feed Mills, Planers, Shingle Mills, Wood Saws and Water Wheels. Prompt shipment and we pay the freight.

DeLOACH MILL MFG. CO., Box 265, BRIDGEPORT, ALA

The YORK Improved Weeder

Write and let us tell you more about Weeders.

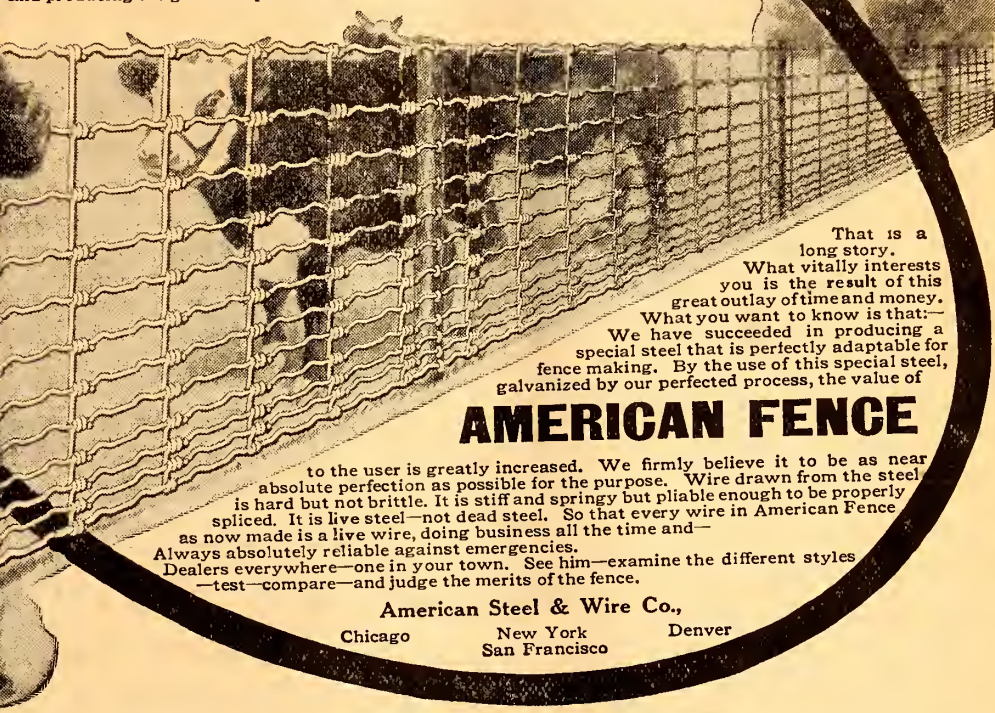
Strength of frame and flexibility of teeth are combined in the York Improved Weeder. The teeth are made of square spring steel with round points. Being narrow they do not injure the plants. No clogging. Ask your dealer to show you The York Improved Weeder, examine it carefully, and you will see that 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 Grain Drills always give satisfaction—durable, perfect in operation. Write for our free catalogue.

SPANGLER MFG. CO., 504 N. Queen St York, Pa.

AMERICAN FENCE

Our Special Hard--Stiff--Springy--LIVE Steel

The development of American Fence. The years of experimenting. The hundreds of thousands of dollars which we have invested in perfecting machinery and producing the grade of special steel to make American Fence what it is today.



That is a long story. What vitally interests you is the result of this great outlay of time and money. What you want to know is that:— We have succeeded in producing a special steel that is perfectly adaptable for fence making. By the use of this special steel, galvanized by our perfected process, the value of

AMERICAN FENCE

to the user is greatly increased. We firmly believe it to be as near absolute perfection as possible for the purpose. Wire drawn from the steel is hard but not brittle. It is stiff and springy but pliable enough to be properly spliced. It is live steel—not dead steel. So that every wire in American Fence as now made is a live wire, doing business all the time and— Always absolutely reliable against emergencies. Dealers everywhere—one in your town. See him—examine the different styles—test—compare—and judge the merits of the fence.

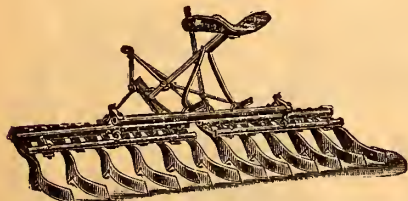
American Steel & Wire Co.,

Chicago New York Denver
San Francisco

best value for your money, but be fair to yourself and post yourself fully on all prices before you do buy.

Address, The Ohio Carriage Mfg. Co., H. C. Phelps, Pres., Station 294, Columbus, Ohio.

A SEASONABLE SUGGESTION.



The time has come when our readers must be getting ready for the work of spring. They will have to look over their implements and make sure that they are equipped to proceed with the preparation of their seed beds, and we have a suggestion to make to those who find themselves in need of a harrow or want to get one that will do better work than their old one.

In either case we suggest that our readers write to Duane H. Nash, Inc., Box 19, Millington, N. J., and request

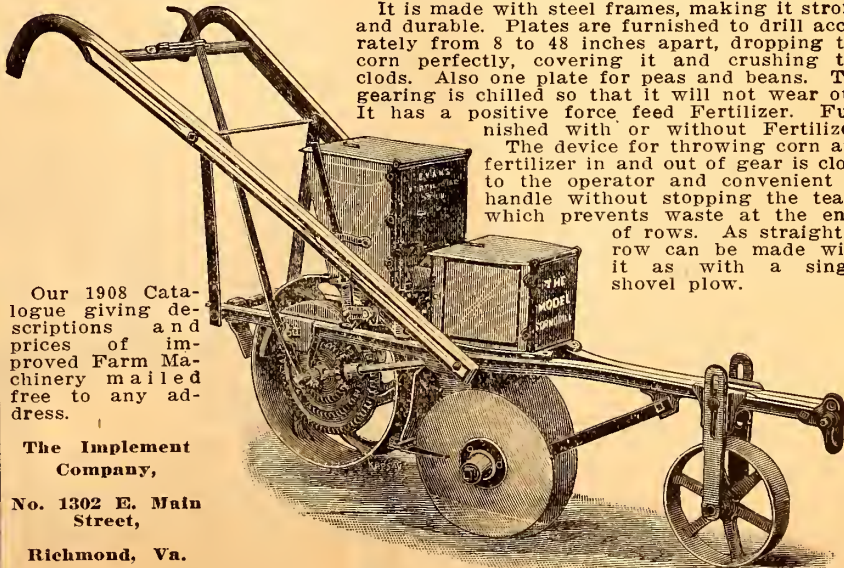
Evan's "Model" Disk Corn Planter for Corn and Peas.

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 1908 Catalogue giving descriptions and prices of improved Farm Machinery mailed free to any address.

The Implement Company,
No. 1302 E. Main Street,
Richmond, Va.



When corresponding with our advertisers always mention Southern Planter.

a copy of their booklet describing the now famous "ACME" harrow, the harrow that figures, we dare say, in the writings of more authorities on the subject of seed bed preparation than all other harrows combined.

YET HE WISHED HIM WELL.

"Between emotionalism and formalism in religion," says a Washington clergyman, "there is a golden mean—a reflection that came to me recently upon the conclusion of my remarks to a colored congregation in Richmond.

"I had invited an aged deacon to offer prayer: 'O Lord,' prayed he, 'gib dis pore brudder de eye of de eagle, dat he spy out sin afar off. Glue his hands to de gospel plough. Tie his tongue to de line of truf. Nail his yere to de gospel pole. Bow his head 'way down between his knees, O Lord, an' fix his knees 'way down in some lonesome, dark, and narrer valley, where prayer is much wanted to be made. 'Noint him wif de kerosene ile of salvashun, an' set him on fire!'"—Harper's Weekly.

ENQUIRERS' COLUMN,

(Detailed Index.)

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Genasco Ready Roofing

The only roofing worth having is one that stays waterproof.

And the only roofing that stays waterproof is made from the great natural waterproofer—Trinidad Lake Asphalt.

Ask your dealer for Genasco. Don't accept a substitute. Write for Book 62 and samples.

THE BARBER ASPHALT PAVING COMPANY

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

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Merchants National Bank,

RICHMOND, VIRGINIA.

Virginia's **STRONGEST** National Bank.

THE BEST BANK FOR FARMERS
and Country Merchants.

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MAIL US YOUR DEPOSITS

If you desire modern, progressive service, and at the same time absolute safety for your funds, This bank has the largest surplus and profits of any bank in Virginia, which demonstrates the conservative methods and liberal treatment to its patrons. One dollar starts an account

Let us hear from you to-day. We pay 3 per cent. compound interest in our SAVINGS DEPARTMENT.

PLANTERS NATIONAL BANK, Richmond, Va.

G.W.E.

Try Mine With the Money in Your Own Pocket Nothing to Pay Down to Try My Wagon Box Spread-er

Bill Galloway Says

For You to Get Your Pencil Now and Write Him for His New, Big, 1908 Free Book About Fertilizing and the Red Hottest Spreader in the World.

Get your name and address down to me now and I'll prove to you that you can't afford to be without one of my Galloway Wagon Box Manure Spreaders. I'll prove it and make you bound you won't have any other kind. That's the idea. In fact, it's the only practical wagon box manure spreader made today. Worth \$25.00 to \$50.00 more than any other. Is the only endless apron force feed spreader made and is 5 times as durable as any other spreader made. Is the lightest draft—will save your horses—save half your time or your men's time—get you larger and better crops. Pay for itself quickly. Let me make you the first one in your district—my Special Money Making Proposition. My letter and Free Spreader Catalog will tell you all the superior points—splendid construction and about the practical seven exclusive patented parts of my Galloway Wagon Box Spreader and about my Complete Spreader. I'll make you a personal proposition that you'll be sure to take me up on when you read my new, Free Book for 1908.

(Get Our 30 Days Special Freight Prepaid Proposition)

GALLOWAY

Endless Apron Force Feed Wagon Box Attachment Manure Spreader—Fits Any Wagon Truck. What do you know about spreaders? I can hear you say "Just about the average." That's it. That's why I want to talk to you. There are about 15 Red Hot Facts I'll send you proof of in my Free Book with 100 or 200 other points that will "put you wise" to "average" spreader weak spots. I've had all the spreaders made tested to work beside mine. I tell you how in my Free Book. Now, I want you to investigate first—try my Galloway 30 Days Free next—and buy last. That's my way. Buy when you are satisfied. My special proposition to you comes in my letter to you with my Big, Free 1908 Book. Spend one cent now to save \$50.00 by writing me a postal—or enclose the free coupon above in an envelope, and get your name and address down here to me now—today so I can send you a thousand Red Hot Facts about Fertilizing—Money Saving—Money Making—and the practical "horse sense" proof on the manure spreading proposition.

