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# Southern Planter

## A MONTHLY JOURNAL

DEVOTED TO

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

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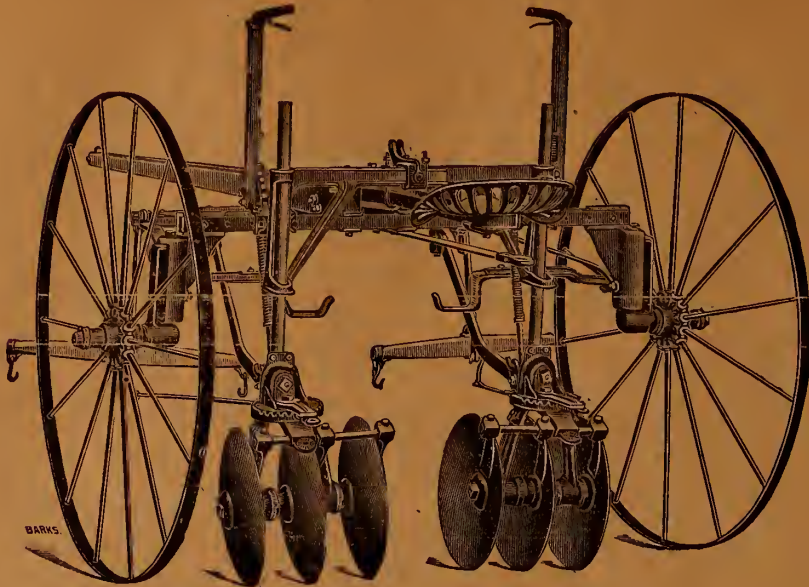
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# The Southern Planter.

DEVOTED TO

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

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

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64th Year.

Richmond, May, 1903.

No. 5.

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## Farm Management.

### WORK FOR THE MONTH.

The month of April up to this writing (20th of the month) has been throughout the South the most ungenial April we have ever known. It has been one succession of cold, showery days, with one of the sharpest frosts in the first week we have had since February. Following two months of excessive rainfall, this weather has put the land into such a condition that no work has been or is even yet possible. In the past three months we have had nearly one-half of the average rainfall of the year. As the average rainfall of each year is usually about the same, we may reasonably expect that this wet spring will be followed by a dry summer or fall, and that the water now in the depths of the soil will be needed before crops are matured. It will be well, therefore, to conserve this by keeping the surface mulched with fine soil as much as possible after crops are planted. In the semi-arid regions of the West a new method has been introduced for conserving soil moisture, which is being found to be of great value. It is called the Campbell method of sub-surface packing. The method is to plow very deep, and by means of a specially constructed implement to pack the bottom of the furrow and then to keep the surface well cultivated and covered with a mulch of fine dust. By pursuing this method of conserving the winter and spring rains it has been found possible to make successful crops on land where little or no moisture falls

from June to the fall. An adaptation of this system may be found to be of service here in many seasons.

The condition of the wheat, oat, clover and grass crops are most promising. The genial weather of March set them to growing, and this has continued, notwithstanding the coolness of the month. The average condition of the wheat crop on April 1st throughout the country was 97.3, as against 78.7 on April 1st, last year, and 82.1 the mean of the April averages of the last ten years. Virginia is ahead of all the States in the condition of the crop, which stands at 103 as against 54 last year, and 84 for ten years. North Carolina stands at 100, as against 64 last year. South Carolina at 93, as against 80 last year, and Maryland at 99, as against 70 last year. Tennessee, Kentucky and West Virginia have also a high average condition. Should there be no serious set back during the next three months, the promise is for the largest winter wheat crop ever grown. Grass, crimson and red clover have made splendid growth, and promise early and full crops of hay—crimson clover is being cut already for feed in this section.

The work of planting the corn crop should be pushed on as fast as the land can be got into good order. We would, however, strongly urge that too great haste be not made. Let the land dry and be thoroughly worked before planting, even though the crop

may be put in somewhat late. As we pointed out in our article on "Work for the Month," in our last issue, more depends on a fine condition of the seed bed than on the fertilizer that may be applied. Corn planted in cold, wet and cloddy land is not going to make a good crop, however well it may be cultivated afterwards. The best and most successful cultivation of the corn crop is that which precedes the planting of the crop. In our last issue will be found our views as to best method of planting and fertilizing the crop, and to that issue we refer our readers.

The cultivation of the corn crop will require attention through this month and the next. The object of cultivation is two-fold. One to kill the weeds, the other the conservation of the moisture in the land. The latter is the most important of the two. Without abundant moisture the crop cannot be a success, and this conservation of moisture can only be secured by keeping the top three or four inches in a finely broken condition so as to destroy the capillarity of the soil. When once the soil becomes consolidated, moisture evaporates from it in the hot weather so quickly that the tender rootlets of the corn are absolutely prevented from securing the food needed to make growth. All plant food is taken up by plants in a liquid form, and the amount of this liquid required is enormous. At the Wisconsin station it has been proved that every pound of dry matter in a corn crop requires 310 pounds of water to make it. To secure this it is necessary not only to utilize the rainfall during growth, but also to call upon the reserve moisture in the soil accumulated during the winter and spring months. This can only be done by keeping the surface soil finely broken. To plow the crop deeply will not serve this purpose. Plowing deeply and exposing large surfaces of the subsoil to the action of the air and sun is the way to dry it, and not to conserve moisture. This method of cultivating the crop has also the further disadvantage that it damages and breaks the tender roots of the plant, and thus curtails its feeding power. What is needed is to encourage the making of more roots rather than the cutting off of those roots already made. Few farmers realize how quickly the corn plant will fill the ground with roots if the soil is in a fine condition and well supplied with moisture. Long before the corn is too tall to work the whole width between the rows should be filled with the feeding rootlets of the plants and to use a plow through these is to irreparably injure the crop. The best implements to cultivate a corn crop with for the first two or three work-

ings are a harrow or a weeder. One or the other of these implements should be run over the crop before it breaks through the land, and this be repeated at intervals of five or six days until the crop is too tall to be thus worked. Whilst this may seem a harsh method, and likely to result in pulling up or injuring the plants, it will be found in practice to have no such effect, but will result in keeping a fine mulch on the surface and will destroy all weeds as fast as they germinate, thus accomplishing at one time both the objects of cultivation. The number of times which a crop should be cultivated in order to secure the best results depends largely upon the character of the weather during the growing season. It should be cultivated after every heavy rain as soon as the land is dry enough to work freely, and at other times whenever the soil is showing signs of crusting or whenever weeds are appearing. The advantages of frequent cultivation are forcibly shown in an experiment made at the New Hampshire Station, where certain plats were given no cultivation, other plats were cultivated five times and other plats were cultivated fourteen times. Some of the plats were cultivated shallow and others deep. On the plats not cultivated the weeds grew luxuriantly, and the yield was 17 bushels of shelled corn to the acre. The plats cultivated shallow fourteen times yielded at the rate of 80 bushels of shelled corn to the acre. On the plats cultivated *shallow* five times the yield was 79 bushels of shelled corn to the acre. Where the plats were cultivated *deep* five times the yield was 69 bushels per acre. A plow should never be used to cultivate a corn crop. It has no place in a corn field after the crop is planted, except it may be in the rich river low ground, where climbing vines are so troublesome, growing between the plants in the rows. As these cannot be reached by a cultivator of any kind, and hoeing is too costly, a light furrow may be plowed on to them to smother them out, but the space between the rows should be cultivated level with either an Iron Age or disc cultivator after the crop is too well grown to be worked with the weeder. Keep the soil as nearly level as possible, and throw no hills to the corn. The idea that throwing a hill to the corn will prevent it being blown down is a fallacy. If the corn roots have not been cut during growth by deep cultivation they will have such a hold on so large a surface of the soil that no ordinary wind storm will hurt the crop. Hills thrown to the corn only expose a much larger surface of soil to the drying winds and sun, and lead to drouthing of the crop and a reduced yield. *Cultivate frequently and culti-*

*rate level and shallow.* At the last working sow either cow peas, sapling clover, crimson clover or rape, or a mixture of all these, and then in the fall after the crop is harvested there will be good pasturage, the land will be protected from washing, and a humus making crop be ready to turn under in the spring.

The chopping out and cultivation of the cotton crop should have attention as soon as the plants are large enough for it to be clearly seen which are the strongest and most likely to be left. The longer the chopping out is deferred the less plant food there will be left in the soil for the plant which is to make the crop, and the more the plant is likely to be drawn and spindling. Bring to a stand as soon as can be done with safety, and then cultivate frequently, and cultivate level. Do not use the plow, but an Iron Age or disc cultivator. The same principles apply to the cultivation of the cotton crop as to the cultivation of the corn crop. Sow crimson clover at last working to cover the land in winter and make humus.

Tobacco plants should be set out on well prepared land as soon as they are large enough. Better to plant small, stocky plants than drawn ones. In our last issue we discussed fully the preparation of the land for this crop and the fertilizer best fitted to make a crop which will sell well. To this article we refer our readers. The indications are that for good tobacco there will be a good market next season as stocks in dealers' hand are light and consumption is active.

Peanuts should be planted this month. The demand for these nuts has been good, and prices better than for some years past, and the stocks held by dealers are, we are told, small. This would indicate a good demand for the next crop, as the consumption is a growing one both for domestic use and for oil and feeding purposes. We are strongly of opinion that if better methods of preparation of the land and a better system of rotation was followed and more consideration given to the requirements of the crop in the way of fertilizer, that much heavier crops would be grown than the average now raised. The crop is an important one in Eastern Virginia and North Carolina, and the land well suited for its production, but in many sections they have been too long grown on the same land without a rotation of other crops. According to the census reports, the area devoted to growing peanuts in 1899 in Virginia was 116,914

acres, and the product was 3,713,347 bushels, the average yield per acre being 31 bushels. In North Carolina, in the same year, 95,856 acres were devoted to the crop, and the yield was 3,460,439 bushels, the average yield per acre being 36 bushels. These yields are too small to be profitable, and fall far short of what can easily be made. Fifty bushels to the acre can readily be made by planting in a proper rotation and by fertilizing scientifically. One hundred bushels per acre have been frequently grown. Too often the practice is to follow peanuts with peanuts year after year until the land will not produce a crop worth gathering. At best, the only rotation is peanuts followed by corn, and then by peanuts again. This is too short a rotation. A more profitable way would be to grow cow peas or soy beans, and then follow with peanuts, and after this crop plant sweet potatoes—the three crops to be followed each fall with crimson clover and oats or wheat mixed, to keep the ground covered during the winter, and to provide a humus making crop to be plowed down in the spring. A dressing of 300 pounds to the acre of acid phosphate should be applied to the cow pea crop, and a mixture of 100 pounds of acid phosphate, 300 pounds of cotton seed meal, and 65 pounds of muriate of potash, or 30 pounds of kainit to the acre should be applied before planting the peanuts. A dressing of 25 bushels of lime to the acre should be given every three or four years. We are satisfied that if such a system as we suggest be followed it will result in a much heavier average yield of nuts and the fertility of the land will be maintained and enhanced.

After the planting of the staple crops is completed attention should be given to the planting of forage crops. It is one of the cheering evidences of an improved system of farming being adopted in the South that we almost daily receive enquiries as to the proper forage crops to be planted and the method of growing and harvesting them. This is an indication that live stock is receiving attention and becoming a factor in farm economy. In the past the absence of this factor has been the great weak point in Southern farming. Live stock, instead of being regarded as the sheet anchor of successful farming, was looked upon as merely an incident of the occupation of land and as a means of getting rid of some of the waste products of the farm without regard to their profitable utilization. If the corn stalks and straw sufficed to keep the animals, apart from the team, alive during the winter all was regarded as well. If

not, why they merely pined to death or so near to death as to be practically worth much less in the spring than in the fall. Now on thousands of farms the profit derived from cattle and sheep is a large element in the farm returns, and the resulting manure a great factor in reducing the fertilizer bills. This is as it should be. No country ever became a prosperous, fertile, agricultural country without live stock, and even on the highest priced lands in the world they are the main factor in securing a profitable result from farming. To succeed with live stock provision must be made for their maintenance all the year round by crops specially grown for that purpose. The need for these in a hot climate is often almost as great during part of the summer as in the winter. We have known few summers in which in the South there were not one or two months, when in the absence of forage crops, cattle did not suffer from shortness of feed and make no progress towards maturity or maintain their flow of milk. All this can be obviated by growing a variety of forage crops coming to maturity at different seasons of the year. The climate of the South is especially favorable to the production of the greatest variety of the most nutritious forage crops, and due attention given them will place the stockman in a position to compete successfully with stock raisers in any section of the country. In another article in this issue we deal with this subject more fully, and to that refer our readers.

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When planting the corn crop don't forget to use some pumpkin seed with the corn. On the low grounds especially pumpkins can be grown with advantage in the corn, and will make an excellent return in the way of good feed for cattle and hogs during the winter, and at the same time do no injury to the corn crop; indeed, some growers maintain that they help the corn crop by shading the land and conserving the moisture. Mix the seed in the proportion of about 1 of pumpkin to 5 or 6 of corn. The Virginia Mammoth is a good variety to grow. If not mixed with the corn, see that a field is planted with pumpkins alone. Lay off the rows 6 feet apart, and drop the seeds (two or three at a place) 6 feet apart in the rows. The more fertile the land the better will be the yield. It will pay to give the crop some fertilizer, say some cotton seed meal and acid phosphate.

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## FORAGE CROPS.

In our article "Work for the Month," we have drawn attention to the importance of making preparation for the seeding and planting of forage and feed crops for live stock at this time of the year. The number and variety of these crops, which can be successfully grown in the South, is so great and their importance in the farm economy so weighty, that we have thought it wise to devote a special article to the subject. These crops may conveniently be divided into three classes—first, those which planted now will make summer forage crops; second, those which planted a little later, say June, will make fall and winter feed; third, those which planted still later, say August, will make fall, winter and spring grazing and an early hay crop. In addition to these forage crops, there are the root crops, which are of such great service in the successful wintering of cattle, sheep and hogs. Of these mangold wurtzel and sugar beets should be planted this month, ruta бага turnips in July and August, common turnips in August and September, and artichokes in March and April. Among the forage crops in the first class above mentioned are the millets (*Pencillaria*, German and Hungarian), sorghums, and (south of the James river), Teocinte. Pearl or cat-tail millet (*Pencillaria*, as it is called in the West) is one of the best of the millets for making a green forage crop to be cut and fed to cattle during the summer. Sown at the rate of one bushel to the acre, on well prepared land, in good fertility during May and June, it will make a crop ready to cut in fifty days, and will yield anywhere from five to ten tons to the acre, according to the fertility of the land. German and Hungarian millet may be sown from this time until the end of July, and will make a fine hay crop in from sixty to seventy days from the time of seeding. To make a heavy yield the land should be in a good state of fertility, and be finely prepared. Sow one bushel of seed per acre broadcast, cut and cure before the seed forms.

Cow peas either sown alone or mixed with sorghum or millet make an excellent crop for green feeding or grazing or for hay. To be used for these purposes, they may be sown broadcast from May up to the end of July. Sow at the rate of one bushel to the acre, if sown alone, or, if mixed with sorghum or millet, sow three pecks of cow peas and a peck of millet or sorghum. If cow peas are wanted for a seed crop, they are better planted in drills two feet six inches apart, and scatter thinly in the drills. They should be cultivated once or twice, and will make a much heavier seed crop than if sown broadcast.

Soy beans are one of the best feeds that can be grown either for cutting green to be fed to hogs or other stock, or to be made into hay or to be allowed to stand until the seed matures for a seed crop. They are the richest of the leguminous crops in protein and fat, and at the same time are, like cow peas, improvers of the land. In our last two issues, and in this issue, will be found articles from farmers who have grown soy beans, speaking in the highest terms of the value of the crop and of its ease of cultivation and curing. They are best grown in drills two feet six inches apart and dropped in the drills five or six inches apart. A peck of seed will sow an acre. They should be planted in May or June.

Teocinte is a most valuable fodder plant either for cutting green or cured, but is not suitable for growing north of the James river. It is a sub-tropical plant, growing very much like corn, but will not mature seed north of the Gulf States. This plant will make a much heavier yield of feed than corn, as it stools enormously after being cut, as many as fifty stalks having been counted coming from one seed. It may be cut two or three times during the summer. It requires rich land to produce these heavy yields. The land should be deeply and finely broken and the seed be planted in rows three to four feet apart. Two to three pounds of seed will sow an acre. The seed should be sown in May, or, at the latest, in June.

In the second class of forage plants—that is, plants intended mainly for fall and winter feeding—sorghum and Kaffir corn are amongst the best. These crops may also be used for feeding green, sorghum of the Early Amber variety being an especially good green feed for cattle and hogs. The saccharine sorghums, like the Early Amber, are not so resistant of drouth as the non-saccharine ones, like Kaffir corn, and it is therefore often well to plant some of both varieties, so that if the season should prove a dry one, there will be a certainty of crop. Kaffir corn will stand drouth better than any other forage crop. Both the forage and seed are good feed. These sorghums may be planted at any time from now to the end of July. They will make a crop on poorer land than corn, but, like corn, will make the greatest yield on good land. They should be planted like corn, in rows three feet apart and the plant be left about four inches apart in the row. Cut and cure like corn. A peck of seed will sow an acre. When intended for a hay crop, from two to three pecks should be sown broadcast, and the crop should be cut before the seed forms, and be cured like hay. We will deal with the crops in the third class in later issues.

## SUCKERING CORN.

There has always been considerable difference of opinion as to the injury which suckers do to the crop of corn. We are glad, therefore, to be able to report the following experiment made by Mr. C. F. Day, of Isle of Wight county, Va., on the subject. He says: "For years I have been pulling off the suckers when I could have it done, being of the opinion of many of the best farmers of this section, who thought it injured the corn not to pull them off. I determined, as it was a question of surmise, to give the matter a practical test.

"Last year I had a ten acre field of corn planted after potatoes, which was full of suckers. Thinking they would reduce the yield, I secured a force of hands and pulled them off, which I found to be the hardest job of any done during the year. I directed the manager on my farm to leave two rows at different places in the field with the suckers on. The rows were 200 yards long.

"In the fall, when it was time to 'get in' the corn, I took two carts with some men, and superintended most carefully the gathering and measuring. From the two rows not suckered I gathered three flour barrels and a bushel and one-half in the ears. From the two rows alongside, which were suckered, I gathered three flour barrels and a scant bushel. So you will see I not only lost the cost of suckering, which is probably three times as great as thinning, but I made less corn by half a bushel in the ears. I examined (but did not shuck) the other rows, and could see no difference.

"Now, whilst 'one swallow does not make a summer,' nor may one experiment prove the truth, it was so convincing that I will never pull off any more suckers."

## BETTER PLOUGHING PAYS.

OTHER NATIONS BEAT US—GOOD PLOWS FOR GOOD PLOUGHING.

*Editor Southern Planter:*

Plows have been going for some time, and will be kept busy for a month yet to come. Generally, pains enough are not taken by ploughmen in the United States. The object of ploughing is twofold—to get the stubble, rubbish, grass and weeds buried, and to make the soil mellow, soft and fine, so that the roots of the plants to be grown upon the field may penetrate it easily in all directions in search of nourishment and moisture. The cohesion of the particles must be overcome and they must be loosened and

separated from each other, because crops do not grow well among clods.

Unlike the food of men and animals, the nourishment of plants must be in the liquid state, and the finer the soil is reduced the easier it is for them to obtain it. This being the case, it is easy to understand that the better the reduction by ploughing and harrowing the better will be the crop. If we only "cut and cover" we should not expect the plants to flourish on the "balks," nor very well in other places.

It has been frequently said, and is, no doubt true, that ploughmen in this country do not take pride enough in ploughing. In Great Britain ploughing matches are of frequent occurrence; the ploughmen by constantly striving after perfection become very expert. The writing master's direction: "Every line and every letter strive to make a little better," is as applicable to ploughing as to writing. In all kinds of work unless there is a constant effort made for improvement, the product will not be kept up to the high standard. We must continue to do our best all the time, or our workmanship will deteriorate. English, Scotch and Irish ploughmen beat us. In Canada also, according to Professor Shaw, the ploughmen excel us. He says that in a journey through Ohio he, 'did not see a really straight furrow. We have young men in this college who can turn a furrow as straight as an arrow course.'

Some may say it is only a matter of looks, and that grain will grow on a crooked furrow as well as on a straight one. So it will, if the crooked furrow is as well crumbled to pieces and refined, but such is not generally the case. Ploughing on a long curve may do tolerably well, but on short crooks the ground cannot be well pulverized, because there it is impossible to maintain an even furrow slice.

Good ploughing cannot be done without a good plow. No amount of skill or watchfulness on the part of the ploughman will avail with a poor tool. According to my experience a short plow with considerable twist in the mold-board will mellow up the furrow slice in a stubble field better than a longer plow with less twist in the mold-board. The short plow will require more power to draw it through the ground, because it is doing more work at crushing, kneading and disintegrating the particles of the soil. The long plow with but little twist in the mold-board is best for ploughing sod-ground, because it raises the furrow slice more gradually, lays it over so gently that it does not become broken or kinked and draws easier.

To do the best work, and for the comfort of the ploughman, plows should have wheels to regulate the depth of the furrow and maintain an even depth on uneven ground. This cannot be done with the clevis.

Wheel plows were common in England more than

140 years ago. They used two wheels and four coul-ters on each plow. The coul-ters were not all placed in a straight line on the beam, but were fastened diagonally across the beam, the object being to cut up the ground to the width of the furrow slice before it was turned. The jointer, or diminutive plow, hung in the beam of some of our plows, which is so valuable for getting the grass and stubble under, is a modern invention. We find no account of it in the old English books on husbandry.

Hales's Book of Husbandry, published in London in 1758, says: "Ploughing is the capital operation of husbandry." "To give the crop the full benefit of the land every lump should be broken." "The more we break the particles of earth the more we put the soil in condition to furnish plants with nourishment."

J. W. INGHAM.

Our correspondent is undoubtedly right in asserting that the English ploughman is, as a rule, a much better workman than his colaborer here. There great rivalry exists between the ploughmen on neighboring farms and the work done under such circumstances is of the best. We have seen scores of acres ploughed so skilfully that the furrows were as true and straight as though laid off with a ruler, and the width and depth of each furrow almost mathematically exact. This results in an evenly grown and ripened crop and rows capable of being easily cultivated by machinery.—ED.

### IMPROVEMENT OF SOUTHERN PASTURES.

WHICH SHALL IT BE, THREE ACRES TO EACH HEAD OF STOCK, OR THREE HEAD OF STOCK TO EACH ACRE?

*Editor Southern Planter:*

It lies in the power of each and every land-owner throughout the entire South to determine the manner in which he individually will answer the above query. If he so elects, he can leave his so-called "pastures" in the condition so many of them are to be found in at this present time—to wit, three acres furnishing but a very scanty subsistence for one single head of live stock; or, if he so elects, he can so improve the general condition and fertility of his pasture as that a single acre of it shall furnish more and better grazing than is now furnished by three acres.

I have seen high, dry and comparatively poor pine, sandy land, that would have been considered a dear bargain at 50 cents per acre, so enhanced in value by Bermuda taking complete and entire possession of it (though much against the owner's will or wishes in the matter) that \$5 per acre would have failed to



purchase it. I have seen many acres on high, dry and comparatively poor sandy pine hills that were so heavily set with Bermuda and the turf so dense that one single acre of it would, and did, furnish more and better grass than was furnished by three or more acres of rich bottom land where the so-called "native" grasses were the sole dependence.

One reason the average southern pasture is no better than it is is on account of so many useless, unsightly and pestiferous weeds that, each in its season, are allowed to take possession and crowd out the more useful and valuable grasses, as dog-fennel, sneeze-weed, etc., and that pest of every lover of good milk and butter, the "bitter" weed, each and all of which might be eradicated by a little effort in the way of running the mower, or if too rough or too many washes and gullies, even a sythe, and cutting them just as they come into bloom and before any of the seeds have had time to mature. Hand-pulling is a somewhat slower, though surer, method. I have depended exclusively on the latter, hence it is a mere chance if I ever see any of them in my pastures, and if so, they are immediately pulled up and more often than any other way, carried to the fire and burned.

I am satisfied that the leese of a barb-wire fence is a rather poor protection from either a cold north-west wind or an easterly rain, sleet or snow, and it is an undoubted and indisputable fact that animal heat must somehow or other be maintained and also that said animal heat is far cheaper when maintained from the outside by the aid of a good shelter, than from within by the more costly carbonaceous foods. No pasture, even in the "Sunny South," is complete without some shelter for the stock to run to from sudden northers, etc. "The merciful man is merciful to his beast."

Sufficient timber should be left for necessary shade, but as grass does not, and cannot, thrive where shade is too dense, all timber not actually needed for shade is a detriment to the pasture, and should be cut down without mercy.

Whatever arrangements are made about water, and from whatever source obtained (living springs are best), the supply should be both abundant and pure. The health of the stock is largely dependent on the water supply, and still more on the purity of that supply. The fence should connect with the barn yard by at least a lane, if not other way, and be put up so firm, stout, close and high that any and all live stock enclosed therein shall be actually and positively restrained from depredating on either your own fields or those of your neighbors. This tends to keep

peace in any neighborhood, and may save lots of trouble, both home and abroad, as well as some expensive law suits.

The one great error into which many of our farming friends have been led is that something can be obtained from nothing; that the pasture forms the single exception to nature's inexorable law of restitution or "so much for so much," and that as the animals are continually depositing excrementitious matter on every square yard, or even foot, of it, that instead of the soil of a pasture becoming depleted or exhausted of its fertility, until grass refuses to grow and noxious weeds and useless moss supplant them, that the pasture of all places on the farm should finally become immensely rich and fertile, in fact, the richest land on the place.

It is needless to undertake to prove the above to be a fallacy; it proves itself on every hand the entire country over and in each and every individual pasture.

To keep a permanent pasture in good order and increase its ability for growing grass, hence its capacity for supporting stock, the soil should be fed, and the more liberally it is fed the greater the quantity of grass furnished by it and the better its quality, as far as succulence and nutrition is concerned.

It is seldom necessary to apply nitrogen to a permanent pasture, the droppings of the stock and the leguminous plants, as the vetches and clovers invariably found in every good pasture, tending to keep up the needed supply. Still I have derived both satisfaction and profit from an application of fifty or seventy-five pounds of nitrate of soda per acre broadcasted in early spring before the weather has become sufficiently warm for active nitrification to set in.

The pasturing of stock, particularly of growing animals and of cows whose milk is sold, exhausts the phosphate and potash of the soil very rapidly, and it is important that these be restored if the sod is to be kept in the best condition. To do this 500 pounds of a fertilizer containing 8 per cent. phosphoric acid and 8 per cent. potash may be applied per acre.

It is a great mistake to locate the permanent pasture on the poorest part of the farm, as it requires as good soil, better and more thorough preparation and a greater amount of after-care to make and maintain a really poor permanent pasture than it does for any other crop on the farm. But when all this has been efficiently and rightly done, aside from the vegetable garden, no other crop on the farm affords

as much satisfaction nor so much clear profit, though more often than any other way, it gets the least credit for it.

G. H. TURNER.

*Burgess, Miss.*

### THE NEED OF POTASH IN VIRGINIA LANDS.

*Editor Southern Planter:*

As Mr. J. S. Woods, in the April number quotes me in regard to potash I feel that some additional words on the subject may not be amiss. Dr. Stubbs's experience was in the low-lands of a river heading in the Blue Ridge, and it is generally found that where this is the case that potash is plentiful in such lands. But if he applies the results there to all the sandy soils of Tidewater Virginia I think he will make a serious mistake. The gradual decay of epidotic rocks in the Blue Ridge brings down the rivers that rise there a goodly supply of potash, which is lacking in the Tidewater section, where this is not the case. It depends very largely on the nature of the soil anywhere as to what its requirements are as to plant food. The lands that are devoted to tobacco in North Carolina are very different from the bottom lands of Albemarle and grow a very different tobacco. If Mr. Woods practices on the theory that phosphoric acid is all that tobacco needs he will soon find that he is growing a very poor grade of tobacco. While the lands of the Piedmont section are abundantly supplied with potash it is doubtful whether in most of the lands there is a sufficiency of readily available potash for the tobacco crop. The requirements of tobacco are mainly for nitrogen and potash, as is shown in the experiments of Major Ragland, which you give in the April number of the *PLANTER*. An excess of phosphoric acid will harm the quality of the leaf more than anything else, making it, as the growers say, "boney." The best crops of tobacco grown in North Carolina are grown by men who use potash in the form of a sulphate largely, and while the lands of Piedmont Virginia may have potash enough available for most farm crops, if lime is used on them it will be found that tobacco needs more readily available potash. Still, a great deal does depend on the soil and its treatment. In Nelson county they grow fine black wrappers with no fertilizer but the clover, while in North Carolina the growers say that they cannot grow fine wrappers after clover or peas, even when otherwise well fertilized. The fact is, that every farmer should experiment and study the needs of his particular soil, and not jump to conclusions based on local experience.

W. F. MASSEY,

*Editor of Practical Farmer.*

### HOW TO PREVENT TOBACCO FROM DROWNING.

*Editor Southern Planter:*

I would like for many of your readers to know what to do in case there should be much *wet* weather after weeding their tobacco. The rows should be left nearly level after the crop has been ploughed. If the tobacco begins to wither or droop go quickly and get your horse and plow and turn the soil from the hill again. By so doing you will leave the plant in a draining condition and the plants will soon flourish again. I prevented several thousand plants of my crop of 1902 from being drowned by this means. I am sure this will be helpful to those who are now preparing to raise the *wed* in some of our eastern counties.

D. D. CARTER.

*Habifax county, Va.*

### THE VALUE OF SOJA BEANS AS A FORAGE CROP.

*Editor Southern Planter:*

At this season of the year, when our farmers are planning for their spring and summer crops, it would be well to compare notes as to the value of some of the crops raised the preceding year. Often it is well to exchange views as to value of crops raised, even on adjoining farms.

We well know that it would be a mistake to try and feed stock without a corn crop, but how many of us have raised, in connection with our corn crop, a crop of Soja beans?

About six years ago I planted three pecks of Soja beans in drills three feet apart and sown about like garden peas. The soil was a sandy loam, and considered above the average. This three pecks yielded twenty-three bushels measured, allowed to ripen for seed and cut with sickle. This little crop opened my eyes as to the value of this new crop for feed. The dry, woody stalks were eaten with a relish by all stock. I had some ground with corn—one peck of beans to three pecks of corn. This made one of the best rations for milk cows I ever used, and also for work horses.

The following year I sowed twenty acres broadcast and cut for hay and found them first-class for general feeding of all kinds of stock.

The next year I planted ten acres in drills and began to cut and feed when in full bloom, and they were relished in this stage by cows, horses, mules and hogs.

Each year the yield of grain was about the same.

Last year I sowed four acres on the 3rd of July and ploughed in with a small Dixie plow; dragged flat next day. The season was favorable and I had a nice lot of hay. Cut when the leaves began to turn

yellow—before dropping—and this made as fine a lot of hay as any one could wish for. I would not sow more than one bushel to the acre when wanted for hay, as the natural grasses help to make it easier to cure. Don't house until dry. It may take two or three days, but when cured properly it is one of the best crops I know of.

Now for the benefit to the land. If you will pull up some of the growing plants you will find the roots thickly "set" with nitrogen nodules. From this source comes the great benefit to the soil, gathering and storing for future crops the most expensive element of plant food—viz., nitrogen. Corn planted on land the following year after Soja beans will be benefited by an increased yield of 30 per cent.

Experience with the cultivation of cow peas and blackeye peas teaches that sowing very early gives a larger yield of hay and less grain than sowing later. The 20th of June, in my judgment, is the ideal time for sowing cow peas and blackeye peas and the 20th of May for Soja beans.

Let the farmers who want to try this new (?) crop, and who think it overrated, plant three to five acres and they will never be sorry. D. W. MORRIS.

*York county, Va.*

## RESTORING THE WORN LANDS OF VIRGINIA.

*Editor Southern Planter:*

A great difference is found in what are termed "wornout" lands. The "wornout" lands of the Eastern, Northern and many portions of the Southern States are brought to productiveness only by a long, tedious and expensive process, but the "worn" lands in Eastern Virginia are entirely different.

Comparatively level lands, with a good subsoil of clay, say from eight to twenty-four inches under the surface, where the original timber was pine, oak, hickory, gum, beech, walnut etc., etc., are not "wornout" in the true sense of the term.

Such land is like the blooded horse. The horse may be thin and "worn" and "run down" by hard usage and abuse, but the bones, the hide, hair, muscles, sinews and tendons are all there. The hoof, the eye, the spirit, vim and vigor are all there (partially dormant, it is true), but hay, oats, curry-comb and brush will resurrect, reconstruct and restore the thoroughbred and make a good horse of him, because the foundation is there.

So with our land. If the foundation is there our lands can be easily, cheaply and quickly reconstructed, restored, rebuilt and made reproductive.

If poor, "wornout" land is open at the bottom so

that it will not hold manure and fertilizer, and is washed away on top, it is then poor and "worn" indeed.

Thin, "worn" lands, with porous subsoils and surface quite rolling will require the best of handling to bring them up, and such will not "stay there" after being brought up.

In a recent pamphlet, issued by the Norfolk and Western Railway (said pamphlet edited, and very ably edited, by Dr. Paul Scherer), the subject of "worn out" land is well treated. We recommend the testimony contained therein to the owners of "worn out" lands of Eastern Virginia. We also commend the treatment suggested for such lands.

By the way, the subject matter in said pamphlet is not only comprehensive, covering a great scope, but it is remarkably well and concisely treated, and we can heartily endorse the pamphlet from start to finish. The "worn" lands of Virginia are, in the main, all right for quick improvement.

*Norfolk, Va.*

A. JEFFER.

## BLACK ROT OF SWEET POTATOES.

Can you, or some of your subscribers, tell me what causes sweet-potatoes to turn black, and what to do to prevent it? I have been told that fresh stable manure makes it, but this cannot be so, as I did not use any at all last year, still they turned black badly.

*Hanover county, Va.*

JOHN FLICK.

Black rot of sweet-potatoes is a specific germ disease which affects the crop in all stages of its growth. The spores of the disease infect the soil from the tubers and are carried also from the vines to other vines. In this way when once it has got on to a farm it is a most difficult thing to get rid of. Professor

Price, who has made most careful study of the disease, says: "There is no doubt but that only healthy slips should be used, which means the careful selection of perfectly sound roots for the seed bed." These healthy sprouts must then be set in soil which is perfectly free from infection—that is to say, on land on which the crop has not been grown for several years. It is impracticable to apply any substance to the soil to kill the germs that have accumulated there. If the seed potatoes are grown from vine cuttings it is easy to get rid of the disease by planting the sprouts from these seed on fresh land. A crop grown even from vine cuttings taken from diseased tubers has turned out to be entirely free from the disease, whilst one grown from sprouts from the same tubers was almost ruined by the disease. The manure or fertilizer used has nothing to do with the disease. It is only propagated by the spores from diseased tubers or vines.—ED.

