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# THE SOUTHERN PLANTER AND FARMER

DEVOTED TO

Agriculture, Horticulture, and the Mining, Mechanical and  
Household Arts.

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

CH. B WILLIAMS, ED & PRO'R. | JNO M. ALLAN, HORT'L EDITOR  
FRANK G RUFFIN, CO-EDITOR. | WM. L HILL, GEN'L AGENT.

New Series. RICHMOND, VA., AUGUST 1869. Vol. III.—No. 8.

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CH: B. WILLIAMS, . . . . . EDITOR AND PROPRIETOR.  
FRANK G. RUFFIN, . . . . . Co-EDITOR.

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## Cisterns.

As a number of our subscribers wish to have our well tried plan for building cisterns, we have determined to devote our column this week to it, though it be at the expense of some valuable agricultural matter. Our calculations have been revised by the well known and experienced architect, Mr. A. L. West, of Richmond. But it must be remembered that the expense of building them in a city is three or four times as great as it is in the country. Without giving all the reasons for this great difference in the cost, we will instance one or two, to give those persons some idea of it who have no experience in the matter.

For instance, it would cost forty cents per square yard in the city to dig and cart off the dirt, whereas the cost to a farmer would be scarcely anything at some seasons of the year. We had it done before the war for twelve and a half cents per yard.

Again, the top of the cistern, in Richmond, must be made of stone; but in the country, if yellow locust or cedar are on the farm, the top will not cost a moiety of what the stone does.

This difference in the cost will be found in everything which is required to construct the cistern.

Mark off a circle ten feet in diameter; then take a rod of round iron about twelve feet long, pointed at one end, and drill or drive it down in the ground ten feet, within the circle, in four or five places, to ascertain if there is any solid rock in the way. If there is, move the circle, if it can be done, as the solid rock conflicts with a uniform settling of the wall and floor of the cistern. When the

earth is excavated ten feet deep, put in the wall, which should be made of bricks, nine inches thick. The bricks should be laid in cement, and well pointed with the same, which will supersede the necessity of plastering the wall with hydraulic cement. In this wall, on the side nearest the house, where the filter should be placed (if one is desired,) a hole should be left, in which to insert a square tube, which can be made of four pieces of plank two inches wide, for the water to pass from the filter to the cistern, five feet from the bottom of the cistern. Another hole like this should be left in the wall, two or three inches from the top, in which the same sort of tube (except it should be a little larger) must be placed as a waste pipe, to prevent the water from reaching the top, which it would do if there was much roofing during a long rainy season. The next thing done should be to put on the top, which should be made of yellow locust or cedar.—Hew the pieces on three sides. With the unhewed side up, lay them as close together as possible, and strip the cracks with plastering lathes on the inside, so that not a particle of dirt can pass through. In the top should be left an opening on the side for a chain pump, which is preferable to any other kind of pumps for cisterns. By this opening another should be left large enough for a man to pass down through on a ladder, which should be kept for the purpose. This opening should be closed with a trap-door, which should have a lock upon it. A box-like frame should be placed around these openings about fourteen inches high, which will be about the depth of the earth which should be, at this point of the construction, thrown over the whole top—when it should be sodded or grass seed sown upon it. The next thing to do is to crack sand stone, if it can be had, (if not any other kind will do,) about the size of a hickory nut, and spread it on the floor six inches deep. It should be raked over and made perfectly level. Then get a wide flat stone, and place it on the cracked stone immediately under the opening for the pump to rest upon. If this is not done, the chain will when it stretches cut a hole through the floor. After this floor settles a day or two, grout it with cement, as much as it will take, about the consistency of very thin mush or thick gruel. Of course a lamp or candle must be used all the time, when work is being done on the inside. The man who does the inside work must take off his leather boots and work in his socks or gum shoes. When the grouting is done, and has dried off, put on the floor a coat of plaster of hydraulic cement.