**William Galloway, Pres.
William Galloway Co.
219 Jefferson St., Waterloo, Iowa**

Write Your Name to Me Here Tear Out and Mail Today

William Galloway,
219 Jefferson St., Waterloo, Iowa.
Send me your Big, Free Galloway
Spreader Book for 1908.

Spend 1 Cent To Save \$50.00

Name.....
P O.....
State.....



30 Days FREE Trial

Gold Bond \$25,000.00 Guarantee

Get My Special Proposition Price

Read What This Man Says:
Claremont, Minn., 12-20, '07.
Mr. Wm Galloway, Waterloo, Ia.
Dear Sir.—The spreader I bought of you last spring is a Grand Spreader. I have spread all kinds of manure—even hard, frozen chunks and it scatters everything. You can't break it. Wishing you a prosperous new year, Yours truly, D. HISSAM.

INCREASED PROFIT IN CORN RAISING.



S. L. Allen & Co. issue a very interesting catalogue about the Planet Jr. tools, and they are sending it to everybody who writes for it. It is liberally illustrated, not only with pictures of their tools, but also with photographic scenes showing how the tools are used in the different steps of crop raising. Write for one of these catalogues, whether you want to buy farm machinery or not. Address, S. L. Allen & Co., Box 1107X, Philadelphia. A postal will do.

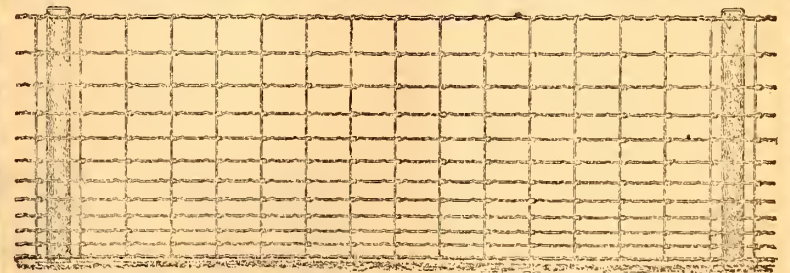
Charleston Co., S. C., Nov. 9, '07.

I certainly would not like to be without the Southern Planter in my home since the whole family has become so fond of its interesting pages. It is a strong paper and, above all, absolutely clean.

J. B. SMITH.

Stands Like a Stone Wall

Turns Cattle, Horses, Hogs—Is Practically Indestructible



AMERICAN FENCE

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,

1302 E. MAIN ST.,

RICHMOND, VA.

TELL THE ADVERTISER WHERE YOU SAW HIS ADVERTISEMENT

NOTES FROM BURKE'S GARDEN.

Nothing but farm-raised grain and foodstuffs are used in the development of Burke's Garden breeding stock. Hence we do not compete for cups offered by makers of fancy mixtures nor do our birds, when sold to others who don't see the wisdom or profit in their use, suffer and fall to go on and give satisfactory results through lack of such on practically all farms.

When you get a bird or beast from Burke's Garden you will see at once that its bringing up has taught the virtue of independence and liveability. There will be no need of perfectly balanced rations, condiments, or patent foods and medicines or a wet nurse to make up for its otherwise lack of vigor and constitution.

To prove that farm products alone are equal to the task of developing winners of outstanding excellence, it is but necessary to cite our entry of four White Plymouth Rock pullets bred, fitted and owned by Burke's Garden Cattle Co., hatched last of May, over standard weight, January 1st, won first, second and fourth (21 birds) in one of the largest classes at Virginia State Show, Richmond, 1908. Also, with our first cockerel, got the Blue for best pen. Never took a drop of medicine, tonic, or anything, but what any Virginia farm will grow, in their lives.

Burke's Garden is developing the most extensive and unique breeding establishment in the South. **LOOK OUT FOR PARTICULARS NEXT MONTH.** But a few trial trips to shows so far. Wait till she starts out to spend the season.

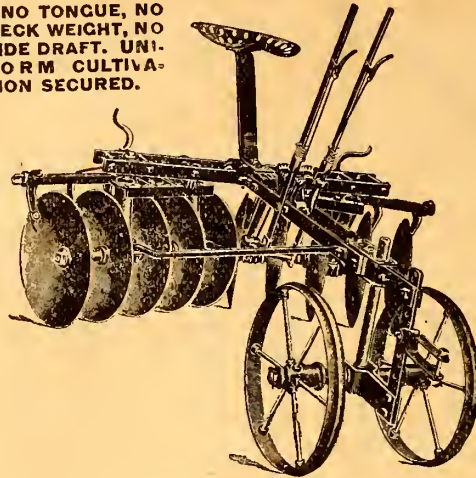
Had two birds at Jamestown; won second and third. In latter class, Burke's Garden entry (a White Plymouth Rock cockerel) was up against skill and numbers of fanciers North and East. This place brings credit to Tazewell county equal to record of any breeder in Virginia, competition considered.

The two Pekin Ducks sent down from Richmond, where they had won a first (State Fair) and fourth at Poultry Show to Charlotte, each won a Blue in full class.

In stock, Burke's Garden claims the best producing line on the Continent, viz.: the combination "Choice Goods," best bull in the world. Its grand Champion for two years himself and sire of two sweepstakes winners the past season, viz.: "Scotch Goods," at International, and "Ruberta's Goods" of the Royal, and Ruberta, best cow in the world; mother to our sweepstakes cow, Rubertress; undefeated from calfhood to maturity, although she went up against the Queen's heifer, best in England, all that America could do to beat her.

The Imperial Disk Harrow with Fore Truck

NO TONGUE, NO NECK WEIGHT, NO SIDE DRAFT. UNIFORM CULTIVATION SECURED.



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Bay horse; foaled 1904; sired by Peter the Great, 2:07¼ dam Telka by Arion, 2:07¼, second dam La Jolla dam of Binjolla, 2:17¼, by Advertiser, 2:15¼. Note.—Petaurist is a trotter of fine form, exquisite quality and finish. He carries the blood of champions of each remove for generations back, and was awarded the blue ribbon in his class at the Virginia State Fair in 1907.

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Stallion cards, folders and catalogues compiled; pedigrees of trotters, pacers and thoroughbreds traced, horses registered and race summaries supplied. I make a specialty of such matters, as my library includes all the Year Books, Trotting Registers, Stud Books, files of turf journals and other references. Inquiries promptly answered.

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Kentucky Stock Farm and The Thoroughbred Record, Lexington, Ky.; The Trotter and Pacer, New York; The Horseman, Chicago; The American Horse Breeder, Boston, and The Breeder and Sportsman, San Francisco.

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The handsome trotting stallion, Red Guy, 21052, a rich bay, 16 hands, 1,100 pounds, sired by Guy Moor 14885, dam Edna Wilkes, 2:23, by Red Wilkes, 1749, etc. Red Guy is an inbred Wilkes and from the family of Sonoma Girl, 2:05¼, who sold for \$30,000. He is even tempered, a nice driver and sires fine foals. Offered for want of use, as I have two stallions and must sell one. Bargain to quick buyer.

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ONE WAY.

A story, said to be characteristic, is told of an Arkansas judge. It seems that when he convened court at one of the towns on his circuit it was found that no pens, ink, or paper had been provided, and upon inquiry, it developed that no county funds were available for this purpose. The judge expressed himself somewhat forcefully, then drew some money from his own pocket. He was about to hand this to the clerk, when a visiting lawyer, a high-priced, imported article, brought on to defend a case of some importance, spoke up, in an aside, plainly audible over the room.

"Well," he remarked, with infinite contempt, "I've seen some pretty bad courts, but this—well, this is the limit!"

The old judge flushed darkly.

"You are fined twenty-five dollars for contempt, sir! Hand the money to the clerk!" he said, and when the pompous visitor had humbly complied, he continued:

"Now, Mr. Clerk, go out and get what pens, ink, and paper the court may require, and if there is anything left over, you can give the gentleman his change."—Harper's Weekly.

WASHINGTON NOTES.

The technical world recently described a patent which has been secured by C. C. Parsons, of Oberlin, Ohio, for a dilator milking machine. Recognizing the more or less objectionable features of the machines of the vacuum or pneumatic type, the inventor is said to have produced a thoroughly effective dilator milker. When the machine has been adjusted to the cow's udder and the teat openings or ducts have been dilated by the means of the dilators to form artificial openings the milk flows freely and automatically from the openings thus formed in a much more natural manner than by the use of the suction milking machine. In a recent test, fourteen quarts of milk were drawn from a cow by this machine, the same being applied, operated and removed in six and one-half minutes. Each machine is complete in itself requiring no air tubes or power plant, as in the case of the pneumatic milkers. According to the description, but little or no attention is required, once the adjustment is made, until the cow is milked dry.

The Origin of the Aberdeen-Angus.

Much diversity of opinion exists regarding the origin of the Aberdeen-Angus cattle. By some it has been seriously argued that they are an original and distinct species, while others maintain that they are a distinct departure from the original cattle of ancient Caledonia. Certain it is that they have had a separate existence for a long period of time, and if the

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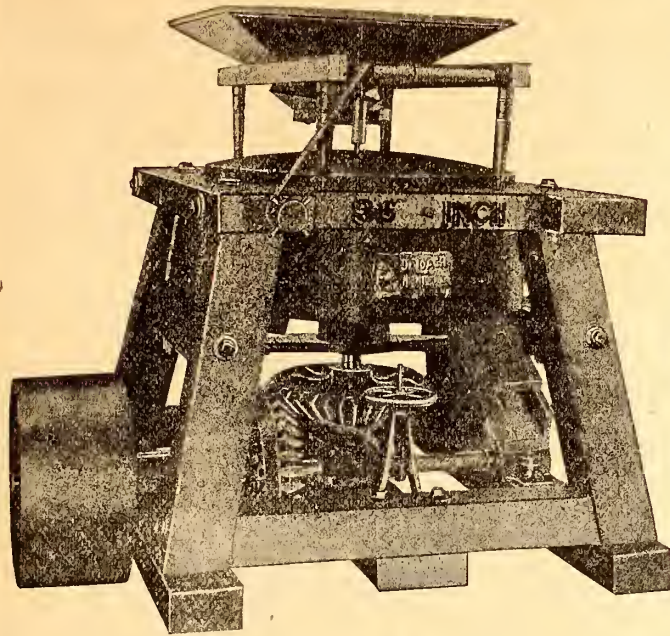
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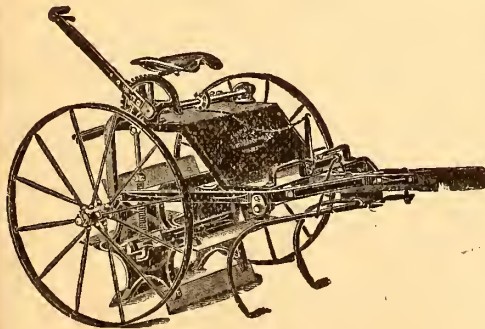
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latter theory of variation is correct, how and when these departures may have been effected must be left in a large measure to conjecture.