## GINSENG CULTURE.

Ginseng (*Panax quinquefolia*) is a native perennial plant closely related to the garden parsnip, carrot and celery. It grows wild in oak and maple woods in all the more Northern States and extends southward along the Alleghany mountains. In North Carolina this plant is found only in high mountain valleys. It is found only in moist, loamy soil under deep shade. The plant cannot endure the sun and when timber is cut out it dies from the locality.

The plant as found growing wild is from eight to sixteen inches tall with from one to three leaves, which are in turn composed of from three to five, or rarely seven, leaflets. The leaflets are arranged like fingers on the hand; they are ovate, sharply toothed on edges and taper pointed at tip. The flowers are greenish-yellow and appear in July. The root resembles a parsnip.

Wild ginseng is extensively collected wherever it abounds. The rapacity of collectors is fast exterminating the plant and many attempts have been made to cultivate it artificially. Most of such attempts have ended in failure. The plant is very difficult to grow and only with great care, patience and considerable expense is it possible to succeed.

The wild root, dried, brings about \$2 per pound. Cultivated roots often bring \$5 per pound. The market is China where this plant is the universal nostrum. American physicians say it has no medicinal virtue and never prescribe it. Owing to the frequent stories told of enormous profits to be made by cultivating this plant there is a constant demand upon the North Carolina Department of Agriculture for advice regarding methods of growing ginseng. To those who want to try the experiment the following advice is offered:

1. Ginseng cannot be profitably grown anywhere in North Carolina east of the mountains. The climate is unsuitable.

2. There may be profit in growing ginseng west of the Blue Ridge.

3. Ginseng cannot be grown in full sunlight. It must have a loose, rich, moist and cool soil. Drought is fatal.

The plant is propagated from roots and from seeds. The plant produces seed in abundance, but the seed requires to be planted immediately after it becomes ripe, and then does not germinate until after eighteen months. The best plan is to sow the seed as soon as ripe in shallow boxes, tack wire cloth over these to keep out mice and worms and place box where it will be continually moist and well shaded.

Let the young plants grow one year in the seed box, then transplant to the permanent bed. This must be rich, moist, loose soil well shaded. Set the plants about six inches apart in rows eighteen inches apart. Cultivate frequently and each fall mulch the bed with straw or pine branches. If everything goes right the roots will be fit to sell the fifth year after transplanting. But a single drought may ruin the entire crop at any time.

Mice, moles and boys are the only pests of the crop.

In starting a new plantation, unless the seed can be had directly from the plant, it is best to begin with small roots, which may be purchased for about \$2 per 100. H. P. Kelsey, Kawana, N. C., and George Stanton, Summit Station, N. Y., supply such roots.

The plantations should be made from October 1st to April 1st.

When ready for harvesting the entire bed should be carefully dug up and the crop assorted. Plants too small to sell may be replanted. The larger and smoother the roots the higher the price. The roots are simply washed clean and dried in the sun or in a fruit evaporator. The following persons buy for export, viz.: Wallace Brothers, Statesville, N. C.; M. Sabel & Sons, Louisville, Ky.; S. Wells & Co., 211 Vine street, Cincinnati, O.; J. L. Cilley, 101 Gold street, New York.

GERALD MCCARTHY,  
Biologist.

## ARTIFICIAL PROPAGATION OF BERMUDA GRASS.

Bermuda is propagated most successfully by planting pieces of the sod. In the fall while breaking the land with a turning plow, drop pieces of the sod in every third furrow behind the plow and cover with the next plow slice. Sow rye on the land as left by the plow and harrow or drag it smooth, covering the rye seed. In spring turn cattle on to pasture the rye and aid the Bermuda by removing shade and firming the soil upon the Bermuda roots. Neither horses, sheep nor hogs should be allowed upon young Bermuda pastures. These animals will interfere with the spreading of the Bermuda by biting off the over-ground stems.

For spring planting, prepare the land by plowing and harrowing as for corn. Open furrows 2 feet apart, and in these drop pieces of sod every 2 feet. Cover with a light furrow and roll down smooth. This should be done late in March or in April. It may be planted in this way at any time during the summer and early fall by covering the pieces of sod deeply.—J. S. NEWMAN, *Experiment Station, S. C.*

## ENQUIRERS' COLUMN.

Enquiries should be sent to the office of *The Southern Planter*, Richmond, Va., not later than the 15th of the month for replies to appear in the next month's issue.

### Artichokes.

Will you state in your next issue the time for planting artichokes, method of cultivation, and cost of roots required per acre?

*Bedford Co., Va.*

W. A. PENNER.

Artichokes should be planted in March and April, though if got in even in the first half of May they will usually make a fair yield, though this is late to plant them. They should be set in rows three feet apart, and the sets be dropped two feet apart in the rows, and the land be then cultivated during the growth of the crop like corn. It requires about six bushels to plant an acre. The sets usually cost about \$1.00 per bushel.—ED.

### Applying Ashes.

Please let me know, through the columns of your paper when is the best time to apply unslacked ashes to the land.

*Pittsylvania Co., Va.*

H. M. WATKINS.

Ashes, which are valuable for the potash and lime which they supply to plants, may be applied without fear of loss from leaching at any time of the year, but as they are slow in becoming available, they are best put on during winter or in the early spring.—ED.

### Nitrate of Soda—Effect of Use of Fertilizers on Land.

Will you kindly tell me in your magazine whether nitrate of soda strains land or not, and if the use of it is once begun will it have to be kept up and used in larger quantities every year? I have heard such a theory from some good farmers around me, and would like to have your valued opinion. I was of the opinion that nitrate of soda was plant food in its most available form, and that the reasons plants showed such a change as soon as the soda was applied was because the food was immediately available, not that it made the land give up its own food. I may add, this is my first year at farming, and I have no practical experience whatever. Your answer to the above will be greatly appreciated, and I am sure there are others who would be benefited by your remarks.

*Darlington Co., S. C.*

RUSSELL ACREE.

Nitrate of soda is the most readily available form of plant food, as it is in the condition in which plants take nitrogen when applied. It has to undergo no change in the soil except to be dissolved. Like all

other forms of plant food, the effect is, or ought to be, to encourage and strengthen the growth of the crop. The stronger and more vigorous the growth of a crop the greater the amount of the available plant food naturally in the soil which it will assimilate, and thus take from the soil, and the more of the tough, immediately unavailable plant food it will act upon by its root acids and bring into available form. In this way all fertilizers and manures, if they are worth anything at all, deplete the fertility naturally in the land, which by their action is converted from an unavailable asset into a money crop. Any land producing heavy crops must sooner or later become depleted of natural fertility, and to continue the process must be helped by good tillage, to get the beneficial action of the sun, air and moisture, and thus make available more of the natural plant food in the soil, and by manure or fertilizers, or both, to continue the healthy growth of the crops.—ED.

### Crop Rotation.

I would appreciate a suggestion as to what crop or crops may follow on land at present in onions. I want something that is readily marketable. I have alfalfa to plant, and according to *The Planter*, I think the best land I have is in my orchards. Would you advise using it there? Any information on these two subjects will be greatly appreciated. I keep my orchards in peas.

*Haywood Co., N. C.*

JOHN FARRIOR.

1. We would suggest tomatoes (we assume that you want a trucker's crop) or a late crop of Irish potatoes.

2. Yes. The alfalfa would be beneficial to the orchards and a source of profit as feed. We have seen fine crops of alfalfa in an orchard.—ED.

### Top Dressing Oats--Cow Peas for Hay--Top Dressing for Clover—Fertilizer for Corn.

1. Kindly advise me, through your columns, whether it will pay to top dress an oat crop that was put in with drill on fairly good land, and on which I used 200 pounds of alkali bone, a medium grade corn fertilizer when seeded. If so, please, advise me what to use. My land is somewhat of a red, stiff chocolate.

2. Which is the best way to put in cow peas to be cut for hay. I want to use fertilizer enough to get a rank crop of vines, so please advise what kind and how much to use, and what time to seed.

3. I have a field of clover on red, stiff land, that is nearly in bloom. Some of my neighbors advise me to top dress it with 200 pounds of plaster to the acre. Please advise whether you think I would get enough clover to pay for the plaster above what I would have

got without using the plaster, say the plaster cost 90 cents per acre?

4. Please advise me which is the best way to use fertilizer on the corn crop, and what do you think of putting about half the quantity I expect to use under the crop when I plant it, and the other when I give it the last working?

*Halifax Co., Va.*

N. A. TULLOH.

1. We have used nitrate of soda (100 pounds to the acre) as a top dressing on oats with great advantage.

2. Sow the peas broadcast one bushel to the acre on the plowed land, and cover with a harrow. Apply from 300 to 500 pounds to the acre of acid phosphate and work into the land before seeding. Sow the peas at any time from the middle of May to the end of June.

3. It is very doubtful if you would have obtained any advantage from the use of plaster even had you applied it just when the clover commenced to make growth. Certainly you would get no advantage from its use now. Plaster is very uncertain in its effect. If the land to which it is applied is rich in potash, plaster will generally show marked results, but if potash be wanting, no effect can usually be seen.

4. In our last issue we wrote fully on the use of fertilizers on the corn crop, and to that issue we refer the inquirer. If applying nitrogenous fertilizers heavily it is often advisable to apply part at planting and the residue at the last working, as these fertilizers are apt to be readily washed out of the land by heavy rainfall. The mineral fertilizers are not subject to this loss, and therefore may safely be applied at, or better, some little time before planting.—Ed.

### To Prevent Injury to Tomato Plants by Cut Worms.

Tell F. E. Omohundro (page 247) if he will get some stiff paper, not pasteboard (old postal cards will do), cut it in pieces 2x3 or 3½, and fold it around a lead pencil to form a tube folding the longest way. Put one of these tubes around each tomato plant when he sets them out. This will keep the cut worms from cutting his plants. Put them in the earth about one inch, so that the wind will not blow them away.

### Cow Peas for Improving Land.

What is the best pea to sow as an improver, and is it best to turn them under green or wait until they are dry?

*Hanover county, Va.*

H. J. ROSBACH.

Either the black or clay peas. The black usually make most vines, except south of the James river, where the Unknown variety grows well and makes a

heavy crop of vines. Let the vines die before ploughing down.—Ed.

### Whitewash.

I would like to ask you for a receipt for whitewash.  
*Knox county, Tenn.* M. B. GALYON.

An excellent whitewash that wears four or five years is made in this way: Slake a bushel of lime, strain, add a half bushel of salt which has been dissolved in water and six pounds ground rice, after being made into a paste. Stir in while boiling one pound of ground whiting and two pounds glue well dissolved in a double boiler.—Ed.

### Seeds for Pasture and Meadow—Fertilizer for Corn Land and Wheat.

1. I have a field of rye that I wish to turn and sow to millet, with some other crop that would make a good winter pasture as soon as the rye is cut. Would this be practicable, and if so how many pounds of millet and other seed should be sowed per acre?

2. What would make the best winter pasture?

3. How much and what kind of fertilizer should I use per acre with millet?

4. I have a meadow that I wish to turn as soon as the first crop of grass is cut in order to make it very rich for meadow 1904. Is it practicable?

5. If so, what kind of crop would be best to sow that would make a good forage?

6. How many pounds of seed should be sowed per acre?

7. How many pounds and what kind of fertilizer should be used per acre?

8. What time this fall and what kind of grass would you recommend to sow with timothy for meadow?

9. What kind and how many pounds of fertilizer per acre?

10. What is the best crop to sow in working corn the last time to turn down in the fall for wheat?

11. How many pounds per acre?

12. What kind and how many pounds of fertilizer should be used per acre for wheat?

13. What crop would you recommend to be sowed in working corn the last time for winter pasture?

14. How many pounds of seed should be sowed per acre?

15. I want to make a piece of land very rich for a premium crop of corn. In the absence of stable manure what kind and how much fertilizer should be used per acre?

16. Would you please give me the name and addresses of those who deal in seed and fertilizers whom you would recommend?

*Scott county, Va.*

C. M. T.

1 and 2. We don't think it practicable to sow a

crop for winter pasture with a millet crop. Sow the millet in May and in sixty days it will be ready to cut for hay. Then break the land with a disc harrow and in August seed with a mixture of hairy vetch, crimson clover, winter oats and wheat. This will give good winter and spring grazing. Sow twenty pounds of vetch, ten pounds of crimson clover and half a bushel each of oats and wheat.

3. Apply 300 to 500 pounds of acid phosphate per acre.

4. If you will refer to our article on "Work for the Month" in the March issue you will find a full discussion of the subject of growing hay grass.

5. No crop should be grown until the grass seeds are sown. Work the land frequently and get it into fine order.

6 and 7. See reply to No. 5.

8. We always advise that timothy should be seeded alone. The market demand is for clean timothy hay not mixed. For home use we would seed clover with timothy.

9. See reply to No. 5.

10. If wheat is to follow corn we do not think it a good plan to seed any crop at the last working, as with a crop turned down it is not possible to get the land sufficiently compact for the growth of wheat after the corn is harvested.

12. We will write fully on this subject later in the summer nearer the time when the crop is to be seeded.

13 and 14. Sow sapling clover, crimson clover, hairy vetch and rape, say five pounds of sapling clover, ten pounds crimson clover, twenty pounds hairy vetch and two or three pounds of rape.

15. In our last issue we discussed fully the fertilizing of the corn crop. We refer you to this issue. Increase the quantity of each ingredient advised to the extent to which you feel disposed to pay for it. The corn crop, however good, will never pay for it, but the crop may be largely increased and the land improved.

16. Refer to our advertising columns. You can safely deal with any of the parties whose advertisements you will find there.—ED.

### Protecting Chickens from Hawks.

I know Nux vomica given to chickens will not injure them, but is certain death to a hawk which catches one of the nux vomica-fed chickens. Will some one tell me how much nux must be given in feed for ten chicks? Dr. John Lewis, of this county, protected his chicks that way, as did Mr. R. T. Meech,

but I was not then interested in the subject and both these gentlemen are dead. The dose will be a public benefit.

*King William county, Va.* B. D. MONCURE.

Nux vomica (strychnine) is deadly poison to either man, beast or bird if given in even a comparatively small quantity. We are aware that it is frequently administered in two or three drop doses to human beings, animals and chickens and is a powerful tonic in this form. We cannot, however, conceive it possible to give a dose sufficient to kill a hawk to a chicken without causing the death of the chicken as well. We shall be glad to hear from any one who has experimented with this remedy for hawks.—ED.

### Soy Beans.

Could you collect data from those who have raised Soy bean hay as to methods of raising and curing. I tried last year your method of putting in small piles, but it moulded before curing. M.

*Thomas county, Ga.*

In our April issue information is given by a contributor on this subject. We have never found any difficulty in curing the Soy bean for hay or for seed. Cut the crop for hay when in full growth. Let lie in the sun until thoroughly wilted and partially cured. Then put into small cocks or heaps and it will lie so open that both wind and sun can penetrate them and complete the cure. It is not easily injured by rain during curing. This is the testimony of numerous growers. Mr. Morris, of Olney, Ill., says he cuts the crop when in bloom with a down corn binder and binds the crop into the smallest sheafs he can make and shocks them up in long, narrow shocks and lets them stand until thoroughly dry before putting in bulk.—ED.

### Teosinte.

Will you, or some subscriber, give an article in the May Planter on the cultivation of teosinte? I have read great deal of it recently and wish to try it.

MRS. CHARLES GUTHRIE.

*Charlotte county, Va.*

In our article on Forage Crops will be found information as to the growth of this crop. It is as easily grown as corn and should be planted and cultivated in the same way.—ED.

### Curb on Horses.

C. I. Mitchell, of Brunswick county, Va., wishes to know what will cure curb on horses. I find that the most simple and effectual remedy is kerosene oil. Apply every morning and rub in gently until the

knot disappears and let the horse have rest until the forward action of the leg is natural again. Kerosene oil is a good remedy for any unnatural growth on horses. It gently blisters and dissolves the knots to which it is applied. It will cause the hair to come out. Rub on a little vaseline and the hair will soon grow again.

H. J. ROSBACH.

*Hanover county, Va.*

### Removing Stumps With Dynamite—Horse Apples—Remedy for Scab on Irish Potatoes—Obstructed Teat of Cow.

1. Will you, or some of your readers who know, please give me minute directions for using dynamite to remove stumps? I want to know where to get it, cost, etc. I have a lot of old oak stumps from 15 to 36 inches in diameter cut from one to twenty years ago, which I want to get out of the way.

2. Will horse apples come true from seed, or do they have to be grafted?

3. I use flowers of sulphur on seed pieces of Irish potatoes after cutting with very satisfactory results for scab. It has the advantage of not being poison. What kind of lime, sulphur or salt are used in the wash for San Jose scale?

4. I have a cow with her first calf whose milk comes in a spray instead of a steady stream. I have to put the bucket very near the teats to catch the milk. What can I do to remedy it? It comes this way unless I milk very slowly.

*Arcola, N. C.*

J. F. HUNTER.

1. Dynamite is sold by the railway supply stores and by hardware merchants in the mining sections. It is sold put up in cartridges, with time fuses ready to be attached. We cannot give the price, but dealers will gladly quote. A hole is driven under the stump with an iron bar large enough to take a cartridge. This is then pushed down the hole, with the fuse attached, until fairly under the stump, and the hole then tamped solid with damp soil and the cartridge then fired. It is the most effective way of removing stumps, but requires handling by careful hands.

2. We cannot say. Some of our horticultural friends will please answer.

3. Rock lime, flowers of sulphur and common salt.

4. The mouth of the teat is obstructed and should be opened by the insertion gently of a steel probe.—  
ED.

### Obstructed Teats.

I have a three-fourths Jersey cow (four years old), which calved at two and one-half years of age. In eight or nine months after dropping her calf, there appeared in one of her teats what seemed to be a

gristle or lump at the neck of the teat, where it joined the udder. The flow of milk from this teat was immediately greatly decreased, and what she did give was bloody, and consequently unfit for use. About one month ago she dropped her second calf, and at the time all her teats seemed to be in good milking condition and all right, except the one above named. That one seemed to have the same gristle in it that it had at the time she went dry, but does not discharge any bloody milk. Within the last few days two other teats have got in the same condition as the first named one, and the flow of milk has greatly decreased from all three of them. I kept her well milked when she first dropped a calf, and thought I had her udder well "broke." Please give me all the information you can upon this matter and suggest a remedy.

*Caswell Co., N. C.*

A. H. D. KING.

The cause of the obstruction in the teats may have been either mammitis, which is an inflammation of the mammary glands, or it may be stricture of the teats or internal warts in the teats. If caused by mammitis, we are afraid that it is now too late to remedy the injury. A case of mammitis should be treated vigorously immediately it is found out. It is indicated by swollen, hard glands, which are tender to the touch, and there will be fever present, the muzzle of the cow being dry and hot. A purgative of one pound of epsom salts in warm water should be given. A suspensory bandage should be made large enough to take in the whole udder and to fasten over the back of the cow. In this bandage or bag holes should be made for the teats to pass through. The bandage should be packed with bran and hops mixed in hot water and applied as warm as can be borne by the udder, the teats being passed through the holes and the glands resting on the hot bran and hops. The bran and hops should be kept warm by pouring warm water on them frequently. Keep the animal warm, and give an ounce of alcohol three times a day. The cow should be milked many times a day and the lumps in the teats be worked with the fingers, and thus be broken down, if possible. If this treatment fails, the teat will become useless. Frequently the glands will gather or suppurate, and they should then be opened when a head is formed to allow the matter to escape. If the cause of the trouble is stricture or internal warts, these can only be removed by an operation by a veterinarian.—ED.

### Injury to Wheat Crop.

Our wheat is turning red, and the top blades look as if they had been burnt. There are blades all through the bunches that look as though fired from the ground. From what I can hear, all the wheat



through the country is affected in the same way. Please inform us in your next issue what is the cause of the trouble, and whether or not it will hurt the crop, and if anything can be done for it. The wheat has a fine growth. We are both subscribers to *The Planter*, and would like very much for you to answer this in its columns. Yours very truly,

*Charles City Co., Va.*

G. H. WALKER,  
E. H. STUBBS.

We have a similar complaint as to the wheat crop from many different sections. We believe the cause to be the cold weather and the frosts. As the plant has generally made such a good growth, we are hopeful that this may not prove hurtful to the yield.—ED.

### To Prevent the Growth of Horns—Buckwheat for Bee Feed.

Will you please tell me how I can prevent the horns from developing on young calves so that it will not be necessary to use the saw? Also, when is the best time to plant buckwheat to get the best results from bees?

*Faulkner county, Ark.*

W. G. DENISON.

1. Get a stick of caustic potash from a drugstore and as soon as the little button from which the horn grows can be felt on the head of the calf cut off the hair upon and around it for a small space, wet the end of the caustic potash and rub on the button. This will burn out the embryo horn and no cutting will afterwards be necessary.

2. Buckwheat for bees should be seeded in June or July.—ED.

### Moles.

Can you tell me the best trap to use for catching moles, and if they can be poisoned, and with what? There are a great many round the house, and they ruin the grass by their passages under it, the hot weather killing it out.

H. G. C.

There is a steel trap sold generally by hardware dealers which is as effective as any. Moles are difficult to poison, as they are not grain or flesh eaters. They are almost wholly insectivorous in their diet, and therefore are usually much more beneficial to farmers than otherwise. We have heard of the animals being poisoned by arsenic mixed in corn meal dough made into little balls and dropped in their runs.—ED.

Feed brood sows very little for the first week after farrowing; by that time the pigs will be able to use all the milk.

### NOTES FROM SOUTHEASTERN VIRGINIA.

*Editor Southern Planter:*

March, 1903, gave us no frost at all. The coldest was one day at 35. The rain fall for March was 6.01 inches, that being 1.37 inches above the average March rain fall for the past thirty-three years.

Rain fell on thirteen different days—namely, on the 5th, 9th, 10th, 11th, 12th, 17th, 20th, 21st, 22d, 23d, 29th, 30th and 31st. No damage done except in a few cases where the newly planted potatoes did not come up even and regularly—one-fourth to one-third the seed rotting in the ground.

We never suffer from high water, as the only rise and fall in our streams is the regular rise and fall of the tide. If the entire rain fall of the year—about 50 inches—fell during a period of thirty days, the surplus water would all be in the sea within twenty-four hours after falling; and it would not carry houses, bridges or fences with it either.

While the surface here is only from eight to twenty feet above the sea level, still our section is well drained. Our lands do not wash, and our plows are running sooner after heavy rains than in the interior, where the lands are on edge.

While we escaped all frost in March, the full moon period in April did us some damage. When the moon gets full during the first half of April we look for a cool spell, possibly frost. Just what relation there is between the full moon and cool weather we can't say; but still we look for a cool wave at the time stated. The moon was full on the 11th of April and on the 4th and 5th nights there was frost.

Fully three-fourths of the trucking section escaped damage, and the other fourth was not damaged seriously. The thermometer stood between 30 and 31.

The tender radish was not injured at all. The snap beans, just up, and the young potatoes and the strawberry bloom in about one-fourth of our trucking section were slightly injured. The prospect is good for a full crop of fruit.

A. JEFFER.

*Norfolk, Va.*

Whole or piece roots—Jacob Wise, a West Virginia nurseryman, says he sees no difference between budded and grafted apple tree stocks. He strongly urges the use of whole roots and covers the graft with a wax made by boiling together two pounds English resin, one pound beeswax, and one pint linseed oil. He does not believe in the use of piece roots for grafting.

## Trucking, Garden and Orchard.

### WORK FOR THE MONTH.

The continuous season of wet and cold weather which we have had during April has caused serious loss to the truckers of Tidewater Virginia and Eastern North Carolina. A large part of the early Irish potato crop will be a complete failure from the rotting of the sets, and English peas have in many places been badly cut by the frost. The strawberry crop has also been injured by the frost. It is probable that whilst the total yield of this crop may not be materially reduced, yet the return from it will be less, because of the fact that the earliest blooms and berries have been injured by the frost.

The work of sowing and planting out crops of vegetables has been almost completely stopped by the weather, and what promised in March to be one of the earliest seasons known is now likely to be a late one. As soon as the land is dry enough to work the main crops should be seeded or planted. The hardiest, such as English peas, onions, spinach, carrots, beets, lettuce should be first got into the ground. Later sweet corn, snap beans, lima beans and pole beans may be planted. Then should follow cucumbers, squashes, melons and cantaloupes, and later peppers, tomatoes and egg plants may be set out.

Whilst rich soil is absolutely necessary for the best production of vegetables of almost every kind, yet it is possible to make land too rich for all the different kinds of beans. These are very apt to run too much to vine where the soil is overrich. A piece of land that was well manured for a crop last year will usually make more beans than a piece manured just previous to the planting of the crop. When planting lima and pole beans see that the poles are well set in the ground at or before the planting of the crop. They should be set at least a foot in the ground, and it is a good plan to stay them by running rods from the tops of one row of poles to the next row. Many beans are lost every year by the poles being blown down. The dwarf lima beans save trouble with poles and make a good yield, but as large a yield cannot be got from this variety as from the tall growing ones.

Where onion plants have been raised from seed in cold frames they should now be set out in rows wide enough apart to admit of working with a small cultivator like the little Plantet Jr. Set them about four inches apart in the row. When the bulbs begin to

form the soil should be thrown from them, as onions ought to mature on the top of the ground and not in it. Where plants have not been raised the seed should be sown at once in rows a foot or fifteen inches apart. Sow the seed rather thickly so as to ensure plenty of plants. When as thick as a quill thin out so as to stand about three inches apart. The Pearl, the Prize Taker and the Southport White Globe are varieties that make excellent crops from seed in the South. The onion set crop is one from which money can be made, as there is always a large demand for sets. The soil for growing sets ought not to be so rich as for growing onions. The seed should be sown at once in drills a foot or so apart and very thickly. Do not thin out. As soon as ripe they should be taken up and cured with the tops on.

Cucumbers, cantaloupes and squashes should be set in hills four or five feet apart each way. Give each hill a good shovelful of manure and a handful of high-grade fertilizer having 6 or 7 per cent. of ammonia, 4 per cent. of phosphoric acid and 7 or 8 per cent. of potash. Plant three or four seeds in each hill and thin to one plant when well started. Dust the young plants with bone meal as soon as they are well out of the ground and when wet with dew. This will help to keep off the bugs. Where melon bugs are very troublesome the only way to save the plants is by covering them with little frames covered with plant muslin.

Tomato plants should be set out at once. In our last issue we wrote fully on this crop, and to that issue refer our readers. It is well to plant a hill of corn every five or six feet apart. This will save the tomato plants from the worms, which prefer corn to tomatoes. The corn can be pulled out and fed to stock when the tomatoes do not need further protection.

Plant successional crops of sweet corn every week or ten days until the end of July to keep up a supply through the season.

Cultivate all growing crops frequently and keep down all weeds.

Egg plants require rich, light land and a warm situation. Give them plenty of manure and a handful or two of rich fertilizer to each plant. Look out

for potato bugs. They are as destructive to egg plants as to Irish potatoes. Use Paris green in good time.

Don't forget the front garden and yard. Set out a few flowering plants in the beds where they will make a good show from the house and from the highway, and sow a few packets of flowering annuals on all the beds and borders. A dollar or two spent in plants and seeds will make the home much more attractive and home-like and add to its value. Keep the lawn mown frequently and the walks swept and free from weeds.

### ORCHARD AND GARDEN NOTES.

*Editor Southern Planter:*

While examining a peach tree for borers recently, I was greatly surprised to find six large ones and about one thousand very small ones. The life of that tree would have lasted about three months. Examine the peach trees at once for these borers. Use a sharp-pointed knife and a piece of wire or a nail to destroy them. The presence of borers is indicated by gummy exudations and sawdust-like particles of wood. The best preventative I have ever used against peach borers was made of white lead paint and Paris green. Take one-half gallon of the paint and mix with it one teaspoonful of Paris green. After the borers are taken out of the trees paint the trunks of the trees up to eighteen inches. Rake the dirt back around the trunk and the job is completed. After the eggs are deposited on the trunks of the trees and the young borers hatch and begin to cut through the bark they soon get enough of the poison to kill them. I have also known this paint to save trees from injury done by mice and rabbits.

To be most successful the trees must be repainted each year.

At the present writing (April 15th), the prospects for a good fruit crop in Southwest Virginia were never, perhaps, better. Of course, the peach crop has been damaged about 50 per cent and sweet cherries about 25 per cent., while all other fruits seem safe. There is the heaviest bloom on fruit trees this year ever seen by me. If 50 per cent. of the apple and cherry bloom sets these crops will be ample. It is a great pity that some overzealous newspaper correspondents should send alarming reports to our State papers about the damage done to fruit, when frequently there is very little done. It is a very

simple thing to learn how to know when fruit is damaged, and there is no excuse for not knowing, by even a newspaper correspondent.

The Virginia Polytechnic Institute, formerly the State Agricultural and Mechanical College, is in need of more money. The number of students attending this Institution have increased very much during the past five years, as I know from personal observation. Being an alumnus of the Institution, no one can be more proud of its progress than myself. Desiring to see still more progress in the agricultural side of the Institution prompts me to make a few plain statements about the needs along this line. I think it can be truthfully stated that the Agricultural Department has no home. The agricultural teaching is done in spare rooms at different places. There are good agricultural buildings at many other agricultural and mechanical colleges with fine agricultural laboratories, libraries, seed rooms, tool rooms, soil physics rooms, stock judging rooms, etc. The sons of the farmers of the Old Dominion deserve as good agricultural equipment as those of any other State. While it is true that the Agricultural Department has a good barn, still such a building serves a very small part in class instruction.

Students of the Horticultural Department are crowded in small rooms of a building which was not built for teaching purposes at all. The building is not suited for such work. It is a wonder to me how any professor can teach any considerable number of students in such a building with any satisfaction to himself or students. The building is used also for station work. Still good work in both lines has been done. The veterinary department has a small, barn-like building in which afflicted animals are kept.

The equipment for the dairy is not at all adequate.

There is needed a large agricultural building to house all these related departments. This would economize space, since several of the rooms and some of the equipment could be used jointly.

The work along all these lines should be broadened very much. I would like to see a short winter course offered in agriculture, horticulture, entomology, veterinary science and dairying. This would give practical men an opportunity to learn something about the latest methods along all these lines. Practical instruction and demonstration along these lines would be a great help to the agricultural interests of the State, but I doubt whether, with the present equipment and the way these related departments are scattered, such a course would be feasible. These

short winter courses of practical instruction have been successful at every agricultural and mechanical college that I am familiar with where the equipment was anything like what it should be. Efforts were made a few years since to secure an appropriation for an agricultural building at this Institution, but no such building exists on the grounds.

There is not only need of improvement along agricultural lines at this Institution, but with the State Department of Agriculture also. How to improve the many worn farms where the fertile soil is being washed to the rivers; how to rehabilitate the old homesteads with all their interesting memories; how to develop stock husbandry, improve the dairy interests, take proper care of the immense orchards now being planted, grow more grass and hay, better forage crops, in short, to make rural and suburban homes more attractive, are great things that affect the weal or woe of the State. There are no other interests of as great importance to the State, and this fact is not doubted by any fair, competent and unprejudiced person.

Let the equipment come. We need it for the agricultural and related interests. R. H. PRICE.

*Montgomery county.*

#### WATERMELON GROWING.

The best soil for the watermelon is a high, warm, sandy soil. Land that has been newly cleared or an old field that has been laying out some years are usually good places for melons. It is well not to plant them on land which has grown melons within the last two or three years, as a fungoid disease which affects the plant seriously and causes failure of crop is kept alive in the soil on which a diseased crop has been grown, and will assuredly affect a crop planted on such land within two or three years. Prepare the land well by deep breaking so that moisture will be conserved in the soil. Lay off the rows in checks ten or twelve feet a part each way and plant at the intersection of the rows. Throw out the soil at the intersection of the rows for a space of four or five feet each way. In the hole thus made fill in a few shovelfuls of a good compost of well-rotted manure and woods mould and add a few handfuls of a rich fertilizer analyzing 6 per cent. ammonia, 4 per cent. phosphoric acid and 7 per cent. potash, which may be made up of 300 pounds of nitrate of soda, 750 pounds cotton seed meal, 750 pounds acid phosphate and 250 pounds of muriate of potash to make a ton. Mix the fertilizer and compost well and cover with good soil. Make the hills solid by either run-

ning a roller over them or by patting down with the shovel and plant in each hill five or six seeds. Thin to two plants when they have made good growth. Cultivate until the plants commence to run. After this time the vines should not be disturbed.

#### CANTALOUPE GROWING.

Mr. W. F. Allen, of Salisbury, Md., one of the largest cantaloupe growers in the South, gave the following description of his method of growing and handling the crop at a recent meeting of the Maryland Horticultural Society:

"My experience has been that one of the most important items in profitable cantaloupe culture is good seed, true to name, of the variety that you have decided to grow, to commence with, as I know of no crop where more harm can be done with poor or mixed seed than with the cantaloupe crop.

"The most desirable location for cantaloupes is a sandy loam which has not been tilled for a year or two or a clover sod, or, better yet, where cow peas have been grown the year before and the vines left on the ground to be ploughed in during the winter or very early spring, when you want to commence preparing your ground, which should be well broken with a two or three horse plow and put in thorough condition with disc, acme or spading harrow, or something that would produce the same results. After your land is prepared take a two-horse plow and run out furrows about 8 inches deep, 4½ to 5 feet apart, going twice in the same row, in order to broaden out the trench and clean it out well. Next you must turn to your manure pile. A good compost of stable, pound and hog-pen manure is very good. Stable manure would be very preferable, everything else being equal. I use New York city stable manure, as I cannot possibly get enough at home.

"This trench or furrow should be filled one-half or a little more than one-half full of compost or stable manure, as the case may be. If your furrows are run out you can put on your manure even if the ground should be frozen. If your ground is not frozen or as soon as it thaws, if it is frozen, take from your cultivator the front shank on one side and the rear shank on the other side and provide the other three shanks with 1¼ and 1½ inch blades and shut up cultivator close enough to go in the furrow, go four times or more, if necessary, to thoroughly work the manure in the soil, then let it remain until about ten days before you are ready to plant your seed; when your fertilizer should be put in five days before planting will do, but ten days is better; put about 800 to 1,000 pounds an acre, running something like 6 per cent. ammonia, 8 per cent. phosphoric acid, 6 per cent. potash.

"The best thing to put your fertilizer on with is a hand drill, which will do the work better and quicker than you can do it by hand. After the fertilizer has been put in take the cultivator which you have already prepared and go twice more in each row. Now take your two-horse plow again and throw up a two-furrowed list over your manure. Any time between this operation and planting take a big roller that will cover two rows at once and roll the rows off. This leaves you a nice, firm, smooth seed bed to plant in with manure firmed in the soil and moisture preserved to germinate the seed should dry weather set in. Now we are ready to plant the seed, and I usually feel safe in making the first planting by April 10th. Small, light weeding hoes are used for this, and six to eight seed are planted at intervals of about eighteen to twenty inches along the row; plant one inch deep. One week from first planting plant again in the same way, putting the hill beside the first one. Two weeks from the first planting plant again the same as at first, putting the third on the other side of the first one. Three plantings are usually sufficient, but if there is any doubt about getting a stand I would not hesitate to plant the fourth time, although I have never found it necessary to do so.