Here I will remark that a substitute for the filter can be had by inserting a pump log in the opening left for the chain pump, which

log should rest on the broad stone provided for the chain pump. This log should be hollow and closed tight at the lower end. The hollow should be large enough to hold as much as possible. Insert an inch pipe of some sort in this hollow log, to which attach a common iron pump. About an inch from the bottom, put three holes with an inch auger—in each of which put a piece of sponge, and over which tack a piece of gauze wire. The sponge and gauze wire filter and strain the water as it passes into the log. But if a filter is preferred, it must be built exactly like the cistern—except half the depth and diameter—and four or five stones, the size of the first, must be placed over and around the hole or end of the square tube referred to above. Put a piece of coarse bagging over the stone, and on that put about one-half bushel of sand stone and charcoal, which should be cracked in pieces the size of small gravel. Leave a trap door as in case of cistern—as it will be necessary to go at least once a year to clean out the filter and renew the filtrating material.

The reason for making the cistern round and not square, is that the exterior pressure strengthens the former, and will certainly bulge the latter. The reason for avoiding solid rock is, that the floor and wall will unsettle equally, and much mending and trouble is the consequence. The reason for completing the top at the point named, is that all jarring and settling takes place before the wall is pointed and floor made, which would be injured by doing it afterwards.

The advantage of the chain pump is, that it does not freeze, and any child can lift the water from that depth; besides it is very cheap. We purchased one before the war, with chain tube, wheel and ornamental cast-iron top, for nine dollars. The advantage of brick instead of stone, is that the wall settles more regularly, and it requires considerably less cement. The brick from an old chimney is usually the best, as they are often very hard. The yellow locust for the top is preferred, because no man will live long enough to see it rot—indeed, we know a piece similarly situated to that in the top of the cistern, which is in a perfect state of preservation which has been thus situated certainly more than a hundred years.

We were about to make a statement of the cost of materials for a ten foot cistern, but those things vary so much, according to circumstances, it is useless. Besides the two instances given above, we will name one more.

Hydraulic cement costs in Richmond three dollars per barrel;

but if a farmer is within a day's drive of a cement mill, or if he is on a railroad or canal which passes one, he can send his bags for the cement, which will then cost him twenty-five or thirty cents per bushel, or about one dollar per barrel. Some cements take about one fourth sand, and some considerably more. The proper quantity should be ascertained by trying. The most important thing to be considered when using the cement, after learning how much sand should mix with it, is the rapidity with which it sets. Therefore, *very little* should be mixed at a time.

This cistern will hold 5,870 gallons, or about a hundred and fifty barrels of water. A small house say 40 by 20 feet, will produce about 27,600 gallons, or 690 barrels annually, of water, which is about two barrels a day through the year—more than a family of size suited to that house could possibly need. Put in the cistern three or four small fish—they keep it perfectly pure. Some persons think they are the best substitute for a filter. Use in this case a strainer to keep out coarse dirt which may be washed from the houses, and never feed the fish except when the water is perfectly transparent. Any opacity in the water shows the presence of animal life, which the fish live upon; and when they increase to an unnecessary number, catch them with hook and line, when a nice fry may be had.

A cistern one foot larger than this cost us before the late war, a fraction less than seventy dollars. If persons knew the comfort they afford, no man who is able to build one would be without it.—*Religious Herald.*

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### When to Cut Grass for Making Hay.

At the meeting of the *American Institute Farmers Club*, held on the 29th of June, the following interesting discussion arose, as reported by the *New York Semi-Weekly Times*. Although it appears in this Journal too late to be available to our readers the present year, it is eminently worthy of preservation for their future use:—

#### WHEN TO CUT GRASS FOR MAKING HAY.

As many farmers are now beginning to mow, the subject of making hay was introduced by S. E. Todd, who opened the discussion by saying that:

“There are certain gross errors cherished by many farmers in regard to the best period in the growth of grass for making hay. And some most absurd notions have been promulgated in years past in regard to the manner of curing hay in certain periodicals claim

ing to be correct and reliable agricultural authority; and these errors continue to be propagated from year to year, by men who never made a ton of hay, and who are utterly ignorant of the fundamental principles of this branch of agriculture. As new beginners come into possession of meadows every season they naturally aim to be guided by the most reliable authorities on haymaking. Therefore as the blind have continued to lead the blind, the result has been, and will continue to be so, long as such errors are promulgated, the dumb animals are required to subsist on mouldy, musty, and unpalatable food, when, with no more labor, their daily allowance might be a liberal supply of sweet smelling hay.