The idea which finds most favor is the probability that the peculiarity, such as being hornless, may have appeared suddenly, owing to spontaneous variation, and that these results have come to possess a powerful hereditary tendency. These spontaneous variations or organic changes must have occurred since domestication took place, for while deviations from the original form of animals may arise spontaneously, some sort of selection in breeding is necessary in order to impart to those isolated deviations such fixity of character, or such strong hereditary power as would ensure their perpetuation. Among cattle completely wild, no artificial selection could take place, but with those under domestication the case is different, as isolating and breeding from no other but animals possessing a peculiarity would, in time, lead to perpetuation of hereditary fixity.

Polled varieties of cattle, however, have been more widely spread than is generally supposed, but there is nothing to lead to the supposition that there is any near affinity between one another. Herodotus, writing of the Scythians, mentions that their chariots were drawn by oxen without horns; and Darwin states that a polled variety of cattle existed in Paraguay, South America, at the close of the eighteenth century. In Sutherlandshire, Scotland, there was a polled variety in 1769, and, according to Boswell, another in the Isle of Skye about 1773, while similar characteristics appeared among the cattle of Iceland at a less remote period. And although the Scotch Galloway cattle of to-day may have a certain resemblance to the Aberdeen-Angus, there is certainly no nearer kinship between them than that the ancestors of each breed have sprung from one parent stock in the ancient cattle of Caledonia.

Previous to the close of the eighteenth century, nearly all the Galloways were horned, and there is in fact a very close resemblance between them and the present Highlander—minus the horns.

There can be little doubt that the breed is indigenous to the very district which still forms its headquarters namely, Aberdeenshire. But from earliest history, the cattle of Buchan, in Aberdeenshire, are referred to as a distinct breed. The lower part of Aberdeenshire was known by the name of Buchan, at least two centuries before the days of Wallace and of Bruce. The derivation of the word is the Gaelic "Bo," meaning an ox, and "caen," the head; so that in the eleventh century, if not much earlier, there was something about the heads of the cattle of this part of the country distinctly different from those of

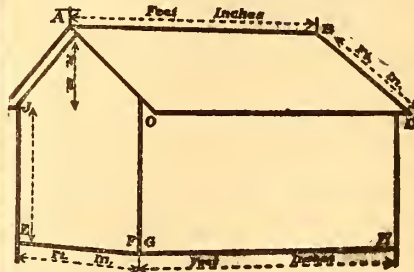
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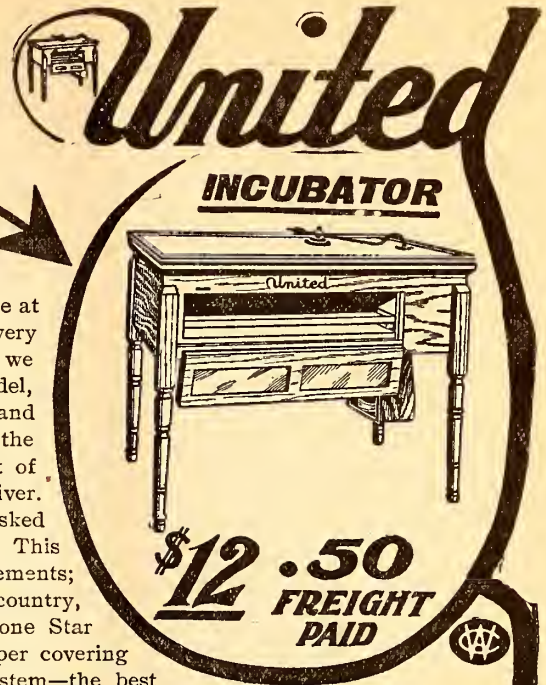
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Here is the biggest Incubator Bargain offered the poultry-raiser this season. An opportunity to get a high-grade, standard 100-egg machine at a money-saving price that will interest every incubator buyer in the land. For \$12.50 we will ship complete a regular No. 48 Model, 100-egg "United" Special Incubator, and pay the freight to any point east of the Mississippi River, or we allow amount of freight to River on orders west of the River.

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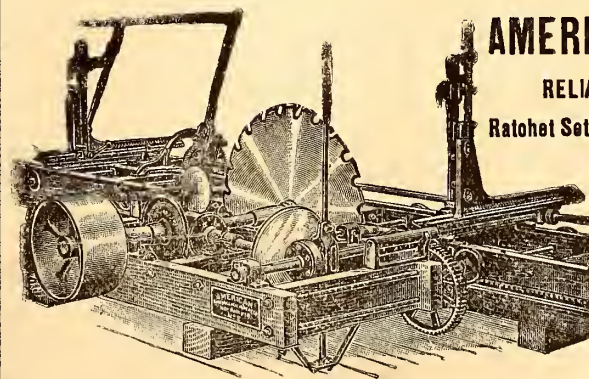
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other localities. Their history, beyond this period, is lost in the mist of antiquity, and the nearest that mortal man can approach to accuracy is that the breed has existed in Aberdeenshire from time immemorial.

The earliest records of their utility are furnished by the Williamson's, of St. Johns Wells, Fyvie, who, about the year 1770, were the principal cattle dealers in Scotland. They stated that they preferred them to others "as they were most easily maintained, more hardy in work, have flesh of the finest grain, and pay better in proportion to the goodness of their keep." So even at this day the breed has such well-defined features as to mark it out for such excellent properties that some of our most extensive cattle dealers regard it as superior to all other varieties.

The breed first came into prominence in British history at the Highland and Agricultural Society's Show in 1829, when Hugh Watson triumphed with the best fat stock of any breed. One of his exhibits was afterwards shown at Smithfield, where she won the medal in the class for extra stock. Her breast was "not quite eight inches



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from the ground." Mr. McCombie, of Tillyfour, was the next to enter the field with them, and in 1847 he gained the championship at the National Show. From that date until his death he maintained a foremost place. At the Paris Exhibition in 1856, he was awarded the gold medal for Charlotte, the dam of Pride of Aberdean. In 1862, at Paris, he secured similar honors for the best ox. But the greatest triumph of the breed was at the International Competition at Paris in 1878, where the Tillyfour group, by twenty-four votes out of thirty-nine, won the grand championship of the show.

How Wheat Rust is Starved.

An instructive account is published in the Experiment Record of the Department of Agriculture of the manner in which the yellow rust parasite acts upon susceptible and resistant varieties of wheat. In an experiment with Michigan Bronze wheat and "rust-proof" Einkorn, young seedlings of each were infected by placing spores on the leaves. In the Michigan wheat the germ tubes passed into the inner tissues and developed rapidly, producing pustules in about ten days. In the case of the resistant Einkorn wheat, the germ tubes made good their entry, but almost in the beginning showed, through the microscope, weakness and starvation; and was unable to make further progress. The wheat plant continued to flourish, except for the small dead area where the fungus entered the leaves. The reason for this resistance is unknown, but is supposed to be due to some toxic principle in the host plant.

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The number of pencils manufactured in the United States each year, according to the Forest Service, is at least 315,000,000, for the production of which 75,000,000 feet, board measure, of wood are required, the greater part of which is red cedar. Four pencils for each inhabitant seems a very conservative estimate.

Bovine Tuberculosis is Transmissible.

A Royal Commission, appointed by King Edward, of England, to investigate whether tuberculosis in man and animals is one and the same disease, has reported that "there can be no doubt but that in some cases the tuberculosis occurring in the human subject, especially in children, is the direct result of the introduction into the human body of the bacillus of bovine tuberculosis; and there also can be no doubt that in the majority of these cases at least the bacillus is introduced through cow's milk. Cow's milk containing bovine tubercle bacilli is clearly a cause of tuberculosis and of fatal tuberculosis in man."

In investigations by our own Bureau of Animal Industry it was found that tubercle bacilli are readily



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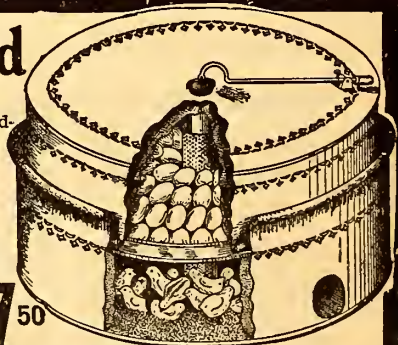
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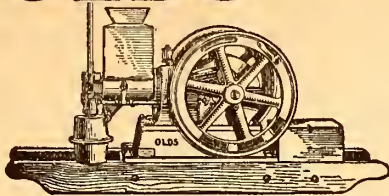
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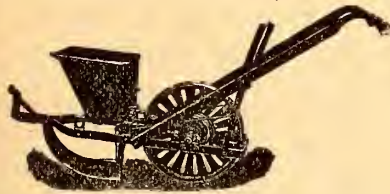
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 Boston, 69-75 Washington St., N.
 San Francisco, Cor. Jessie and Ecker Sts.
 Kansas City, 1226 W. Eleventh St.
 Omaha, 1018 Farnum St.
 Binghamton, N. Y., 23 Washington St.
 Minneapolis, 313 S. Third St.
 Philadelphia, 1816 Market St.
 Portland, Oregon.
 Elgin, Ill.
 Kempton, Pa.
 Houston, Texas.
 Norfolk, Va.
 Miami, Fla.

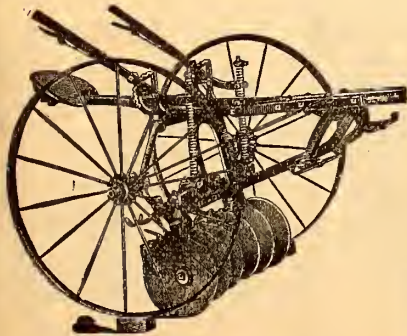
Established by
 Geo. Watt, 1840.

THE CALL-WATT CO., 13 South 15th St., Richmond, Va.

MANFRED, CALL,
 Manager.



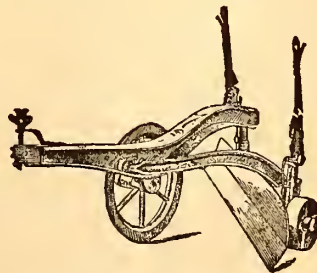
THE EMPIRE CORN AND FERTILIZER PLANTER.