"These repeated plantings are very important, especially in the event of a cold snap late in the spring. If your first planting is up they may all be cut off. The second planting would be already sprouted and ready to come through. If your second should meet a like fate your third planting would be ready to burst through the next warm day, and you would be a week or ten days ahead of your neighbor, who waited for his first planting to come up before he made the next. I made this mistake once and it was a costly one. When the plants have made the third leaf from the size of a dime to a quarter they should have the first thinning and the ground should be lightly stirred around them. If the first planting are good, healthy plants pull out all but two or three of the most vigorous looking. By this time all three plantings will likely be up, and it may be that in some hills the second planting will have the thriftiest healthiest-looking plants. If this is the case the hill may be established from this planting. It will not be necessary to thin out any but the bunch, or planting from which the hill is to be established, this time. By the time the plants have the fourth or fifth leaf they should be again stirred and get their last thinning, leaving one plant in a place, the surplus plants in the hill to be carefully pulled out, and the surplus hills can be easily chopped off by one stroke of the weeding hoe.

"Keep the middles thoroughly cultivated and the rows clear of all other growth until the vines are about two feet long, when all cultivation should

cease, and the vines will quickly cover the ground. It has been my custom, and I think it a good one, immediately after giving the cantaloupes the last working to drill in a row of cow peas between every cantaloupe row with a one-row drill. These can be cultivated after the cantaloupe crop is harvested and left for seed, cut for hay or left on the ground, as is most desirable. It sometimes happens that there is a mat of crab grass on the ground by the time the melon crop is off, and in this event I often let the grass and peas grow up together and cut for hay. It makes a very fine hay, only being surpassed by hay that is all pea vine. Now the cultivation is done and the peas drilled in if desired; there is nothing else to do to the crop until we go to harvest it. One hundred and fifty crates an acre is a fair yield. I find there is some difference of opinion about picking, and it is really necessary to pick them greener when they are to be several days in transit, but I will give you my way of doing it. The first half of the season I pick them as soon as the stems can be forced with the thumb to part from the fruit without breaking out a piece of the melon with it—that is, it must come off smooth and not tear or break in the flesh. This condition should prevail before the cantaloupe has begun to turn yellow; but a cantaloupe that is in this condition and just right to ship to-day will be quite yellow and unfit for transportation the next day.

"After the season is one-half or two-thirds gone, and the weather is very hot, as is usually the case, I find it safe to cut them off with stems after they are full grown and become densely netted. It requires careful help to pick a crop of cantaloupes without considerable losses from picking too green or too ripe. In either case those too ripe or too green should not go in the package. An expert should follow just behind every fifteen or twenty pickers to see that they are doing their work properly. Wagons should be ready to take the cantaloupes to the packing shed soon after they are brought out to the end of the rows."

### HEDGE PLANTS.

I cannot understand the interest the people North are taking in the so-called California privet. It grows fast and makes a pretty hedge in summer, but it browns up and loses its leaves in winter, so that we have other things that are far better. The Amoor river privet is far better and more nearly evergreen, though it does brown a little. There is another privet—*Ligustrum Japonicum* or *Ibota*—which is as evergreen as a holly. It is more dwarf in its habit than the California, which is from Japan, too, and does not need half the trimming, while growing more dense at the bottom. All the privets are easily pro-

pagated by long cuttings set in the open ground in the late fall. Make the cuttings about ten inches long and insert them full length in the ground after taking off all the leaves. Work them one season in the nursery row and then transplant where wanted or set the cuttings at once in the hedge row and cultivate there. Head the hedge back to within six inches of the ground the second spring to get it to spread at the base and then shear it broad at the bottom and sloping to a sharp ridge at top. Most people shear a hedge too upright and flat on top and the base gets thin because it is over shadowed. Advise your inquirers to get the Amoor river privet from the Barkmans Company, of Augusta, instead of the California, or get the Ibota, which is more costly and slower to grow, but is far better when grown.

W. F. MASSEY.

### IMPORTANT AND WELCOME NEWS FOR THE FRUIT GROWERS OF VIRGINIA.

*Editor Southern Planter:*

For several years the Virginia State Horticultural Society has endeavored to obtain better rates for shipments of apples than have been in existence. The Committee on Transportation and Marketing was specially instructed to make representations to the railroads operating in Virginia on this subject. As a result of these representations it is with the greatest satisfaction that I, as chairman of this committee have received official information that the rates have been adjusted. Mr. E. D. Hotchkiss, general freight agent of the Chesapeake and Ohio railway, writes to this effect, and in his letter says, in part:

"You will, no doubt, recall quite a lengthy correspondence and several conferences on the subject of a modification of the rates on fruit from Virginia fruit growing sections to eastern territory. The matter has been one of consideration for a good while. I am very glad to be able to advise you that at several recent conferences this matter was considered, and the following announced by the various lines:

"That the rates on apples from the Virginia territory included in Charlottesville, Rockfish, Lynchburg, Staunton, Goshen, Lexington and Roanoke groups to the following eastern groups, viz.: New York, Newark, Allentown, Flemington, Philadelphia, Reading, Chadd's Ford, Baltimore, York, Odenton, Harrisburg, Hagerstown and Washington be made—less car-loads fourth-class (former rate third-class) and car-loads sixth-class, the minimum rate to be observed being to Baltimore 15, to Philadelphia 16 and New York 17 cents per hundred pounds.

"The above is a material reduction on the present basis, and I am sure will be entirely satisfactory to

yourself and your associates, and it will be our purpose some time before the fruit season is on to arrange to publish the rates in accordance with above \* \* and for your further information I desire to say that this basis will be applicable in connection with the Southern railway, Norfolk and Western and Baltimore and Ohio, the same as with our company (the Chesapeake and Ohio)."

The above means that car-load rates to New York will be 25½ cents or thereabouts per barrel. It is with a sense of the greatest satisfaction that I find myself in a position to submit the above information as the result of our efforts on behalf of the fruit growers, thus tending to advance the development of the fruit-growing industry, and I now appeal (with confidence after this showing of what we have been able to effect) to all fruit growers and parties interested in this industry who are not already members to join membership in the Virginia State Horticultural Society. Membership fees are \$1 annually, which can be sent to me, as secretary and treasurer, at Crozet, Albemarle county, Va., and entitles each member to a copy of our annual report and all other privileges of membership. Our organization is steadily increasing each year, and I believe no better proof is now needed that the society is doing all it promised on behalf of fruit growers. These efforts, of course, cost time and money, and we need every member we can obtain.

Our thanks are due to the railroad companies for the recognition mentioned above. I feel satisfied they will find themselves gainers by the increased impetus that will be thus given to our industry.

Yours very truly,  
WALTER WHATELY,  
Secretary and Treasurer Virginia State Horticultural Society, Chairman Committee on Transportation and Marketing.

*Crozet, Va., April 15, 1903.*

We are very much gratified to know that the efforts of the Horticultural Society to secure a reduction in rates has been successful. Great credit is due the Committee on Transportation, and especially the chairman of that committee, for the persistent way in which he has followed up the matter. The fruit growers of the State owe Mr. Whately a debt of gratitude which they may, and should, repay by becoming members of the society. Concerted efforts by a strong organization may always be counted on to secure success sooner or later. Make the society stronger and still greater results will be obtained.—  
ED.

An old broom is useful in the stable to clean the thickest mud from the horses' legs. Finish up with a coarse cloth or a handful of clean straw.

## Live Stock and Dairy.

### THE MALE THE HALF OF THE HERD OR FLOCK.

For years we have been trying to convince our readers that the only way in which they can succeed in grading up their herds and flocks is by breeding to pure bred bulls, boars and rams. In defiance of all our arguments and illustrations, there are yet, we are sorry to say, many who, whilst most anxious to have better stock, yet begrudge the money to pay for a pure bred male animal of fine breeding and ancestry, and therefore prepotent in power to impress his qualities on his produce. We are constantly in receipt of letters from breeders complaining that Southern farmers decline to pay more than \$50 for a bull calf or \$10 for a ram or boar pig. This is very false economy on the part of would-be buyers. To want a bull calf six months of age and weighing anywhere between 500 and 600 pounds as a pure bred animal of the beef breeds ought to do at that age for \$50 is an unreasonable request. Breeders having bulls at the head of their herds which have cost them into the thousands of dollars cannot afford to sell at such prices. No man who wants to do himself justice should hesitate to give \$100 for a bull calf, or \$25 for a boar pig or a ram lamb when he knows that he is buying pure bred, registered stock from breeders of repute. The get of the animal in one season, even when bred only upon grade stock, will amply repay such an outlay. The increased size of the calves, pigs and lambs and their greater thriftiness will make them worth half as much more when they are six months old as animals the produce of grade sires, whilst animals kept to maturity will show the prepotent power of their male parent in the increased size yield and well doing on the feed consumed. A long experience in keeping stock of all kinds enables us to speak without hesitation on this subject. Whenever you decide to set about the improvement of your herd or flock, and the sooner you do so the sooner you will get into the line of those whose animals are keeping them instead of the owners keeping the animals as is so largely the case now in the South with cattle especially, for it is well within the truth to say that more than one-half the cows in the South to-day are costing their owners money every year, instead of bringing money in; let the first step be the purchase of a pure bred, registered bull, boar or ram of the breed you have decided to adopt, and when you order him let your instructions be liberal. Do not say to the breeder,

however good the animal be, I will only give \$50 or \$10, as the case may be, but ask to have the best animal put to you at the lowest price the breeder can afford to sell at, and give him credit for knowing what will result in the most profit to you and the greatest credit to him as the breeder.

### BLACK LEG—TEXAS FEVER.

*Editor Southern Planter:*

I frequently hear of losses of live stock, or rather cattle, from black leg, and I write to ask that you will call the attention of farmers to the fact that if they will take the precaution to vaccinate their young cattle that there is no danger of losses from that disease. It is to be used as a preventative and not as a cure. And it would be well to describe the disease, as but few of them recognize it when their cattle are suffering from it. Hundreds of cattle are destroyed in this State by it every year when there is a remedy at hand, or, rather preventative.

I am also a firm believer that the fatal Texas fever can be prevented by the use of the salt, sulphur and saltpeter mixture which I think you published once. I give it to you, as I think it will do no harm to put it before your readers again:

One gallon salt, 1 quart sulphur, 1 gill powdered copperas, 1 gill powdered saltpetre. Mix and keep before the cattle at all times, under shelter or in covered troughs, and do not give them any other salt.  
*Fluvanna county, Va.* STOCKMAN.

We have repeatedly drawn the attention of our readers to the importance of their availing themselves of the means afforded by vaccination for preventing loss of cattle from black leg. In almost every issue of the journal there appear advertisements offering the remedy for sale and testimonials as to its effectiveness. In our issue of August, 1902, we published a report on the subject from the Veterinarian of the Experiment Station at Blacksburg, in which he showed that the average loss of cattle in thirty Virginia counties from black leg was, before the introduction of vaccination, 11 per cent., whilst since vaccination had been practiced the loss had been less than 1 per cent. In this report the Veterinarian says: "It must be remembered that vaccination has no curative effect. An animal, therefore, which is infected at the time of vaccination is just as sure to die as one which has not received the vaccine. \* \* \* Although the disease appears to be on the increase there is no doubt that it could be

stamped out in a few years' time by concerted action on the part of farmers by a thorough system of vaccination and thorough destruction by burning of all carcasses of animals which have died of the disease.

Black leg vaccine can be obtained from the Experiment Station, Blacksburg, on complying with certain rules and regulations."

And now, as requested, a word as to the disease itself: It is a bacterial disease in which, under certain conditions, spores (eggs) form which are capable of great resistance to destructive agents, and when once scattered in a field or pasture may remain for an indefinite time, only waiting for an opportunity to enter the system of a susceptible animal and produce the disease, hence a pasture once infected may remain so for years. The carcass of an animal which dies of black leg contains countless numbers of these spores, and unless destroyed by burning may be the means of infecting a whole neighborhood. The disease itself occurs much more frequently in young cattle ranging from 6 months to 2 years old than in old cattle. It is not often seen in calves under 6 months old. The most fatal period is 1 year and under 2. All young cattle, therefore, between the ages of 6 months and 2 years should be vaccinated. The symptoms of the disease are loss of appetite, dullness, cessation of rumination, harshness and staring of the coat, elevation of temperature, rigors, coldness of the extremities, lameness or stiffness when moved. Tumors form under the skin, most frequently on the shoulders or the loins. These tumors are first hot and painful when touched and then become cold and insensitive. If incised a dark colored and fetid fluid is discharged. As the disease progresses the tumors enlarge and the animal shows great pain, the breathing becomes hurried and the temperature rises. After death the animal will be found to be enormously swollen with bloody froth issuing from the mouth, nostrils and anus.

Texas fever preventive: Whilst this will do no harm to try it, we confess that we have no faith in its efficiency wherever the Texas fever tick is to be found.:ED.

#### A RECORD TEST FOR MILK AND BUTTER OF A HOLSTEIN COW.

The secretary of the Holstein Freisian Advanced Registry sends us the following particulars of the testing of Sadie Vale Concordia. It establishes a new record for the breed:

Sadie Vale Concordia, 32259, age 10 years, 2 months, 24 days. Record for twenty-eight days—

days after calving 5—milk 2,565.6 pounds, butter fat 92.327 pounds, equivalent to 115 pounds, 6.5 ounces butter 80 per cent. fat, or 107 pounds, 11.4 ounces 85.7 per cent. fat; best seven consecutive days—days after calving 14—milk 694.3 pounds, butter fat 24.508 pounds, equivalent butter 80 per cent. fat, 30 pounds, 10.2 ounces, or 28 pounds, 9.5 ounces 85.7 per cent. fat. This cow was retested twice, the first time showing a product of less than a half ounce of the average of the previous seven days; the second a product of eight one-hundredths of an ounce less than the average of the best seven days. This record is undoubtedly the largest strictly official record ever reported. Owner, McAdam & Von Heyne, Deansboro, N. Y.

As showing what such a record adds to the value of the progeny of a cow, we note that Henry Stevens & Son, well-known New York breeders of Holstein cattle, have recently paid \$4,000 for the 9-weeks-old bull calf out of Sadie Vale Concordia, the cow that established new records for seven and thirty days' production of milk and butter fat.

#### A FARMER'S OBSERVATIONS ON FEEDING—FEEDING FOR PROFIT.

*Editor Southern Planter:*

Next in importance to providing the kind of food that will produce the largest amount of flesh, or milk, at the least cost, is to secure a perfect digestion of the food. A food may be rich in all the elements nature requires to support the animal economy, but unless the nourishment is extracted from it the food will be of no value to the animal, or its owner, except for manure. Digestion is the process by which the food, after having been reduced by mastication to considerable fineness, and mixed with the saliva of the mouth and throat to facilitate swallowing, passes into the first stomach, is there acted upon by a powerful solvent called the gastric juice, is subjected to a grinding process to still further reduce its particles, the coarse' parts returned to the mouth for remastication to be again swallowed and acted upon by the organs of the four stomachs and intestines; the most nutritious portions, called *chyle*, extracted and absorbed by the lacteals, or vessels provided for the purpose, is changed into blood and from blood into flesh

This being the case, it will be readily seen that one great aid to digestion when grain is fed is to have it *ground*, and the finer the better. I am aware that many western feeders have declared that cattle will fatten just as well on whole corn as on corn meal, and that with hogs to follow the steers to eat the



whole grain that is voided, there is no loss whatever. Eastern farmers with smaller corn-fields to draw upon, and forced to observe closely and practice rigid economy, do not find this to be the case. To feed whole grain to cattle without waste would require hogs to follow the cattle and hens to follow the hogs. A neighbor, when showing me his hogs, said he was feeding them whole buckwheat without cooking or soaking, and thereby saved the miller's toll. Apparently they were doing well, as he was also feeding them sour milk and buttermilk in considerable quantities. I pointed him to their dung, which contained many grains that were entirely whole and many more that were merely cracked.

"Oh, that's nothing," he said, "they eat the whole grain all over again." Every observant feeder has noticed that when hogs are fed all they want of whole corn their dung is full of half-chewed kernels, which, unless eaten by the hens, is wasted. Hogs are naturally so greedy they do not properly masticate whole grain, and as they do not have the power to raise and re-chew it, as cattle do, it is utterly impossible to feed them whole grain without waste; and, in my opinion, to force them by hunger to eat it the second time, is not only improper, but positively dangerous.

To make hogs eat the voidings of cattle may not be quite so bad, but it is contrary to the instincts of nature and correct judgment. With the dung is ejected the impurities and poisonous germs of the body. No animals will eat their own dung or that from another species, if provided with sufficient food that is clean, fresh and of good quality.

The almost universal practice of feeding whole corn to cattle in the West and compelling hogs to get their living from the cattle's dung, no doubt supplies a fruitful field for the propagation of hog cholera. Something must be allowed for the greater number of hogs raised in the West, but it is a well-attested fact that hog cholera is hardly known in the Middle and Eastern States, where hogs are mostly raised and fattened on ground grain.

Why should animals be allowed to wear out their teeth and tire their jaws in grinding whole grain, which they do not grind good, in order to save the miller's toll, when by so doing they are sure to waste more than a tenth because it is not fine enough to be digested?

Numerous experiments have shown that it is unnecessary to cook food for cattle and hogs, unless it be potatoes for hogs. From the immense number of great kettles manufactured at North Aurora, Ill., it

is evident that many farmers in the West practice boiling potatoes and other roots for their hogs. For the human stomach nearly all foods, except fruits and berries, need to be cooked; but the case is different with animals. As nature has not supplied them the means of cooking food it is reasonable to suppose she has provided them with organs of digestion so powerful and perfect they do not need it, and this reasonable supposition has been supported by many experiments. If grain is to be fed to animals without grinding, then by all means it should be cooked—not for the purpose of making it more palatable or nutritious, but to secure a better digestion by making it softer. Soaking might answer the purpose if it could be soaked long enough to soften without souring it.

My experience is favorable to boiling potatoes and turnips for hogs. The hogs eat them greedily, and with a small quantity of meal mixed with them they furnish a cheap fattening food. On raw potatoes they will nearly starve. Cattle, on the contrary, prefer all kinds of roots in the raw state, and according to my experience roots are better for them raw. I have tried feeding boiled potatoes and pumpkins to cattle, and unless they were fed sparingly they brought on the scours.

To raise and fatten animals the most profitably they must be sheltered from cold storms and housed in warm, well-ventilated stables in the winter. Kept warm and comfortably all kinds of stock will grow and fatten on a smaller quantity of food. Cattle or hogs kept out of doors in the winter require a good deal of corn to maintain the warmth of their bodies, to say nothing about making a gain in weight.

The cruelty of the western ranchmen in starving their unsheltered herds in the winter is punished by the great loss of stock and the pitiful appearance in the spring of those that survive.

Cattle have been grown to good size and fattened on the prairie farms of the West exposed to the fearful blasts of winter that sweep over those fertile plains without the protection of any shelter or wind-break whatever; but it was done at a fearful cost of corn. It is said that western farmers have sometimes burned corn to warm their houses, because it was cheaper than coal, but there is not a particle of doubt they have burned it oftener, and in larger quantities, inside their cattle to keep the unsheltered beasts warm in the winter.

John D. Gillette, of Illinois, took premiums at fat-stock shows, and his steers were famous for their size and beauty in all the eastern markets. He raised

and fattened them in the open fields summer and winter on pasture and unhusked corn. His cattle were excellent, not because they were exposed to the blizzards of winter,, but in spite of it. A great deal of the corn he fed his steers was required to supply warmth to their bodies and was as surely wasted as if it had been thrown into the Illinois river. Had he built barns for the comfort of his stock he would have made a great deal more money and slept better in his warm bed.

J. W. INGHAM.

### CHANGING THE BREEDING HABIT IN SHEEP.

We are frequently asked as to the possibility of changing the breeding habit of sheep so as to make them produce their lambs in the winter months and thus meet the requirements of the early-lamb market. The Minnesota Experiment Station has conducted a series of experiments extending over a period of six years with the object of reaching conclusions on this subject. The ewes selected for the experiment were at the outset common western grade sheep carrying the blood of the American Merino and probably of the Cotswold, Shropshire and Oxford Downs. The following are the conclusions reached:

1. That the breeding habit in ewes which usually drop their lambs in the spring may be so changed that they will produce them in the fall and early winter.

2. That this change can be effected sufficiently for practical uses in from two to three generations of judicious crossing when accompanied by a judicious selection.

3. That it may be effected thus quickly by choosing very common ewes of mixed breeding and mating them with pure bred Dorset rams, always reserving the earlier dropped lambs for breeding uses.

4. That in the transforming process, the dams which have suckled winter lambs may usually be bred more readily before being turned out on grass than subsequently, and especially when fed a stimulating grain portion while yet in the sheds.

5. That when the change sought has been thus effected in the dams, a superior quality in the lambs may be obtained by using rams in service of certain of the dark-faced types and more especially of the Southdown and Shropshire breeds.

### POISONING BY SORGHUM AND KAFIR CORN.

In Bulletin No. 77, issued by the Nebraska Experiment Station, stockmen have at last been furnished information of the highest importance relative to cattle poisoning by Kaffir corn and sorghum. Why these two plants so generally useful should under some circumstances be so deadly to cattle has at

last been explained by this bulletin. We quote the following:

"Some three years ago Dr. A. T. Peters arrived at the following conclusions regarding the loss of cattle from eating green sorghum:

"1. Animals do not die from bloat or indigestion.

"2. They do not choke to death.

"3. The deaths result from a violent poison in sorghum of stunted growth.

"4. The symptoms are those of prussic acid poisoning."

The last two conclusions are the ones of deepest interest to stockmen feeding sorghum and Kaffir corn. They have observed that large mature stalks eaten while green or fed as dry forage made a wholesome nutritious food, while stunted plants or those springing up as a second growth brought on the trouble.

The following from the bulletin is to the point:

"As both sorghum and Kaffir corn are important forage plants, and as the investigations of the writer show that they contain as normal constituents compounds yielding prussic acid, the important question naturally arises, in what condition of growth are these plants dangerous? The following have been suggested:

"1. Young plants.

"2. Second growth.

"3. Frosted plants.

"4. Stunted plants.

"Unfortunately sufficient data have not been secured to enable the writer to give a final opinion on all of these points. They will, however, be discussed in the light of the facts at hand.

"Young plants of vigorous growth contain a higher per cent. of prussic acid than the bright green leaves of plants reaching maturity. As the stalks and seeds contain no prussic acid, the young plants contain a much greater per cent. of acid than the mature plants considered as a whole.

"Second growth is not more deadly than first growth, although, as falls in the West are often bright and dry, conditions may be favorable for the elaboration of excessive amounts of poison during the second growth.

"Frost is without influence except as the forerunner of a period of bright dry weather.

"Growth arrested by dry weather before the plant begins to mature presents a condition very favorable for the elaboration of the poison. Growth stunted by too much water, sterile soil, shade of trees or hardness of ground does not result in the formation of dangerous quantities of poison.

"A study of the data at hand, field observations and chemical analyses, indicates that the poisoning is most deadly in Missouri, Nebraska, Kansas and Colorado, and that it is rare east, north and south of these States.—*Breeders' Gazette*.

## The Poultry Yard.

### THOSE DESTRUCTIVE LICE.

Of all ailments of the poultry yard, none equals the scourge of hen lice. They destroy more thousands of young chicks than we have any idea of. Bowel trouble, brain trouble and debilitated conditions are brought about by these blood-sucking pests, some of which work by day and others by night. The first of all these is the head louse, which comes into active service as soon as the chick is out of the shell. We have seen over a dozen of them clinging to the top of the head and under the throat within a few hours after the coming from the shell. To destroy these, oil the top of the head and under the throat with sweet oil. Dip your finger into the oil and rub the top of the head and under the throat with it as soon as they come from the nest.

Much of this insect pest may be avoided by having clean nests for the sitting hens, and by filling the plumage of the hens with insect powder, at least twice during the three weeks of their time of incubating. Dalmatian insect powder—better known perhaps as Persian—which is sold in the drug stores by the pound, is excellent; or any good insect powder will do, providing it will not injure the eyes of the young chicks. If nest boxes are fresh and clean to start with, then clean nests are made of soft straw, the hens' bodies well powdered with the insect powder two or three times during the three weeks they are sitting, you have at least established a barrier against their gaining much foothold; but the eggs of these ever-active pests are hidden away in the feathers of the hen, and continue to hatch and propagate after their creators or sponsors have been killed.

Following the head lice on the chick come the body lice, that hide under their little wings, about their vent and in the neck—in fact, they go where they will be kept warm from the heat of the chick's body, and where the chick cannot get at them with beak or toes. Here they live and thrive, and scatter utter destruction by sucking the life blood from their bodies. Some make use of oil of different kinds to rid the chicks of them. Kerosene oil is often made use of. This is not good, because it will blister the tender skin of the chick; also, this or any kind of oil will grease the down or feathers and gather dirt; for these reasons they are not desirable. If any kind of oil is used, to be rid of lice, use sweet oil; but the best thing is powdered anise seed. When this is powdered very fine, and kept perfectly dry, it is an excellent destroyer of all kinds of lice that infest the

young chick. It must be fine and dry to do good execution. The beauty of it is it is harmless, if they eat it, and it will not injure their eyes.

There are several kinds of body lice that bother the young chick, as well as the mother hen; all of these, however, can be destroyed by the use of finely powdered anise seed or any good insect powder. When you see the young chicks standing in the sun as if asleep, and peeping in distress, you had better look through their plumage, head and neck, for lice. If found, begin war on them as soon as possible by powdering them well, also the mother hen; but ever have in mind that the powder you must use must be very fine, perfectly dry, and of a kind that will not make their eyes sore. Some kinds of powder will cause them to have sore eyes, when it gets into them, as it is apt to do when put into the feathers of the mother hen.—*Country Gentleman.*

### TEN POINTERS IN SUCCESSFUL POULTRY KEEP-ING.

*Editor Southern Planter:*

1. Give your fowls a dry, comfortable, roomy house; crowded winter quarters are expensive.
2. Breed only from healthy, vigorous stock; never inbreed.
3. Feed a variety of wholesome food, but do not over feed.
4. Let your hens scratch for a part of their living; exercise is essential.
5. Be sure that they have grit of some kind; hens have no teeth.
6. Provide clean water for drinking; foul, stagnant water breeds disease.
7. Clean and disinfect your poultry houses and coops at least once a week; fowls have breathing organs.
8. Look out for lice; give them no quarters. Lice breeding and poultry breeding make an unprofitable combination.
9. Dampness, filth and cold drafts cause roop; avoid them.
10. "Be sure that you are right, then go ahead"; persistent pushing in the right direction insures success.

S. P. YODER.

*Warwick Co., Va.*

When corresponding with advertisers, kindly mention the *Southern Planter*.

### AUSTRALIAN LAYING CONTEST.

Secretary Dunncliffe sends us clippings from the Daily Telegraph, Sydney, New South Wales, from which we learn that great interest is felt in that country over the coming laying contest between American and Australian hens, which is now under way.

The clippings are from the Telegraph for January 7th, and give the results for ten months in the year's test being carried on at the Hawkesburg Agricultural College with Australian hens.

This report makes a better showing than was made at the end of six months, and we are inclined to a belief that some Australian hens are rather good layers.

If we remember that midsummer comes in January in New South Wales, we will better understand the allusions to hot weather in the following extracts from the report:

"Considering the lateness of the season, the hens are laying wonderfully, and no doubt many breeders will be greatly surprised to know that the total number of eggs for the month exceeded that for December by 51.

"The warm weather seems to be suiting the Leghorns from Wagga, as Mr. Horwood's six hens gave the splendid total of 118 eggs. Grantham's rose-comb and Mr. Kennedy's single-comb White Leghorns are having a ding-dong race, and no doubt, from the condition of the birds, they will have a hard battle during the next two months. It is surprising how the Orpingtons and Wyandottes maintain their position, and there is no fear of any of the leading general utility pens being displaced by the Mediterraneanans now below them.

The total number of eggs laid for the month was 2,993, as compared with 2,942 in December, 2,213 in November, and 3,735 in October. The total number of eggs from the 38 pens for the 10 months was 25,935, or an average of 113.75 per hen.

"The six leading pens for the prizes for the second six months are: D. Scott, 447 eggs; Grantham Poultry Farm, 445; G. Kennedy, 439; Dr. Fiaschi, 425; Mrs. A. Hislop, 418; W. Haydon, 412."

The report before us shows that at the end of ten months a pen of rose-comb White Leghorns was first, a pen of White Leghorns second, and these were followed by Silver Wyandottes, Black Orpingtons, Silver Wyandottes, Black Orpingtons, Black Orpingtons, in the order named.

Beginning with the lowest on the list, we find Minorcas, Buff Leghorns, White Wyandottes, Anda-

lusians, Minorcas, Anconas, Black Orpingtons, White Wyandottes. The first and second pens have 152½ and 152¾ eggs, respectively, as the average production for the ten months. The last and next to last have 70¾ and 78 eggs, respectively, to their credit as the average production for the ten months. The best pen of Buff Orpingtons appears as eleventh on the list from the top and the poorest as tenth from the bottom. This places them very close to the general average of all the breeds.

Of the thirty-eight pens, not one is composed of Plymouth Rocks of any variety. A private letter from a breeder in Australia assures us that the Plymouth Rock is in bad savor in that country solely on account of the quality of the specimens that have been sent from this country on orders from breeding stock.

We are not at all alarmed over the prospect of defeat for the American hens, as we believe they will be able to make a good showing compared to the one above given. We are looking for a report from them on the next Australian mail.—*Commercial Poultry.*

### SITTING HENS AND NESTS.

When the sitting hens leave their nests before the hatch is due, it is an infallible indication of lice, and the nests should be taken outside, cleaned of the contents, the material burned, and the next-boxes swabbed with kerosene, to which a lighted match may be applied. If the nests crowd the poultry houses, causing room to be restricted, they may be left outside at this season by being placed against the fences and partially covered with brush.

If a chick stands drawn up or acts droopy, examine it at once. Either lice, bad bowels or indigestion is probably the ailment.

Eggs that have been exposed over night to a temperature of 31 degrees have been hatched and a fair hatch has been had from an incubator where the temperature got as high as 115 degrees. Much depends on the degree of moisture in the air, a dry air being the least dangerous.

Few of us would enjoy a steady diet of cold vituals. The hen is a good deal that way. She appreciates warm food and will respond quickly to it and in a way to make the pocket-book of her owner fuller.

## The Horse.

### NOTES.

Breeding, rearing and developing hunters and jumpers has assumed important proportions in Virginia live stock circles, and the industry is one that richly merits the encouragement and support of breeders and farmers in general. These horses, usually and preferably, too, perhaps, are the product of thoroughbred sires from general purpose mares, and many of them bred and reared on our native heath have gone out and captured the highest honors in the greatest of American show rings and in hunting fields known the world over. Probably the best known centres of this breeding industry are Warrenton, in Fauquier county; Leesburg, Loudoun county, and Charlottesville, in Albemarle county, which are in the midst of rich grazing districts, but there are scores of establishments in other sections that have attained prominence, and whose products have gained fame and the smile of fortune as well.



The season has been a busy one at Hampton farm, and the big stable of hunters and jumpers has been thinned down considerably by a number of quite important sales. The farm is in Fairfax county, and just three miles out from the staid old Virginia town of Alexandria. Hampton, with its broad acres, is the ancestral home of Courtland H. Smith, who directs affairs, and in all Virginia there is probably not a bolder or more intrepid horseman. In addition to the horses at Hampton, Short horn cattle and Southdown sheep are also kept, and these, with poultry of all kinds, help to make the establishment a paying institution. Since the beginning of spring a new and profitable market has been found in Kansas City, and the sales of Firebrand, Roscommon, The Greyling, Montrose, and another light weight hunter were followed by those of Marmion, b. g., 16:2, up to 200 pounds, by Marmion; Well Over, br. g., 16:2, up to 200 pounds, by Jake Shipsey; Valley Boy, b. g., 16:1, up to 180 pounds, by Jake Shipsey; Blue Bottle, blue roan g., 16 hands, up to 180 pounds, by Golden Deer; Troope, br. m., 16 hands, up to 180 pounds, by Philadelphia; ch. g., 15:3, up to 180 pounds, by Guardsman; Minerva, ch. m., 16 hands, up to 180 pounds, by Torchlight; The Witch, br. m., 16 hands, up to 175 pounds, by Romnev; Panther, b. g., 15:3, up to 175 pounds, by Panther; Milk Maid, br. m., 15:2, up to 150 pounds, by Tecumseh; Mr. Dooly, br. g., 16 hands, up to 225 pounds, by Zuave; Scattercash, 16 hands, up to 175 pounds, by Delurie; Cascade, b. g., 15 hands, up to 150 pounds, by Imp; Water Level; Juniata, b. m., 16 hands, up to 175 pounds, by Richelieu; Archduke, b. g., 16:2,

up to 200 pounds, by Jake Shipsey, and The Lamb, gr. g., 15:3, who has a record of 6 feet 5 inches, and is up to 250 pounds, by Botheration. The schooling and handling of these horses represented both care and ontlay, but the outcome was satisfactory, and they averaged over \$500.



The Hampton Farm stable has recently been strengthened by new additions, and the string is now the best ever owned on the place, its most important and best known members are, of course, the well-known prize winners, Up-to-date, Tip-Top, Chappie Lee and Ongonquitt, all of whom are in grand shape, and are confidently expected to duplicate their victories of other years when taken down the line of horse shows this season. The new ones, however, include Flambeau, ch. g., 4, 16 hands, by Torchlight, who is a fine looker and able to jump a fence with ease; Skibbereen, ch. g., 4, 16:3, and up to 225 pounds, and can jump close to six feet; Potential, b. g., 15:3, by imp. Potentate, dam Moline, by imp. Blythewood. A grand type with perfect conformation and safe for a lady, while up to 180 pounds and safe over any country; Pride of Hampton, b. g., 15:3, up to 180 pounds, by William, dam Best Girl. This horse is a grand fencer, with nice mouth and manners as well; Senegal Rad, ch. g., 15:1, by Calcium, dam Columbia, a perfect type of the thoroughbred hack, with perfect mouth along with manners, and good enough to win in the best company down the line of horse shows; Fire Light, ch. g., 15:3, 4, by Torchlight, dam nearly thoroughbred; one of the clean bred galloping sort rarely found, and up to 175 pounds; Yorrick, r. g., 16:2, 5, by Merry Lad, is a grand big youngster, up to top weight, and fast with it, while a magnificent fencer; Daylight, b. g., 16:3 1-2, 5, by Torchlight. This gelding is up to 230 pounds, and one of the fastest weight carriers of his day, safe over five feet; Courageous, b. g., 16:2, by Zuave, dam by Underwood, is a big one without flaw or fault, and can both fence and gallop, and some dozen or more other good ones, among them the fine, big roan gelding Brigadier, by Guardsman, and one of the finest horses ever sired by him.



The brown pacing mare Skyland Girl, 2:19½, by Simmons, who was so successfully campaigned during 1902 by George F. Dyer, then of Greensboro, N. C., but now at the Fair Grounds track, Lynchburg, Va., is now in the stable of A. H. Tyson, Newark, Del., who will race her this season. Mamie Woods, 2:20, the dam of this mare, was purchased while in foal and taken to Winston, N. C., by R. J.

Reynolds, the head of the noted Southern manufacturing house of the R. J. Reynolds Tobacco Company, and foaled his property. Mr. Reynolds is still interested in fine harness horses, but of recent years has turned his attention to breeding coaches.