At what period in the stage of the growth of grass do animals eat it with the greatest avidity? Of course, when the leaves and stems are fresh and green. Now, then, if it were better for the animals that the fresh grass should be covered with a sprinkling of mould and have a musty smell, rather than the delicious taste and grateful fragrance, that green grass possesses, why did the great agriculturist of the universe make such an egregious mistake to furnish the beast of the field with such food when it might have been different? Hay is dried grass. And the nearer the hay resembles fresh grass the more excellent the quality will always be. Here then, we have a reliable starting point to enable us to decide as to the most correct period of the growth of grass to cut for hay. Hay made of grass, cut before the blossoms have appeared will be better and more fragrant than if the grass had been allowed to stand until the flowers are in full bloom. Yet if this period was chosen for cutting grass the hay would be excellent; but a great loss would be sustained as to the quantity. Therefore, by allowing the grass to grow until the blossoms have nearly all appeared, we have the double advantage of that stage of growth which will make sweet-smelling hay in the largest quantity that it is possible for a given meadow to yield. As the period for cutting grass is chosen either before the blossoms have appeared or after they have fallen, the material that would have made the best of nourishment for domestic animals changes rapidly into unpalatable woody fibre, which will furnish animals no more nourishment than corn cobs and saw dust. Great weight and bulk of fair-looking hay may be obtained by allowing grass to stand until the blossoms have disappeared. But the quality is quite inferior.

When druggists and botanical physicians gather plants and herbs for medicinal purposes, at what period in the stage of the growth

do they cut them? Always when they are in full bloom, if it is practicable. And why at that particular period of development. Because they know when herbs are gathered at the period of full bloom, the stems and leaves will yield a larger percentage of aroma and medicinal qualities than if cut at an earlier or a latter period. The same fact holds equally good of all kinds of green fodder, including the grasses, clovers and maize. Grass that is cut when in full bloom and properly cured, without bleaching, or too much scorching in the sun, or sweating or heating in the mow, will make hay resemble grass so nearly that the hay will furnish almost as much real nourishment to those animals that eat it as it would yield in a green condition. If grass be allowed to stand until the seed have matured and the leaves and stems have become dry, the hay made of it will go much farther than if the grass had been cut when in full bloom, on the same principle that flour made of unsound wheat will go much further than an equal number of pounds of choice flour, when made into bread. Stock will very often eat very indifferent hay with an apparently good relish. Hunger sharpens the appetite; and they must eat such food as has been prepared or do worse. But it is by no means a satisfactory argument that because stock eat poor hay with avidity, all grass should be allowed to stand until it will yield the largest quantity of inferior fodder. The correct point, then, is to cut grass for hay, when the blossoms are fully developed.

Dr. I. P. TRIMBLE.—Mr. Chairman, are we to understand that timothy grass (*Phelum pretense*) is not to be allowed to stand until the blossoms have fallen? I would ask Mr. TODD if he intended to teach that timothy grass should be cut when in full bloom?

Mr. TODD—I do hold that the correct period in the stage of the growth of any grass—not excepting the *Phelum pretense*—is when the blossoms are fully developed. If cut then and properly cured, it will make prime hay in the largest quantity.

Dr. TRIMBLE—that is a very great error. Timothy grass should always be allowed to stand until the blossoms have entirely disappeared. It is a mistake to cut hay when in blossom. It makes the hay dusty on account of the great quantity of pollen thus collected. But if the grass is allowed to stand until the pollen has fallen, the hay will be free from dust.

Mr. TODD—If I am promulgating error, Doctor, it is your duty to expose it.