THE DISC CULTIVATOR.

IMPLEMENTS, MACHINERY, WAGONS.

THE UNIT ROAD MACHINE

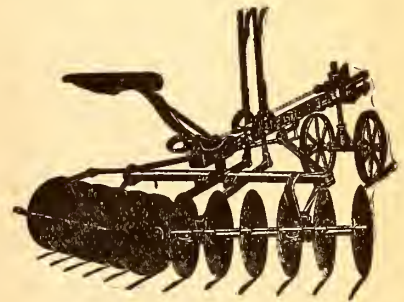


The Simplest, Easiest Managed and Least Expensive of Any.

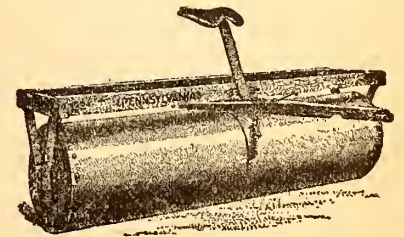
Requires but one Man and one Team to Operate It.

Saves Labor Enough to pay for Itself in Two Days' Use.

The Price Brings it Within the Reach of All.



DISC HARROW WITH TRUCK



SOLID STEEL HEAD ROLLER.

BALING PRESSES FOR HAND, HORSE AND STEAM POWER.
 FERTILIZER, LIME AND PLASTER SOWERS. EIGHT STYLES AND SIZES.
 PEA HULLERS, GRINDING MILLS, HORSE POWERS, POLE AND WOOD SAWS.
 ROAD ROLLERS, ROAD PLOWS, WHEEL AND DRAG SCRAPERS.
 PLOWS AND PLOW CASTINGS IN GREAT VARIETY.

WE SOLICIT CORRESPONDENCE AND ARE PREPARED TO MAKE LOW PRICES.

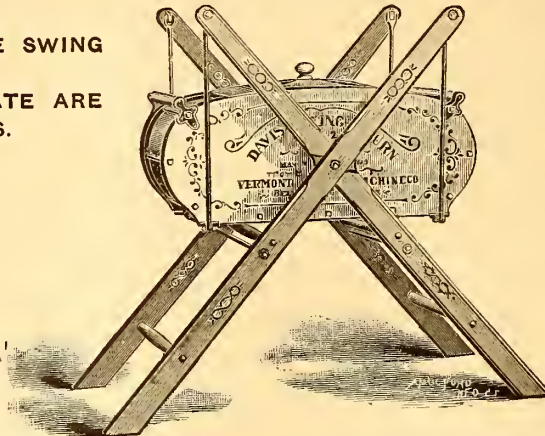
ASHTON STARKE,

Richmond, Va

The United States Cream Separators and Davis Swing Churns.

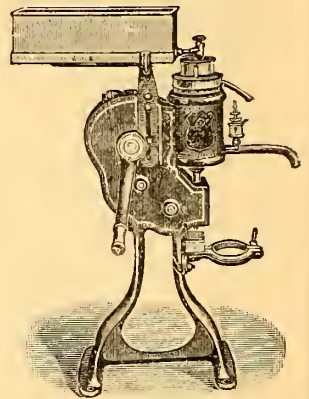
THE ORIGINAL, GENUINE SWING CHURN.

ALL EFFORTS TO IMITATE ARE SIMPLY FAILURES.



U. S. SEPARATOR. EFFICIENT, EASY TO CLEAN, SIMPLE, DURABLE, EASY TO WORK. GETS ALL THE CREAM. THE BEST BY EVERY TEST

IF YOU WANT TO KNOW ABOUT THE MOST UP-TO-DATE DAIRY APPARATUS OF ANY KIND, LET US SEND YOU A VERMONT FARM MACHINE COMPANY CATALOGUE. IT WILL BE WORTH YOUR WHILE AND SAVE YOU DOLLARS.

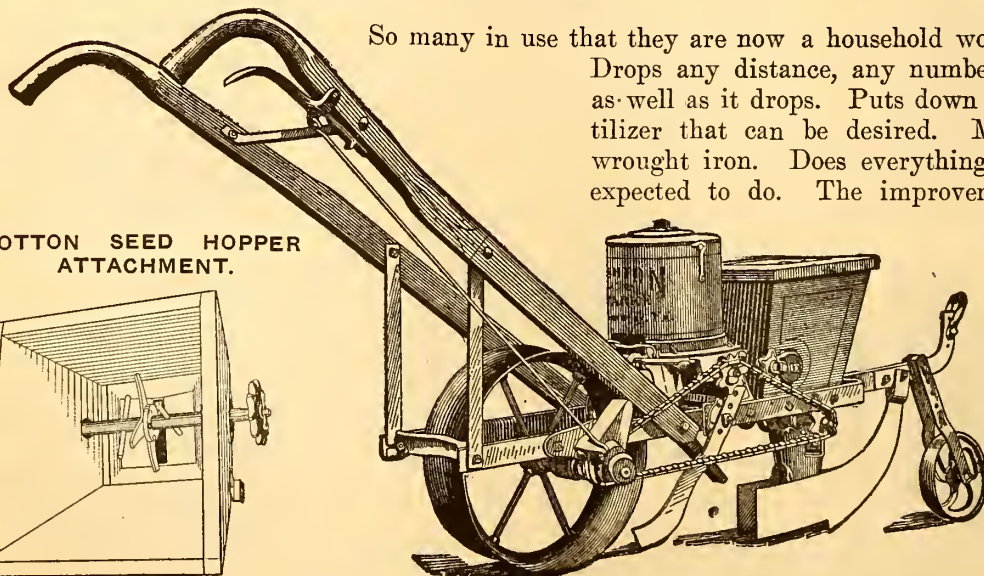
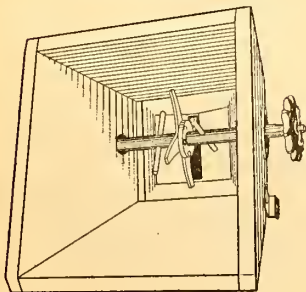


SEND ASHTON STARKE, RICHMOND, VA., A LIST OF FARMERS' NAMES AND WE WILL MAIL THEM REGULARLY, POST PAID, CIRCULARS IN SEASON.

"THE STAR" Corn, Cotton, Pea, Bean, and Fertilizer Planter.

So many in use that they are now a household word with the farmer. Drops any distance, any number of grains. Drills as well as it drops. Puts down any quantity of fertilizer that can be desired. Made of steel and wrought iron. Does everything a planter could be expected to do. The improvements for 1908 are great.

COTTON SEED HOPPER ATTACHMENT.



Don't let any one tell you that they have a planter just as good.

Demand the
STAR

See That Our Name is Cast in Raised Letters on the Hopper Lid.

ASHTON STARKE,

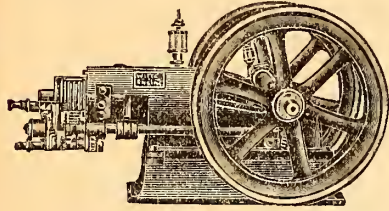
Richmond, Va.

ASHTON STARKE,

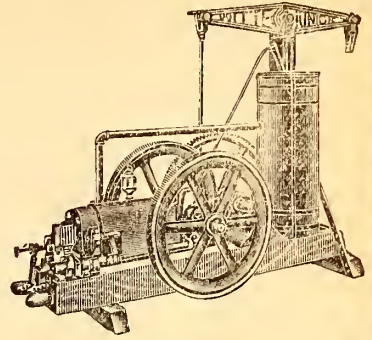
Richmond, Va.

GASOLINE ENGINES

Guaranteed to develop as full horse power as any engine made. The standard of excellence in every particular. Just as simple as they can be built, and built for rough usage.



ANY NUMBER OF THESE ENGINES AT WORK ALL OVER THE SOUTH. WE CHALLENGE ANY MAN TO POINT TO ONE NOT DOING ITS FULL WORK SATISFACTORILY.



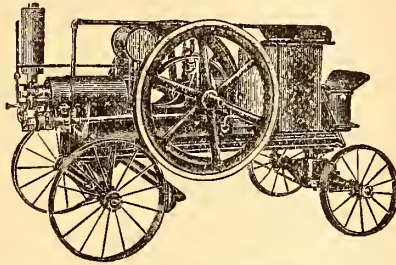
For Pumping, Sawing, Grinding, Threshing, Hoisting, they can't be beaten

When you call on them they go, and when they go, they carry a full load. "Ginger bread" "talking points," and numerous delicate springs eliminated. Built to stand up under the work.

THE GREAT POINT IS SIMPLICITY. THE GREAT RESULT, STRENGTH. THE GREAT SATISFACTION, DURABILITY.

BUILT TO SPECIFICATIONS BY
THE

WITTE IRON WORKS CO.,
KANSAS CITY, MO.



You must see the Catalogue giving all the details of construction to value their merits. Send us the addresses and we will gladly mail Catalogues.

SEND ASHTON STARKE, RICHMOND, VA., A LIST OF FARMERS' NAMES AND WE WILL MAIL THEM REGULARLY, POSTPAID, CIRCULARS IN SEASON.

A Combination Disc and Mold Board Plow.

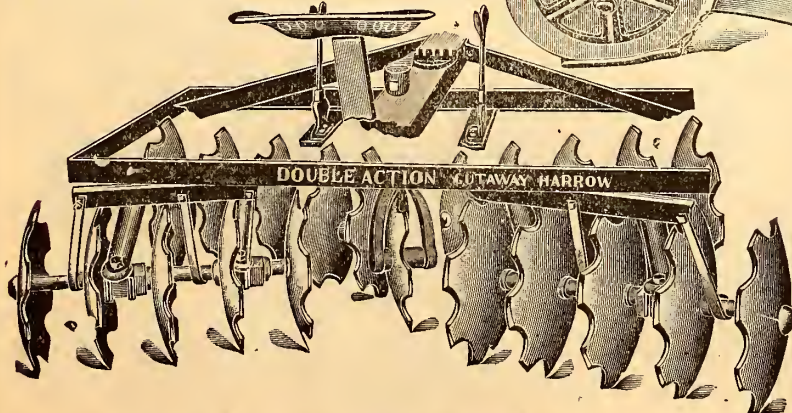
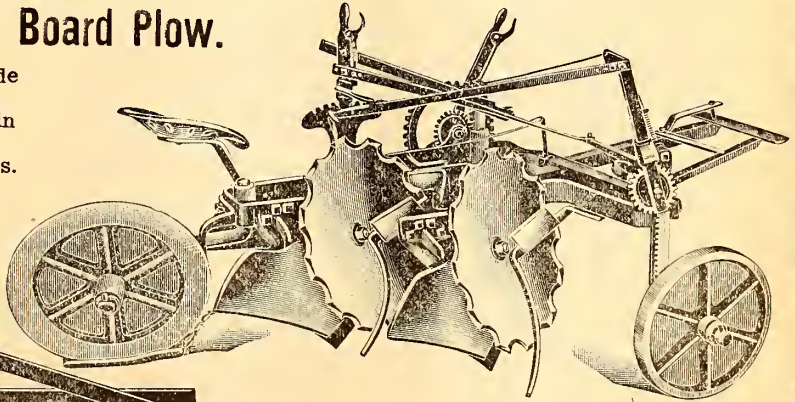
Turns sod and stubble and turns it upside down. Leaves a flat, open furrow.