Among the horses in the training stable of George M. Harden, Raleigh, N. C., are the big chestnut mare, Petronel, 2:19 3-4, by Expedition, 2:15 3-4, dam Petrel, by Onward, who made her record in 1902, and is likely to go much faster this season; Sweet Rector, bay horse, 5, by Director, 2:17½, dam Sweet Alca, by Alcazar, and John T. Moore, the bay pacing stallion, foaled 1899, by Hal Woodridge, dam by Locomotive, second dam by John Dillard, Jr., who is well formed, handsome in harness, and has a nice way of going. This horse was brought to North Carolina by T. M. Arrasmith, of Greensboro, who named him for "Trotwood," the widely known poet, author, charming turf writer and horseman, of Columbia, Tenn., and the son of Hal Woodridge promises to be a credit to the famous pacing family from which he springs.



Wealth, 2:17½, the son of Gambetta Wilkes and Magnolia, by Norfolk, who heads the stud of Col. W. H. Chapman, Gordonsville, Va., is doing finely, and at the close of a limited season will go into training, and if he keeps right a record of 2:10 or better will be credited up to him before snow flies. Wealth is a horse of grand size, finish and splendid appearance in harness, while he has frequently shown two minute speed in both his work and in races. Col. Chapman is determined not only to accord the son of Gambetta Wilkes the benefit of speed development, but opportunities in the stud as well, as shown by his recent purchase from W. J. Carter of the richly bred brood mare Lanciana, a good looking daughter of Lancelot, 2:23, and Mariana, by Sorrento, second dam, Mary Whitman, by Kentucky Prince, third dam, Nancy Whitman, dam of Robert McGregor, 2:17 1-4, sire of Cresceus, 2:02 1-4, the trotting king, Lanceana, is now in foal to Red Buck, Jr., the sire of Ben D., 2:06 3-4, and after foaling will be mated with Wealth.



Friends of the well-known Virginian, Algernon Daingerfield, now assistant secretary of the Washington Jockey Club, will welcome the news that he has been appointed clerk of the scales for the Metropolitan Circuit of the Jockey Club of the United States. This is the largest organization in the country, and the position is an important one. Since Mr. Daingerfield left Harrisonburg, his native home,

he has been prominently identified with the turfmen of the country, and has become widely known in racing circles.



The former well-known Virginia bred pacing mare, Princess Eulalie, 2:17 1-4, by Prince Belmont, dam by Red Jacket, owned by the Hon. W. R. McKenney, of Petersburg, Va., foaled on March 30th, a fine filly by Judge Cox, the sire of Coxey, 2:13.



John G. White, Leesburg, Va., has sold, through W. D. Grand, of the American Horse Exchange, New York, eight half bred hackneys, all of whom were high stepping harness horses, among them being the Virginia Horse Show winners, Lord Fairfax; the prize team, Threads and Patches, and Grey Eagle.



The Boscobel Farm Stable of Mr. and Mrs. Chas. H. Hurkamp, Fredericksburg, Va., includes some choice young horses in addition to a few older ones that will be taken down the line of horse shows this season. Grand old Hornpipe, the big, sturdy roan, son of Young Sanford; Amaret, the crack high jumper, and others will compete for honors in select company. With Mr. Hurkamp up, Amaret has cleared the bars at dizzy heights, while Hornpipe has figured as a winner season after season when pitted against the best in the land, and can usually be depended upon to do his best whenever called upon.



Joseph Lassiter, of the Richmond Horse Bazaar, has made a number of sales of well known trotters and pacers recently, among those passing through his hands being Whitby, 2:18 1-4; Florence Miles, 2:21 1-4; Kitty B., 2:23 1-4; Lenore Russell, Rose Bow, Crissie, and others.

BROADROCK.

### SALE OF IMPORTED JERSEYS.

We invite attention to the advertisement in this issue of the sale of imported Jerseys by Mr. T. S. Cooper, the well-known importer and judge of stock. The sale will include some as fine animals as Mr. Cooper ever offered, and he has imported and sold some of the finest Jerseys now in the country. Buyers who cannot attend the sale are invited to send their bids to Mr. Cooper, who will use his best efforts to execute orders entrusted to him. Send for catalogue.

## Miscellaneous.

### GOOD ROADS.

The long continued wet weather has once more aroused attention to this subject, and for a time at least caused one to believe that at last something is to be done to rid the State of the greatest incubus on its advancement. We, however, regret to say that the question has not yet assumed that phase which leads us to think that we are on the eve of the only sound and satisfactory settlement of it. Not until the State itself as a whole realizes that the subject of roads is one calling for the help of the State in its solution can there be a just settlement of the matter. The dealing with it as one affecting the counties alone can only result in injustice to farmers. It is neither just nor right that the burden of making good roads throughout the State, and thus advancing its prosperity more than any other thing can do, should be wholly borne by the farmers. The cities of the State will be as much—nay, more certainly—benefited than the counties by the making of highways leading into them upon which heavy loads can be carried at all seasons of the year, and the cities therefore should bear their fair share of the taxation, which must be imposed to secure this end. We advanced this idea many years ago, when first the subject of roads became a living question throughout the country. It was then strongly opposed everywhere, but it has proved its soundness by commending itself to the enlightened communities in the North. New Jersey, New York, and Pennsylvania have adopted the principle, and each of these States annually appropriates from the State taxes several million dollars to supplement the efforts of the counties. Pennsylvania only the other day appropriated \$6,500,000 to be expended this year. The result is already seen in New Jersey and New York States, where scores of miles of good highways are already made, and hundreds more are under construction. The counties readily burden themselves to meet the offer of State aid, and the work progresses to the manifest advantage of every one owning property, whether in city or county. We are expecting to see this system of help to the counties still further extended in the near future by the recognition by the Nation of its responsibility in the matter. We urged this in a Convention at Washington many years ago, when the Road Inquiry Bureau, of the Department of Agriculture, was first formed. Then the idea was scouted, now it is being favorably considered, and there is

throughout the country a strong current of feeling being expressed in favor of the Brownlow bill, now before Congress, which makes provision for this National help. There is no more reason why waterways (rivers and harbors) should be aided by national assistance than why highways should not be helped. If the one system is sound and just, then the other is certainly so. Millions have been spent and are being spent each year in rivers and harbors, which are much less the highways of the people than are the public roads of the State. The national revenues are largely drawn from the country people, yet they receive little in return. Millions of this national money are expended in the cities and towns in building government buildings. Let the country people have their share in the building of highways. We are glad to see that some of the counties of the State are asking for power to borrow money to build highways. This, when borrowed, should be met by help from the State and nation, and then good roads will be built without being too great a burden upon the farmers of the State. They are willing to bear their share, but should not consent to carry the whole burden. "Equal burdens break no backs."

### AN IMPORTANT VIRGINIA INDUSTRY.

*Editor Southern Planter:*

In no other portion of the habitable globe does the productive water meet the productive land on such close, intimate and easy terms as is shown everywhere on the lower Chesapeake, James river, Hampton Roads, and their tributaries.

These productive waters penetrate the land in every direction, making thousands of beautiful coves, inlets and snug little harbors, and here and there we find a body of water like Hampton Roads, which contains nearly fifty square miles of surface; the lower James, which is from five to seven miles in width, and the lower Chesapeake, which comprises a thousand square miles of water, all of which waters are underlaid with oysters and clams, and the waters are fairly alive with fish and crabs.

Norfolk is a logical centre for fish and oyster business, and the report of the United States Commission for the year 1901 places Norfolk well up on the list. The States included in the report are New York, New Jersey, Pennsylvania, Delaware, Maryland and Virginia.

A few "facts, figures and features" relating to the fish and oyster industry may be of considerable interest to many of your readers, both in and out of the State.

The value of the Virginia catch for the year 1901 was more than four and one-half million dollars—this for fish alone. Only one State exceeds the Virginia figures, and this is New Jersey. The New Jersey figures were only about one hundred thousand dollars over and above the Virginia figures.

The number of fish caught in Virginia waters during the year 1901 reached the grand total of 378,183,358, against less than half that number for New Jersey.

The value of the New York catch of fish was nearly one million dollars less than that of Virginia. Virginia leads all the States in the clam industry, and is second on the list in the quantity and value of crabs handled.

In oysters Virginia leads every State except one, that being Maryland, and leads Maryland in the quantity, but falls slightly behind her in value of the oysters handled.

The Virginia catch of oysters was 7,885,447, and the value of the catch was \$2,923,456. The Maryland catch was 5,685,561, and the value was \$3,031,518.

In the matter of oyster business, Norfolk is rapidly gaining on Baltimore. For many years Baltimore has had the distinction of being the greatest oyster centre on the face of the globe, and for many years Norfolk has been a pretty good second in the race, and is gaining each year, and will soon lead Baltimore, because the great bulk of oysters and the best oyster grounds lie nearer Norfolk than Baltimore.

Norfolk waters are always free from ice, making it easier for the oystermen to handle their business.

Maryland employs 36,260 hands in the oyster business, Virginia employs 29,325 hands. Virginia uses 1,086 sailing vessels in the prosecution of the oyster business. In addition to these vessels, 12,174 smaller boats are used.

The oyster fleet alone employed in these Virginia waters would make quite a respectable showing. Just imagine 1,086 quite good-sized sailing vessels and 12,174 smaller boats all going and coming like bees all winter in the oyster business. It makes a very lively scene, and results in the handling of large sums of money. The hands are paid every week, and much money is placed in circulation in Norfolk by reason of the oyster business.

Nature has been very good to Eastern Virginia, in

supplying her with such an inexhaustible meat barrel. It is filled each year by the provident hand of nature, and, notwithstanding man's best efforts, the supply continues pretty nearly the same from year to year.

The fish that are caught for the oil are dried out and the oil extracted, and the fish scrap is used for fertilizer purposes, but most of the catch are confined to the food fishes, such as spots, mullets, blue fish, sheep's head, croakers and other varieties, including large numbers of sturgeon, which often reach the weight of three to four hundred pounds each.

The hook and line fishing is also very fine in the waters adjacent to this sea port, and we have to confess that the inducements offered here to extract a living from the salt water are so numerous and so weighty that thousands of good farmers have been spoiled by being attracted by the profits offered to fishermen.

In other words, Eastern Virginia is *long* on good *fishermen* and good *oystermen*, but rather *short* on good *farmers*; but it is a fact that here in Eastern Virginia fishing is not only a pleasure, but it seems to be highly profitable.

A. JEFFERS.

## IMPROVING LAND.

*Editor Southern Planters.*

If I were going to preach three sermons on fertility, or land improvement, I would take as my first text Deep Plowing, my second would be Humus, and my third would be Lime. Any one of these three "texts" is a subject for unlimited discussion. But I am going to combine them in one, and if my views have any weight, I will feel honored to have you give them space in your columns. If I am wrong, then consign this to the waste basket, and I will not complain. But my faith is in my subject, and my heart is with my Brother Farmer, and if I can say anything that will aid him, then I am happy.

Deep soil, humus, and lime go hand in hand together. They were joined together in the beginning, and they stand together in the bond of nature, and can be counted on to do their work, if man will let them. They are devoted and true to each other, and dependent one upon the other.

Living as I do, on the border of Loudoun and Fairfax counties, I have abundant opportunity to see the benefits derived from the practice of deep plowing and liming, as well as to note the baneful results of the system of shallow plowing.

We have in this section of the State a beautiful



country, about 300 feet above sea level, with a climate unsurpassed for man, beast and vegetation. (A German editor who spent his summer here says our county is the Italy of America.) The nature of our soil is both loam and clay, adapted to the growing of grain, grass and fruit, as well as trucking. We have the best of railroad facilities, with Washington city as our market, where they pay fancy prices for all good articles. We are in easy distance of the city, and this is the cause of the majority of the farms which are worked by tenants, becoming impoverished. A great many of our land owners hold office in the city and live there. They lease their farms, and the renter hauls about everything that the farm produces to the city. They feed little or no stock, make no manure, and sow a cheap acid fertilizer on land plowed from two to four inches deep.

The owners of these rented lands are now placing these farms on the market, and they are being rapidly bought up by home seekers, and where they have plowed deep and put a little lime the improvement has been like magic. I have frequently, in passing a poor field of corn, asked what was the matter with the crop, and the answer would always be, the land is "worn out."

Now, nearly all of this land in this section was good to begin with, and I do not believe that naturally good land can become permanently exhausted under any system of farming in three or four generations, and yet this land fails to produce, under the tenant system. I think it is God's plan of locking up the fertility of the soil, and rendering it unproductive until some man gets hold of it who knows how to farm it.

These so-called worn out lands are lacking mainly in humus, and the quickest way to fill these lands with humus is the shortest road to permanent improvement. Deep plowing and sub-soiling is the first essential thing to do. I am frequently hearing the question, "What are the benefits derived from deep plowing?" This question was ably answered by Mr. A. Jeffers, in his article: "That Little Farm Well Tilled," in the April *Planter*. He preached sound doctrine there, and it should be preached in every journal. Another article in the April *Journal*, written by Mr. K. N. Crast, headed "Fertility Without Humus," is a strong argument for deep plowing and sub-soiling. Whilst I do not agree with him, that we can maintain fertility without humus, still his article shows that the sub-soil, dug deep in the ground to make the embankments, had plant food in it, and when loosened up and brought into contact with the sunshine and frost, brought forth rank vege-

tion. For the past twenty years I have used chemical fertilizers, and am still using, yet I am constrained to say that I believe a great part of the money spent for fertilizers was lost, and I would have derived better results if the same money had been spent in legumes and barn yard manure, for no so-called complete fertilizer ever took the place of stable manure for me.

As humus is partially decomposed vegetable matter in the soil, its duties are many. First, it is used for the purpose of keeping the particles of soil separate, so that air may find access, and the roots may have a chance to develop. It keeps the soil from puddling in a wet time, and from baking in a drouth; second, it serves as an absorbent or a sponge, to hold moisture, and gives it out in the time of a drouth. It is a conservator of heat, which warms up the soil and causes the seed to germinate properly, and it is the home and storehouse of nitrogen. Humus is the result of fertility; at the same time, it is the mother of fertility. We can best obtain it by thorough cultivation and the plowing under of vegetable matter, such as weeds, stubble, clover, peas and barnyard manure. In doing this we often turn under too much green vegetable matter, and this causes our land to become "sick or sour" from too much acid being left in the soil. In this event we want something to take up and neutralize these liberated acids before they accumulate in such quantity as to injure vegetation. Slaked lime is one of the best materials for this purpose, and has clearly demonstrated the fact in this section.

We are told by the chemist that the conversion of refuse vegetable matter, as well as animal matter, into plant food requires the intervention of chemical and other agencies, which will transform this inert nitrogen into ammonia or nitrates. The natural forces that do this work cheaply and beneficially are the microbes that feed upon the refuse vegetable matter of the soil. These nitrifying microbes cannot do their work in a soil where any considerable amount of free acid (other than carbonic acid) exists, but they work well and multiply in the presence of lime. In this neighborhood hay has been made to increase from 50 per cent. to 100 per cent. per acre from the application of lime, and from my experience and observation, I would advise an application of 25 bushels to the acre every four years, as this quantity is giving as good results as 100 bushels per acre. It is an easy matter to locate the lands in this section that have been limed by the abundance of grass and the absence of sheep sorrel.

As a rule, farmers are not chemists, and do not

know what their lands need in the shape of fertilizers, as different land requires different fertilizers. But we cannot go amiss in putting lime on any kind of land. It will make stiff land more porous, and sandy soil more compact.

Let me repeat, deep plowing, clover, peas and barn yard manure and lime have reclaimed more worn out or abused land than all other agencies combined. Lime works wonders under certain circumstances, But like medicine, it should not be given in over doses, and should be accompanied by some kind of stock raising for the manure. W. E. MILLER.

*Fairfax Co., Va.*

### HOW THE FARMER HAS BEEN EDUCATED.

*Editor Southern Planter:*

A great deal has been said of the educational advantages of city life over that of the country. This fact has had a definite bearing on the agricultural community in all sections of the country. Parents have left the farm in order to give their children the benefit of the advantages which city life affords. The older sons and daughters have left of their own volition, leaving the farm to their parents on which to live out their natural term of years. Any great industrial enterprise cannot long attract labor and capital of a productive nature, which plays this losing game in its process of development. But now as agriculture in its various phases represents the greatest of all industries of the country, there must have been some agency by which this stream of emigration has been checkmated, or a new force set in motion to counteract this condition.

The solution has been found in the farmer himself. The general awakening of the farmer came simultaneously with the organization of such self-helping societies as the farmers' clubs, the Grange, etc. The government also lent a hand, not with a spirit of philanthropy, but as a matter of business policy, and which took the form of departments of agriculture and agricultural colleges. From these two widely different points of view a systematic method of co-operation has been evolved to solve the difficulties of rural progress.

In nearly every State in the Union a central organization has been formed to promote the interests of agriculture. The direction of the work may fall to an agricultural board especially created for the purpose, or under the auspices of the agricultural colleges. The object in any case is the same—namely, the diffusion of knowledge in matters per-

taining to agriculture. By far the most potent influence for agricultural progress has come through the Farmers' Institute. The general supervision is in the hands of the State, and it represents the co-operation of the farmer and the scientist in a common interest. On the average, each State holds 175 meetings in as many places during the year, and the beneficial results accruing cannot be estimated. An Institute lasting from one to two days, and having generally four sessions a day, affords ample opportunity for a great range of subjects, and while the purpose is to draw out local experience, the scientific lecturer may be able to point out from experiences in other communities practical ideas applicable to conditions obtaining in the district where the Institute is held. In the State of Pennsylvania there is a corps of 95 Institute lecturers. Their reports show 200 Institutes during the year, and an attendance of 150,000 people.

The Institute or other voluntary organization for the promotion of agricultural science in any community marks the intelligence of the inhabitants of that locality, and in the most progressive sections they flourish in great number and variety. In Massachusetts great encouragement has been given by the State Board of Agriculture. At the present time there are thirty-four agricultural societies, sixteen horticultural societies, forty-seven farmers' and mechanics' associations, fifteen Pomona granges, one hundred and fifty-nine subordinate granges, and eighteen organizations of a miscellaneous nature, all of which are connected with the State Board. The secretary of the Board believes this communion of interests and unity of purpose is in a very great measure responsible for the general prosperity of its agricultural population. Such a comprehensive method cannot but leave its impress on an agricultural community, developing both a better social condition and a consequent high standard of living. The field of association is constantly widening in its usefulness, and their need is becoming more fully demonstrated throughout the country. GEORGE E. CHADSEY.

*District of Columbia.*

### Bermuda Grass from Seed.

If seed is used, the land should be thoroughly prepared as for other grass seed, having the surface thoroughly pulverized. Draw a smoothing harrow over the surface, leaving the whole surface corrugated with small furrows. Sow the seed, after danger of late spring frost is over, at the rate of five pounds of seed to the acre and brush in very lightly, or better, press in with a heavy roller. J. S. NEWMAN.

THE

# Southern Planter

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J. F. JACKSON,

Editor and General Manager.

B. MORGAN SHEPHERD,  
BUSINESS MANAGER.

TERMS FOR ADVERTISING.

Rate card furnished on application.

TERMS FOR SUBSCRIPTION.

THE SOUTHERN PLANTER is mailed to subscribers in the United States and Canada at 50c. per annum; all foreign countries and the city of Richmond, 75c.

REMITTANCES should be made direct to this office, either by Registered Letter or Money Order, which will be at our risk. When made otherwise we cannot be responsible.

WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. Criticism of Articles, Suggestions How to Improve THE PLANTER, Descriptions of New Grains, Roots, or Vegetables not generally known, Particulars of Experiments tried, or Improved Methods of Cultivation are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.

ALWAYS GIVE THE NAME of the Post-Office to which your paper is sent. Your name cannot be found on our books unless this is done.

SUBSCRIBERS failing to receive their paper promptly and regularly, will confer a favor by reporting the fact at once.

THE DATE ON YOUR LABEL shows to what time your subscription is paid.

NO ANONYMOUS communications or enquiries will receive attention.

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## PUBLISHER'S NOTES.

### TO ADVERTISERS.

All advertisements and matter pertaining to advertising *must* reach us by the 25th of each month. Please bear this in mind.

### SPECIAL OFFER.

For 25 cents we will send the Southern Planter for the remainder of this year (May to December inclusive) to any one who is not now a subscriber. We make this liberal offer in order to induce a large number of farmers to send us at least a trial subscription. We will greatly appreciate it if our subscribers will bring this notice to the attention of their friends. They will thereby do us a favor and indirectly help themselves. Remember, this offer is for new subscribers only. We have another offer, which we make to those already on our list. Remittances can be sent in the most convenient form, coin, stamps or money order.

This month the Southern Planter appears in entirely new dress from cover to cover. We experimented last month with the type machines, and were so well pleased with the appearance of the journal that in future all composition will be machine set. We will, therefore, give our readers a brand new type in every issue. How do you like it?

### WITH THE ADVERTISERS.

The Chicago Stump Machine Manufacturing Company resumes its advertising in this issue.

The Oconeechee Farm, Durham, N. C., desires to exchange a shorthorn bull to prevent in-breeding.

Breeders of live stock should look up the advertisement of "Stock" elsewhere in this issue.

W. B. Fleming, proprietor of the Bridle Creek Stock Farm, is advertising some choice Berkshires in this issue. Mr. Fleming is a new advertiser, and we bespeak the patronage of our readers for him.

The Gans-Rady Company, the well-known Richmond clothiers, have an ad-

## WOOD'S SEEDS.

# Plant Wood's Prize Head Late Flat Dutch Cabbage

FOR LATE FALL AND WINTER CROP,

Our customers pronounce it,

"The finest Cabbage for winter I have ever grown."

"The best late Cabbage I have ever planted."

"Makes the largest and most solid heads of any late Cabbage grown in this section."

Price of seed, pkt. 5c.; oz. 20c.; 1-4 lb. 50c.; lb. \$1.50, postage paid. See page 17 of Wood's Seed Book for 1903, for further information about Late Cabbage Seed. Wood's Seed Book mailed FREE on request.

T. W. WOOD & SONS,  
SEED GROWERS AND MERCHANTS,  
RICHMOND, VA.

## Did you ever buy a SUIT direct from the MILL?

If you have, all right, you will buy again. If you haven't you will be surprised to see how much you have been paying for dealers' profits. We send you FREE samples of Spring and Summer Suitsings with tape measure and self-measurement blank. Then send us your measurements and we will make you a suit for

# \$7.50 or \$10.00

that would cost you \$18 to \$25 at your tailor's. All our suits are all wool, made complete in our own mill from the raw wool up. Every suit bears our label and is guaranteed for one year. Every suit has hand shrunk collars, hand made button holes, padded shoulders. We sell either tailor-made or ready-made clothing. Men's all wool and worsted trousers \$2., \$2.50 and \$3. Handsomely made and trimmed. We have the cheapest, strongest and best all-wool boys' clothing. Also cloth by yard or piece and ladies' suitings and skirtings. Write to-day for samples, &c.

GLEN ROCK WOOLEN MILLS,  
Somerville, N. J.

## CRONK'S Improved Staple Puller



IS AT THE FRONT. Ask your dealer to show it. Three wire cutters, two hammers, two splicing clamps—all in one tool. A Staple Puller that will pull staples when no other make will. A cutter that will reach wire when the button cutter will not. One day's use will save the cost of it. \$1.00, postage paid CRONK & CARRIER MFG. CO., Elmira, N. Y.

vertisement on another page, to which we invite the attention of our readers.

The Armour Fertilizer Works are advertising blood meal in another column. This packing-house product is receiving the attention of farmers and feeders everywhere at present.

E. F. Schlichter starts the season's advertising with this number. The Philadelphia Silo is his specialty.

The Defender Spray Pump is offered our readers by J. F. Gaylord, Catskill, N. Y.

The West Disinfecting Company is advertising Chloro-Naphtholeum in this issue. Look up the advertisement and write to the company for pamphlets, prices, etc.

A new advertiser in this number is J. H. Boelte. He offers some choice Shorthorns.

The Leaksville Woolen Mills are with us again this season. Farmers can ship their wool direct to these mills, and have it made into any garment desired.

John P. Mays, a prominent Leghorn breeder, has an advertisement in another column.

Well-drilling outfits can be purchased from the Loomis Machine Company, Tiffin, Ohio. We invite the attention of our readers to a card of this company in another column.

Some finely-bred Aberdeen-Angus bulls are offered by Rear-Admiral B. F. Day.

Miniborya Farm offers some choice Berkshires, both sexes, this month.

We invite attention to the advertisement of the Messinger Manufacturing Company, Tatamy, Pa.

The Majestic Rotary Washer is offered by the Richmond Cedar Works. This is a splendid machine, with hoops electrically welded and sunken in the groove—a patent owned exclusively by them.

Hereford bulls and heifers are offered by the Stonehurst Fruit and Stock Farm.

Farms, orchards, and homes are for sale by J. W. Apperson & Brother.

Note the offering of Duntreath Farm this month.

**HOW'S THIS?**

We offer One Hundred Dollars' Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY, & Co., Props., Toledo, O.

We, the undersigned, have known F. J. Cheney for the last fifteen years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm.

WEST & TRAUX, Wholesale Druggists, Toledo, O.  
WALDING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price, 75c. per bottle. Sold by all druggists. Testimonials free.

Hall's Family Pills are the best.

**The Practical Man**

appreciates the saving in wear and tear, in friction, draft and labor gained by the simplicity of

**Plano Mowers**

He knows the value of abolishing needless mechanism and applying power direct.

Plano's simple, automatic Clutch Shift, strong internal Drive Gear, easy-acting Vertical Lift Device and self-adjusting Draft Rod are the kind of Mower improvements that appeal to him. They are the outgrowth of experience and scientific ingenuity.

Our catalogue explains them and tells about some other interesting products of the Plano shops—Grain Binders, Headers, Reapers, Mowers, Rakes, Corn Binders, and Huskers and Shredders. The "Plano" is the Husker famed for its safe, swift and satisfactory work. Catalogue free.

**PLANO DIVISION**  
International Harvester Co. of America  
CHICAGO, ILL.



We make from your  
Own Wool on Shares  
Or for Cash

- White or Gray
- Large or Small
- Blankets, Coverlets
- Dress Goods, Skirts
- Underskirts, Flannels
- Cassimeres, Cheviots
- Jeans
- Art Squares,
- Carpets
- Stair Carpets
- Smyrna Rugs
- Buggy Robes,
- Lounge Covers
- Yarns, Etc.

SEND US YOUR WOOL  
WE PAY THE FREIGHT.  
WRITE FOR CATALOGUE.

LEAKSVILLE WOOLEN MILLS,  
Leaksville, N. C.

Write Us.

ORDER AND SEE THAT YOU GET

**Pasteur Black Leg Vaccine**

If not obtainable from dealers, refuse substitutes and wire your order to us. Over 20,000,000 calves successfully vaccinated with the original Vaccine during the last eighteen years. Powder form and Cord form both for Single and Double treatment.

**PASTEUR VACCINE COMPANY, Ld.,**  
CHICAGO - NEW YORK, - FT. WORTH - SAN FRANCISCO.

Write for Catalog Today



**\$40**

**SPLIT HICKORY WINNER TOP BUGGY**

Made of selected second growth split hickory throughout. Handsome and durable. This is a thoroughly high-grade vehicle at a low price and has heel braces on shafts, panel carpets, leather quarter top, solid panel spring back, open bottom spring cushion, boot on back of body, high leather dash, storm apron, side curtains, oil and lead paint (choice of colors), open hearth oil-tempered springs, Norway iron clips, bolts and forgings and a hundred other points of merit. Guaranteed for two years.

**SENT ON 30 DAYS' FREE TRIAL.** Hitch up to it and use it before you decide. It will pay anyone to borrow the money and pay interest on it to take advantage of the great saving contained in this buggy bargain. It is an investment for years. Secure our large catalogue, sent free if you write, describing this and numerous other vehicles and bargains at bargain prices. We lead the world in quality, style and price. Address **OHIO CARRIAGE MFG. CO., Station 41, Cincinnati, O.**

**GET A GOOD WIND MILL**

Don't buy a poor wind mill. Don't pay a double price. Send direct to our factory for catalogue of the

**Freeman Steel Wind Mills**

and four post angle steel towers. A complete line of pumping and power mills of the highest grade at extremely low prices. We can save you money on a good article.

**S. Freeman & Sons Mfg. Co.,** 110 Hamilton St., Racine, Wis.

A complete line of Feed and Ensilage Cutters, Corn Shellers, Wood Saws, etc., at low prices

**Corn Planting**

must be well and carefully done, as the future crop depends upon it. For all purposes, in any soil, on all kinds of ground nothing equals the

**SPANGLER CORN PLANTER.**

It saves time, labor, money and insures the crop. You know when it is working; you can see the corn on its way to the ground. Made with or without fertilizer attachment. New device for sowing peas, beans, ensilage, corn, etc. We also make the famous Spangler Low-Down Grain and Fertilizer Drill. Write for catalogue and circ. **SPANGLER MANUFACTURING CO., 501 Queen St., York, Pa.**

**WROUGHT IRON PIPE**

Good condition, used short time only; new threads and couplings; for Steam, Gas or Water; sizes from 1/2 to 12 inch diameter. Our price per foot on 3/4 inch is 8c; on 1 inch 3 1/2c. Write for free catalogue No. 1

**CHICAGO HOUSE WRECKING CO.,** W. 35th and Iron Sts., CHICAGO.

**NO HUMBAG. Three in One.**

Swine V. Stock Marker and Calf Behorner. Stops swine from rooting. Makes 48 different ear marks. Extracts Horns. Price \$1.50. Send \$1 for trial. If it suits, send balance. Pat'd May 6, 1902. Hog and Calf Holder only 75c. **FARMER BRIGHTON, FAIRFIELD, IOWA.**

Mention the *Southern Planter* in writing.

**A GOOD SUGGESTION.**

Editor The Southern Planter, Richmond, Va.:

Dear Sir,—I am a subscriber to your paper, which is a source of much valuable information for the up-to-date and progressive farmer.

Now, a word to my brother farmers: Let each and every reader of the Southern Planter try to persuade at least one neighbor to subscribe to the paper. In this way, we can double its present circulation, and thus enable the editor to make it even more interesting than now. We farmers are scattered over the country in such a way that we can speak almost every day of the Southern Planter to some neighbor or friend who is not familiar with it. This the editor cannot do, as there is only one of him, but there are many of us. Let's get a hustle on us and make it the greatest farm paper in the world.

A. H. D. KING.

Caswell County, N. C.

We certainly very greatly appreciate the above letter from our correspondent. He states our position exactly. We want every farmer in the South to become a reader of the Southern Planter. We know we can help them in their farming operations. Look up the special offer we make in this issue to new subscribers. We appreciate the support of every one of our friends, and we endeavor to make our journal a credit to our section, as well as to ourselves as publishers.—S. P. Pub. Co.

**PURIFIED MILK.**

"Purified Milk" is the title of a little pamphlet from the Virginia Cattle Food Company, Danville, Va. This company manufactures Mrs. Lea's Milk and Butter Purifier, which is advertised in another column.

The pamphlet referred to contains splendid testimonials from prominent physicians and dairymen, who have used this preparation in their herds.

The McCormick Division of the International Harvester Company sends us some unique advertising novelties in the shape of barometers. This barometer consists of a little girl wearing a dress, which changes color according to the weather. They also send us some useful memorandum books.

**THE HILL-TOP STOCK FARM.**

We invite the attention of our readers to the advertisement of the Hill-Top Stock Farm, Staunton, Va., of which Colonel S. Brown Allen is now the proprietor. This farm is well known to numbers of our readers who have purchased stock there for the past number of years.

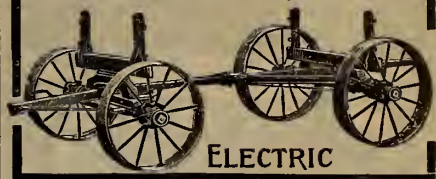
Berkshire hogs and Southdown sheep are the offering this month. Look up the advertisement elsewhere.

Hollybrook Farm offers eggs from its splendid strains of pure-breds.

**Wise Man's Wagon.**

The man who has had experience in running a wagon knows that it is the wheels that determine the life of the wagon itself. Our **ELECTRIC STEEL WHEELS**

have given a new lease of life to thousands of old wagons. They can be had in any desired height, and any width of tire up to 8 inches. With a set of these wheels you can in a few minutes have either a high or a low down wagon. The Electric Handy Wagon is made by skilled workmen, of best selected material—white hickory axles, steel wheels, steel hounds, etc. Guaranteed to carry 4000 lbs. Here is the wagon that will save money for you, as it lasts almost forever. Our catalog describing the uses of these wheels and wagons sent free. Write for it. **ELECTRIC WHEEL CO., BOX 146 QUINCY, ILLINOIS.**



**WE'LL PAY THE FREIGHT**

and send 4 Lingy Wheels, Steel Tire on, - \$7.25 With Rubber Tire, \$15.00. 1 mfg. wheels 3/4 to 4 in tread. Top Buggies, \$28.75; Harness, \$3.60. Write for catalogue. Learn how to buy vehicles and parts direct. Wagon Umbrella FREE. **W. V. BOOB, Cincinnati, O.**

**The WEBER 14 H. P. Gasoline Engines**

for running grinders, shredders, cutters, threshers, etc. Free catalogue gives all sizes. **Webber Gas & Gasoline Engine Co., Box 12 Kansas City, Mo.**

**FLOWING WATER.**

A constant stream in your house, barn or garden without running expense by using the

**RIFE Hydraulic Engine.**

It never stops. Requires no attention. **Sold on 30 Days Trial.** Send for free book. **RIFE ENGINE CO., 126 Liberty St., New York.**

**Defender Sprayer**

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

J. F. Gaylord, Box 82 Catskill, N. Y.

**STEEL KING CULTIVATOR**

with 5 reversible points and hillers. The best tool of its kind in the market. Get our catalogue of Separators and Powers for 2 and 3 horses, level or even



tread. Sweep Powers, Corn Shellers, Feed Mills, Steel and Plank Rollers, Mowers, Rakes, Corn Planters, Saws, Engines, 3 to 25 H. P. mounted and stationary. **The Messinger Mfg. Co., Tatamy, Pa.**

**YOUR GREAT GRANDFATHER USED**



**DEERING HARVESTER**

In the old days of the first harvester "DEERING" was a name to conjure with.

**YOUR GRANDFATHER USED**



**DEERING BINDER**

When the wood-frame binder came into use "DEERING" meant the best your grandfather could get

**YOUR FATHER USED**



**DEERING BINDER**

When the first steel-frame binder appeared "DEERING" was the name it bore. It was a general favorite.

**YOU COULDN'T DO BETTER THAN USE A**



**DEERING BINDER**

Now as then, "DEERING" stands for excellence.  
Deering Division,  
International Harvester Co. of America, Chicago.

MARK YOUR STOCK.

.....USE THE.....

KENTUCKY ALUMINUM EAR LABEL

Made by F. H. JACKSON & Co., Winchester, Ky.  
Write to them for free samples.

SPLIT HICKORY BUGGIES.

The Split Hickory line of vehicles is sold only direct to the user at the wholesale price, not being on sale at any store, nor is it handled by any jobber or dealer.