J. A. WHITNEY—There is a scientific principle involved in this



matter, which goes to show that Dr. TRIMBLE is mistaken and Mr. TODD is right. In succulent plants the sugar and starch increase until the flowering culminates; but when the seed begins to form, the sugar and starchy matter are cemented into indigestible, woody substance. The dust of timothy blossoms cannot be a tithe of the quantity mixed with hay by the use of the horse rake.

W. S. CARPENTER—There can be no doubt that it is much the best to cut grass when in blossom. It not only makes better hay but it exhausts the soil much less. And I believe it is safe to cut the grass before the blossoms have appeared. I am satisfied, that if cut at this early stage of the growth, the hay will be of a superior quality if properly cured. More than this, we should aim to protect our meadows by early mowing. Grass that is allowed to mature the seeds before it is cut, will exhaust the soil and also the vitality of the grass roots far more than if the crop were cut just before the blossoms are fully developed, as has already been stated.

JAS. A. WHITNEY—There is a little chemistry involved in this subject, which will show that the facts stated and the theory coincide. When any plants, not excepting the cereal grains and grasses, are allowed to mature their seeds, the growth of seeds takes much more phosphoric acid from the soil than herbage does. Cut grass when in bloom and you will have the best quality of hay without taking the manurial substance from the soil that will be needed for the next grain or seed crop.

A. B. CRANDELL—In a certain black-letter volume, dust-covered and worm-eaten now, printed some hundreds of years before the era of modern collegiate agriculture, I can find one of the old teachers—Mr. CONO by name—laying the down the law on this subject in this wise: “The grasse being cut, you are to consider of what nature grasse is, whether very coarse and full of strong weedes, thicke leaves and great store of peony-grasse, or else exceeding fine and void of anything which asketh much wethering. If it be of the first kind, then after the mowing you shall first ted it, then raise it into little grasse cockes as bigge as small molehills, )?)after turne them and make them up again, then spread them; and after full drying put them into wind rowes, so into greater cockes, then break those open, and after they have received the strength of the sunne, then put three or four cockes into one, and lastily leade them into the barns.”

Two young farmers near Mineapolis, Minnessota, put eleven acres of land in hops.

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### Notes of Southern Travels.

An English gentleman, Mr. Bower Wood of Long Island City, has just returned from a journey to the South, and reports as follows: We found throughout North Carolina and Virginia every disposition to welcome immigration, to put aside politics, and an earnest wish to embrace every Northern suggestion and improvement. The negroes are disappointed because they do not each get a forty acre farm and a mule, but as a rule they are never troublesome or dangerous. In truth they require the incentive of the master's eye, or else a faithfully-fulfilled contract, by the piece or acre, just as white laborers do. Their wages vary from \$7 to \$10 per month, and rations, which do not cost altogether more than \$10 per month more. The females make excellent in-door servants, and can be hired at nearly half the above. We found all portions of the State above-named healthy, and with the advantage over the Western section of nearness to market, plenty of splendid timber, and good water. We felt the heat no more than in New York, and farmers assured us that they could do that hardest of all work—the hoeing of cotton—all day in the hottest sun. The quality of the land is various, but equal to any section North, that we know of, and wherever proper cultivation, rotation of crops, and manures are applied, the results are an excess of Northern products on the same area. Japan clover, white and red clover, and the grasses can generally be grown, white cotton at the present price, and the vineyard, which is being rapidly inaugurated, render a farmer's success speedy and certain. The prices of lands vary from \$3 to \$30 per acre. In the cities and towns large-sized lots can be got from \$50 to \$500.(?) Houses and grounds which cost five times their present price, can be readily obtained. Even in the mineral regions land is still very cheap. We saw a large fruit farm, only four miles from Raleigh, rich in gold and plumbago, with good house and 180 acres, that could now be bought for \$1,500. The owner was the former postmaster, and a much respected man. One-fourth cash, and three to five years' credit, are the general terms; while many properties can be hired, with an option of purchase, at a stated price agreed upon beforehand. Even mere laborers are readily welcomed, for their energy is much needed, and they form a check upon the negro, who, as the Rev. J. B. Smith of Raleigh remarked to us, has at present no proper standard by which to measure a day's work. Mechanics and artisans would find nice

openings and be free from much of that wear and tear which characterizes the struggle for life in more inclement latitudes.