Does not leave the land edged up and in bumps, but just right for the harrow.

A great stride ahead of all Disc Plows. Fills the lacking place.

The Great Double Action Disc Harrow

Fairly masticates the ground. Does, and does better, in one trip than any other disc harrow will do in three trips.



The Two Greatest Land Preparers on Earth To-day.

Away yonder ahead of competition. Just see one in the field; that settles it.

Made by

CUTAWAY HARROW CO.,
Higganum, Conn.

ASHTON STARKE,

Richmond, Va.

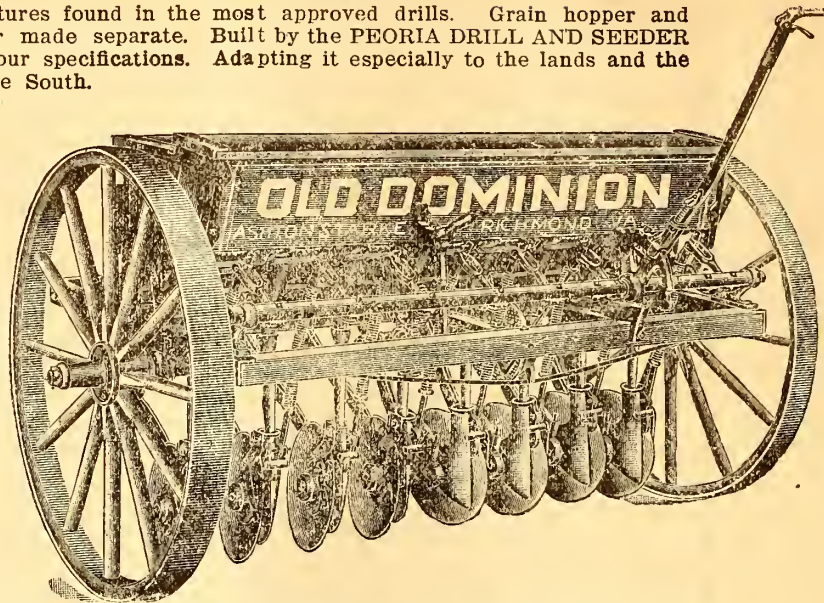
ASHTON STARKE,

Richmond, Va.

A COMBINATION

Of the best features found in the most approved drills. Grain hopper and fertilizer hopper made separate. Built by the PEORIA DRILL AND SEEDER COMPANY, to our specifications. Adapting it especially to the lands and the conditions in the South.

DRILLS
WHEAT,
RYE,
OATS,
CORN,
PEAS,
BEANS,
ALFALFA,
CLOVER,
ETC.



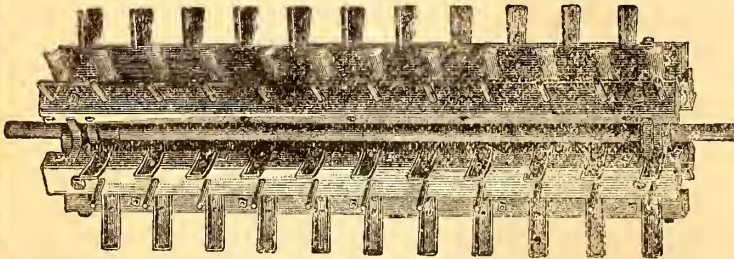
FERTILIZER
FORCE FEED,
REGULATES
TO ANY
QUANTITY.
NO CLOGGING.
STEEL TUBES.
STEEL FRAME.
SEPARATE
HOPPERS.

STEEL FRAME. A Spring Seat goes with the Drill. You can ride if you wish to. 8 Dis Drill, complete with Fertilizer and Grass Seeder; also, 10 Disc Drills. Also, 5 Disc and 5 Hoe Drills, Seeders and Broadcasters.

We guarantee it in any and every particular to be the equal of any drill made, and challenge comparison. Send for testimonials from farmers who have bought and use the "Old Dominion" Drill.

SEND ASHTON STARKE, RICHMOND, VA., A LIST OF FARMERS' NAMES AND WE WILL MAIL THEM REGULARLY, POSTPAID, CIRCULARS IN SEASON.

Miller Improved Manure Pulverizer and Spreader, and Lime Spreader.



Body made tight like a wagon. No slats in bottom that let lime and manure sift through and to get clogged up.

Low down. Easy to load. The lightest draft machine of its capacity on the market. Just right width to straddle corn rows.

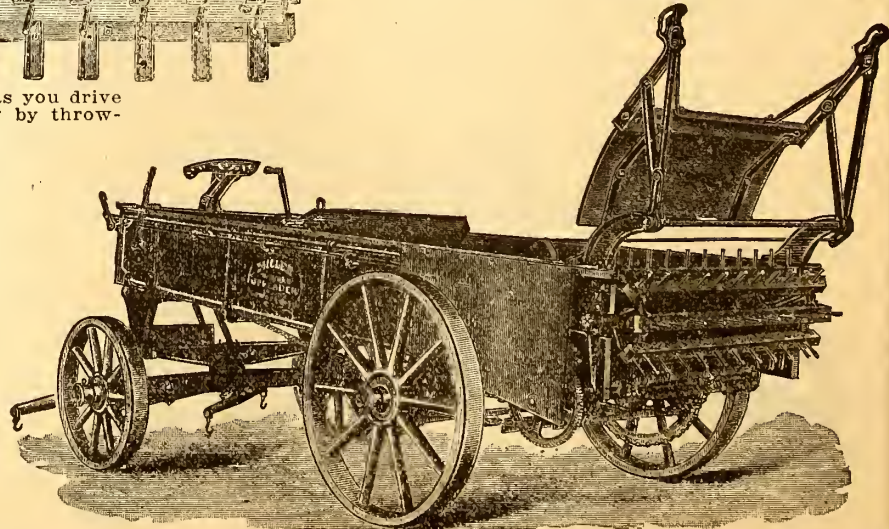
Every lever independent and positive. Low down, so that in spreading Lime it is not blown all over the farm. SHOWING SPOON TEETH TO SPREAD LIME.

Amount per acre can be changed as you drive along. The conveyor returns simply by throwing the lever. The low wheels guarantee the maximum of strength. No experiment, fully tried and fully guaranteed.

Tears up corn stalks and spreads them on the ground.

Write for illustrated catalogue showing every part in detail.

When you know its merits you will consider none other.



The Greatest Spreader Made,

MILLER!

ASHTON STARKE,

Richmond, Va.

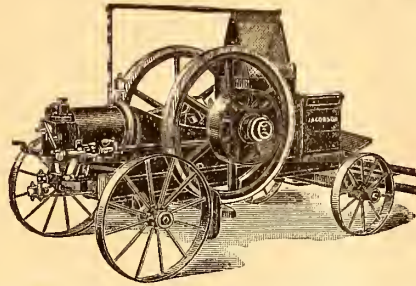
ASHTON STARKE,

Richmond, Va.

Jacobson Gas and Gasoline Engines

**POWERFUL
DURABLE**

**Are Built Right and
Run Right**



**RELIABLE
ECONOMICAL**

**Ask the Man Who
Owns One.**

The Following Features are Distinctive in the Jacobson Engines

Vertically operated valves, eliminating side wear of the valve stems and obviating frequent leakage annoyances. Rigidly supported cylinder, the metal of the frame being in the line of the forces acting between cylinder and crank shaft.

Removable and interchangeable cylinder walls, in the form of a bushing, providing for easy and quick repair of cylinder and uniform expansion.

The combustion chambers and cylinder walls are so proportioned and water jacketed that a very high compression is attained (averaging 100 pounds per square inch), and as a result a very high efficiency is obtained. They save 20 per cent. in gasoline over other high-grade engines on the market.

These features, with the many others of this line, are worthy of careful study, investigation and consideration by power users.

**ASHTON STARKE,
Virginia Agency**

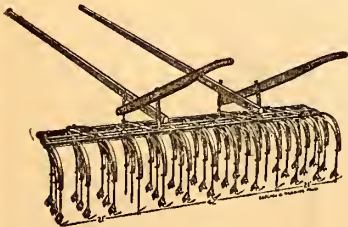
**JACOBSON MACHINE M'F'G CO.,
Home Office and Works, Warren, Pa.
C. R. MORRISON, Southern, Manager,
676 Marietta St., Atlanta, Ga.**

SEND ASHTON STARKE, RICHMOND, VA., A LIST OF FARMERS' NAMES AND WE WILL MAIL THEM REGULARLY, POSTPAID, CIRCULARS IN SEASON.

NEVER MIND:

Let them all claim what they will. Here are the two easiest adjusted, most adaptable, easiest controlled cultivating tools made.

on wheels when wanted.

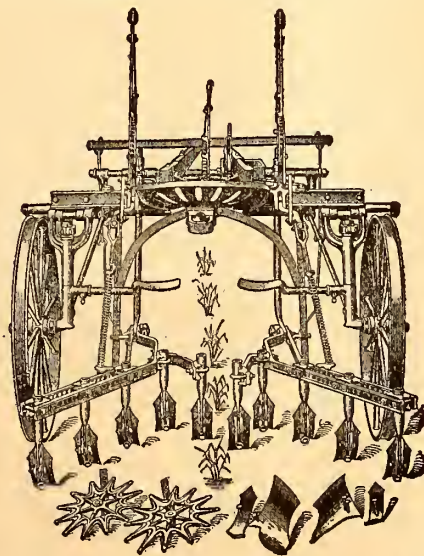


The Keystone Weeder.

The seeder box working on this weeder makes up a great tool. This is the most complete shallow cultivator and hard ground worker ever put on the market. You must see our catalogue giving details of construction to appreciate it. Mark! You are going to find this weeder on every farm.