The Ohio Carriage Manufacturing Company, Station 41, Cincinnati, Ohio, sole makers of Split Hickory vehicles, is a highly reputable firm, with a record of years of honesty and success as makers and sellers of high-class vehicles at moderate prices. Their offer to sell their jobs on thirty days' free trial is bona fide and liberal. It enables the intending purchaser to see and try just what he intends to buy. A postal card or letter addressed to them at Cincinnati will secure their valuable new catalogue, containing all the latest things on four wheels for people who like stylish, long-wearing, and well-built buggies and vehicles. Send for it before you forget it.

The Fanciers' Supply Company, whose advertisement appears elsewhere in this issue, is unique in that it is the only exclusive poultry supply house in the South. Their line embraces everything in foods, remedies, appliances, incubators, and brooders.

The business is under the management of Mr. Frank Jenkins, well known throughout the South as a judge and a fancier of life-long experience. The company issues a handsome catalogue, which is sent free for the asking, and should be in the hands of every poultryman.

WILD TURKEYS WANTED.

Dr. Cecil French is advertising in another column for all sorts of wild game, and especially wild turkeys.

Our readers should be on the lookout for wild turkey eggs, and also any flocks of these birds, which they may run across. Dr. French will pay \$5.00 apiece for them next fall.

BEST LINIMENT FOR ENLARGEMENTS OF ANY KIND.

Carrie, Va., Jan. 22, 1903.

The Lawrence-Williams Co., Cleveland, O.:

I was induced one year ago by my family physician to try Gombault's Caustic Balsam. A fine mule that had an enlarged hock that all other linaments failed to help at all; after using two or three applications of Caustic Balsam, added \$75.00 to its value. Afterwards used it for another one with bone spavin that was so lame he would give out in one day's drive. Gave one month's rest, and the mule is well. So I am proud to say Gombault's Caustic Balsam is far the best linament I have found for enlargements of any kind.—J. C. Dixon.

"The difference between water and air is that air can be made wetter, but water cannot."—New Orleans Picayune.

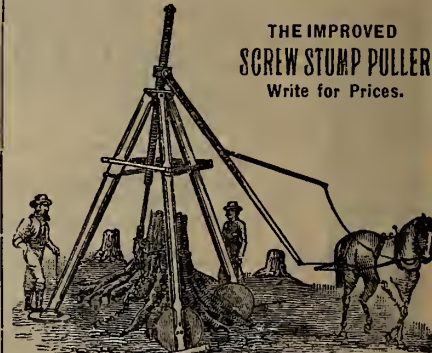


Announcement

We have obtained the Court's decree against two additional manufacturers who have been infringing our patent. The rule of law is: "The maker, seller or user of an infringing device are all liable in damages to the owner of the patent infringed." The Janesville Machine Co. and the Keystone Farm Machine Co. are the only firms licensed to use a flat tooth covered by our patent, and we finally warn sellers and users of all other makes. So admirably have the 60,000 "Hallock" Weeders done the work for which they were designed, that one maker after another sought to copy it. However, by the various Courts' decisions, these makers are compelled to abandon the manufacture of a Weeder having flat teeth, and they are now experimenting with other shapes; but it is the flat tooth that made the "Hallock" Weeder famous, and in view of the manner in which our patent has been sustained, it is dangerous to use an infringing tooth. Write for descriptive circulars and prices.

HALLOCK WEEDER & CULTIVATOR CO.,  
Box 839 York, Pa.

THE IMPROVED SCREW STUMP PULLER  
Write for Prices.



Chamberlin Mfg. Co., Olean, N. Y., U. S. A.

STUMP PULLER



Most Powerful, Handiest and Strongest Built in the World.

We make 4 kinds in sizes to suit all needs and of any desired strength. Saves time and does the work right. The operation of pulling stumps and trees by our methods is simple and easy. Send for Free Catalogue.

CHICAGO STUMP MACHINE MFG. CO.  
236 La Salle Street, Chicago, Ill.

HERCULES STUMP PULLER



Clears an acre of heavy timber land each day. Clears all stumps in a circle of 150 ft. without moving or changing machine. Strongest, most rapid working and best made.

Hercules Mfg. Co., 413 17th St., Centerville, Iowa.

WE PAY \$26 A WEEK And expenses to men with rigs to introduce Poultry Compound.  
INTERNATIONAL M'F'G. CO., Parsons, Kan.

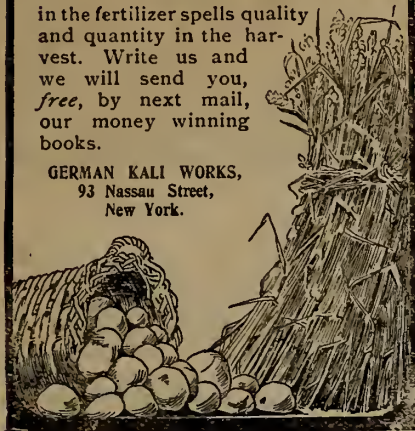
**A Golden Rule of Agriculture:**

Be good to your land and your crop will be good. Plenty of

**Potash**

in the fertilizer spells quality and quantity in the harvest. Write us and we will send you, free, by next mail, our money winning books.

GERMAN KALI WORKS,  
93 Nassau Street,  
New York.



**SAN JOSE SCALE** and other insects can be controlled by using

**GOOD'S CAUSTIC POTASH WHALE OIL SOAP. No. 3.**

It also prevents Curl Leaf. Endorsed by entomologists. This soap is a fertilizer as well as insecticide 50 lb. kegs, \$2.50; 100 lb. kegs, \$4.50. Half barrels, 270 lbs., at 3 1/2¢ per lb.; barrels, 425 lbs., at 3 1/4¢. Large quantities, special rates Send for circular.

**JAMES GOOD,**  
PHILADELPHIA, PA.

939—41 N. Front St.,

**Agricultural and Builders' LIME**

Send for Circulars and Price-List.

**FELLSWORTH LIME WORKS**

**REEVES CATT, Agent**  
Bodley, Augusta County, Va.

**STEEL ROOFING**

Strictly new, perfect, Semi-Hardened Steel Sheets, 2 feet wide, 6 feet long. The best Roofing, Siding or Ceiling you can use. No experience necessary to lay it. An ordinary hammer or hatchet the only tools you need. We furnish nails free and paint roofing two sides. Comes either flat, corrugated or "V" crimped.  
**\$2.00 PER SQUARE.**  
A square means 100 square feet. Write for free catalogue. 348, on Farm supplies of every kind  
**CHICAGO HOUSE WRECKING CO.,** 35th & Iron Sts., Chicago

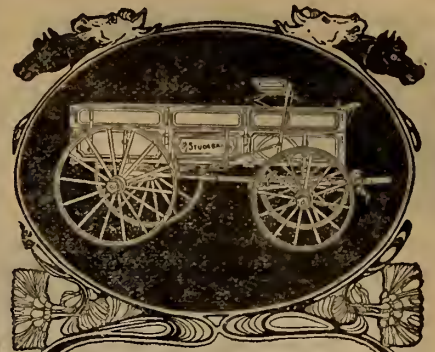
**TEACH THE COMMANDMENTS.**

The Ten Commandments, if I may be allowed the expression, are that quantity of eternal righteousness of which human nature is capable, writes Rev. Dr. H. Martyn Hart, dean of St. Johns' Cathedral, Denver, Col. There was one man who kept them intact, one perfect man, and only one. But, inasmuch as Jesus of Nazareth did keep them, it is proof that they can be kept by human nature. That these Ten Commandments were spoken by God and were not the emanation of the mind of Moses is plain enough. We have some intimation of the caliber of the ancient Egyptian mind and of their notions of morality. The outcome of the Ten Commandments from that source is impossible. The Jews were, and had been for two centuries, laborers, ground down in slavery. Moses could not have gained such a notion of righteousness from that source. Then, how did this man, without assistance from his environment, suddenly produce a code of laws which the highest intellectual capability of our race has never approached, much less equaled?

The Ten Commandments are the only invariable moral standard the world has ever possessed, and those men whose characters have most closely reached that standard have been the best men, the men who have been most honored, who have had the best influence on their generation, and whose memories the world has treasured. What ordinary man can even mention ten men who lived in the different centuries after Christ other than those the world has called "saints"? And the saints are the men who ruled their lives by the Ten Commandments. "Wisdom," said the wisest man who ever lived—"wisdom is the principal thing," and everybody knows that the ancient writer wrote truth when he said: "The fear of the Lord is the beginning of wisdom." When that man whom God raised up to try to the fullest every scheme human nature has proposed for the securing of happiness reached the end of his career, having travelled every road to its farthest end, and declared of each one: "It is vanity; all, all is vanity," Solomon bequeathed to his race the result of his vast experience. Let us hear the conclusion of the whole matter. He wrote: "Fear God and keep His commandments, for this is the whole duty of man."  
The Ten Commandments are the only rules we possess for the education of the heart—the man.

And inasmuch as it is the heart which governs the man, and not the head, the Ten Commandments are the most important implements of education we possess.

The Ten Commandments are the rules of morality. There is not a breath of ecclesiasticism or sectarianism in the Ten Commandments. Let the Ten Commandments be incorporated in the regular school curriculum. They carry with them a subtle feeling



**No Favors.**

Impartial Time bestows none in passing on vehicles. Each is judged by its fitness and the service rendered. It is through more than half a century's duty that

**Studebaker**

**Vehicles and Harness**

have acquired the good opinion of all users. The verdict is that they are staid, staunch, dependable goods, that give full value everywhere and always. There's variety and fitness for all service, good taste, style, and above all, **Honesty in Make and Material.** You are entitled to these things for your money. The place where you are sure of getting them is the Studebaker local dealer. Catalogue and particulars sent direct on request.

**Studebaker Bros. Mfg. Co.,**  
SOUTH BEND, IND.



**WELL DRILLING MACHINES**

The most successful money-making machines ever made. Also machines for boring wells with augers by horse power. Write us if you mean business.

**Loomis Machine Co., Tiffin, Ohio.**

First check for \$20.00 will get a

**Sharples Safety Hand Separator,**  
350 lb capacity. Does good work.

**W. B. GATES,**  
Rice Depot, Va.

**"Feeds and Feeding"**

**Prof. Henry's Great Book for Farmers and Stockmen.**

Delivered anywhere for \$2.00  
With the SOUTHERN PLANTER, 2.25

**FRAZER**

**Axle Grease** Best in the world.

Its wearing qualities are unsurpassed, actually outlasting 3 bxs. any other brand, Not affected by heat. Get the Genuine.  
**FOR SALE BY ALL DEALERS.**

**MANLOVE SELF OPENING GATE**



Ornamental, economical, practical, high grade saver. Used by good, practical farmers everywhere. Satisfaction guaranteed.

Catalogue free.  
MANLOVE GATE CO.  
272 HURON ST. CHICAGO, ILL.

### YOU OUGHT TO KNOW BETTER

About the B. B. Stays. They make a cheap, strong fence with barb or coil wire. Easily handled as nails, self-locking, can't slip, and no machine necessary. They are made of heavy, hard wire, and won't slip down. Try a basketful to stiffen the old fencing (barb or woven wire), and you will use nothing else to build new fence. We sell coil wire, too.

THE B. B. FENCE CO.,  
14th and Clark Sts., Racine, Wis.



### WIRE FENCE.

Heavy lateral wires, heavy hard steel stays, coiled spring wire, Sure Grip lock. In strength, appearance and durability, the Hard Steel cannot be excelled. Write for catalogue and prices.

THE HARD STEEL WIRE FENCE CO.,  
Cuyahoga Falls, Ohio.



### Page Gate Frames

are solid round iron, welded by electricity. Gates have to stand more banging than fence. Ours are powerfully braced. Mesh entirely woven by hand.

PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.



### Genuine Spiral Spring Wire FENCES AND GATES

If your dealer does not have our goods in stock you can buy direct at Manufacturers' Price. Write for Catalogue and secure agency.

INTERNATIONAL FENCE AND F. CO.  
Columbus, Ohio.

### Barbed & Smooth Wire

Write for our prices on 2 and 4 point Barbed Wire, painted and galvanized; also, 65,000 pounds

### Smooth Galvanized Wire Shorts

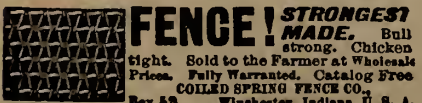
Gauges, 10, 11, 12, 13 and 14; Prices from \$1.50 to \$1.75 per hundred. Write for Catalogue No. 166

CHICAGO HOUSE WRECKING CO.  
West 35th and Iron Sts., CHICAGO.



### LAWN FENCE

Many designs. Cheap as wood. 32 page Catalogue free. Special Prices to Cemeteries and Churches. Address COILED SPRING FENCE CO. Box Q. Winchester, Ind.



### FENCE! STRONGEST MADE.

Bull strong. Chicken tight. Sold to the Farmer at Wholesale Prices. Fully Warranted. Catalog Free COILED SPRING FENCE CO. Box 53 Winchester, Indiana, U. S. A.

of awe—"God spake these words"—and the fear that the Great King will hold us responsible for breaking them is a continual incentive to our careful keeping of them.

Mr. MacDonald, the specialist in the United States Bureau of Education, in his statement just presented to Congress, says, without question, that crime is steadily on the increase. This may be seen from these figures, published ten years ago (the data of the last census have not yet been issued, so that 1890 is as far as we can go):

In 1850 there was one criminal to every 3,442 of the population.

In 1860 there was one criminal to every 1,647 of the population.

In 1870 there was one criminal to every 1,021 of the population.

In 1880 there was one criminal to every 837 of the population.

In 1890 there was one criminal to every 715 of the population.

There were 8,834 murders in the United States last year; the year before the number was 7,852—an increase of 1,000. One death in every 112 is murder! There were 986 more suicides last year than the year before—8,231 is the fearful record of godless unrestraint. One death in 65 is either a murder or a suicide in the United States.

In the face of this alarming condition of the mortality of the nation, it must be confessed that the public education is a failure. It fails to do that very thing for which education is undertaken; it fails to train our youth to the yoke of discipline and obedience; it fails to create in them a principle of energy which enables them to resist temptation; it fails to induce them, of their own free will, to accept the law of labor and duty; it fails to make them patriotic citizens and God-fearing men and women.

I have little respect for the man who is only a destructive critic. Do not pull down even the hovel which shelters you, unless you have prepared a better house for your refuge. I therefore would venture to suggest a remedy to arrest this increasing torrent of anarchy and revolution.

I would stop the public education at about the sixth or seventh grade. I would take the money now expended on high schools and universities and spend it on lower education. The character is formed practically between the ages of seven and fourteen years.

I would supply a teacher to every twelve children. I would make those children, by almost individual attention, master, and thoroughly master, the groundwork of education. They should read aloud history, geography, etc., and plenty of it; they should write composition, commit to memory the best of literature.

I would publish a book of extracts from the Bible, which is the highest literature we possess. I would have the Ten Commandments often repeated and thoroughly taught, and some

## FARMS FOR SALE!

### Farm No. 2.

Contains 265 acres; 215 under cultivation; 50 acres original oak and hickory. Fronts on the pike running from Winchester to Alexandria; five miles from railroad; one-half mile from proposed electric railroad. Excellent six-room dwelling house, with broad halls, standing in a large, nicely-shaded blue-grass lawn; all necessary outbuildings; land chocolate clay, with stiff clay subsoil; all level, but rolling enough to drain well; fine for wheat and grass; well watered. Owner contemplates making improvements. But if sold before, price \$25 per acre, on easy terms.

### No. 3.

Contains 430 acres; 350 acres under cultivation; 80 acres in good original oak and hickory timber. Situated in Loudoun county, four miles from railroad station; one mile from proposed electric railroad. Soil in fine state of cultivation; adapted to grain and grass. Land level and watered by streams, and a beautiful, bold spring in the yard. Good dwelling and outbuildings; two new stock barns. Greater part of farm in grass. Price now, \$20 per acre.

### No. 4.

Contains 100 acres, all under cultivation, and in good condition. Good frame dwelling and all necessary outbuildings in good condition. Situated on the pike, with market wagons passing every day, paying Washington city prices for produce. Splendidly situated for fruit, poultry, dairy and trucking. Price now, \$2,000, on easy terms.

### No. 5.

Contains 163 acres; one-half under cultivation; balance in second-growth timber. Good seven-room dwelling and necessary outbuildings; good orchard in fine fruit section. Farm lies near Southern railroad, twenty miles from Washington; well watered; a splendid dairy farm. Price, \$2,000.

The above-described farms are situated in a neighborhood of refined citizens, with good labor plentiful, and will not be on the market long before being sold. For further information and a more detailed description of any one of them, write to

W. E. MILLER,  
Herndon, Va.

## To HOMESEEEKERS.

"THE BUSINESS OF FARMING IN VIRGINIA."

Is the title of a new pamphlet issued by the Norfolk and Western Railway Company. We will gladly mail you a copy.

W. B. BEVILL, PAUL SCHERER, Agt.,  
G. P. A., Lands and Immigration,  
Roanoke, Va.



## HOMES AND THE PLACE TO FIND THEM.

No place in the United States can a man do so well at farming, for the money invested, as in Virginia. Lands are cheap; climate good, and the best of markets close at hand. It is the State of all others, for a comfortable all the year round home. The James River Valley Colonization and Improvement Company offer superior advantages to land purchasers. For free 36 page land pamphlet, address

W. A. PARSONS, Vinita, Va.

## WE HAVE A LARGE LIST OF FRUIT, POULTRY and TRUCK FARMS

Ten, Fifty and One Hundred Acres each, with good buildings, close to steam and trolley lines, easy access to the city. Also

**GRAIN AND STOCK FARMS**  
From 100 to 1,000 acres at low prices all the way from \$5 to \$50 per acre. Write for Catalogue.

THE VIRGINIA LAND AGENCY, Richmond, Va.  
J. R. HOCKADAY, Manager.

## IF YOU WISH TO SELL —OR BUY— VIRGINIA LANDS

Communicate with us. Write for free "Virginia Real Estate Journal," containing many splendid bargains.

R. B. CHAFFIN & CO., Inc.,  
No. 1 N 10th St., Richmond, Va.

## VIRGINIA FARMS, ORCHARDS and HOMES

In the best fruit and agricultural sections of the state. Virginia folder, lists of property and information free

J. W. APPERSON & BRO.,  
Yancey Mills, Va.

## JAMES RIVER FARM FOR SALE!

220 acres—120 in high state of cultivation, in Wheat, Grass and Corn; will produce 30 bushels of Wheat per acre. Land adapted to variety of trucking. Dwelling house, Barns and other out-buildings. One mile from regular steamboat wharf. For further information write to "JAMES RIVER,"

Care of The Southern Planter.

## 'PIEDMONT And all that it Implies.'

Good land, climate, markets, shipping facilities, churches, schools, good health, moderate prices, easy terms.

MACON & CO., - Orange, Va.

## VIRGINIA FARMS

All prices and sizes. Free list on application.

WM. B. PIZZINI CO., RICHMOND, VA.

## Go South.

For full particulars write A. JEFFERS, Norfolk, Va.

## I Can Sell Your Farm

no matter where it is. Send description, state price and learn how. Est. '96. Highest references. Offices in 14 cities. W. M. Ostrander, 1885 N. A. Bldg., Philadelphia

text-book provided for the explanation of their principles.

By this plan a boy or girl of fifteen or sixteen would leave the public care thoroughly and accurately instructed in the groundwork of education, and, which is of far more importance, with habits of careful observation, accurate expression, and economy of time well established, and—above all—with the law of labor, not play, stamped upon the character.

Every civilization which has practiced immorality has decayed and finally disappeared. And this great country is not beyond the reach of a universal law. This country is rapidly deteriorating in its moral fiber, and the material decline will inevitably follow; and, unless our citizens arise and grapple this demon of irresponsibility and immorality by reorganizing the public education, even this land of vast opportunity, rapidly becoming the land of license, will fall from her majestic height into an unimaginable chaos of social disaster.

## PRIZES FOR AGRICULTURAL STUDENTS, NORTH CAROLINA A. AND M. COLLEGE.

The Vermont Farm Machine Company, of Bellows Falls, Vt., offers a prize of their No. 7 U. S. Separator for the student preparing the best essay on "The Making of a Dairy Farm." The value of this prize is \$100.

P. M. Sharples, West Chester, offers a prize of one-half the list price of the separator to the student preparing the best essay on the subject, "The Middle South as a Dairy Section." The value of this prize is from \$50 to \$250.

The Caraleigh Fertilizers and Phosphate Company, Raleigh, offers a prize of a ton of high-grade fertilizer to the student preparing the best essay on "Soil Fertilization." The value of this prize is \$35.

Mr. Grimes Cowper, Raleigh, offers a prize of a pure-bred registered Jersey bull to the student preparing the best essay on "The Conformation of the Dairy Sire and Cow." The value of this prize is \$50.

The McMillan Company, of New York, offers a prize of a set of books, "Rural Science," complete, to the student preparing the best essay on "The Farmer and His Library." The value of this prize is \$25.

Charles Scribner's Sons, New York, offers a prize of a set of books on Agriculture to the student preparing the best essay on the subject, "The Farmer Should be a Student Always." The value of this prize is \$5.

The Zenner Disinfectant Company, Detroit, Mich., offers a silver medal to the student making the best report on live stock exhibit at the State Fair. The value of this medal is \$25.

The North Carolina State Fair Association offers a prize of \$5 to the student preparing the best essay on the "Live-Stock Exhibit at the State Fair."

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A large eared, deep grained Early White Corn with 16 to 24 rows on a cob and stalks 13 to 15 feet high; usually two ears to the stalk and yielding an abundance of fodder. This Corn is very productive and makes the best table meal.

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Popularly known as Huron Dent. Most perfect-shaped ear and most reliable Early Yellow Corn ever introduced. Planted May 10th, cut, and in shock by the latter part of August.

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## Snow White Dent.

It has medium ears and grows very large, compact, close-set grains, well filled out, the cob being medium size, very white, and requiring grains to span it, and weighing about  $7\frac{1}{2}$  lbs. per 70 lbs. of ears. Another point, Snow White Dent matures a good yield during droughty years, growing along side of other corn that makes little or nothing. Taking all points into consideration, Snow White Dent is the coming white variety for milling and all other purposes. To-day there are more than thirty articles made from white corn, and Snow White Dent is the best one for all purposes.

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## SEED CORN.

IMPROVED GOLDEN DENT—For a large yielding, quick-growing yellow corn, this variety is, in my opinion, unequalled.  
\$1.00 (one dollar) per bushel.

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Birdwood, Albemarle Co., Va.

## HONOR TO WHOM HONOR IS DUE. (Mary Washington.)

Whilst the whole civilized world is throwing up its cap (as it were) and cheering for Marconi, there is no fact in history better authenticated than that the original inventor of wireless telegraphy was Dr. Mahlon Loomis, whom we may justly call a Virginian, for, though he was born in what is now called West Virginia, it formed at that time (1826) a part of the "Old Dominion." Fairfax county claims Dr. Loomis as one of her citizens, on the strength of his having spent the greater part of his life there, his parents having carried him to that county when he was only ten years old. It is not a matter of mere tradition, but of record, that in July, 1872, Dr. Loomis obtained a patent for his wonderful invention, but, as usual with men of genius, he had to encounter the sneers, incredulity, and ridicule of his contemporaries, with a few honorable exceptions. The following winter, he tried to get the recognition of government for his invention, and accordingly on the 16th of January, 1873, the United States Senate passed a bill incorporating the Loomis Aerial Telegraph Company, and the act was signed by President Grant on the 21st of January.

The whole transaction had been consigned to oblivion until lately, when it was recalled to recollection by Senator Hoar's introducing a resolution that Congress should extend a vote of thanks to Marconi for his invention of wireless telegraphy. On reading of this, Mr. E. W. Whitaker (who had been Loomis' attorney when his bill was passed, and who had assisted him in getting a patent) wrote to Senator Elkins, of West Virginia, calling his attention to the fact that wireless telegraphy had been invented by a man from his State thirty years before, "but that a foreigner had taken and perfected the ideas and invention of Dr. Loomis, who had died poor, because his countrymen had failed to recognize his genius." I am not aware, however, if any proof exists that Marconi appropriated Loomis' idea, or even knew of it as such. It is more probably one of those coincidences (so numerous in the annals of the world) in which the same idea dawns almost simultaneously on persons living widely apart and having no communication with each other.

The records amply verify Mr. Whitaker's assertions about Dr. Loomis' invention. It appears from the debates held on the subject that the bill was warmly championed by Senator Anthony, of Rhode Island, but most of the other senators were disposed to laugh at it, and treat it as a freak. Even Senator Thurman, although he gave the bill his support, showed something of this spirit. "Now," said he, "I want to perfect this measure as well as I can. The promoter of it has discovered some new mode of telegraphy, which he assures me will enable him to

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**1 GEISER THRESHING MACHINE** with 30 inch cylinder.

**One 2-hole Corn Sheller; 1 Nesbit Grain Measurer.**

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telegraph all around the world without any wires, cables, or anything of that kind. I have not the least objection to his doing it, provided so great a feat can be accomplished."

One section of his bill provided that "the business and objects of said corporation shall be to develop and utilize the principle of and powers of natural electricity to be used in telegraphing, generating heat, light and motive power, and otherwise make and operate any machinery run by electricity for any purpose."

Finally, the bill passed, more as a compliment to Senator Anthony than anything else, and because it did not commit the government to anything, or involve any appropriation. But I cannot see that the passage of this bill effected anything, except to place on record the fact that Loomis was the original inventor of wireless telegraphy. It left him still without adequate means to put his great invention into practice, and though he used his own means unsparingly for the purpose, he was only able to demonstrate on a very small scale the feasibility of his plan. He succeeded in transmitting messages without wires between stations fourteen miles apart, these stations being on the spurs of the Blue Ridge mountains. He memorialized Congress for an appropriation of \$50,000 to enable him to carry out his invention, and the House of Representatives passed the bill, but it was defeated in the Senate, and thus, for want of this trivial sum (trivial in comparison with the matter at stake), one of the greatest inventions of modern times fell to the ground, instead of soaring triumphantly aloft, and the name of Loomis, instead of being proudly inscribed on the roll of fame, along with that of Morse and other great inventors, is known to only a very few of his countrymen.

His fate reminds me very much of that of Columbus, who, after all he had risked and endured in making the discovery of the new world, saw himself virtually pushed aside in favor of a later explorer, and the crown of laurels he so richly merited placed on the head of Amerigo Vespucci, in honor of whom the two continents of the new world were named, instead of their bearing the name of "Columbia," and the fact of Columbus' rival being an Italian renders the parallel yet more striking.

After sacrificing his health and means in the effort to secure recognition for his invention, Dr. Loomis died at the residence of his brother, at Terra Alta, West Virginia, in 1886, aged sixty, fully convinced that posterity would acknowledge the importance and utility of his invention.

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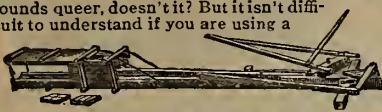
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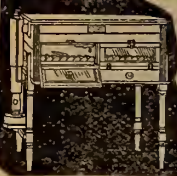


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With its mechanical frame quite concealed beneath beautiful flowers and vari-colored foliage plants, the mammoth floral clock that may be seen at St. Louis by visitors to the Louisiana Purchase Exposition in 1904, will be by far the largest timepiece ever constructed.

The floral clock is immediately north of the Agricultural Building, and to the visitor appears to be made entirely from contributions from the floral world. The mechanism of the clock is buried and the huge dial, 100 feet in diameter, shows its face six inches above the ground. The dial, the hands, the minute hand being fifty feet long, and moving five feet at each move, and all the frames are so covered with flowers as to quite conceal any mechanical contrivances.

The numerals making the hour are fifteen feet in length, and are made of bright-colored coleus, a foliage plant that grows dense, and may be pruned with the gardener's shears and kept symmetrical without fear of impairing the growth of the plant.

In the circle surrounding the numerals are collections of twelve distinct plants, each collection being twenty-five feet long and twelve feet wide. Nature has ordained that each of these plants should open its blossom at a certain hour of the day, and the great floral clock shows how the laws of nature are as exact as the mechanical laws discovered by man. As the hands of the giant floral clock reach the numeral naming a certain hour the flowers in the great bed at the back of the hour so designated begin to open their buds and to exhale the perfume peculiar to the plant.

Still another mode of computing time will be shown by this immense recorder of time's flight, and this by the primitive hour-glass. On the south side of the dial, behind the numeral that denotes mid-day or midnight, is built a tower, twelve feet square and eighteen feet high. The tower is of wood, and, like most of the beautiful structures within the City of Knowledge, is covered with staff. The architecture is graceful and ornate. The top of the tower is surmounted with a mammoth hour-glass, made of the heaviest and clearest crystal, with the receptacles for holding the sand, each six feet in length and four feet in diameter, as the base. The hour-glass is so suspended that when the sand is spent the glass automatically reverses itself, and another hour is being told off.

Concealed in the picturesque tower is the massive machinery, weighing tons and controlling the powerful steel shaft that extends under the centre of the floral dial more than fifty feet distant. The powerful machinery is so

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Toulouse Goose eggs, \$2 per dozen; Barred and White Rocks, S. L. Wyandottes, Brown Leghorns, S. and R. C. S. C. White Leghorns 75c. per setting of 15. A few more Leghorn Cockerels left, \$1 each.  
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delicately adjusted that it measures off each second of time with as much certainty as does the most accurate ship's chronometer.

Above the hour-glass is suspended a sweet-toned bell, weighing 5,000 pounds, on which the hour is announced. The sound-waves thus created penetrate to the extreme ends of the grounds.

With the first sound of the bell, the massive and beautifully-decorated doors to the tower swing open, and the machinery that propels the great time-piece is exposed to the view of the public. In one minute the doors are again closed, and the vine-covered hands continue their never-ending journey, propelled by a power as incapable of detection as the power that causes the flowers to unfold its blossom at the hour appointed by nature, or the force of gravity that causes the hour-glass to deplete itself in a given space of time.

The entire centre of the face of the mammoth floral clock, a space inside the circle created by the numerals, and seventy feet in diameter, is composed of alternanthera, a foliage plant which is commonly known as "Joseph's Coat," because of its many colors. This plant grows low and exceedingly dense and mottled, and brightly-colored foliage completely covers the ground, but will never grow close enough to be touched by the hands as they pursue their never-ending course.

Encircling this immense bed of alternanthera, and separating it from the fifteen-foot floral numerals that mark the hour, is a narrow band of centaurea, another foliage plant, popularly known as "Dusty Miller." This species of plant, a beautiful silver in appearance, grows a trifle higher than the alternanthera. The band of "Dusty Miller," only eight inches wide, separates the seventy-foot circular bed of alternanthera from the twelve beds of the same plant that surrounds the space on the dial allotted to the large numerals.

The hands of the clock are made of a frame-work of steel, but wooden troughs filled with soil are provided, and in these troughs myrtle, ivy, and other creeping green plants grow luxuriantly and completely conceal from view everything but themselves.

The crowning glory of the floral clock is a group of twelve distinct plants that begin unfolding their petals with the morning-glory at the peep o' day, and as each hour is registered a new plant begins displaying its charms, while the bloom of the plant of an hour before falls and dies to be reincarnated twenty-four hours later. The circle surrounding the numerals is 300 feet in circumference, and the sections of hour flowers each occupy a space twenty-five feet long and eighteen feet deep. The sections are divided by narrow strips of foliage

## HOLLYBROOK FARM. EGGS FOR SITTING

### From Thoroughbred Poultry.

In our poultry yards we have the following thoroughbred poultry, all first-class stock, originally started from the best stock in this country and carefully cross-mated so as to give strong and vigorous stock and the best laying strains of the different breeds that it is possible to obtain:

BARRED P. ROCK, \$1.00 per sitting.  
BLACK LANGSHAN, \$1.50 per sitting.  
BUFF PLYMOUTH ROCK, \$1.50 sitting.  
LIGHT BRAHMAS, \$1.50 per sitting.  
SILVER LACED WYANDOTTE, \$1.50.  
BLACK MINORCAS, \$1.50 per sitting.

In addition to careful breeding, we pay special attention to the handling and packing of our Eggs, so as to ensure good fertility and a good hatch.

HENRY W. WOOD,

P. O. Box, 330. Hollybrook Farm, RICHMOND, VA.

## Barred Plymouth Rocks

— EXCLUSIVELY —

Strong, healthy, vigorous, farm-raised stock; bred for laying; 75 cts. per setting.

WM. B. LEWIS, Irby, Nottoway Co., Va.

## BARRED P. ROCK EGGS

from Sunnyside Winter laying Ringlet strain.  
\$1.00 for 15; \$2.50 for 45.

SUNNYSIDE POULTRY FARM,

Christiansburg, Va.

REFERENCE: Bank of Christiansburg.

## EGGS FOR HATCHING.

Purebred B. P. ROCK, BLACK MINORCA, S. C. B. LEGHORN. Fine stock, excellent layers; I guarantee eggs to be true to name, fresh, and to arrive in good condition. 75 cents per 15, \$2 per 45, \$4 per 100.  
Miss S. M. HITER, Ellisville, Louisa Co., Va

## EGGS FOR SALE

From pure bred

M. B. TURKEYS, WHITE and BARRED PLYMOUTH ROCKS.

W. F. FLANAGAN, Christiansburg, Va.

## BARRED P. ROCKS and S. C. B. LEGHORNS.

15 eggs, \$1.00; 30, \$1.75.

Pekin Ducks—11 eggs, \$1; 22, \$1.75. Bargains in INCUBATORS, ORGANS and PIANOS. Satisfaction guaranteed. Rev. J. W. HECKMAN, SPOTTSYLVANIA, VA.

EGGS From prize-winning matings. BARRED and WHITE PLYMOUTH ROCK, WHITE WYANDOTTE and BLACK MINORCA. Reduced rates to secure widest patronage—\$1.00 per 13.  
KENTON POULTRY FARM, Glendale, Md.

## EGGS. EGGS.

M. B. Turkey Eggs, bred from 45-lb. tom, brilliant plumage. \$3.00 doz. B. P. Rock and Pekin Duck Eggs, \$1.00 per 20, \$4.00 per 100. Yearling Male Scotch Collie, trained, \$10.00; Pups, \$5.00.

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## EGGS FOR SALE

From purebred S. C. B. LEGHORNS,

\$1 per 15; \$5 per 100.

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**The Southside  
Manufacturing Co.,**

PETERSBURG, VA.

All Kinds of...

**Fruit and  
Vegetable  
Carriers...**

Send for Catalogue and Prices.

**NOW READY, A VALUABLE  
PAMPHLET,  
CULTIVATION AND STORING OF  
SWEET POTATOES.**

This pamphlet, with necessary cuts, gives plain directions for constructing a Sweet-Potato House that, in connection with important details, will easily keep sweet-potatoes in good condition until the new crop comes in, or longer.

Also some new, well-tested and valuable plans for bedding and growing sweet-potatoes.

A. F. Funderburk, Dudley, S. C., in speaking of this pamphlet, says: "I would not take ten times its cost for it."

The pamphlet has been introduced into eighteen States and two Territories, and it is believed that the plans given will eventually, to a great extent, supersede the present mode of growing and storing sweet-potatoes.