By taking a trip to Norfolk, Portsmouth, Richmond, Lynchburg, Weldon, Raleigh and Asheville, the intending emigrant may readily satisfy himself as to which is the best spot on which to settle according to his capacity and capital. Cheap return tickets are issued by the Virginia State Land Company, whilst the famous North Carolina Land Company, of which our genial New-Yorker, A. J. Bleecker, is a director, have issued tickets for the round trip from Boston or New York for \$24. This is a most respectable and *bona fide* association. W. S. Kingsland of New York is a resident director at Raleigh, and very acceptable to Southern settlers, while the Hon. R. W. Best, Secretary of State, is Grand Master of the Masonic Lodge in North Carolina, and by his urbanity and fairness will be found equally deserving of confidence. We heartily wish all such societies full success. We are assured that the present farms are too large for the means of present holders. They will cheerfully part with a portion to enhance the value of the remainder and to secure a good neighborhood. That this season will be a happy one for the South we do fully believe. Some immigration and capital have already taken place; the full stream will soon follow. The present wheat crop is all safe, and the best known for many years. Oats and vegetables are more than an average crop, tobacco is fair, and though the season is backward, cotton is generally in blossom and the yield at the present prices promises to be the most enriching of any that has occurred of late years. The South will soon be fully recuperated. Norfolk will soon be a busy entrepot worthy of its magnificent harbor, and Wilmington must have her share of direct intercourse. It ought to be the earnest and daily prayer and work of all good Americans to do all that in them lies to help forward this intermixing and prosperous knitting together of all parts of our country.—*N. Y. Tribune.*

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### The Alkali Earth of the Rocky Mountains as a Fertilizer.

Judge J. G. Knapp, Madison, Wis.—During a residence of many months in the central regions of this great continent, I took note of the available mineral and agricultural resources of these Territories. Perhaps it is not generally known that much of the material commonly known by travelers as *alkali*, spread in vast deposits on our western plains, and which the Mexicans call *salitra*, is a compound

salt, of which nitrate of soda is a large constituent, the other ingredients consisting of carbonate and chlorate of soda, with salts of potash. Some difference in composition exists in different localities. Besides the useful arts to which it may be applied, salitra supplies the place of salt to the cattle and sheep; and though poisonous to vegetation where it exists in excess, yet in smaller quantities, but sufficient to be plainly visible by its inflorescence, yet it is a valuable manure, especially for wheat, beets, and onions, and causes New Mexico to produce such fine grapes, peaches, and quinces as can be found in no country where the salt does not exist. The apple-tree and cotton-wood, and some other forest trees are benefited by its presence. There are places particularly in New Mexico, where it might be gathered in almost inexhaustible quantities. Would it not make a valuable dressing for vines, quinces, peaches, and other crops, and thus pay for collection and transportation? Where I have seen it there are no "large accumulations of decaying organic matter" to furnish the nitrogen for the formation of salt, therefore I am of opinion that the nitrogen is derived either from the atmosphere, during the hot, dry seasons, or from the ground through some, to me, unknown volcanic action, as all the hot springs yield some of the combinations of this alkaline earth.

[*Note.*—The Club has long thought that the deposits on the alkali flats of the wide central plateau of this continent, though now condemning those surfaces to sterility, might prove a valuable manure on lands where potash and soda are not abundant. They would suggest to some readers of these reports, who live near those regions to forward a barrel of alkaline earth to the American Institute of New York City to be used experimentally as a manure.]

*N. Y. Tribune.*

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### Clipping Horses.