Pivot Wheel Cultivator

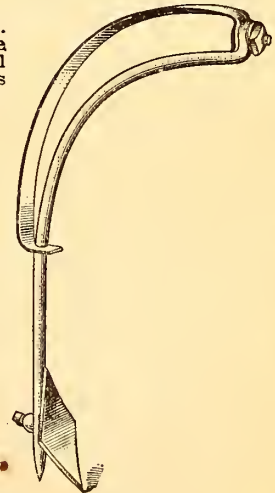
Perfectly balanced frame. Gangs always parallel. Wheels adjustable from 28 inches to 48 inches. Use 2 to 5 shovels on each gang. This is a pivot wheel cultivator, not a pivot frame or shifting pole—there's a great difference.



The Keystone Pivot Wheel Cultivator

MADE BY KEYSTONE FARM MACHINE CO., YORK, PA.

LOOK AT THIS.



The Keystone Weeder Tooth

Combination round and flat diamond tooth. Remove the diamond point and you have the round tooth.

Notice the reinforced tension spring.

It is in a class by itself.

ASHTON STARKE,

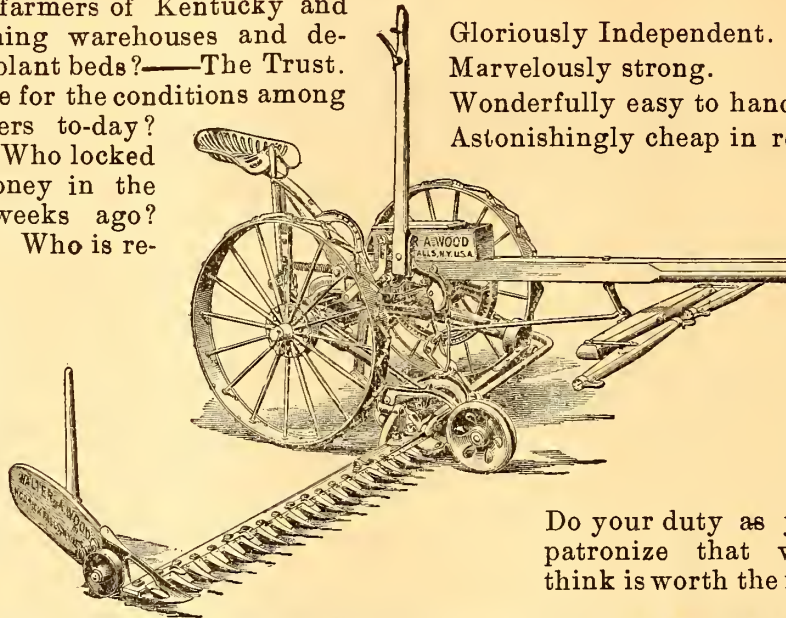
Richmond, Va.

WILL THE FARMERS HEED?

Who drove the farmers of Kentucky and Tennessee to burning warehouses and destroying tobacco plant beds?—The Trust. Who is responsible for the conditions among the cotton planters to-day? —The Trust. Who locked up all of the money in the country a few weeks ago? —The Trusts. Who is responsible for the value of secu —The Trusts.

Did we ever know such things before we had the Trusts?— No.

IT IS UP TO THE FARMER TO CHOOSE



Gloriously Independent.
Marvelously strong.
Wonderfully easy to handle.
Astonishingly cheap in repairs.

The great competitor of the Trusts in machines. As independent as a wood sawyer & as strong as a giant

Do your duty as you see it; patronize that which you think is worth the most to you

Harvester and Binders, Hay Rakes, Tedders, Disc Harrows, Etc., Etc.

ASHTON STARKE, SOUTHERN OFFICE; WALTER A. WOOD, MOWING AND REAPING MACHINE CO., RICHMOND, VA.

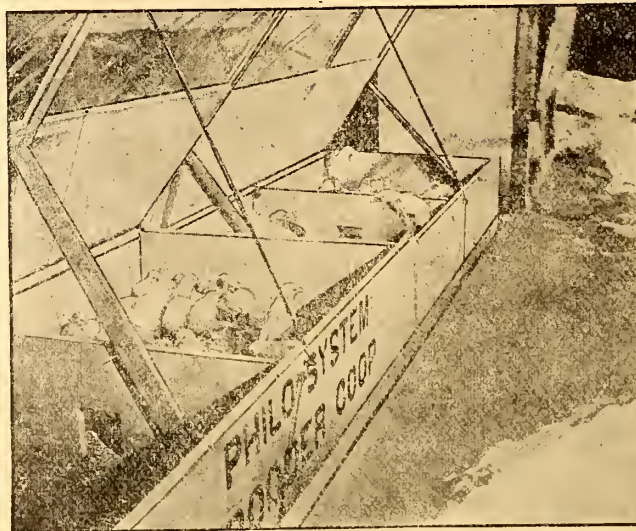
disseminated in the manure. In fact, the manure is considered the most dangerous factor in the spread of tuberculosis.

How Much to Fertilize.

Too great emphasis cannot be placed on the necessity of each farmer making his own manure trials.

While the work the Experiment Stations is conducting is of great value in determining the general principles underlying profitable manure for ordinary conditions of soil and climate, it must be remembered that there are many minor differences in every district, and even on each farm, which influence the result. What may be the best practice in one district may be only second best in another. If simple fertilizers are purchased and each man makes his own mixtures, it is a simple matter to try three or four drills of this or that mixture, until, by trial, a farmer determines what is the best practice for his particular district. One word of caution—keep a tight hand on the manure bag, and let good soil culture have fair play. Fertilizers only have their best action on well-tilled soil.

The careful man will endeavor to obtain the fullest information on the influence of climate on the crop, the deficiencies of the soil, and the needs of the crop grown.



January chickens that are being brooded in the Philo System Brooder Coop and Brooder without artificial heat. They were hatched January 1st and placed out of doors January 2nd, over frozen ground. This is probably the most severe test ever made, as the temperature has been below zero much of the time, and the chicks are fully equal to any ever raised during the natural hatching season.

Rinderpest in the Philippines.
Rinderpest is the scourge of the Philippines; but our Uncle Samuel has it under control. Whereas entire sections of the Islands were depopulated of the Philippine beast of burden, the carabao, shortly after American occupation, in a recent outbreak of the disease where some 6,000 animals were inoculated by our Phillip-

pine Bureau of Agriculture, only four per cent. subsequently died.

GUY ELLIOTT MITCHELL.

Halifax Co., Va., Nov. 8, '07.

I think your advice in the Southern Planter all O. K., and I have always done my farming in Kentucky and since I have been Virginia by it.

W. E. STOOPS.

AGRICULTURE IN THE PUBLIC SCHOOLS.

The South Bend Tribune, of Thursday evening, February 6th, commenting, editorially, upon the address of Col. Charles Arthur Carlisle, of the Studebaker Bros. Mfg. Co., to the members of the Farmers' Institute of the St. Joseph Valley, directs special attention to the strong resolution left before the Convention by Mr. Carlisle as follows:

Mr. Carlisle's Plan.

"The St. Joseph County Farmers Institute, just adjourned, apparently did well to adopt the resolution proposed by C. A. Carlisle relative to the introduction of manual training, in agricultural and domestic sciences in the district and rural schools. It is likely that such a plan will prove both practical and feasible. The suggestion deserves a thorough trial.

"With agriculture a recognized science, with agricultural schools making farming a scientific undertaking, the idea of a course of study in the country schools as suggested does not seem amiss. Manual training has been proven decidedly practical and advantageous in the cities. Why will it not prove just as beneficial in the country districts?

"The provision of the resolution urging that the matter be taken up with the township trustees, the State and county superintendents and all others in authority in an effort to have one or two district schools in St. Joseph county selected in which to make a thorough trial of the plan is to the point. It is getting down to the meat of a question in a business-like manner. If the teaching of manual training, agricultural and domestic science can be practically applied in the rural schools, there is no reason why this country should not be the first, or one of the first, to profit.

"The position assumed by the farmers in the adoption of the resolution was well taken. Mr. Carlisle deserves credit for proposing the plan to the Institute. The Association showed that it had the courage of its convictions in adopting the proposal."

At the close of his address upon the following questions: First, Does it pay the farmer to keep blooded stock for its intrinsic as well as its artistic value? Second, Does it pay the farmer to study modern farm science? Third, Does it pay the farmer to unite the force of his influence with his neighbor in the country and in the town? Under this question the great thought of holding the boys and the girls contentedly upon the farm was broadly discussed. Mr. Carlisle presented the following resolution, which was unanimously adopted by the Convention:

Whereas, We, the Farmers' Institute and Corn School of the St. Joseph Valley, in session at South Bend, Indiana, on this fourth day of

SUPERIOR DISC DRILLS

PLANT FOR PROFIT



The Superior Disc Drill is not an experiment, or something new. Thousands of the most progressive farmers in every part of the grain-growing world are using Superior Grain Drills, not only for sowing Oats, Wheat, Rye, Barley, Rice, etc., but for drilling Cow Peas, Beans, Beets, and all other large and small grain. The Superior Drill will accurately sow any and all seeds from tiny grass seeds to large bush Lima beans, without cracking the seed.

The Superior Drill is manufactured in all styles and sizes, and we have machines that are built especially to meet the conditions that confront the farmers in every locality in the grain-raising world.

We want you to investigate the Superior Drill for yourself as to its choice material, strength, simplicity and the work that it has done and will do. We ask you to go to your dealer and insist on seeing the Superior Drill before you purchase any drill. Do not be persuaded to buy some other make of drill that your dealer tells you is "just as good" as the Superior. There are many imitations on the market, but imitations are never as good as the genuine.

We sell the Superior Drill under a positive guarantee to be and to do ALL that we claim for them. They MUST do ALL we claim. There is no "string" tied to this warranty. It means a great deal to a farmer, and shows honest, straightforward dealing on our part.

HERE ARE A FEW ADVANTAGES OF THE SUPERIOR

(The Name Tells a True Story.)

- 1—The Superior Drill will sow any seed from the finest grass seed to bush Lima beans.
- 2—The Superior will sow any commercial fertilizer, or granular lime, and it will sow it right and in any quantity desired.
- 3—You can reseed wornout and rundown pastures and meadows with the Superior Disc Drill. The Superior puts the grass seed under the sod without turning it. The work does away with "sod binding." You will be absolutely astonished at what can be accomplished in old pastures and meadows with a Superior Disc Drill.
- 4—The Superior Disc Drill deposits the seed at the axial center of the discs and plants the seed in an even depth right in the very toe of the seed trench, without being mixed with the soil.
- 5—The Superior is the strongest, most simple, lightest draft, best made grain drill in the world.
- 6—The Superior Drill sows evenly—every feed exactly the same amount. No skipping, no bunching or choking. Impossible to go more

than two or three inches without putting seed in the ground. You can't tell where you stop or where you start in a field after the seed comes up.