The pamphlet also contains a number of my best agricultural articles. Price of pamphlet, postpaid, 50 cents.

I have a few copies of formula for constructing "A Mothproof Bee Hive" that will be sent, as long as they last, without extra charge. Address

BRYAN TYSON, Carthage, N. C.

**150 JACKS, JENNETS  
and Mules 150**



Best assortment I ever owned. Can suit you exactly. Write for description and prices. Also will sell two Percheron Stallions at close figures.

BAKER'S JACK FARM, Lawrence, Ind.

**FINE JACKS.**

Mules are equal to GOLD DOLLARS, from "youth to old age." Several nice ones and 2 very fine Jennets for sale. Buy Jark now and get him ready for spring.

Write your wants to

L. L. THOMAS,

722 W. Campbell Ave., Roanoke, Va.

**ANGORA GOATS** are handsome, hardy and profitable. For large circular address E. W. COLE & CO., Big Clifty, Ky.

Mention the *Southern Planter* when corresponding with advertisers.

plants, and each section thus retains its individuality.

Surrounding the twelve groups of flowers that open their blossoms on the approach of the hour hand of the beautiful floral time register and completing the picture, is a circle of grass, six feet wide, and as smooth as velvet. The visitor may walk around the clock on a spacious granitoid promenade, but a chain encircles the six-foot sward, and the dreaded sign, "Keep off the grass," is not in evidence.

The floral clock will be as attractive an exhibit at night as it is in day. Among the foliage of the hour numerals are 1,000 incandescent electric lamps, not visible during the day, but after nightfall, when the electric current is turned on, the myriads of lamps illuminate the entire exhibit, and make it as light as day, and more beautiful.

The floral clock is the exhibit of the Johnson Service Company, of Milwaukee.

**BLOOD MEAL.**

Calves scour and die as the result of incomplete nutrition. Too little protein has been furnished in the food of the pregnant dam; hence the fetus is imperfectly developed. The milk of a dam so fed is similarly lacking in this most requisite ingredient. Armour & Co.'s dried blood meal, advertised elsewhere in this issue, serves to immediately balance the ration of cows and calves—of other females and their offspring—so that these evils do not occur. It is pure dried powdered blood of bullocks, and contains 87 per cent. of digestible protein, besides the other necessary and valuable constituents of fresh blood, so that starchy foods may be easily and cheaply balanced by the addition of small quantities of this important product of the packing-houses. Working animals are strengthened and invigorated; young growing animals fully nurtured, and sick animals restored to normal weight and health when fed dried blood meal as an adjunct to their other foods. It has a hundred other important uses. Many of these are set forth simply and truthfully in the booklet published by the Armour Fertilizer Works. Readers of the *Southern Planter* should procure a copy of this booklet, which will be sent free of charge. Blood meal will keep poultry healthy and make hens lay.

**LORD & THOMAS' NEWSPAPER  
DIRECTORY.**

The 1903 edition of "The Pocket Directory of the American Press," recently issued by Lord & Thomas, Chicago, is of great value to all who are interested in the subject of newspaper or magazine advertising. In compact and convenient form, this little, neatly-bound, handsomely-printed volume, besides giving the claimed circulation of all papers in the United States and Canada, contains a vast amount of detailed information classified and arranged with admirable skill. It is invaluable to general advertisers.

**MARKET TOPPERS FOR SALE, LOW.**



- One thoroughbred Angus cow, unregistered coming 3 yrs., with heifer calf at foot.
- Four three-fourths Angus heifers, two coming 3 yrs., two coming 4 yrs., bred to reg. Angus bull.
- Four seven-eighths Angus heifers, coming 2 yrs., bred to reg. Angus bull.
- Three seven-eighths Angus heifers, coming 1 yr.
- Four one-half Angus heifers, coming 1 yr.
- One bull calf, out of a thoroughbred Shorthorn cow, by a reg. Angus bull.
- One 9-mos-old reg. Angus bull.
- One 12-mos-old reg. Angus heifer.

All of the above cattle are black and as well polled as a thoroughbred Angus.

One fine reg. Angus bull calf, 5 mos. old.

Address W. M. WATKINS & SON,

Cottage Valley Stock Farm,

Randolph, Charlotte Co., Va.

**V. P. I.  
Farm Bulletin**

Splendid ANGUS BULL for sale.  
1 year old in April.

We are now booking orders for DORSET RAM LAMBS. No more BERKSHIRE PIGS now.

**D. O. NOURSE, Prof. of Agr.  
Blacksburg, Va.**

**ABERDEEN-ANGUS BULLS FOR SALE.**

1. My Herd Bull, ROCKBRIDGE ABAC-TOR, No. 40364, 3 yrs. old Dec. 2d last; \$400.
  2. A Bull Calf, born Dec. 20th; sired by the above "Abactor"; dam, "Pride of Potomac"; No. 42607; \$100.
  3. A Bull Calf, born Dec. 12th; sired by the above "Abactor"; dam, a thoroughbred Angus Cow bred by the late William A. Ruff. Fure breeding can be shown for this calf, but being out of an unrecorded dam he cannot be registered; \$50.
- None of these will be sold until October, and should the calves at that time not prove to be good specimens of the breed they will be withdrawn from sale.

B. F. DAY, Glasgow, Va.

MONTEBELLO HERD OF

**Aberdeen-Angus Cattle.**

- 3 Reg. Bull Calves for sale. Ages, 8, 4 and 3 months;
- 1 Thoroughbred (not entitled to registration), male, 2 months old.

BERKSHIRE PIGS of Biltmore Strain.

L. H. GRAY, LOCK BOX 58, ORANGE, VA.

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OFFERS FOR SALE SOME CHOICE

**JERSEY and GUERNSEY CATTLE.**  
**BERKSHIRE SWINE, WHITE**  
**WYANDOTTES, BARRLED PLY-**  
**MOUTH ROCKS and WHITE**  
**LEGHORNS.**

The cattle offered consist of Young Cows, Yearling Heifers, Heifer and Bull Calves and Bulls old enough for service. Berkshires of all ages and both sexes. The poultry is all fine breeding stock and healthy.

Meadowvale Farm has won in the past three years over 600 First and Special Prizes at the Leading Fairs and Expositions, including New York, Boston, Philadelphia, Hagerstown, Pan-American and Charleston. For Description, Pedigree and Prices, address

**LEWIS E. BENEDICT, Prop. Luthersville, Md.**

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Has for sale a large number of nice young registered A. J. C. C.

### JERSEY BULLS AND HEIFERS.

None better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 10 to 12 months old, \$25; Heifers, same age, \$35. **POLAND CHINA PIGS**, \$5 each. Send check and get what you want.

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## FOR SALE

Reg. **AYRSHIRE BULL**, 2 years old in July, \$50.

15 Fresh **MILK COWS**, singly or the lot.  
75 Fine **NATIVE EWES**, with High-Grade Dorset Lambs at side. Choice, not less than \$10, or \$8 for the flock.

Will have for sale five or six Selected-Grade Dorset Buck Lambs and several Registered Dorset Buck Lambs—all from one of the Finest Registered Dorset Bucks in the country.  
**GEO. R. S. CONNELL,**  
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## ANGUS BULL CALVES

Registered and unrecorded. Stock first-class and breeding the best.

## SHROPSHIRE SHEEP

First-class Yearling Rams, and Ewes of all ages. Several **FINE FARMS** for sale.  
**WARREN RICE, - Winchester, Va.**

### HAWKSLEY STOCK FARM.

## Large ENGLISH BERKSHIRES

### B. P. ROCKS FOWLS,

Eggs from same, \$1 per 13.

**J. T. OLIVER, Allen's Level, Va.**

## FOR SALE.

**Large English Berkshire Hogs,**  
**Barred Plymouth Rock Chickens**

**BEN. BOLT, 60747, 430 lbs. as a yearling at head of herd. EGGS IN SEASON.**

**JOHN P. FOSTER, Norecreek, Ohio Co., Ky.**

"WHITE MINORCAS." As layers unsurpassed. Catalogue explains fully. Eggs shipped anywhere with good results. They will please you. **F. S. BULLINGTON, Box P, Richmond, Va.**

## FORESTRY PROFITABLE IN THE SOUTH.

The University of the South, at Sewanee Has Found It So.

What Can Be Done When Forestry Is Practiced With Lumbering—High Profits and a Better Forest the Results.

The direct and immediate advantages of careful lumbering, when combined with the practice of forestry, have seldom been so forcibly shown as in the case of the University of the South, at Sewanee, Tenn., whose timberlands have been managed since 1900 under the direction of the Bureau of Forestry.

Although \$3,000 for all of its timber was considered a fair offer by the University in 1899, the Bureau, by its plan of management, has already secured a net profit for the University of \$3,200. Four more years of lumbering remain to be done, and for three years at least there is an assured annual profit of \$1,500. In a word, timber formerly valued at \$3,000 will have been made to yield a profit of over \$7,000.

Sewanee is on the top of a spur of the Cumberland Plateau, and is a noted summer resort. Every summer when the University opens, hundreds of persons from all over the South take cottages in the town to enjoy for the season the fine climate and the beauties of the woodland scenery. The work of the Bureau of Forestry is thus brought to the attention of a large number of people, many of them owners of Southern timberlands, who see for themselves the great practical advantages of forestry and careful lumbering in the suprisingly large profits and improved appearance of the forest.

A detailed account of how the results in the Sewanee forest have been achieved has just been published by the Bureau of Forestry in Bulletin 39, entitled, "Conservative Lumbering at Sewanee," by John Foley. The bulletin does not furnish such specific instructions for the management of timberlands like those at Sewanee that they can be applied to them without expert assistance. It illustrates, however, what may be done with such timberlands; and especially does it emphasize that lumbering and forestry may be practiced in the South, as elsewhere, with profit.

### THE POINT OF VIEW.

"Life, however short, is made still shorter by waste of time."—Johnson.

Although these words were uttered by the great scholar and philosopher more than two hundred years ago, long before the invention of the reaper, they come down to us freighted with the same meaning they had when first spoken, but from the modern point of view they perhaps have greater significance. They mean more now, because

## SHORTHORN BULL CALVES

### 3 to 10 mos. old

### FOR SALE.

Close descendants of the World's Fair greatest winners in 1893, and also up to the present time. **SPECIAL OFFER:—A 1-year old Roan Bull Calf at \$75 if taken soon.**

**Poland-China Pigs** of the best and most fashionable breeding. Spring Pigs now ready. Pedigree furnished with all stock sold. Come or write.

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## Thoroughbred Horses

## AND SHORTHORN CATTLE,

### Pure Southdown Sheep

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FOR SALE. **R. J. HANCOCK & SON,**  
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## Scotch-Topped

## Shorthorns

Herd Headed by Governor Tyler, 1585 48. Young Bulls for sale. Inspection and correspondence invited.

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The Red and White Bull Calf **Westover 138579**; Roan Cow **Dina**, 4 years old, out of Red Jacket; also 10 months old Bull, to be registered if desired. Inspection of stock invited. **J. H. BOELTE, Redfield Stock Farm.**

**News Ferry, Va.**

### EAST RIVER SIDE

## SHORTHORNS

### FOR SALE.

Two Red Heifer Calves to be shipped about May 1st.

ADDRESS

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Of Registered **Shorthorn Cattle.** Choice young bull, cows and heifers bred Also **Poland-China Hogs** and **Barred Plymouth Rock Chickens.**

PRICES REASONABLE.

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### WE WILL EXCHANGE A—

### Reg. SHORTHORN

(Durham) Bull, 2 years old, well bred, for bull of same breed to avoid inbreeding. We refer to former owner, Mr. R. L. Owen, of Lexington, Va. Address,

**OCCONEECHEE FARM, DURHAM, N. C.**

WANTED—Pair Pure Bred **PERCHERON** and **CLYDESDALE** Brood Mares; **DUROC** Boar and Sows; one **SHROPSHIRE, SOUTH-DOWN** and **LINCOLN** Ram and five Ewes. Address **STOCK, care Southern Planter, with prices and particulars.**

**GOV'T REVOLVERS, GUNS, SWORDS.** Military Goods, NEW and old, auctioned to **F. Fannerman, 679 Bowery, N. Y. 15c. Catalogue mailed, 6c.**

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ANNEFIELD HERD  
Represents the  
**Finest Blood Lines**  
in England or America.

Stock for sale at all times.

Correspondence Solicited.  
Inspection Invited.

EDW. G. BUTLER, Annefield Farms,  
Briggs, Clarke Co., Va.

**We Have Some Choice  
Young  
BERKSHIRES FOR..  
SALE**  
...BOTH SEXES...

By Highclere Topper of Biltmore II, out of Harlene, Imported. Also Two Registered JERSEY BULL Calves  
MINIBORYA FARM. - BOX 901.  
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Some fine Pigs, from Registered Stock, not mated, at \$10.00 per pair, crated F. O. B. 8 to 10 weeks old. Your orders solicited.

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**Registered P. Chinas Berkshire, C. Whites.** Fine large strains. All ages, mated not akl, 8 week, pigs. Bred sows. Service boars and Poultry. Write for prices and free circular.  
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**BULL CALVES FOR SALE.**  
Registered. Also DEVONS, all ages.  
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**WANTED—A thoroughbred  
RED POLL BULL**  
Calf, 4 to 8 months old. Correspondence solicited.  
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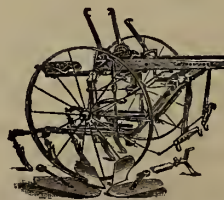
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By prize-winning imported sires and trained dams. Eligible. Fit for bench, ranch or farm. Price, \$10, either sex. Also a book on the care and training of the Collie for all practical uses. Price, 50c. Copy of book free to purchaser of Collie.  
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time is worth more. On the farm today one man and a good binder will accomplish more in a day than a dozen men could do in a week in the olden time. Thus time has come to be a very important factor in modern farm work, and it behooves the farmer to study his best interests from every point of view and do the right thing at the right time. McCormick machines are great time-savers—they enable the farmer to think and plan and look at things from the correct point of view.

**SUCCESSFUL RIDING CULTIVATORS.**

The only way to find out whether a farm implement will work or not is to try it in the field under all the various conditions of soil, climate, crops and seasons that farmers in various parts of the country have to contend with. This is the test that has been applied during many years to the line of Iron Age Riding Cultivators, and they have come out winners in the trial. To meet various conditions, they are made with pivot wheels, with fixed wheels, or with a combination of the two, and they are adaptable to all conditions of soil or crops, hills or plains. Especially desirable for cultivating crops on hillsides or for work among crooked rows is the Iron Age Pivot Wheel Cultivator, a movement of the foot carrying the whole implement, with its gangs of teeth, to right or left as desired.



The cut shows one of the popular Iron Age Riding Cultivators having pivot wheels; spring pressure lock-down, to prevent the gangs rising and slipping over hard places; and lever gang adjuster, which gives the operator immediate control over the width of his gangs.

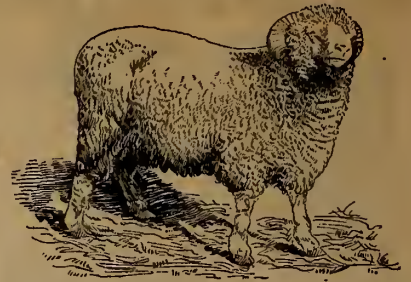
Among the attachments for these cultivators are the fallow-tooth attachment, for work in orchards and for preparing land in the fall for sowing grain; the plows for turning earth away from the plant, hilling up, and marking rows; spring hoes, adjustable in every way; and discs, for working crops and for exterminating wire-grass, coffee, etc.

Prices and full descriptions can be obtained from the Bateman M'fg Co., Box 167, Grenloch, N. J.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

Mention the *Southern Planter* in writing.

**"WOODLAND," 239-2569.**



Bred by us. The finest Dorset ram we ever saw. Is now at the head of our flock with "WOODLAND," 244-2745 Imp.  
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SHEEP, GOATS, HEREFORD CATTLE**

Am open to buy 25 to 50 Angora Goats, 25 to 100 Shropshire or Dorset Sheep, 1 Hereford Bull (yearling), 5 Hereford Heifers.  
Cattle must be registered stock; Sheep and Goats registered or high grades.  
JO HARDIE,  
Brown Summit, N. C.

**Hereford Cattle.**

A number of young HEREFORD Bulls and Heifers, not akin, at reasonable prices.  
STONEHURST FRUIT AND STOCK FARM,  
Union Mills, Fluvanna Co., Va.

**FOR SALE  
8 Reg. HEREFORD BULLS**

From 6 mos. to 3 yrs. old.  
**8 Reg. HEIFERS**  
From 6 to 18 mos. old. At reasonable prices.  
HAYFIELDS STOCK FARM, Cockeysville, Md.

**Dorsets and Herefords.**

I am now offering my fine herd bull, ROY MAY, 80183; am also booking orders for Dorset ram lambs.  
H. ARMSTRONG, LANTZ MILLS, VA.

**FOR SALE**

A thoroughbred **HOLSTEIN-FRESIAN BULL**, one year old, eligible to registration. For prices, etc., address  
C. R. PETTYJOHN, Mgr. Tate Spring Farm,  
Lynchburg, Va.

**Aryshires, Berkshires and Oxford-Downs.**

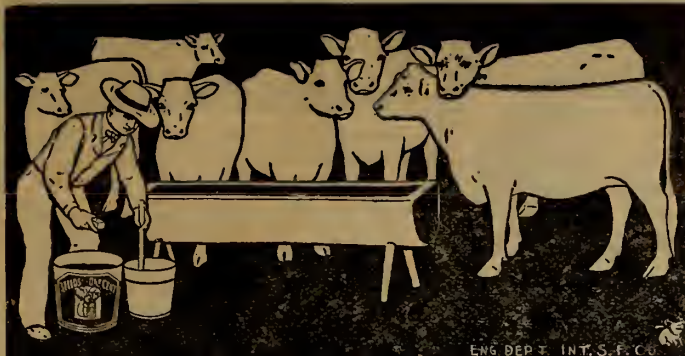
Ayrshire Calves of both sexes, Berkshire Pigs and Boar and 2 Oxford-Down Rams for sale.  
MELROSE CASTLE FARM,  
Enos H. Hess, Manager, Casanova, Va.

**WANTED**

**POSITION** by Practical Poultry man to plan and build a duck and poultry plant for market, for a man having location and capital. None other need answer. Salary expected until business is established. No 1 references given and same required. Address **C. F. G.,**  
Care SOUTHERN PLANTER.

Mention the *Southern Planter* in writing.





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 Gentlemen:—I have used "International Stock Food" for three years and can recommend it. I mixed it in skim milk for calves and they thrive as well as when fed new milk. It also prevents scours. Butchered one of my calves at six months that dressed 330 pounds. I would not feed stock without using "International Stock Food."  
 Very truly,  
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 Dear Sirs:—I have used "International Stock Food" quite extensively. It is the best food I have ever used or known of for fattening cattle or milk cows or calves. I do not hesitate to recommend it very strongly.  
 Yours truly,  
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We have thousands of similar testimonials and will pay you \$1000 Cash to prove that they are not gennias and unsolicited.

"INTERNATIONAL STOCK FOOD" FEEDS FOR ONE CENT is Prepared from Roots, Herbs, Seeds and Barks and Won the Highest Medal at Paris Exposition in 1900 as a High-Class vegetable, medicinal preparation to be fed to stock in small amounts as an addition to the regular feed. It is a Great Aid in Growing or Fattening stock because it increases the appetite and Aids Digestion and Assimilation so that each animal obtains more nutrition from the grain eaten. We positively guarantee that its use will make you extra money over the usual Plan of Growing and Fattening stock. "International Stock Food" can be fed in safety to Horses, Cattle, Sheep, Goats, Hogs, Colts, Calves, Lambs or Pigs. It is Absolutely Harmless even if taken into the Human System. You insist on eating medicinal ingredients with your Own food at every meal. Sals is a stomach tonic and worm medicine, Pepper is a powerful stimulating tonic, Mustard is a remedy for dyspepsia, Vinegar is a diuretic. You eat these medicinal ingredients almost with every mouthful of your food, and it is proven that these condiments promote health and strength for people and improve their digestion. "International Stock Food" contains pure vegetable medicinal ingredients that are just as safe and as necessary an addition to the regular feed of your stock if you desire to keep them in the best possible condition. "International Stock Food" is endorsed by Every High-Class Farm Paper. It purifies the blood, stimulates and permanently strengthens the entire system so that disease is prevented or cured. "International Stock Food" is sold on a "Spot Cash Guarantee" by Fifty Thousand Dealers throughout the World. Your Money will be Promptly Refunded in Any case of failure. It will make your Calves or Pigs grow Amazingly and has the largest sale in the World for keeping them healthy. Beware of the many Cheap and Inferior Imitations! No Chemist can separate all the Different powdered Roots, Herbs, Barks and Seeds that we use. Any One claiming to do so Must be an Ignoramus or Falsifier.

**WHAT PEOPLE SAY ABOUT THIS BOOK.**

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Dear Sirs:—I received your "International Stock Book" and was more than pleased with it. It is worth more than \$10.00 to me.  
 Very truly yours,  
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Dear Sirs:—Your "International Stock Book" duly received, and it is the best thing of its class that I have ever seen. There is a volume of useful articles in it from start to finish.  
 Respectfully,  
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**IT CONTAINS 183 LARGE ENGRAVINGS OF HORSES, CATTLE, SHEEP, POULTRY, ETC.**

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Are popular the world around. The tremendous amount of business being done by the Champion division of the International Harvester Company is well known. There are sixty branch houses located in the United States, devoted exclusively to the demonstration and sale of the Champion line.

This makes it possible for purchasers of these machines to examine them and see them demonstrated at some point near their home. These branches are in close communication with all selling agents throughout their territory, and it is a simple and easy matter for purchasers to secure repairs or special parts without sending to the home plant for them.

This is a special advantage during the busy season, when the breaking of a part may mean a great delay, if it is necessary to send to Chicago to replace the part that is broken.

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S. Brown Allen, who succeeds H. A. S. Hamilton & Co in the ownership and management of this celebrated Stock Farm, offers a few Berkshire Pigs that have been bred without regard to cost, and one and two years old, that cannot be excelled in this country. We have swept premiums on this stock over all competitors at Fairs in this and adjoining States.



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**DUNTREATH BERKSHIRES.**

EXTRA CHOICE lot of Young Pigs for sale, all eligible to registry, and now ready for shipment. Many of these Pigs are sired by

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 NONE BETTER IN AMERICA.

DUNTREATH STOCK FARM, Box 666, Richmond, Va.  
 REFERENCE: American National Bank of Richmond.

Minneapolis, Minn., April 6, 1903.  
Editor of Southern Planter,  
Richmond, Va.:

Dear Sir,—Owing to the great rush of business, we have been compelled to put on a night crew and run our factory twenty-four hours per day. This week we have added ten more typewriters, and this gives us a force of 130 people, and our office is the largest in the entire Northwest.

Our sales for 1903 have been much larger than for the corresponding months of 1902, and our March sale was the largest since we have been established. We are pleased to report this condition, because it is absolute proof that "International Stock Food" and our other goods have superior merits, and that farmers and stockmen obtain paying results from their use.

Intelligent farmers will not use any preparation year after year if they are not satisfied that it is not a money-maker for them. Our largest trade comes from States where "International Stock Food" has been largest on sale.

Such facts as we give in this letter prove conclusively to any fair-minded man that "International Stock Food" is exactly as we represent it to be. Our object in writing you this letter is simply to give you more facts as to the tremendous growth of our business.

With best wishes, we are,  
Very truly yours,  
INTERNATIONAL STOCK FOOD CO.

#### BLACKLEG-INE.

The season is approaching when Blackleg is likely to break out among your stock, and therefore, the question arises as to the best way to avoid the usual loss from this troublesome disease. A vast number of stock-raisers in the blackleg districts can easily answer this question for themselves, and will use the Pasteur Vaccine Co.'s remedies, with which they have had such a large and favorable experience during the last eight years. The Pasteur Vaccine Co.'s vaccines, and particularly the form ready for use, called "Blacklegine," are by far the best and most favorably known. One of the most important facts in regard to "Blacklegine" is that it has not only proved to be the most effective preventive remedy for blackleg, but it is ready for use as supplied; each dose is separate, it costs but little, and the instrument for applying it, called a Blacklegine Outfit, only costs 50 cents. The Pasteur Vaccine Co. has offices in New York, Chicago, Fort Worth, and San Francisco, as well as several general agencies, and a vast number of local agencies, but if any difficulty is experienced in obtaining the Pasteur Co.'s remedies, they can always be ordered direct from one of their offices.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

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Successors to Brennan & Co.,

## SUNNY HOME HERD OF ABERDEEN-ANGUS CATTLE.

**BARON ROSEBOY 57666** (The great Westertown Rose, son of the world-famous **GAY BLACKBIRD**) in service.

The Sire is half the herd. In Baron Roseboy, is combined the typical "doddy" form with a pedigree that cannot be excelled. He is a brother of the great "Gay Blackbird" (sold at \$3050.) who heads the largest Angus herd east of the Mississippi, is also brother of "Hector of Lakeside" at the head of the great Pope River herd of Illinois; is uncle of the "10th Laird of Estill" at the head of the greatest Angus herd in America.

On dam's side, Baron Roseboy traces direct to the Imp. Blackbird Bull, "BASUTO," said to be the best Blackbird Bull ever imported.

The females in the herd are "chips off the same block". Great bulls, great cows, mean great calves. Come and see them, or write

**A. L. FRENCH, Proprietor, Fitzgerald, N. C.**  
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Products are Good

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## Choice Bred A. J. C. C. Bull Calves

Write for descriptive circular.

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## LARGE YORKSHIRE HOGS.

The Ideal Bacon Breed,

The Pork-Packers Breed,

The Most Prolific Breed,

The Most Profitable Breed.

We have **four litters** of this popular breed, which will be ready for shipment in May. Bred from the best imported stock. We have never seen better pigs.

Send for circular and prices. Address—

**BOWMONT FARMS, Salem, Virginia.**

**POINTS ON CULTIVATION.**

The farmer who keeps abreast of the times—whose farm implements are up-to-date—is the successful one in the competition for greater production at less cost.

In this connection the farmer's attention is called to the new book of the Hallock Weeder and Cultivator Company, of York, Pa., manufacturers of the famous Hallock quadruple cultivator and weeder—the most practical and profitable machine ever invented for both weeding and cultivating all kinds of crops.

In this book is demonstrated the superiority of the flat-tooth cultivators over the round. In words so plain and illustrations so clear it proves beyond a doubt that the Hallock weeder and cultivator is the greatest labor and money-saving agricultural implement invented in recent years.

This very interesting and illustrated booklet, which the manufacturers will send free to any address, is chock full of valuable information.

**A REMINDER OF HOME.**

Mr. John F. Warwick, the American traveller and writer, states in a recent article that he had a severe attack of nostalgia or homesickness during his recent trip over the Trans-Siberian railway. He had travelled for days without seeing a familiar face or hearing a familiar tongue, and his spirits were at a low ebb. The train having stopped at a small water-tank station, with an unpronounceable name, Mr. Warwick stepped out of his car to get a breath of fresh air, and in the field at the side of the track he saw a sight that at once dispelled his homesick feeling. It was Deering Grain Binder, painted in the American national colors, and at the sight of this reminder of home and country, Warwick was himself again, and retained his restored good spirits for the balance of the journey.

**COCKSURE SCHOOLBOYS.**

Here are some samples of what the British schoolboy can do when he tries hard:

"John Wesley was a great sea captain. He beat the Dutch at Waterloo, and by degrees rose to be Duke of Wellington. He was buried near Nelson, in the Poets' corner at Westminster Abbey."

Asked to name six animals peculiar to the Arctic regions, a boy replied, "Three bears and three seals."

"The Sublime Porte is a very fine old wine."

"The possessive case is the case when somebody has got yours and won't give it to you."

"The plural of penny is twopence."

"In the sentence, 'I saw the goat butt the man,' 'buti' is a conjunction, because it shows the connection between the goat and the man."

"Mushrooms always grow in damp places, and so they look like umbrellas."

**FROM EVERY POINT OF VIEW**

**LOOKED AT**

from every point of view, McCormick mowers will be found faultless in design, modern in construction and thorough in equipment, with the most practical features. These mowers are so perfectly balanced, so easily operated and do such smooth and even cutting that they instantly become the favorite of every man who buys one.

The McCormick book, "A MODEL MACHINE," tells all about Model mowers.

**W. K. BACHE, General Agent for  
McCormick Machines, Richmond, VA.**

**ANGORA GOATS**



**550 HEAD** of Registered and high-grade Angora Does and Kids for Sale.

Clean your land of brush and filth and double your money invested. I HAVE DONE IT. Come and see for yourself; if not satisfied, I will pay your R. R. fare and expenses.

See Bulletin No. 27, Bureau Animal Industry, Department of Agriculture, for information about the Angora.

**M. M. SUTHERLAND, Wytheville, Va.**

**GOOD, GROWTHY POLAND-CHINAS and BERKSHIRES.**

THE KIND THAT GET BIG PIGS.

**6 Weeks Old Pigs, \$5.00. 12 Weeks, \$8.00.**

WHITE PLYMOUTH ROCK EGGS: \$1 per sitting of 15; Birds, \$1 each in lots of 3 or more.

WRITE YOUR WANTS. **BYRD BROS. R. F. D. 3, Salisbury, N. C.**

**GUARANTEED INCUBATORS.**

An incubator is purchased for a specific purpose—for hatching chicks. If it doesn't do that, or if it only hatches a small part of the eggs consigned to it, it is a failure, and its purchase is a waste of money.

There is a way now of buying incubators on trial. The Hawkeye Incubators are sold on thirty days' free trial, long enough to go through with one complete hatch and enable the purchaser to be sure he is getting what he wants. The Hawkeye Incubators and Brooders are all guaranteed, as it is the wish of their makers to have every customer satisfied. They consider that as their best advertisement.

The new Hawkeye Incubator catalogue is full of pictures and facts, and many letters from all over the Union attesting the excellent hatches these machines have made.

If any of our readers have not as yet received this catalogue, they can obtain one by writing the Hawkeye Incubator Co., Box 49, Newton, Iowa.

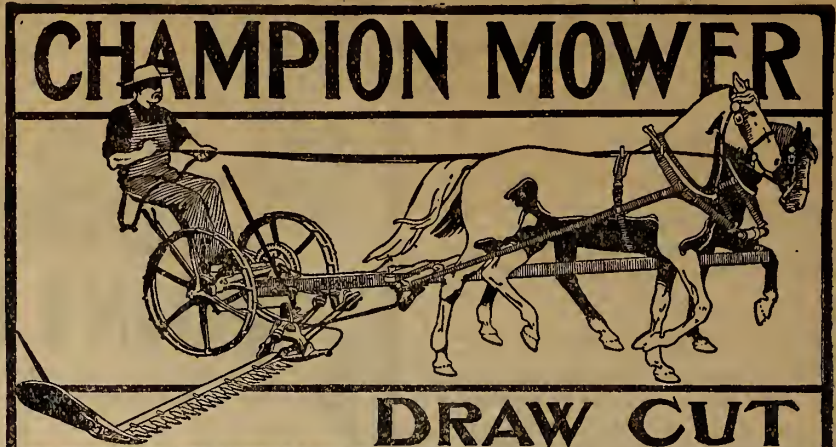
Littleton Female College is preparing for a great commencement the last week in May. Bishop A. Coke Smith will preach the annual sermon. Dr. C. F. Reid, of Nashville, Tenn., will deliver the missionary address, and Governor Aycock will deliver the literary address.

**CORN BREEDERS' ASSOCIATION.**

I would be glad if you would make note of the following item of news in the columns of your paper, so that it may pre-empt the ground for our people and give some publicity to the organization of the association referred to:

As a result of the efforts which have been put forth by the Experiment Station for two or three years, and followed up by the work of the State Department of Farmers' Institutes during the past winter in holding special Corn Institutes in different parts of the State, which were addressed by Professor Shamel, of Illinois University, there was organized recently in Frederick the Maryland State Corn Breeders' Association. The general objects and plan of the organization was modelled in the main after that of the Illinois Corn Breeders' Association, with such modifications as seemed necessary to meet the conditions prevailing in Maryland. The membership includes farmers in Frederick, Montgomery, Carroll, Harford and Prince George's counties. The following officers were elected: Columbus D. Kemp, of Frederick, president; Joseph T. Hoopes, Bynum, Harford county, vice-president; Charles C. Waters, Frederick, secretary-treasurer. These three members, with W. L. Amoss, of Benson, Harford county, and G. A. T. Snouffer, Adamstown, Frederick county, constitute the Board of Directors of the association.

H. J. PATTERSON, Director.



**D**RAWING the finger bar of a mower from a point ahead instead of pushing it from behind gives the wheels more traction and the machine more power. This is the reason for the great cutting power of the Champion, just as it was the reason for the great cutting power of the old rear cut mowers. The Champion is front cut, but it is also draw cut, and combines the cutting power and durability of the old rear cut mowers with the safety and convenience of the modern front cuts. The Champion draws the finger bar entirely—it does not push it in the least, and in this important particular is not equalled by any other. The Champion has other valuable improvements, among them a simple and effective lining device for the finger bar, and a superb pitman having new and improved ball and socket connections both to the knife and to the fly wheel. No cramping or binding is possible with the Champion pitman, while provision is made for taking up wear and lost motion, preventing pounding and breakage. The fly wheel pit is at all times surrounded by oil, which cannot be thrown out and wasted by the revolution of the fly wheel, thus preventing heating and wear at this important and heretofore troublesome point on a mower. Write for catalog describing this wonderful modern mower, also Champion hay rakes and binders. Handsome calendar free if requested.

CHAMPION DIVISION, INTERNATIONAL HARVESTER COMPANY OF AMERICA, CHICAGO.

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Imported Sir John Bull, No. 3609—B. H. B.  
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Imported Columbia, No. 60527—B. H. B.  
Imported Royal Carlisle, No. 4841—B. H. B.

And that Immensely Princely Hog

**Uncle Sam, No. 7233** are the sires of my Spring and Summer offerings of pigs. Does this list of Royalty suit your fancy? They represent the most famous Berkshire breeders of England. Fancy stock, moderate price

**Hunting Dogs** and pups for sale. Setter pups, \$5.00 each.

**Short Horn** (Durham Cattle) for sale. Write for particulars.

THOS. S. WHITE, Fassifern Stock Farm, Lexington, Va.

We positively guarantee to breed and ship the VERY BEST strains of thoroughbred registered **LARGE ENGLISH BERKSHIRE** Hogs for LESS MONEY than any other firm in the U. S., the superiority of our stock considered. Send us your order and we will satisfy you both in price and stock.

WALTER B. FLEMING,

Proprietor of the Bridle Creek Stock Farm, Warrenton, N. C.

**Chloro-Naphtholeum Dip**

A money-maker for the live stock owner, because it kills Lice, and cures Mange, Itch, Scabs, Contagious Abortion and other diseases that pull down the health and cause live stock losses. It saves money and makes money for the live stock owner.

A page of this paper couldn't tell the whole story. Better send for our free booklet, and tell us if you want it for Cattle, Hogs, Sheep, Poultry or Horses.

Agents wanted. THE WEST DISINFECTING CO., Inc. 30 East 59th St., New York.