*Messrs. Editors,*—I have repeatedly been asked my opinion relative to the merits and demerits of clipping horses. As people are generally slow to receive an innovation, whatever may be its value, I will (through the medium of your valuable paper) give my views in as explicit and concise a form as possible. Clipping has a real and magical effect upon the horse. The unclipped horse is distressed by little exertion; he puffs and blows and perspires if driven or ridden at only a moderate pace; he becomes soon exhausted; can scarcely get along, stumbling frequently, and is in fact sadly under the mark. But clip him, lo and behold! he can go double

the distance and do double the work without fatigue. He is quick in his paces, light-hearted, and elastic as a fawn. A marvellous change takes place. What is it? Echo answers what. Have we imparted to his system, suddenly, an increased amount of muscle, more blood, or more nerve? No, nothing of the kind. Then what have we done? Here is a fine field for earnest scientific contemplation. I believe its beneficial influence is attributable to the altered arrangement of the electric force, developing increased vitality. That the great supporter of vital power is an immaterial substance, closely resembling, if not identical, with that which has been termed electricity, will not be disputed; and when the horse is shorn of his thick heavy coat, the body is not insulated as it was before, and there is now established a pure current or circuit of electrical fluid in and out of every part of it, creating an exhilarating excitement and an increased tone of the whole organic system. We find the surface of the skin is warmer in a clipped horse than it was before; it is quite manifest to the hand. That this augmentation or increased supply of caloric is derived from the increased combustion of carbon is more than probable; also, more oxygen is consumed, and it therefore necessarily follows that the removal of this outer barrier to the passage of electricity into the body, which, in accordance with the inherent powers it possesses, is like a metallic chain extending from the conductor of an electric machine to the great reservoir of the electric fluid, the earth, and therefore is, when excited, robbing the body of its greatest source of electricity. I would earnestly recommend that the integument be stripped of this non-conductor—this thick heavy covering—and depend upon it the horse would be more healthy, less subject to fatigue, consume less food, &c., &c., perform his work with more celerity and buoyant spirit, and with far greater pleasure to the rider and driver.

I am, Mr. Editor,

Yours very respectfully,

J. R. FREEMAN, *V S.*

*Veterinary Infirmary, cor. 14th and Ross sts., Richmond, Va.*

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### The True System of Farming.

Trying to do too much is a common error into which the farmer often falls. His great eagerness in striving to be rich is doubtless the cause of his error. He is ambitious and energetic, and forms his plans on a large scale, too often, perhaps, without counting the

cost. He buys a large farm and wants to be called a "large farmer," without understanding or considering the true elements that constitute a real farmer. He fancies the greatness of that profession, as is too often the common estimate, to be in proportion to the number of acres, not to say cultivated, embraced within the boundaries of his domain. The fact is now being spread abroad, that a large farm does not make a man either rich, contented or happy, but on the contrary, the reverse of all these, unless well tilled, when his labor is rewarded by ample crops and fair success in the various departments in which he is engaged. No farmer can realize the full benefits of his profession without adopting a thorough system of culture. His success, commensurate to his wishes, always depends upon the manner in which he prepares his grounds, plants his seed, and rears his stock. Neither of these departments, which may be considered the cardinal ones of his profession, will take care of themselves. The soil may be rich, but it needs culture. His seed may be sown, but it should be in due time, and always on soil well prepared and of a suitable quality for the production of the crop desired. His stock must be constantly cared for—it derives its thrift from the soil, and sends again to that soil the sustenance it requires; but this is not done in a loose or haphazard way. The farmer's care is required, and all his better judgment must be exercised in keeping up this system of reciprocal benefits that may be realized by every intelligent and industrious farmer.

Thorough cultivation and systematic attention to all parts of his business is indispensable to a good degree of success. The very corner stone to this whole system of farming, is to do what you do thoroughly—nature will not be cheated, and never gives full returns to the half way work that is practiced by vastly too many calling themselves farmers. If the land has been worn, the extent of that exhaustion and the food required must be first considered. When ascertained, the full measure of these requirements must be given, to bring out full returns. If the farmer has but a small stock, and consequently but a small amount of manure to replenish his land, it is obvious that but a small farm can be supplied with it; and good judgment at once dictates that to cultivate properly a large farm, artificial fertilizer must be used if good crops are obtained. And so with the labor, two men cannot suitably till one hundred acres of land, when the labor of two men, and perhaps four, might be profitably employed on seventy-five acres.