7—The Superior Disc Drill will run and do good work wherever a disc harrow will run. Stalks, mud, pea vines, crab grass, or any other trash has no terrors for a Superior Disc Drill.

8—Drilled oats and all small grains will withstand the drought much better than where broadcasted.

9—You will get a good stand of clover if you sow it in the spring at the same time you do your oats or wheat, because the young clover plants get a good stocky growth at a very critical time—when they need sun and air.

10—In winter-wheat sections, the farmer can go into his wheat fields, sow the clover seed right down through the grain tubes into the ground and the discs will cultivate the wheat. Don't think this will hurt your wheat. It will increase your crop.

Our 1908 Catalogue is free for the asking. So is our 1908 Superior Almanac. Your request on a postal card will bring both books.

We also manufacture Potato Planters, Corn Planters, Corn Drills and Disc Harrows.

Investigate these machines before purchasing.

THE SUPERIOR DRILL CO., DEPT. 14, SPRINGFIELD, OHIO.
Division The American Seeding-Machine Co., Incorporated.

February, 1908, do appreciate the urgent necessity of developing the farm and bringing the country life to the highest possible degree of comfort, pleasure and profit to the farmer, his family, the community, and all people at large; and,

Whereas, We believe that the boys and the girls of the country can be interested and perhaps more closely held to the country through the teaching of manual training, agricultural and domestic science in the district or rural schools, be it therefore

Resolved, That we urgently petition the township trustees, the State and county superintendents, and all others in authority, to select one or two good district or rural schools in St. Joseph county, schools that will reflect a standard, and make in these schools a practical demonstration by selecting a teacher thoroughly qualified to teach these branches and instruct in them, in regular session, in a thoroughly practical and comprehensive manner; and, be it further

Resolved, That the President and the Secretary of this Society be, and are hereby, requested to place this preamble and resolution before the above-mentioned school authorities and report back to this Society the results.

In presenting this resolution, Mr. Carlisle states that radical changes are often disastrous and that gradual changes are more often reliable and wholesome. He urges that like resolutions be considered by all Farmers' Institutes and Farmers' Societies everywhere, and points out particularly that the effort is made to establish a modern curriculum in one or two schools that will reflect a standard for the district.

Mr. Carlisle, whose address is South Bend, Indiana, states that he will be glad to assist any one interested in advancing this work and would appreciate the helpful advice of others who have a thought to offer.

WHAT HAPPENED TO JONES.

One day a tall, gaunt woman, with rope colored hair and an expression of great fierceness, strode into the office of a county clerk in West Virginia.

"You ar the person that keeps the marriage books, ain't ye?" she demanded.

"What book do you wish to see, madam?" asked the polite clerk.

"Kin you find out if Jim Jones was married?"

Search of the records disclosed the name of James Jones, for whose marriage a license had been issued two years before.

"Married Elizabeth Mott, didn't he?" asked the woman.

"The license was issued for a marriage with Miss Elizabeth Mott."

"Well, young man, I'm Elizabeth. I thought I oughter come in an' tell ye that Jim has escaped.—Harper's Weekly.

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. STEPHENSON & RAINEY, HERNDON, VA.

JOHN F. JERMAN, Headquarters for Virginia Property, Fairfax Va.

Washington Office, No. 1220 H Street, N. W., and Vienna, Va.

If you want to buy a grain, dairy, fruit, truck, poultry or bluegrass farm, city or village property, or any kind of business proposition, such as hotels, stores, livery stables, schools, or any kinds of shop, it will pay you to send for my 50-page catalogue, it is full of bargains near steam and electric railroad and near Washington, D. C., where we have the best of market. I am always ready to show property. I try to please.

MY MOTTO: "HONESTY AND FAIR DEALINGS."

VIRGINIA FARMS

Healthy, productive and rapidly improving section; three hours ride to Washington; thirty minutes to Richmond. Good local markets. Electric and steam railroads. Fine poultry, stock, tobacco and general farming section.

Four Thousand Dollars will buy a most desirable farm, containing 140 acres, with necessary buildings and fences, large orchard, over 100 acres cleared and in good state of cultivation, convenient to Ashland. Many other attractions.

FRANK H. COX Ashland, Hanover County, Virginia.

WHEN TRAVELING ALWAYS CARRY

25
CTS.

PER
BOTTLE



THE GREATEST

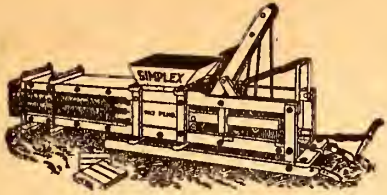
OF ALL PAIN CURES

AT HOME OR ABROAD A SAFEGUARD AND NECESSITY

PREPARED BY

GILBERT BROS. & CO. BALTIMORE MD.

LEADING 1908 UP-TO-DATE LABOR SAVING 20TH CENTURY MACHINERY.



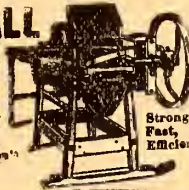
THE SIMPLEX PRESS.
Simplex Little Giant Baling Press for farmers' own use. Has large capacity. Write for circulars and prices.

YOU SAVE IT ALL

when you cut up a corn crop for either dry feed or molasses with **THE ROSS**

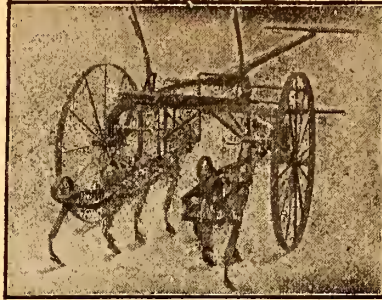
Ensilage Machinery.

Unexcelled in material, construction and cutting speed. Many sizes. Shaves any distance, in any direction at any angle. Don't walk. Send for Illustrated Catalog.



Strong Fast Efficient

tion, bogus, cheap goods. The only in town who claim to sell Oliver Chilled store in Richmond, Va., to buy **Genuine Oliver Plows and Repairs** is at **HENING & NUCKOLS.**



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. **BEMENT DISC CULTIVATOR, WITH SIX OR EIGHT DISC AND SPRING TOOTH ATTACHMENT.**

The "GENUINE" BROWN RIDING AND WALKING CULTIVATORS. Write for special catalogue and prices.

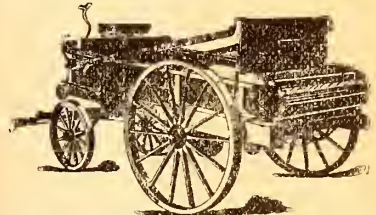
BROWN Steel Lever Harrows, Wood Harrows, Case-Ring Bearing Disc Harrows, Spring Tooth Harrows. All sizes, plain or with levers; Acme Harrows of all styles kept in stock at lowest net prices.

culars of any implement wanted. We warrant our goods "A" grade and can ship promptly from our store all orders. Get our prices and be convinced. 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 powers and 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.



Kemp's Twentieth Century Improved Manure Spreader. Made in three sizes. Write for prices and Catalogue.

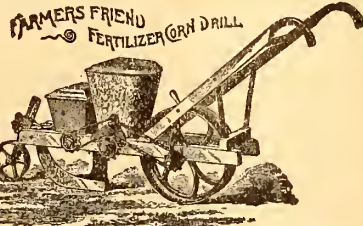
ECONOMY SILO

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.

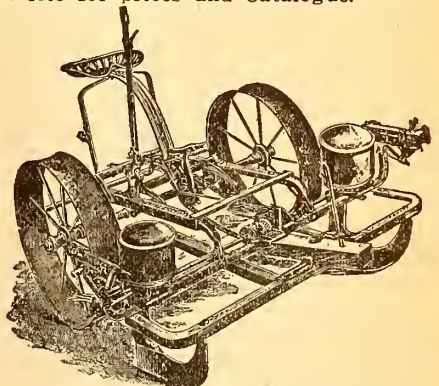


OLIVER SULKEY PLOW NO. 11.

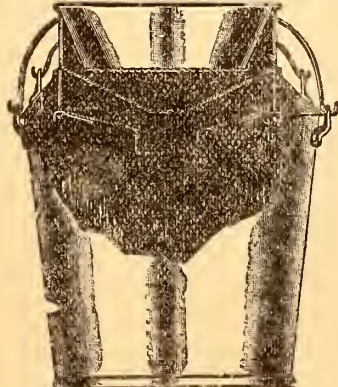
Light, durable and effective. Simple and novel device for turning. Plows the most difficult soils and does it well. Can be used with or without tongue. Depth easily regulated. Turns square corners without lifting out of ground. Made in both right and left hand. The No. 11 Sulky Plow can be fitted with either the No. 20 or 40 regular steel beam plow. Write for circulars and prices on Riding and Gang Plows.



ONE AND TWO-HORSE PLANTER, PLAIN OR WITH FERTILIZER ATTACHMENT.



Case and Tiger Double-Row Corn Planter. Plants two and a half to five feet. Plain or with Check-Row Attachment. Also furnished with Fertilizer Attachment if wanted.

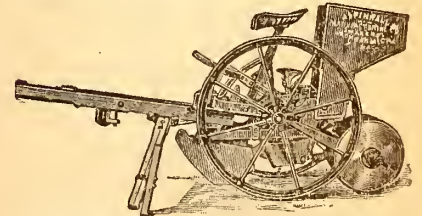


ANTI-DIRT MILK PAIL.

First. It prevents dirt, hair and other substances from dropping into the milk while milking.

Second. It strains the milk twice through two fine strainers while milking.

We mail our General Catalogue promptly on request; also special cir-



ASPINWALL POTATO PLANTER.

Automatic, accurate and reliable. Used by thousands of practical growers the world over. Over twenty years on the market. Don't be fooled by imitations and makeshifts, but write for attractive illustrated catalogue.



DON'T FORGET! All the merchants Plows and Repairs only sell the imita-

HENING & NUCKOLS, 1436-38 E. Main St., Richmond, Va.