When corresponding with our advertisers always mention the Southern Planter.



## COOPER SALE MAY 30

AT COOPERSBURG, PA.

### A PLEASED BUYER IS THE BEST ADVERTISEMENT.

The imported Jersey Cattle sold at our May, 1902, Auction Sale have given universal satisfaction. My most sanguine expectations have been more than realized. How could it be otherwise? Individually, they were strictly FIRST-CLASS.

BEST OF ALL, they were bred on both dam and sire's side from animals that have made the Island cattle so famous—the blood that wins at the churn and in the show-ring.

Catalogues ready for distribution April 20th. Owing to great cost publishing same, they will only be sent on application. Address

T. S. COOPER, "Linden Grove," Coopersburg, Pa.

P. S.—Would respectfully request parties who are in want of an extra fine bull calf, or a few fine heifer calves, that they send for a catalogue, which will give them full particulars, and if they are not able to attend the sale in person, that they send in their bids, and they will receive the same attention as if the buyer was a bidder himself. It is with pride that we refer to parties that have entrusted such orders to us. This will be a rare chance to get calves out of the very best cows the Island can furnish, and sired by prize winning bulls, and they will not cost you more than others that have no breeding.—T. S. C.

## *BILTMORE FARMS, = Biltmore, N. C.*

### Headquarters for GOLDEN LAD JERSEYS,

Also Get of TREVARTH and GEN. MARIGOLD. ❀ ❀ ❀

**GOLDEN LAD'S SUCCESSOR.** First and sweepstakes over all at the Pan-American Exposition, the champion JERSEY BULL OF AMERICA, and out of Golden Ora, our great prize-winning cow, both born and developed on these Farms, is among our service bulls.

Biltmore Jerseys are a combination of large and persistent milking qualities with an individuality that wins in the show ring.

**SPECIALTY.** Write for descriptive circular of the best lot of young bull calves ever offered, both for breeding and individuality. They are by noted sires and out of large and tested selected dams. Many of these calves are fit to show and win in any company.



### BILTMORE POULTRY YARDS.



**SPECIALTY.** Write for descriptive circular of eggs from our prize-winning pens. Over 50 yards to select from, made up of the winners at the leading shows for the last two seasons. If you want winners you must breed from winners.

### Headquarters for the best IMPORTED ENGLISH BERKSHIRES.

APPLY TO *BILTMORE FARMS, BILTMORE, N. C.*

## MAGAZINES.

Leading in interest, as well as order, in the May *Century* is Arthur Schneider's story of his sixteen months's close connection with the Sultan of Morocco. The American artist was the instructor and daily companion of the Sultan from November, 1900, to March, 1902, an intimacy never before permitted between an eastern despot and an American citizen. Mr. Schneider tells in the May number, following an introduction by Talcott Williams, of his arrival and reception in Morocco, his first meeting with, and impressions of, the Sultan, and the often laughable experiences with his odd pupil. There are plenty of illustrations, some of them being reproductions of the royal student's work.

Henry Loomis Nelson, one of the best equipped critics of public affairs in the United States, tells in the May *Century* of "The Hampered Executive." Mr. Nelson's article on "The Over-shadowing Senate" in the February *Century* called forth widespread comment, editors and public men declaring it suggestive, interesting and "a most trenchant arraignment of the growing despotism of the so-called 'upper chamber' of Congress." "It is difficult for the ordinary citizen to understand," writes Mr. Nelson of this important phase of our national life, "why the President cannot accomplish any desire or effect any purpose which he may feel or upon which he may determine." And from this text Mr. Nelson goes on to explain and define the probabilities and limitations of the American presidency.

Ray Stannard Baker's Great Northwest series this month takes up "The Conquest of the Forest" in what one critic calls his "crisp and picturesque way." The story of the Great Northwest forest, a Continent long, 200 miles wide, is as thrilling and fascinating as any tale of adventure, and Mr. Baker has been able to transfuse into a magazine article something of the spirit of the mighty woods. Other features of more than ordinary worth are: William T. Arnold's memories of his father, the younger Thomas Arnold, father also of Mrs. Humphrey Ward; the second installment of Herman Klein's modern musical celebrities, giving this month delightfully intimate glimpses of Adelina Patti; a discussion by Professor Edward L. Thorndike of Teachers' College, Columbia University, New York, of "The Careers of Scholarly Men in America"; Alice Katharine Fallows's "Athletics for College Girls"; Mrs. Fields's estimate of Mme. Blanc, Th. Bentzon; a description, generously illustrated from Copley prints, of Sargent's "Redemption" in the Boston Public Library; another chapter of Lillie Hamilton French's "My Old Maid's Corner"; descriptions and pictures by Charles R. and Annis Hardcastle Knight of the Tasmanian wolf, and an account of of five hundred farmers'

## A Positive Certainty.

WE ask you to take nothing for granted. We say that we can supply the Spring Suit or Top-Coat with as much satisfaction to you as any custom tailor in this country. But there are none of the risks of trying a new tailor. Here are ours—ready for you to put on. You put them on—see exactly how they fit, how they look on YOU; that the pattern is becoming. The making and the details you investigate on the spot. The good opinion of first impression we guarantee will last as long as the suit or coat does.

It's no longer a matter of compulsion to go to the tailor. There's equal satisfaction right here, with economy of time and cost on our side.

But the Gans-Rady perfection mustn't be accepted as a precedent for all ready-for-wear clothing. There's as much difference in that as there is in custom tailors.

## Gans-Rady Company.

1005 Main St (Opposite P. O.) Richmond, Va.

We Have Some EXTRA CHOICE

## Berkshire Boar Pigs

READY FOR SHIPMENT, AND OTHERS  
SOON TO BE READY.

THEY ARE FINE, AND FROM PROLIFIC SOWS  
7, 9 AND 13 TO LITTER.

FOREST HOME FARM, = Purcellville, Va.

## HOLSTEINS THAT PAY.

Purchasers are offered selections from our herd, both male and female; our cows are of the leading strain, including De Kols, Pauline Pauls, Mechthildes, Hengervelds, Netherlands, Aggies, etc., etc. They are all well bred and milking from 40 to 65 lbs. per day. Herd headed by Ury ALWINA Count Paul De Kol and De Kol 29 Butter Boy 3rd No. 2.

THOS. FASSITT & SONS, Ury Stock Farm, Sylmar, Md.

## "THE OAKS" SHORTHORNS FOR SALE

2. Reg. Bull Calves; 2 Reg. Cows; 1 three-year-old Reg. Bull (immune) raised south of Petersburg, Va. All right in every particular.

B. B. BUCHANAN, Bedford City, Va.

When corresponding with our advertisers always mention the  
*Southern Planter.*

successful economic experiments in Iowa.

Of the fiction of the *May Century* perhaps most readers will turn first to Sara Jeanette Duncan's long short story, "The Pool in the Desert." The chapters of "The Yellow Van" continue in interest, and the Pa Gladden story of the month tells of "The Drought." Eden Phillpott's "Joseph" is quaintly humorous.

The dedication of the St. Louis world's fair is the occasion of a brilliant series of articles in the *May Review of Reviews* on the Louisiana Purchase and its results, the exposition in forecast and the city of St. Louis. The same number has an outline of the plans formed for the municipal exposition to be held at Dresden this summer, and the noteworthy features of several other European fairs and congresses are summarized in an article on the great gatherings of the summer and autumn at home and abroad. The character sketch of the month is by Mr. W. T. Stead, his subject being the Right Hon. George Wyndham, whose name has been immortalized by its connection with the Irish land bill introduced last month in the British Parliament. An illustrated article by Mr. F. N. Stacy describes the great ships for the Pacific trade being built at New London, Conn., for Mr. James J. Hill. There are several pages of illustrated notes on the spring fiction and other new books, and "The Progress of the World," "Cartoon Comments" and other editorial departments are marked by a distinctive freshness and timeliness.

The *May St. Nicholas* begins the second half of Volume XXX. of that popular magazine for children of all ages, and seems an especially rich number. Every lad will turn first of all to the record of G. W. Orton's articles on "Training for Interscholastic Athletics." Mr. Orton, who is the 2-mile world's steeplechase champion, as well as a doctor of philosophy, treats his subject from the viewpoint of both the school-boy and the trainer. He tells young athletes this month about the broad jump, the high jump, the pole vault, the hammer throw, how to train for these events and how to secure good all-around results. Reproductions of notably animated photographs add life and interest to the sketch.

J. M. Gleeson, who stands at the head of animal painters of the day, contributes to the *May St. Nicholas* for frontispiece "The Game-Keeper's Daughter" and a sketch under the same title. Alice Gertrude Field's "Remorse Two-Step" is pronounced by every reader a "rattling good story." Hannibal, the lion presented to the New York Zoological Park by Mr. Andrew Carnegie, has been interviewed; and the interview, together with a full-page likeness of Hannibal, is a feature of the number. The story of

**A BIG CROP**

shouts loudest in praise of Iron Age Implements. Quick, sure, thorough cultivation does wonders to increase profits and decrease expense. We have learned how to build our cultivators by farm experience as well as shop practice. Everything about them is for work—

**IRON AGE**  
Riding Cultivators

Pivot wheel, fixed wheel or combination are adaptable for all farming, from corn growing to market gardening. Write for Iron Age Book and read the facts. Ask your dealer to show you the tool.

**BATEMAN MFG. CO.**  
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No. 63  
Iron Age Pivot Cultivator.

No. 70  
Iron Age Combined Pivot and Fixed Wheel Cultivator.



A WASHING MACHINE is as great a necessity in the house as a wringer

**THE MAJESTIC ROTARY WASHER**

has too many good points for explanation in an advertisement. Your name on a postal card will bring our booklet, with full particulars of our six different machines and how to get them. One of them will certainly please you. All are made with electrically welded wire hoops sunk in grooves—our patent. Being the largest manufacturers of woodenware in the world, we can make better machines for the money than any one else. If you want a machine that washes, buy one of ours.

THE RICHMOND CEDAR WORKS, Richmond, Va.

VIRGINIA DIVISION.

**Farmers Mutual Benefit Association**

A Fire Insurance Association, chartered by the State of Virginia, for farmers, under an amended and well protected plan.

Insures in counties surrounding and accessible to Richmond, against Fire and Lightning, only country property—no stores or unsafe risks. Policy-holders amply secured—all legitimate losses paid. Average cost per year less than other plans, and a great saving to farmers. Amount of property now insured, \$330,000, and increasing yearly. Estimated security in real and other estate, \$750,000.

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MENTION THIS JOURNAL.

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**Virginia Fire and Marine Insurance Company, of Richmond, Va.**

**Insures Against Fire and Lightning.**

ALL DESCRIPTIONS OF PROPERTY IN COUNTRY AND TOWN, PRIVATE OR PUBLIC INSURED AT FAIR RATES, ON ACCOMMODATING TERMS.

AGENCIES IN EVERY TOWN AND COUNTY.

WM. H. PALMER, President.

W. H. M'CARTHY, Secretary.

"Dick, the Sea Gull," is a true one, vouched for by Captain Edward Fogarty, of Brenton's Reef Lightship.

As is fitting in a May number, several articles deal interestingly with outdoor topics. Aside from G. W. Orton's valuable sketch, Allan Leigh tells of some "Strange Nest-Builders." John Russell Coryell relates the experiences of "The Artist, the Sparrow and the Boy," and Nature and Science has valuable information on mysterious spring sounds, herring ways, homes under the bark, woodchucks, meadow lark and other interesting topics.

Lippincott's Magazine keeps up its reputation for publishing a strong, bright novel each month by presenting in the May number one of even more than usual interest by George Gibbs. This is called "The Love of Monsieur," and, as the title implies, it is Frenchy, with a hero who is "a demon for success with petticoats." His last love is a fetching conception, well worth the quarrels she provokes. With Mr. Gibbs's grace in writing and an extraordinarily fine plot there is left nothing to be desired in this very fascinating tale.

Among the short stories there is one by Seumas MacManus, called "Caitlin Dhu." The fight between Irish rivals is described in a way which stirs sporting blood.

Readers have come to look with eagerness for Ella Middleton Tybout's darkly parable sketches. "Ananias of Poketown" will not disappoint those who seek amusement, and Miss Tybout has a gift for writing dialect which makes it as easy to read as rolling off a log.

"The Sorrow of a Setter," by Cy Warman, is a pathetic tale of a hunting dog's old age, vividly set forth.

Clifford Howard's lively little story called "The Winning of Margaret Mervin," tells cleverly how two men waste time trying to settle which one shall have the first chance with the girl they both love. Meanwhile, the girl settles it for herself, by marrying the "dark horse," so to speak.

The name Montgoirey B. Corse is not a familiar one, therefore, his admirable story called "How Putz Lost His Job," will attract attention, both for the way it is done and because of its timeliness to the labor question.

**THE ANNUAL MEETING OF THE AMERICAN GUERNSEY CATTLE CLUB.**

The annual meeting of the American Guernsey Cattle Club will be held at the Fifth Avenue Hotel, New York, on May 13th, at 10:30 A. M. The year just closing is the twenty-fifth since the establishment of the register and organization of the club, and has been a very successful one for Guernsey interests.

WILLIAM H. CALDWELL, Secretary,  
Peterboro, N. H.

# Registered HEREFORD CATTLE.

Service Bulls; Imported Salisbury 76059 (19083). Lars Jr. 85297.

**FOR SALE**—A choice lot of bull calves and yearling bulls. The bull calves sold recently weighed 600 lbs. at 6 mos old. Call and make your own selection Prices right.

**MURRAY BOOCOCK, Owners, Keswick, Va.**

## HEREFORD CATTLE

Annefield Herd Richly bred in "Anxiety" Blood and Headed by the Sweepstakes Winner at Kansas City 1901,

PRINCE RUPERT No. 79539.

FEB, \$25.00 FOR THE SEASON OF 1903.

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"MOUNT SHARON"  
Reg. and Grade HEREFORD CATTLE  
BRONZE TURKEYS & MUSCOVY DUCKS

"STOCK FARM"  
Registered SHROPSHIRE SHEEP  
Registered POLAND-CHINA PIGS



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**HEREFORD CATTLE.**—Calves, entitled to registration, \$75 to \$100. Grade Calves by "Sir Edward" \$25 to \$40.

**SHROPSHIRE SHEEP.**—Bucks, one year old and over, \$15 to \$20. Buck Lambs, July delivery, \$10 to \$12. Ewe Lambs, July delivery, \$8 and \$10.

**POLAND-CHINA HOGS.**—Pigs, six weeks old, \$5. Pigs, two or three months old, \$7.50. Pigs, five months and over, \$15 to \$20.

**M. BRONZE TURKEYS.**—Toms, \$1. Hens, \$3. Eggs, per sitting of 12, when in season, \$4.

**MUSCOVY DUCKS.**—Pure White Drakes, \$1.25. Pure White Ducks, \$1. Pairs, \$2.25. Trios, \$3.

**BARRED PLYMOUTH ROCKS.**

**ROUEN GESE.**—Ganders, \$2.50. Geese, \$2.50. Eggs, per sitting, \$3.

WILLIAM L., Jr., No. 21058, half brother of Axtell, will serve a limited number of mares for \$25 the season. Mares boarded at lowest figures per month.



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SCAB AND TICK IN SHEEP.

LICE ON HORSES AND CATTLE.

LICE ON HOGS.

MANGE ON DOGS.

Kills all vermin. Allays all irritation. Promotes growth of wool. Makes animal feel well and take on flesh. **ABSOLUTELY NON-POISONOUS.**

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PRICES: 5-lb. bag, 75c.; 10-lb. bag, \$1.25; 25-lb. bag, \$2.60; 50-lb. bag, \$5.00.

One 50-lb. bag makes 500 gallons Dip for scab, and 1,000 gallons for Tick, etc.

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**Silver=Laced and White Wyandottes,**

**S. C. B. Leghorns and Mammoth Pekin Ducks,**

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Never known to run. The grittiest of all games. **\$2.00 PER SITTING.**

We give 15 Chicken and 13 Duck Eggs for sitting. **Order at once.**

Write name and address plainly. Remember the express is no more on 2 or 3 sittings than on 1.

Refer to Augusta National Bank and former patrons. Satisfaction guaranteed or money refunded

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## REPORTS.

- U. S. Department of Agriculture, Washington, D. C. Bureau of Chemistry. Bulletin 7. A Study of Cider Making in France, Germany and England.
- Office of Experiment Stations. Experiment Station Record. Vol. XIV., No. VIII.
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- Division of Foreign Markets. Circular 25. Our Foreign Trade in Agricultural Products, 1903.
- Bureau of Forestry. President Roosevelt on Forestry and Foresters.
- Alabama Experiment Station, Auburn, Ala. Bulletin 122. Grazing and Feeding Experiments with Pigs. Bulletin 124. The Horticultural Law. Notes on Some of the Insects and Fungous Diseases Affecting Horticultural Crops.
- Colorado Experiment Station, Fort Collins, Col. Bulletin 77. Investigation of the Great Plains. Unirrigated Lands of Eastern Colorado.
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- Bulletin 79. Treatment of Stinking Smut in Wheat.
- Bulletin 80. Laying Down of Peach Trees.
- Bulletin 81. Onion Growing.
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- Press Bulletin. Trials of Maccaroni Wheat by Dry Farming, 1902.
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- Bulletin 84. Dairy Conditions and Suggestions for Their Improvement.
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- Minnesota Experiment Station, St. Anthony Park, Minn. Bulletin 78. Experiments in Sheep husbandry. Bulletin 79. Investigation in Milk Production.
- Bulletin 80. Alfalfa—Its Chemical

## MRS. LEA'S MILK AND BUTTER PURIFIER.

Removes all Weed, Garlic, Vegetable and Animal Odor and Taint from the milk and in no way injures the cow to which it is fed.



Gentlemen,—I take pleasure in giving unsolicited testimony to the complete efficiency of your "Purifier." I have given it the severest possible test on my dairy herd of fifty cows, in pastures so infested with garlic that hitherto I have had to keep them shut up in a dry lot until June. This spring I have grazed them on garlic day and night, with no long food, and the milk is absolutely free from any foreign flavor. At the Episcopal High School, near Alexandria, Va., the results have been equally satisfactory under similar circumstances. I, therefore, recommend it without any qualification.

Yours truly,

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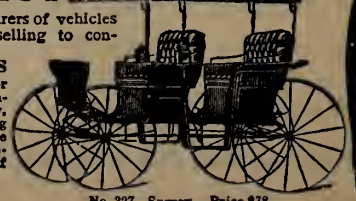
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ELKHART CARRIAGE & HARNESS MFG., CO. Elkhart, Ind.

Development, Feeding Value and Digestibility. Digestibility of Hog Millet.  
Nebraska Experiment Station, Lincoln, Neb. Bulletin 79. Experiments in Orchard Culture.  
New Hampshire Experiment Station, Durham, N. H. Bulletin 96. Fourteenth Annual Report.  
Bulletin 99. A Selected List of Vegetables for the Garden.  
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Press Bulletin. The Lime Sulphur Salt Wash for San Jose Scale.

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Virginia (Hampton Institute), Hampton, Va. Nature Study. Leaflet. A Child's Garden.

How to Make Friends with the Birds.

Virginia Weather Service, Richmond, Va. Report for March, 1903.

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Bulletin 98. On the Prevention of Oat Smut and Potato Scab.

Bulletin 99. Concentrated Feeding Stuffs and Fertilizers Licensed for Sale in Wisconsin, 1903.

Imperial Department of Agriculture for the West Indies, Barbados, W. I. Agricultural News.

#### CATALOGUES.

Virginia Polytechnic Institute, 1902-1903. The present condition and outlook at the Virginia Polytechnic Institute and the necessity for the appropriations asked for building and equipment, and for increase of annuity.

Bird Lawn Stock Farm for the care of horses. M. S. Bird, Anacostia, D. C.

Laidlaw's Concentrated Tobacco Powder Sheep Dip. Absolutely non-poisonous. Laidlaw MacKill Company (Limited), Richmond, Va.

White Minorcas. F. S. Bullington, Richmond, Va.

The Hallock Quadruple Cultivator and Weeder. The Hallock Weeder and Cultivator Company, York, Pa.

The Studebaker Sprinkling Wagons. Studebaker Brothers Manufacturing Company, South Bend, Ind.

The International Stock Food Company, Minneapolis, Minn. Owners of the great pacing stallion, Roy Wilkes, 206½. Race history of Roy Wilkes.

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First proved by the Kansas Agricultural Experiment Station, and since corroborated by thousands of leading stockmen who have used it without a single failure. Equally effective for the diarrhea of all animals.

**PREVENTS** weak bones, paralysis of the hind legs and "thumps" in pigs; "big head" of foals; "rickets" of all young animals; abortion due to incomplete nutrition, and a host of other troubles.

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## EGGS FOR HATCHING

From Fowls of High Merit, Fresh, and a Good Hatch  
Guaranteed of the following varieties:—

**PLYMOUTH ROCKS, BROWN LEGHORNS, WHITE LEGHORNS and PEKIN DUCKS at \$1.00 per sitting of 15 BRONZE TURKEY EGGS, \$3.00 per dozen.**

Jersey and Guernsey Cattle and Berkshire Pigs. Four handsome Great Danes and three Fox Terrier Puppies.

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THE EGG MACHINES OF POULTRYDOM.

The record at such shows as Washington, D. C., Philadelphia and New York proves the quality of my stock is second to none. I always breed my winners. Correspondence cheerfully answered.

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**PROMINENT AGRICULTURISTS TO ADDRESS THE EAST TENNESSEE FARMERS' CONVENTION.**

Satisfactory progress is being made in the preparation of the programme for the East Tennessee Farmers' Convention, to be held in Knoxville, May 21st to 23d, inclusive. Among those who have agreed to be present and deliver addresses are Governor James B. Frazier on "The Greatest Need of Tennessee"; Professor Thomas Shaw, Professor of Animal Husbandry, University of Minnesota, on "Grazing vs. Stall Feeding" and the "Practical Judging of Beef Cattle"; Professor W. F. Massey, editor the *Practical Farmer*, on "The Cow Pea for Soil Restoration" and "The Development of Truck Farming"; Hon. W. W. Ogilvie, Commissioner of Agriculture, on "What the State is Doing for the Farmer"; Professor W. J. Spillman, Agrostologist, United States Department of Agriculture, on "Forage Crops for the South"; Professor M. O. Eldridge, United States Department of Agriculture, on "The Construction of Good Roads"; Professor S. A. Mynders, Superintendent of Public Instruction, on "The Rural Schools."

In addition to the above several members of the Tennessee Experiment Station staff will deliver addresses covering specific experiments now in progress at the station and of general interest to all the people of the Middle South. More than fifty of the most progressive farmers of Tennessee will read papers or lead in discussions. Those attending can be reasonably certain of hearing every one of the gentlemen mentioned, because they have all signified their intention of being present. The Farmers' Convention stands for education, for opportunity and for progress in southern agriculture. Do not forget the dates, nor the fact that the railroads give a single fare to the meeting. If your name is not on the mailing list, kindly send it to the secretary at Knoxville, and he will gladly furnish you with a copy of the programme, which will shortly be issued.

**MOLES.**

About ten years ago I had a beautiful lawn, and it was literally cut up by moles. I offered \$50 to any man who would make a trap that would catch them. Not getting any relief, I had a blacksmith make a small grub-hoe, or mattock. I would look over my lawn and see where their work was freshest, and then watch for them again. After waiting a short time I would see the earth rising up in a ridge, when I would take my grub-hoe and get immediately in front of the mole with my face toward him and my hoe raised, and the instant he would bunch up the ground I would strike about four inches behind him and four or five inches deep, bear down, then pull toward me, and pull

**FRUITS and VEGETABLES**

ARE LARGELY INCREASED IN YIELD, AND GREATLY IMPROVED BY THE USE OF

**SPRAY PUMPS.**

Write for new catalogues and price-lists. Our pumps are used by the Virginia and North Carolina Agricultural Departments.

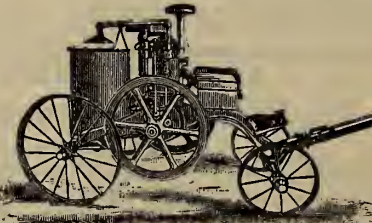
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**GASOLINE ENGINES, WIND MILLS, RAMS, TANKS. WATER SUPPLY CONTRACTORS. ARTESIAN WELL DRILLERS.**

Cut shows a Kerosene Sprayer which can be used for any other mixture.



**RUMSEY=WILLIAMS COMPANY**



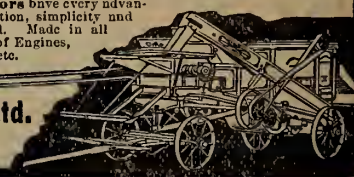
**GASOLINE ENGINES and GRAIN THRESHERS.**

ST. JOHNVILLE, NEW YORK.

There is no record of a FARQUHAR BOILER ever exploding.

**ENGINES AND SEPARATORS**

The Farquhar threshing machinery is the perfected product of the pioneer manufacturers of Grain Separators and Threshing Engines. It's the most durable and cheapest threshing outfit a farmer can buy. The Celebrated Ajax Threshing Engine, made in sizes from 4 h. p. up, have seats, foot brakes, and two injectors. Provided with every approved safety appliance. Farquhar Separators have every advantage of capacity, thoroughness of separation, simplicity and durability. Every part thoroughly tested. Made in all styles and sizes. Send for free catalogue of Engines, Threshing Machinery, Saw Mills, etc.



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First Class Material, Merchandise and Machinery at Sacrifice Prices.

**Plumbing Supplies** For Bath Room  
Porcelain Bowl, Hardwood Seat and Tank, Nickel Plated flush and empty pipes, complete each \$10.00.  
Cast Iron Bath Tubs.  
Length 5 ft. Complete with full set nickel plated fittings, each \$11.00. They are new goods, ask for free catalogue of our full line of plumbing supplies.




**Barbed and Smooth Wire** Write for our prices on 2 and 3 point Barbed Wire, painted and galvanized; also, 65,000 pounds **SMOOTH GALVANIZED WIRE SHORTS** Ranges to, 11, 12, 13 and 14. Price \$1.40 per hundred lbs. We also handle other kinds, write us your wants.

**Poultry Netting** A special lot of new galvanized No. 19 poultry netting while the supply lasts, at these prices: 150 running feet to bale.  
12 inch.....\$0.45 per bale.  
18 inch.....0.05 per bale.  
30 inch.....1.10 per bale.  
36 inch.....1.35 per bale.  
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Other grades at correspondingly low prices.



**Gasoline Engine \$70**  
2 HORSE POWER Absolutely new, most modern type. Guaranteed, pumping jack & fixtures & fittings for \$75. Without pumping jack \$70.  
Headquarters for Machinery  
Our line of machinery supplies is almost unlimited. Complete stock of Saw Mills, Pumps, Sugar Machinery, etc.  
And in fact everything in that line.



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**Wrought Iron Pipe** Steam, Gas or Water; sizes 1/2 to 12 in. diam We have in stock 2,000,000 feet of Standard black wrought iron pipe, second hand. It is in good condition, complete with threads and couplings at following prices:  
1/2 inch at 1 1/2 cents per foot.  
3/4 inch at 2 1/2 cents per foot.  
1 inch at 3 1/2 cents per foot.  
1 1/2 inch at 4 1/2 cents per foot.

**Building Material** LUMBER, SASH, DOORS, ETC. We carry a complete stock of first class Building Material of all kinds. Send us your bill for estimate.  
**10 CARLOADS OF NEW DOORS at \$1.00 each** HARDWARE SUPPLIES Write for our catalogue of builder's hardware. The per cent of the dealers profit we can save you will prove a revelation.



**Cold Water or Ready Mixed Paints** We bought at Receiver's sale from a leading paint house, a very large quantity of Cold Water Paints and Ready Mixed Paints. Equal in grade to any on the market. Here is a Genuine Paint Bargain. Before placing your order, write us for our special prices. You can surely save money, without sacrificing quality.

**Farm Forges \$8.00** We bought several car loads of new Portable Forges at a low price. We have, also for sale horseshoes, horseshoe nails, bl'ksmith tools of all kinds. Hard- 50 doz. single bitted axes of 3 1/2 lbs. 175 doz. double ware bitted axes, 2d qual. @ 40c. 6,000 Dietz Lanterns, few slightly affected by water. Write for prices.



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We issue a complete illustrated catalogue containing prices of which the above are only a few samples. You ought to have a copy of this book in your home or office and we will send it upon request.

**CHICAGO HOUSE WRECKING CO.**

WEST 35TH AND IRON STREETS, CHICAGO.

out a mole every time. I never missed one during the summer.

Moles have good ears, and when you start with your hoe, go on tiptoe, or you may have to wait an hour or two for them to begin work again. I would generally push down with my foot the ground where they worked last for ten or twelve feet, and then watch that, for they always go in the same runaway, and will bunch it up again. That will be a guide for you. Be sure that you are square in front of them when you strike. C. G. JOHNSON.

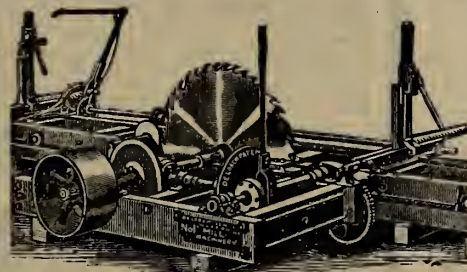
**SOIL FOR PLANTS IN POTS.**

One of the ever-recurring questions that novices in floriculture ask is about potting soil. In his "Home Floriculture" Mr. Rexford gives the following as the best general purpose soil he has ever used: One part of ordinary garden loam; one part of turfy matter scraped from the lower part of sods, containing all the fine grass roots possible to secure with it; one part of well-rotted manure and sand, half and half. If leaf mold can be obtained it can be used instead of the turf scrapings. We hear a great deal about its superiority over the other light and spongy soils, but there is really but very little difference between it and turfy soil, since both are composed largely of vegetable matter. In one case the leaves decay and furnish food for plant growth, and in the other the grass roots rot and supply nutriment. Leaf mold gives more immediate effects, because it is already decayed, while turf soil must have time in which to decay before it is fully available.

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Eight sizes, from Farmers' 4 h. p. up to 200 h. p.

If interested, write for large illustrated catalogue of DeLoach Patent Saw Mills to suit any power from 4 to 200 h. p.; Shingle Mills, Planers, Edgers, Trimmers, Stave and Lath Mills, Bolters, Corn and Buhr Mills, Water Wheels, etc. To introduce our New Farmers' Saw Mill, fitted with DeLoach Patent Variable Friction Feed, we make this special offer:



We will deliver on cars at factory our No. 0 Pony Farmers' Saw Mill, with Duplex Dogs, Improved Head Blocks, and Hatchet Set Works, complete as shown in cut, except it has Carriage made in two 4 foot sections, with Rope Drive instead of Rack and Pinion, without Saw or Belt, for \$115.00 Spot Cash!  
With 36" Solid Saw, \$127.50; 40", \$132.50  
44", \$140.00; 48", \$150.00.  
With 36" Inserted Saw \$147.50; 40", \$152.50;  
44", \$160.00; 48", \$170.00.  
Best Rubber Belting, 4-ply, 6", 20 cents per foot; 8", 30 cents per foot, NET.  
No discount from these prices.

Our Warranty: This mill is warranted to be made in a workman-like manner, of first class material throughout, and to give perfect satisfaction if operated according to our printed instructions, which are so simple that a boy can understand them. Any one with ordinary intelligence can set and operate without the assistance of an experienced sawyer; will easily cut 2 000 to 2,500 feet of first class board lumber per day with only 4 h. p.; 3,000 feet with 6 h. p.; 4,000 feet with 8 h. p.; is adapted to any kind or size power up to 15 h. p.

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The DeLoach is the only mill made that is shipped to all parts of the world. Over 10,000 in use



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make the handiest and most economical threshing outfit known. The thresher is made in three sizes, 21, 26 and 30 in. cylinder. It is a simple, easy to handle, light running, strong, durable and effective machine. Will thresh and clean wheat, rye, oats, barley, flax, rice, alfalfa, millet, sorghum, timothy, etc. Capacity 200 to 600 bu. Runs on steam, gasoline, or any other power preferred. Tread powers for 1, 2 and 3 horses (equal to 2, 4 and 6 horses in lever power). For cutting dry feed, ensilage and shelling, sawing wood, pumping, separating cream, etc. Strongest and lightest running powers on the market. Mounted or unmounted, as ordered. We also make Lever Powers, Feed and Ensilage Cutters, Wood Saws, Feed Grinders, etc. Send for FREE Catalogue. HEEBNER & SONS, No. 25 Broad St., Lansdale, Pa.

**RESULTS OF COMPULSORY ATTENDANCE.**

Statistics of juvenile crime in New York, furnished by the records of the

police department, show that the number of offences committed by persons between the ages of 8 and 14 decreased more than 50 per cent. after the passage of the compulsory education act.

The second annual exhibition of the Kentucky State Fair will be held at Owensboro, September 21st to 26th, inclusive. Twenty thousand dollars is offered in premiums, apportioned as follows:

BEEF CATTLE.	
Shorthorns .....	\$2,000
Herefords .....	1,200
Aberdeen Angus .....	1,000
Polled Durhams .....	650
Other breeds.....	500

DAIRY CATTLE.	
Jerseys .....	1,000
Horses (including five \$200 sweepstake prizes for saddle and roadster horses).....	4,500
Horses .....	4,500
(Including five \$200 sweepstake prizes for saddle and roadster horses).	
Mules and jack stock.....	800
Swine (five breeds).....	1,200
Sheep (ten breeds).....	1,300
Poultry and Belgian hares.....	1,000
Farm products, horticulture and miscellaneous departments ...	4,000

The Kentucky State Fair, although in its infancy, is recognized as the leading institution of the kind in the South, and destined to be one of the greatest in the country.

The initial meeting at Louisville last year was a great success.

The fair of 1903, with a considerable increase in premiums and improved classification, should exceed in attendance and exhibits the fair of 1902.

For further information in regard to the fair write L. S. Shropshire, Secretary, Louisville, Ky.

**LIVE STOCK AT THE LOUISIANA WORLD'S FAIR.**

An allotment of something over 30 acres of ground for the live stock shows at the World's Fair at St. Louis next year has been asked of the management by Chief F. D. Coburn, who has charge of that department.

This site contemplates the erection of forty-seven buildings. Thirty-nine of these are planned for stock barns with 2,400 open stalls 5x10 feet and 400 box stalls 10x10 feet. The 2,800 stalls will accommodate as a minimum that number of cattle or horses, and later, simultaneously a like number of both swine and sheep. Four octagonal dairy barns will provide 140 open stalls and twentyeight box stalls.

The site desired for the live stock exhibits is a continuation of "Agriculture Hill," immediately south of the Agriculture and Horticulture buildings, and would make possible the grouping all the larger exhibits in which farmers and stockmen will be most interested. The live stock area extends south to the grounds limits, where it faces one of the main entrances.

**CHOICE OF WEAPONS.**

Judge: You threw a bottle of whiskey at the plaintiff's head."

Defendant: I always use spiritual weapons.—*May Lippincott's.*

# Your money back

**if you are not satisfied**

**DO YOU SUPPOSE** that a company with a capital of \$500,000.00, paid in full, and the proud reputation of 36 years of continuous success, would make such an offer and not carry it out to the letter?