This is the great error in farming. Two men strive to do what

four can hardly do, and thus thousands of acres are run over, half tilled, and producing half crops. The land is run over till worn out, sustaining year after year the unnatural tax, till its energies are entirely exhausted, and it fails to yield even a feeble crop, because its life is worn out. Much of the soil in Virginia and other Southern States is a type of this. Thousands of acres are entirely useless and exhausted, and will ever remain so, till the first elements of its power are returned to it. This process is going on in many of the Western States. The soil is treated like an inexhaustible mine; the tillers crying give, give, give! till in a few years it will have nothing to give. The boast of the West is, large farms and large fields of grain; plough, sow and reap, is the business of Western farmers, drawing out the very life of the soil, sending away in the heavy exports that are constantly going onward, without returning to the soil the food it requires to make it productive.

The light that is being spread abroad on this subject is beginning to correct this practice to some extent, but in most instances very little is returned to the soil to keep it alive, till after several years of continual cropping, it manifests signs of exhaustion and ultimate barrenness. When tillers of the soil understand their true interests, they will cultivate no more land than they can do well. Fifty acres of land for tillage, brought to a high state of cultivation, pays better than one hundred run over in the way that many do.—*Jefferson Farmer.*

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#### Making a Poor Farm Rich.

Some twenty-five or thirty years ago, I bought a farm containing about one hundred and twenty acres of land. It had been managed badly for many years preceding the sale of it. Fence rows, where hundreds of loads of stone had been hauled off the adjacent fields, were from ten to twenty feet wide, and were filled with cedars, cherry trees, allers, sasafras, briars, rotten rail, &c. Gutters were washed in various places, exposing a stony barren soil, that looked like anything else than desirable farm land. An old farmer, on the day of sale, remarked in reference to the gulleys in the fields, that it mattered but little if all such land was washed away. The buildings were old and dilapidated and needed immediate repairs, to render them at all comfortable for man or beast. This property, however, had two redeeming traits—it was well wooded and well watered.

As was the farm, so was the farmer—poor. To better this state

of things was the aim of the writer, which could not be accomplished without much hard work. This had to be done, and he had to do it. Wood had to be cut and hauled to the kiln; lime to be burned, hauled and spread; fence rows cleaned, fences made, &c. I put one thousand bushels of lime on two ten-acre fields, in the fall, before possession was given. These fields were ploughed in the following spring, and put in with corn, which yielded, when husked not over fifty bushels of sound corn altogether. From one of them, however, I got one hundred bushels of buckwheat, having sown some seed among the sparse and puny-looking stalks of corn about the middle of July.

The next season both fields were put in with oats, averaging forty bushels per acre. I sowed clover and timothy on the oats, and rolled them all in together. The season was favorable and seed took well. I mowed these fields two summers in succession, and had a very good crop of hay. I then put five hundred bushels on one of the fields; and in the spring planted it with corn, which yielded me four hundred bushels without the offal. No manure whatever was used for the crop in addition to the lime, excepting that the corn was plastered in the hill. Oats, wheat, (manured from the barn-yard,) and two crops of grass followed. The ground was then limed again as before, and I gathered the ensuing season sixty bushels of corn per acre. The other fields on the farm have been worked as this, with about the same results, excepting the corn which I think has not been equaled since. There were but two acres of wheat on the place, when I bought it, as all the manure made would not cover a greater extent than this, after a sufficiency was taken out for a potato patch and garden. Two horses and three cows constituted about all the stock. Now there are five horses and upwards of twenty head of cattle kept. The manure they make is sufficient for twenty acres of ground annually. By increased productions of my farm, I have been enabled to pay debts, erect new buildings, and to give my children a good, sound education.

So much for lime; without this fertilizer I could not have lived. I have never sold more than three or four loads of manure. Several times the wheat crop has yielded thirty bushels per acre. I paid \$31 dollars per acre for my farm and have refused \$110.

I have written thus to show that poor land may be made good with lime, and the increased amount of manure obtained as the consequence of the liberal application. Two good horses and a yoke of oxen were all the working stock used on the farm for several years. Young farmers will do well to remember that oxen will do as much



work as horses, eat less grain, require less expensive harness, can be geared in half the time, can be managed more safely by boys, and in fine, are preferable in very many ways.—*Germantown Telegraph*.