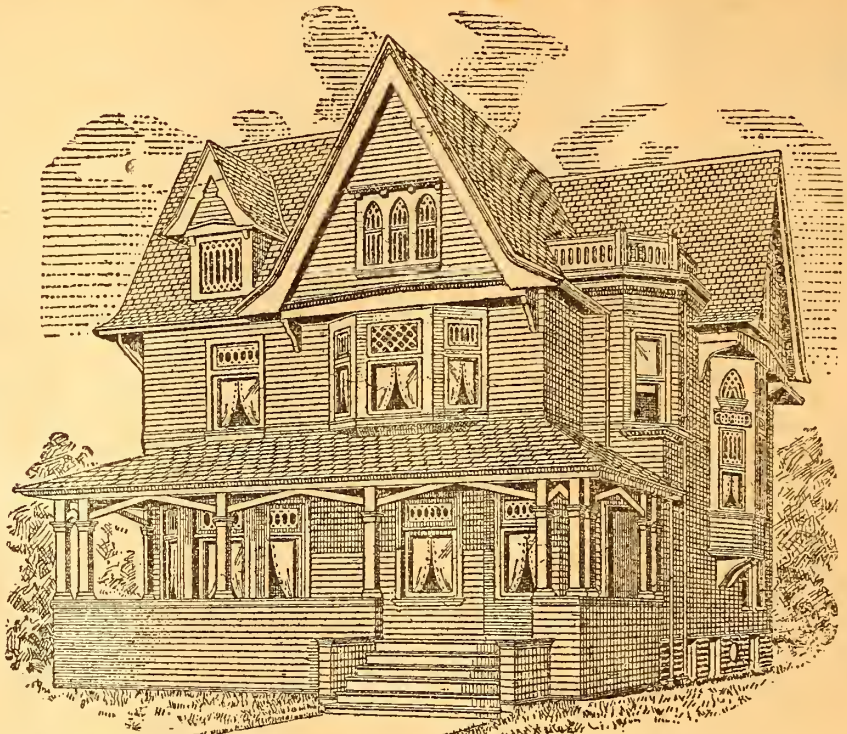
Spotless Paint at only 97 cents Per Gallon

**THIS LARGE
TWO STORY HOUSE
PAINTED FOR
\$12.21**

A Large, Two-Story, Ten or Twelve Room House like this painted with Spotless Ready Mixed House Paint, two coats, for \$12.21.

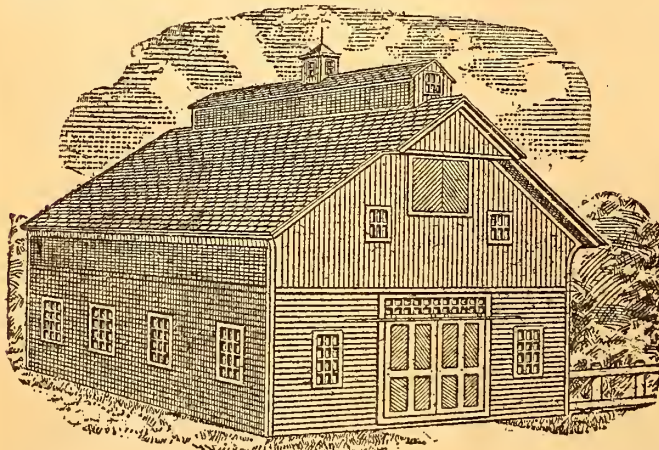
This large house, measuring 28 feet wide by 40 feet long and 24 feet in height will require

11 gallons for body	
10 gallons at 93 cents per gallon...	\$9 30
1 gallon at 97 cents per gallon.....	97
2 gallons for trimming at 97 cents per gallon.....	1 94
	\$12 21



DO YOUR OWN PAINTING

and buy your Paint from us and thereby saving \$10.00 to \$20.00 on every building painted. Make your house and buildings proof against time. Increase their value and have the handsomest house in your section.



A Large Modern Barn Like this Painted with our SPOTLESS WEATHERPROOF PAINT, two coats, for \$8.45.

This large barn, measuring 30 feet wide by 50 feet long and 22 feet in height, will require—

12 gallons for body, 10 gallons at 59 cents per gallon.....	\$5 90
2 gallons at 64 cents per gallon.....	1 28
2 gallons for trimming, at 64 cents per gallon	1 28
	\$8 46

of our Spotless Weatherproof Mineral Barn, Roof and Fence Paint, the most durable mineral paint made. Guaranteed to wear five years.

We sell \$1.50 Paint at 97 cents per gallon, or as low as 84 cents per gallon in larger quantities. It is as good a paint as the kind you pay your dealer \$1.50 per gallon for.

OUR FREE TRIAL PLAN. We make every shipment under our binding guarantee that you may open and use any three gallons of paint you wish, putting it to the hardest test, and if you find that we have not shipped you a paint of as high quality as you can buy anywhere, regardless of price, just ship back

the unopened paint and we will not charge you for the three gallons used, but will refund all your money and freight charges. You must admit that this is a fair proposition.

OUR FIVE-YEAR GUARANTEE is that it will not blister, peel, chalk, crack nor rub off. Send us your name and address to-day for color cards and complete catalogue, sent free, or order from this ad, if in a hurry. It means a saving of more than one-third on your paint bills.

SPOTLESS CO., INC., 122 SHOCKOE SQUARE RICHMOND, VA.

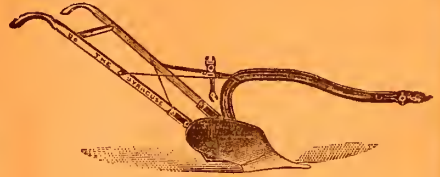
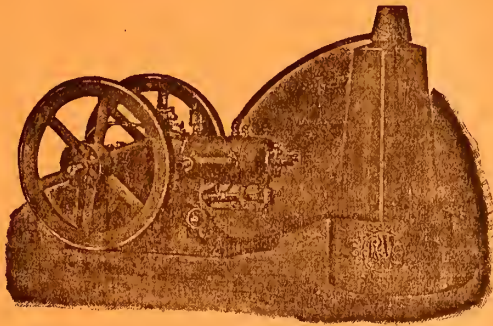
If you will write us the dimensions of the building you want to paint we will tell the amount of paint necessary to cover it properly.

SEND FOR OUR FREE CATALOGUE AND COLOR CARD TO-DAY.

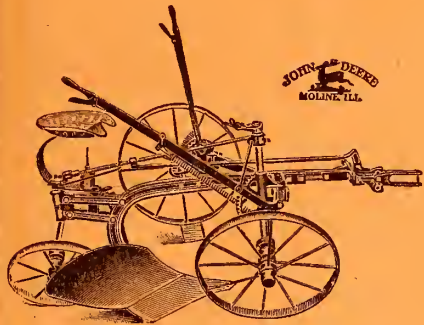
LABOR SAVING IMPLEMENTS

THE WATT PLOW CO., Richmond, Va.

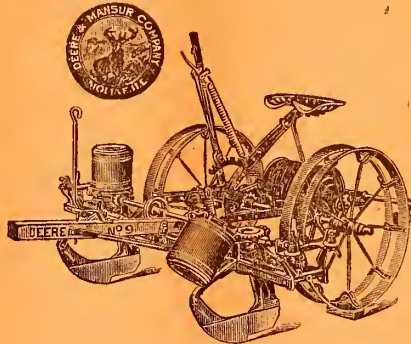
Root & Vandervoort
Gasoline Engines.
From 2 to 25 Horse
Power. Vertical or
Horizontal. Write
for special circular
telling of their
many good points.



John Deere Syracuse South
Bend and Chattanooga Walk-
ing Plows.

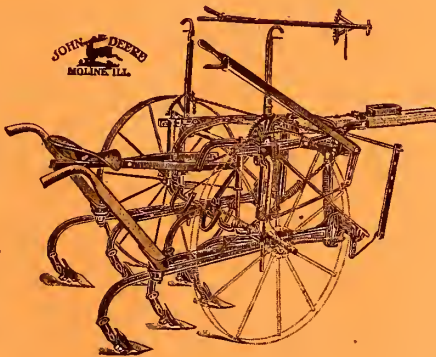


John Deere
Sulky and
Gang Plows

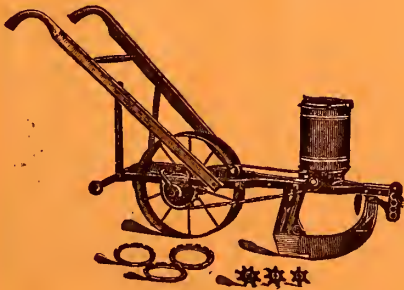
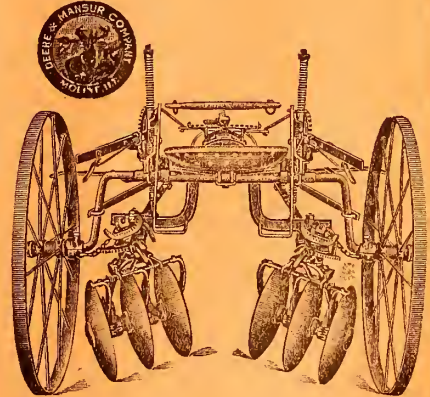


John Deere
and Black
Hawk Dou-
ble row corn
Planter.

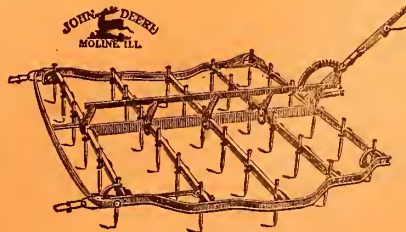
John Deere,
Buckeye, &
Avery Walk-
ing and Rid-
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vators.



John Deere
and
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vators. Extra
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furnished to
convert into
Harrow.



John Deere,
Black Hawk
Spangler,
Root, and
Eureka
Single Row
cornplanters



John Deere
and Rod-
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Success
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The 1908
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THE WATT PLOW CO.

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Northwestern Mutual Life Insurance Company

THE NORTHWESTERN.—The Company that gained more insurance in 1907 than any other company in the world.

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THE NORTHWESTERN.—The Company that in 1907 paid the largest amount of dividends ever paid in one year by any other life insurance company.

THE NORTHWESTERN.—The Company which paid in 1907 more for dividends than for death losses—an unprecedented record in life insurance.

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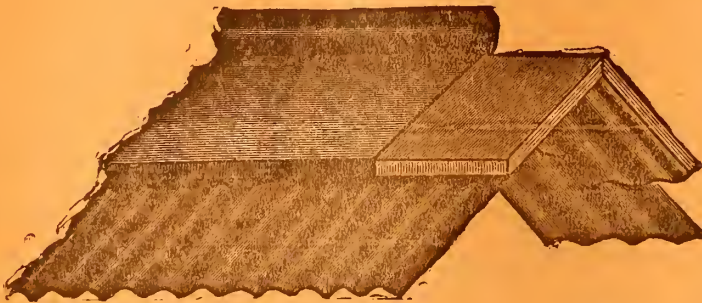
General Agent for Virginia and North Carolina.

601 Mutual Assurance Society Building,

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“Bestoid” Rubber Roofing

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Tarred Paper, Tin Plate, Lime,

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Guaranteed not to Break or Bend.  **Send for Our Number 8 Catalogue**

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We manufacture a complete line of Doubletrees, Singletrees, and Neck Yokes of every description.

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