**DO YOU SUPPOSE** we would jeopardize our standing with the public and our chances of still greater success by failing to fulfil any promise we make?

**DO YOU SUPPOSE** we would make such an offer if we did not have the utmost confidence in the satisfying quality of our goods?

**WE KNOW** we can please you and save you money, for HAYNER WHISKEY goes direct from our distillery to you, with all its original richness and flavor, carrying a UNITED STATES REGISTERED DISTILLER'S GUARANTEE of PURITY and AGE and saving you the big profits of the dealers. That's why it's best for medicinal purposes. That's why it's preferred for other uses. That's why we are regularly supplying over a quarter of a million satisfied customers. That's why YOU should try it.

## Direct from our distillery to YOU

**Saves Dealers' Profits! Prevents Adulteration!**

# HAYNER WHISKEY

**PURE SEVEN-YEAR-OLD RYE**

**4 FULL \$3.20 EXPRESS QUARTS 3 PREPAID**

We will send you FOUR FULL QUARTS of HAYNER'S SEVEN-YEAR-OLD RYE for \$3.20, and we will pay the express charges. When you receive the whiskey, try it and if you don't find it all right and as good as you ever drank or can buy from any body else at any price, then send it back at our expense and your \$3.20 will be returned to you by next mail. How could an offer be fairer? We take all the risk and stand all the expense, if the goods do not please you. Won't you let us send you a trial order? We ship in a plain sealed case; no marks to show what's inside.

Orders for Ariz., Cal., Col., Idaho, Mont., Nev., N. Mex., Ore., Utah, Wash. or Wyo., must be on the basis of 4 Quarts for \$4.00 by Express Prepaid or 20 Quarts for \$16.00 by Freight Prepaid.

Write our nearest office and do it NOW.

### THE HAYNER DISTILLING COMPANY

ATLANTA, GA. DAYTON, OHIO ST. LOUIS, MO. ST. PAUL, MINN.  
156 DISTILLERY, TROY, O. ESTABLISHED 1866.



CHARTERED 1870.

# Merchants National Bank

OF RICHMOND, VA.

Designated Depository of the United States, City of Richmond and Commonwealth of Virginia. Capital Stock, \$200,000.00  
Being the Largest Depository for Banks between Baltimore and New Orleans. Surplus and Profits, \$628,000.00  
this Bank offers superior facilities for direct and quick collections.

JNO. P. BRANCH, President. JNO. K. BRANCH, Vice-President. JOHN F. GLENN, Cashier.

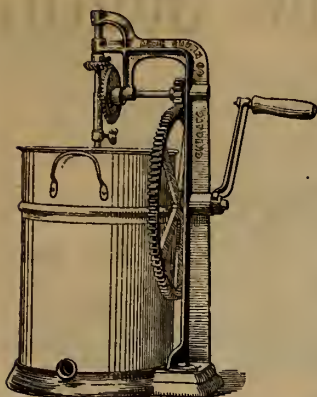
DIRECTORS.—John P. Branch, B. B. Munford, Chas. S. Stringfellow, Thos. B. Scott, B. W. Branch, Fred W. Scott, Jas H. Dooley, Jno. K. Branch, A. S. Buford, Andrew Pizzini, Jr., J. P. George, Alex. Hamilton, Sam'l T. Morgan.

When corresponding with our advertisers always mention the Southern Planter.

THE WONDER OF THE 20 CENTURY.

THE ACME CHURN.

MILK AERATOR and CREAM SEPARATOR.

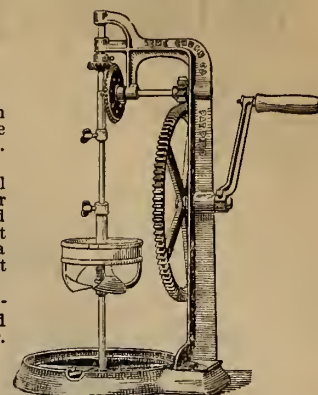


Guaranteed to make butter from sweet or sour cream in from three to ten minutes. The manufacturers offer \$100 to any one who can beat this machine on time, quality and quantity on any given amount of sweet or sour cream. Made of the very best materials and is guaranteed.

The number of inquiries received from our first Ad., on page 299, April PLANTER, shows the great interest taken in this new invention by the butter makers of this and adjoining States. It is a new machine, patented and fully protected; and the greatest labor saver of its kind on the market. It has but recently been offered to the public, and by merit alone is making a name and place for itself in enterprising and progressive homes, where it lightens and lessens the labor of those who need it most.

The cut is the Single Standard, in 3 and 6 gal. sizes. In the Double Standard, the iron frame is on both sides and across the top, is heavier and stronger, with an extra wheel at the handle for either hand or light power. In 6 and 10 gal. sizes. You can rely upon what is said about this machine.

Make a note of this and continue to watch SOUTHERN PLANTER.  
Address THE ACME CHURN, Lock Box 311, Richmond, Virginia.



Our readers will notice the appearance in this issue of the advertisement of the Studebaker Brothers Manufacturing Company, of South Bend, Ind. This great concern, we believe the largest of its kind in the world, is so well known as to require no introduction. Studebaker general repositories for the proper and convenient distribution of their products are found in most large cities, while there is scarcely a hamlet in the country where the local Studebaker dealer is not found. There is nothing questionable about the character of Studebaker goods. The wagons and vehicles of every character, and harness for all purposes are standard everywhere. Whoever is willing to pay a fair price for assured high quality is not disappointed in Studebaker's. We unreservedly commend the advertisement to the favorable attention of our subscribers.

Readers of this paper may not be familiar with the Red Ripper Hay Press advertised in this issue by the Sikes Manufacturing Company, Helena, Ga. The advertisement deserves attention. The Red Ripper claims strong features where hay balers have found weakness in other makes. To instance, the removal of practically all draft, when the horse is crossing the connecting beam, in a full circle press, is a big item. The statement that through its clever mechanism the draft at all times is so light that it can be operated by one horse, where other presses require two, well deserves consideration. We believe, too, there is some reduction from prices heretofore prevailing. The manufacturers maintain distributing houses at Baltimore, Memphis and Cincinnati. See advertisement for home office address before writing for catalogue.

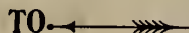
A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

THE

SEABOARD

AIR LINE RAILWAY

OFFERS  
PROFITABLE  
INVESTMENTS



THE MANUFACTURER,  
THE STOCK RAISER,  
THE DAIRYMAN,  
THE FRUIT GROWER,  
THE TRUCKER.

WHERE YOUR LABOR IS NOT IN VAIN.

Would a country where work can be carried on the entire year and where large profits can be realized interest you?

The SEABOARD Air Line Railway traverses six Southern States and a region of this character. One two cent stamp will bring handsome illustrated literature descriptive of the section.

J. B. WHITE,  
Gen. Industrial Agt., Portsmouth, Va.

EDW. W. COST,  
Traffic Mgr.

CHARLES B. RYAN,  
Gen. Pass. Agt., Portsmouth, Va.

WHISKEY

4 full quarts Corn Whiskey 10 years old, \$3.50  
4 " " " " " 6 " " 2.50  
4 " " " " " Private Stock,  
20 years old, for invalids and other  
loved ones..... 6.00  
Or will ship the 12 qts. named above for \$11.00

Plain packages Express paid. Purest and Best Whiskey, and Oldest House in America. Established 1768—135 years ago. Just as Corn bread is more wholesome and palatable than Rye bread—So with the Whiskey—so say all Doctors—try it and be convinced. Nothing on earth so beneficial to weak lungs as this mountain beverage.

THE OLD NICK WILLIAMS CO.,  
Lock Box No. 11. Williams, N. C.

Mention the Southern Planter when corresponding with advertisers.

The RICHMOND, FREDERICKSBURG  
and POTOMAC R. R.  
and WASHINGTON SOUTHERN R'Y

Form the Link connecting the

Atlantic Coast Line R. R.,  
Baltimore and Ohio R. R.,  
Chesapeake and Ohio R'y,  
Pennsylvania R. R.,  
Seaboard Air Line R'y  
and Southern R'y.

Between all points, via Richmond, Va.

Fast Mail, Passenger and Express Route between Richmond, Fredericksburg, Alexandria, Washington, Baltimore, Philadelphia, New York, Boston, Pittsburg, Buffalo and All Points North, East and West.

W. P. TAYLOR, Traffic Manager, Richmond, Va.

# Our Clubbing List.

The following list of papers and periodicals are the most popular ones in this section. We can **SAVE YOU MONEY** on whatever journal you wish.

DAILIES.	Price.	With Alone.	Planter.
Times-Dispatch, Richmond, Va.....	\$5 00	\$5 00	
The Post, Washington, D. C.....	6 00	6 00	
The Sun, Baltimore, Md.....	00	40	
News-Leader, Richmond, Va.....	3 00	3 00	
TRI-WEEKLY.			
The World (thrice-a-week), N. Y....	1 00	1 25	
WEEKLIES.			
Harper's Weekly .....	4 00	4 00	
Harper's Bazaar .....	1 00	1 40	
Montgomery Advertiser .....	1 00	1 00	
Nashville American .....	50	75	
The Baltimore Sun .....	1 00	1 35	
Breeder's Gazette .....	2 00	1 75	
Hoard's Dairyman .....	1 00	1 35	
Country Gentleman .....	1 50	1 75	
Times-Dispatch, Richmond, Va.....	1 00	1 15	
Religious Herald, Richmond, Va.....	2 00	2 25	
Central Presbyterian, " " .....	2 00	2 50	
Christian Advocate, " " .....	1 50	1 75	
Turf, Field and Farm .....	4 00	4 00	
Spirit of the Times.....	4 00	4 00	
Horseman .....	3 00	3 00	
SEMI-MONTHLIES.			
Wool Markets and Sheep .....	50	75	
Dairy and Creamery .....	50	75	
Commercial Poultry .....	50	75	
All three .....	1 50	1 15	
MONTHLIES.			
North American Review .....	5 00	5 00	
The Century Magazine .....	4 00	4 25	
St. Nicholas Magazine .....	3 00	3 25	
Lippincott's Magazine .....	2 50	2 50	
Harper's Magazine .....	4 00	4 00	
Forum Magazine .....	3 00	3 25	
Scribner's Magazine .....	3 00	3 25	
Frank Leslies Magazine .....	1 00	1 35	
Cosmopolitan Magazine .....	1 00	1 35	
Everybody's Magazine .....	1 00	1 35	
Munsey Magazine .....	1 00	1 35	
Strand Magazine .....	1 25	1 65	
McClure's Magazine .....	1 00	1 35	
Argosy Magazine .....	1 00	1 35	
Review of Reviews .....	2 50	2 75	
Southern Fruit Grower .....	50	85	

Where you desire to subscribe to two or more of the publications named, you can arrive at the net subscription price by deducting 50 cents from "our price with the PLANTER." If you desire to subscribe to any other publications not listed here, write us and we will cheerfully quote clubbing or net subscription rates.

Subscribers whose time does not expire until later can take advantage of our club rates, and have their subscription advanced one year from date of expiration of their subscription to either the PLANTER or any of the other publications mentioned.

Don't hesitate to write us for any information desired; we will cheerfully answer any correspondence.

We furnish **NO SAMPLE COPIES** of other periodicals.

# Seed House of the South.

RED CLOVER,  
MAMMOTH CLOVER,  
CRIMSON CLOVER,  
WHITE CLOVER,  
LUCERNE CLOVER,  
ALSYKE CLOVER,  
BOKHARA CLOVER,  
JAPAN CLOVER,  
BUR CLOVER,



TIMOTHY,  
ORCHARD GRASS,  
RED TOP or HERDS GRASS,  
KENTUCKY BLUE GRASS,  
RANDALL GRASS,  
TALL MEADOW OAT GRASS,  
JOHNSON GRASS,  
GERMAN MILLET,  
BUCKWHEAT,  
OATS and CANE SEED.

"Whatsoever One Soweth, That Shall He Reap."

We sell strictly reliable **FIELD AND GARDEN SEEDS** of every variety at **Lowest Market rates**, included in which are **RAGLAND'S PEDIGREE TOBACCO SEEDS.**

WE ALSO SELL

## Our Own Brands of Fertilizers

For Tobacco, Corn, Wheat, Potatoes, &c.

Pure Raw-Bone Meal, Nova Scotia and Virginia Plaster and Fertilizing Materials generally.

Parties wishing to purchase will find it to their interest to price our goods. Samples sent by mail when desired.

## Wm. A. Miller & Son,

1016 Main Street,  
LYNCHBURG, VA.

# Headquarters for Nursery Stock.

WHOLESALE  
AND  
RETAIL.

We make a specialty of handling dealers' orders.

**ALL STOCK TRUE TO NAME.**

Apples,	Nectarines,	Pecans,	Ornamental and
Pears,	Cherry,	Chestnuts,	Shade Trees,
Peach,	Quinces,	Walnuts,	Evergreens,
Plum,	Almonds,	Small Fruits,	Roses, Etc.
Apricots,			

CALIFORNIA PRIVET, for Hedging.

WRITE FOR CATALOGUE.

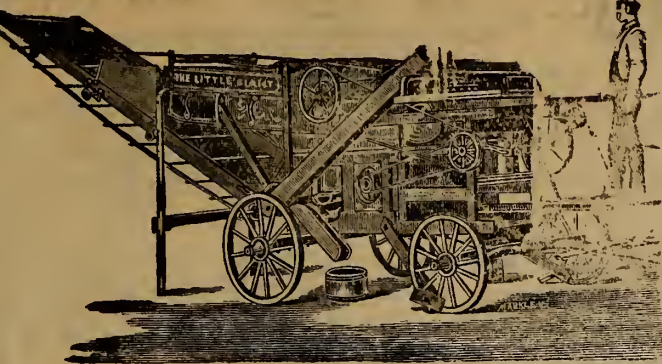
AGENTS WANTED.

**FRANKLIN DAVIS NURSERY CO.,** Baltimore, Md.



The Most popular Machines in use for Peanut Picking and Grain Threshing are the

**HEEBNER'S,  
LITTLE GIANT and  
PENNSYLVANIA**



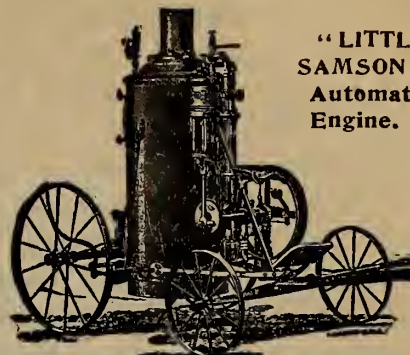
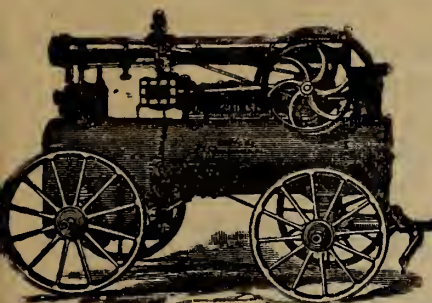
Machines, and they have splendid improvements for 1903. They are built in first-class manner, and are strong and durable. The price is within the reach of all. We guarantee them to do the work satisfactory. We will mail catalogue and testimonials, and quote prices on application.

**RUBBER, LEATHER  
AND  
GANDY BELTING.**

**FRICK'S "ECLIPSE"  
ENGINES and BOILERS.**

**ERIE ENGINES and BOILERS.**

**THE CELEBRATED  
"CHASE" SAW MILLS  
AND  
"DE LOACH" MACHINERY.**



**"LITTLE  
SAMSON"  
Automatic  
Engine.**

This cut shows our 5 and 7 h. p. "Little Samson" Vertical, Automatic Engine, for running threshers, peanut pickers, cutting feed, sawing wood etc. Larger size also furnished.

**STRATTON & BRAGG CO., 20-22 N. Sycamore St., Petersburg, Va.**

# How is Your Wheat?

**ONE CENT** Invested in a postal card and addressed to  
**THE CARDWELL MACHINE COM-  
PANY, Richmond, Virginia,** will bring you circulars regarding

## Cardwell's Thresher and Cleaner

They are **SIMPLE, DURABLE** and **EASY TO WORK.**

Capacity, 200 to 1000 bushels of wheat per day, according to size and character of grain.

**THE CARDWELL MACHINE CO.,** Nineteenth and Cary Sts.,  
**RICHMOND, VIRGINIA.**

# "THE EARLY BIRD" You Know the Rest.

I mention this well-known adage, because so many of my customers have proved the old and true saying about the early bird—what he caught. He got the best, and he got there first. Now, you must do the same thing. You know our prices all "change without notice"—so send your orders in on time, and you will get the pick and choice of everything—though we keep nothing but the best. We buy at the market and sell at the market. Write for prices and I will be delighted to send them to you as fast as your mail service can carry them. I have at this writing but I don't know how long they will last:

10,000 bushels Feed Oats .....	40	50,000 lbs. Rock or Lump Salt for stock. Take	
6,000 bushels Mixed Corn .....	50	1,000 lbs, and I will make it for.....	7 50
Both of these are big drives, and you should order at once.		500 bbls. North Carolina Cut Herrings.....	4 75
500 kits of Large Mackerel, per kit.....	1 25	500 bbls. Lime, Cement, Plaster, at cost.	
5,000 bushels Early Rose Potatoes.....	70	Paints, Oils, Nails, and everything that is needed by a Farmer we keep, and will sell at actual cost to reduce our stock.	
4,000 bushels Burbank Seed Potatoes.....	75	Drop me a line, keep in touch with headquarters, and by doing this you save money.	
10 large bars Laundry Soap .....	25		

## READ CAREFULLY THE FOLLOWING PRICES

### WINES, LIQUORS AND CORDIALS.

Gibson's fine old Rye Whiskey, 6 years old—quarts, 75c., or gallon, jugs free.....	\$3 00
Bumgardner's fine old Rye Whiskey, 6 years old, per gal.	2 75
Fine old Anderson County, gal. (this is 4 years old).....	2 00
Clemmer's fine old Rye, three summers (it is thick and drinks like nectar), quart...	40
Fulcher's old Mountain Dew, quart .....	45
Imported Juniper Gin. For kidney and kindred troubles it gives instant relief, and you should get a quart—only....	45
346 bottles, quarts, imported Three Star French Brandy...	75
McDermott's Pure Old Malt Whiskey, quart .....	85
Pure old Northampton Apple Brandy, 7 years old, strictly choice, gallon .....	2 00
Old Rye Whiskey, 4 years old..	2 00
Pure Old Virginia Apple Brandy	2 00
Blackberry Brandy, per gallon.	75
Good Holland Gin.....	1 50
Duffy's Malt Whiskey.....	85

### FLOUR.

Pillsbury Flour, per bbl.....	4 90
Pillsbury, per bag.....	32
Graham Flour, per bag.....	25
Dunlop Patent Flour, bbl.....	4 50
Dunlop, per bag.....	29
Byrd Island Flour, per bbl....	4 40
Jersey Lily Flour, per bbl....	4 00

Fine Fairy Flour, per bbl.....	3 85
Best Family Flour.....	4 25

### SEEDS.

Sapling Clover Seed, per bushel.	\$7 50
Alfalfa Seed, per bushel.....	7 40
Alyske Seed, per bushel.....	9 50
Timothy Seed, per bushel.....	2 75
Orchard Grass Seed, per bushel.	2 10
Tall Meadow Oats, per bushel..	2 00
White Clover Seed, per bushel..	13 00
Potato Onion Sets, per bushel..	2 00
Black Spring Oats, per bushel..	52
Rust Proof Oats, per bushel...	65
Turf Oats, per bushel.....	70
Fine Winter Turf Oats (seed)...	75
Prime Winter Seed Oats.....	60
1,000 bushels Seed Rye.....	68

10,000 bushels Choice Seed Potatoes, all varieties—Early Rose, Burbanks, Beauty Hebrons. Am prepared to make very low prices.

I have everything that is required by a farmer, from a 1,000 Acre Farm to a Mouse Trap. Write for my Price-List that will give you more information than a gossiping woman.

### SUGAR.

Best American Granulated.....	4 3/4
White A Sugar, per lb.....	4 3/4
Cut Loaf .....	6
Powdered .....	6
Light-Brown Sugar, 6 lbs.....	25

### BACON AND LARD.

Best Sugar-Cured Hams, lb....	15
California Hams, per lb.....	10 1/2

Breast Bacon, per lb.....	13
Good Lard .....	9
Genuine Smithfield Hams, lb...	15
4-lb Can Cottolene.....	44
Country Cured Bacon Sides....	12
10,000 lbs Nice Family Pork....	9

### FEED.

Oats, per bushel.....	46
Shipstuff, per 100 lbs.....	1 10
Brownstuff, per 100 lbs.....	1 05
Good Corn, per bushel.....	52
Coarse Meal, per bushel.....	65
Best City Meal, per bushel....	70
Linseed Meal, per 100 lbs....	1 75
Cottonseed Meal, per 100 lbs..	1 40
510 tons Cottonseed Hulls—an excellent winter food, cheap and nutritious—as good as coarse meal for stock, per 100.	50
70,000 lbs Rock Salt for stock, per 100 lbs.....	1 00
5,000 Bales of Fine Shucks.	

### COFFEE, TEA, SOAP, ETC.

Arbuckle's Green Coffee.....	11
Best Mocha and Java Coffee, roasted .....	18
Fine Gunpowder Tea.....	40
800 barrels White Oil.....	12
7 boxes Axle Grease.....	25
10 Large Cakes Fancy Soap....	25
Crystal Washing Soda, light, smooth and durable—makes washing easy.....	30
Washing Powder, 8 for.....	25
Large Fat Mackerel in nice buckets or kits, about 15 lbs..	1 25

**D. O'SULLIVAN,** 18th and Main and 502 E. Marshall Sts., Richmond, Va.

# WAGONS and BUGGIES



MADE  
RIGHT HERE  
AT HOME  
BY



The BARBOUR BUGGY CO.,  
The HUGHES BUGGY CO.,  
The VIRGINIA WAGON CO.

*All of Virginia.*

These vehicles are guaranteed to be as good as can be bought elsewhere; material and workmanship unsurpassed; all sizes and styles, prices low. We can save you time, money and freight by purchasing our vehicles. Send for our illustrated catalogues. Drop in our warehouse and inspect our stock. Inquiries cheerfully answered.

AGENTS FOR DEERING MACHINES.

RICHMOND BUGGY & WAGON CO., 1433 E. Main Street, RICHMOND, VA.

J. T. DUNN, Manager.

## Our "TRUST" is in the merits of the machines.

Fine as they are, Durable as they have proven,

# THE WALTER A. WOOD MOWERS.

Reapers, Hay Rakes and Binders

can be bought to-day for less than any other machine on the market.

Don't you believe it? Try us. We'll astonish you. We've got 'em whipped to a stand-still. Everybody after "WOOD" machines this season, and no wonder.



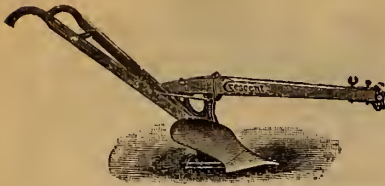
ASHTON STARKE,  
RICHMOND, VA.

# Seasonable Implements of Latest Patterns.

Established by  
GEO. WATT, 1840.

**THE CALL-WATT CO.,**  
RICHMOND, VIRGINIA.

MANFRED CALL,  
Manager.



THE CRESCENT PLOW.

The WATT, CROWN and CRESCENT PLOWS.

Especially adapted to the Corn Grower. Equally adapted to the Tobacco Planter, the Cotton Planter and the Gardener.

**DISC HARROWS**—All sizes

Independent Flexible Gangs, operated by one or two levers. No end thrust.

**DUST PROOF BEARING BOXES**, Flexible Scrapers. Steel Shanks.

All Steel Lever Harrows. Made up of sections of 25 teeth each. We have the Continuous frame with spring trip, which relieves all strain on the teeth, or the U Bar, by means of the lever instantly changed to a straight or slanting tooth harrow.

The DEERE SINGLE and DOUBLE ROW CORN PLANTER.

The Corn Drop works on the "edge selection" principle. Simple in construction and next to impossible to get out of order. These Planters have features not possessed by any other, and are fully described in special circular.

The EMPIRE SINGLE ROW CORN PLANTER with the celebrated Marks Force Feed Fertilizer. The lightest Combination Planter made.

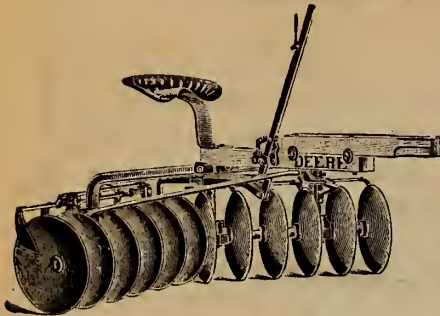
The EUREKA CORN PLANTER, Known so long as to require no special description.

The DEERE DISC CULTIVATOR is made almost entirely of Steel and Malleable Iron. Light weight and great strength. High, solid steel arch. Wheels adjustable in width. Pivoted Tongue. Dust proof bearing boxes. Convertible into an Eight Disc Harrow or a Spring Tooth Cultivator.

The DEERE RIDING and WALKING CULTIVATORS. With four or six shovels or spring teeth. Possesses features not found in any other.



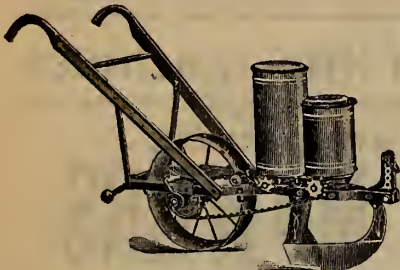
THE WATT PLOW.



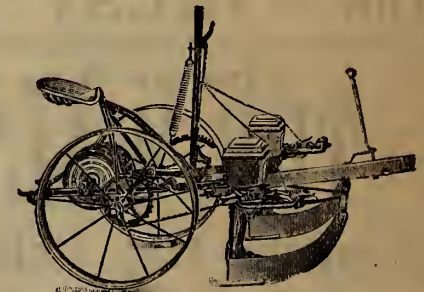
DISC HARROW.



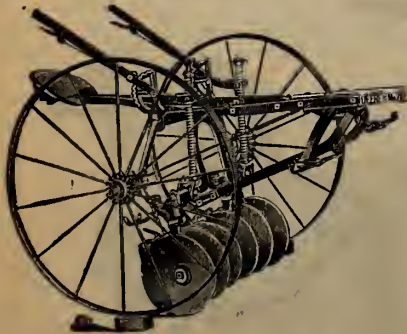
LEVER HARROW.



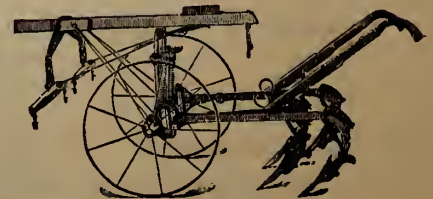
DEERE SINGLE ROW PLANTER.



DEERE DOUBLE ROW PLANTER.



DEERE DISC CULTIVATOR.



WALKING CULTIVATOR.

Iron Age Cultivators, Iron Age Combined Cultivator and Harrow, Double Shovel Plows, Feed and Ensilage Cutters, Pea Hullers, Threshers, Engines, Saw Mills, Grain Drills, (Hoe or Disc.) Farm Wagons, Buggies, Road Carts, Implements, Machinery and Vehicles for all purposes.

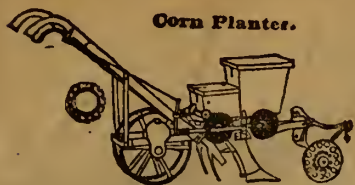
WRITE FOR DESCRIPTIVE CIRCULARS.

RICHMOND, VA. THE CALL-WATT CO.

13 So. Fifteenth Street,  
Between Main and Cary.

# LABOR=SAVING IMPLEMENTS AND MACHINERY.

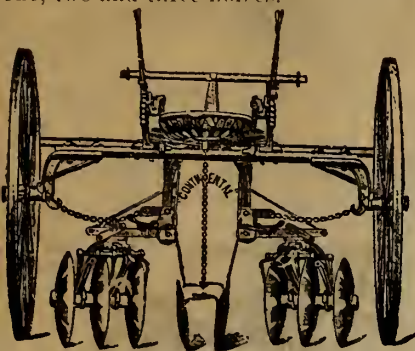
Corn Planter.



**CORN PLANTERS.** The HOOSIER, both single and double row, with and without fertilizer attachment. The SPANGLER for Corn, Peas and Sorghum.

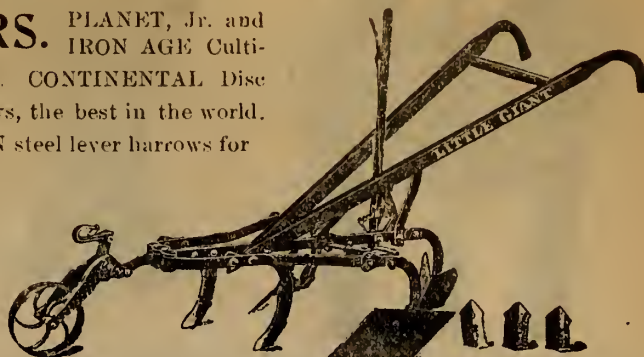
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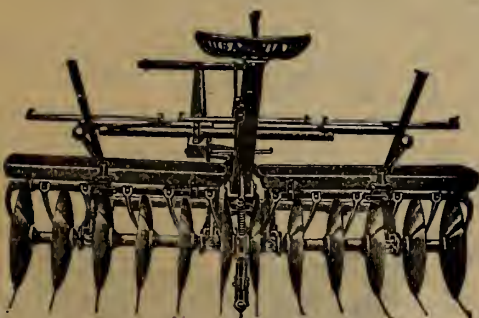


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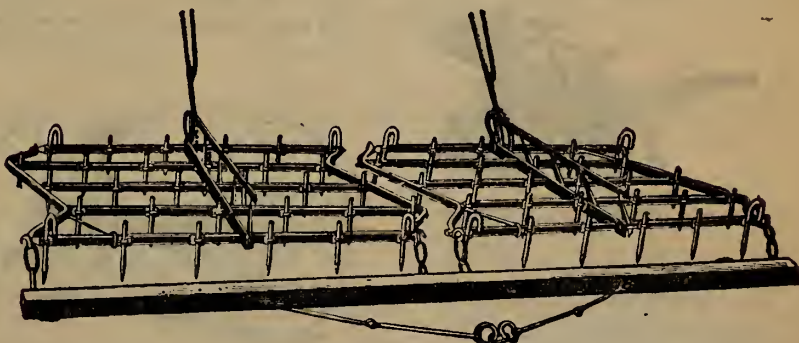
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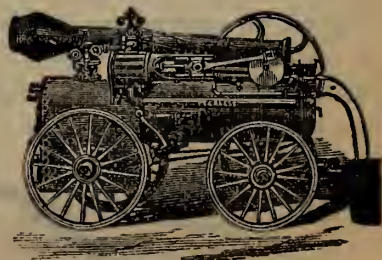


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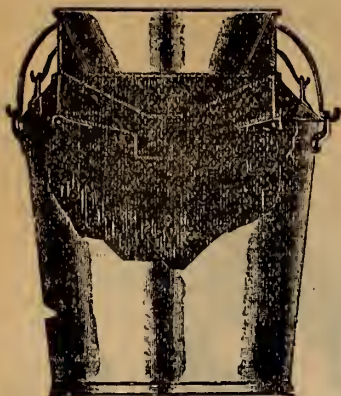
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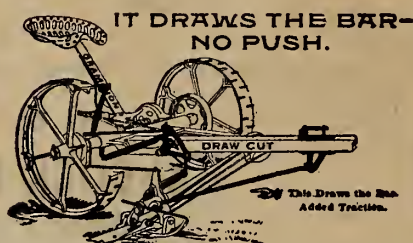


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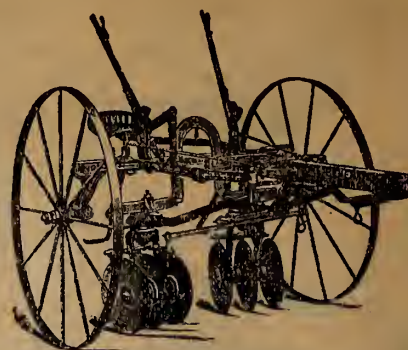


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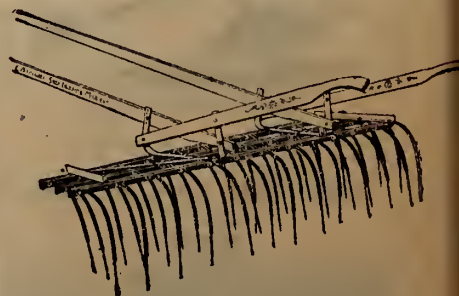
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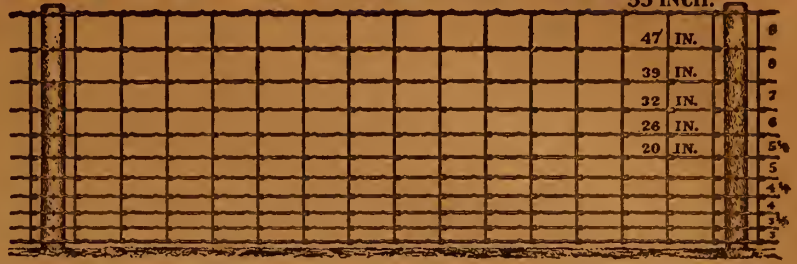
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WHEN AN

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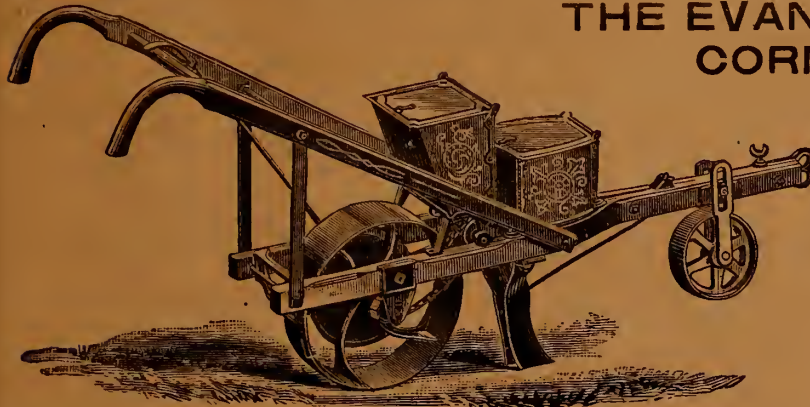


47 IN.	8
39 IN.	9
32 IN.	7
26 IN.	6
20 IN.	5
	4
	3
	2
	1

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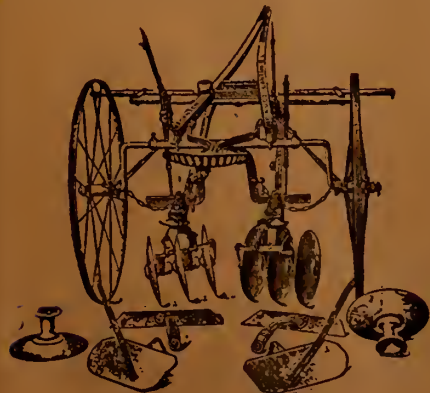
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