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### Lespedeza Striata.

A correspondent of the *Richmond Christian Advocate*, whom we personally know to be a gentleman of the highest character, who has lately travelled extensively in the South, writing from Spartansburg, S. C., under the date of the 8th of June, makes the following statement, as the result of close observation and diligent inquiry respecting the new variety of clover known as the *Lespedeza Striata* which has so wonderfully spread over large sections of the South, since the close of the war:

There is a vegetable production spreading all over this country which may truly be regarded as a providential blessing, I allude to the the *Lespedeza Striata*, usually termed "Japan Clover," frequently "Confederate clover." According to the most reliable information I can get, it first made its appearance at and near country stores about twenty years ago, in South Carolina and Georgia. It is supposed the seed was transported in packages of wares from Japan, where it is said the plant is found. It is curious as well as valuable. Although it evidently belongs to the trifolium, or three leaved family, it can hardly claim to be a clover; for it is not perennial at all, but an annual; nor has it a head and bloom resembling any of the varieties of clover. Its bloom is in shape and color, though very diminutive, like the pea. The seed, also, I am informed, while very small, has the shape and appearance of the pea. It is the opinion of intelligent gentlemen with whom I have conversed, that it should rather be regarded as a pea than a clover; although its appearance is very much like young clover.

The most singular part of its history is the fact that up to the time of the war it had not attracted much attention, nor spread to any noticeable extent; but that during the war it spread as if by magic all over Northern Georgia, upper South Carolina, and many counties of Western North Carolina. Now it pervades every portion in this extensive region. It is literally rooting out broom straw in all the waste lands, vegetates and springs up anywhere, even in gulleys, roads, and on red clay banks, in old fields and forests. It makes its appearance early in spring, an insignificant little plant, and lives through all vicissitudes of weather, wet and dry, till late in the fall, affording grazing for stock of all kinds. It is especially

sued to sheep, and causes them to take on more flesh and fat than any other pasturage in this region. It grows mainly on uncultivated land and never interferes with crops. Should it spring up on lands that are tilled, it is easily destroyed, and is not at all considered a pest. On lands that are rich it is ten or twelve inches high, and may when fully matured in growth, be cut for hay. Its growth is not very rapid. I have watched its growth from the first of April till now. I find it is not generally more than three or four inches high unless the land is tolerably rich. It is the opinion of persons who know more of its peculiarities than I do, that it will root out all noxious grasses—the wire grass included. It is considered a fine improver of the soil, and makes beautiful lawns. It is perhaps the greatest seed producer that has ever grown upon the soils of this country. Once get it on the land, and it remains and springs up without any care or concern of the owner. As it seems to have spread by magic, or on the wings of the wind, you may soon expect to find it on the waste lands of your state.”

### The Crow's Value to the Farmer.

Whatever wrong the crow commits against the cultivators of the soil, may by a little pains-taking, be materially lessened or wholly prevented. The benefits he confers are both numerous and important. During the time he remains with us he destroys, so says no less authority than Willson, “myriads of worms, moles, mice, grubs and beetles.” Audubon also affirms that the crow devours myriads of grubs every day in the year—grubs which would lay waste the farmers fields—and destroys quadrupeds innumerable, every one of which is an enemy to his poultry and his flocks. Dr. Harris also, one of the most faithful and accurate observers, in speaking of the fearful ravages sometimes wrought in our grass-lands and gardens by the grub of the May-beetles, adds his testimony to the great services rendered by the crow in keeping these pests in check. Yet, here in Massachusetts, regardless of such testimony in their favor, we have nearly exterminated the birds, and the destructive grubs, having no longer this active enemy to restrict their growth, are year by year increasing with a fearful persistence. We have seen large farms within an hour's ride of Boston, in which over entire acres the grass was so completely undermined and the roots eaten away, that the loosened earth could be rolled up as easily as if it had been cut by the turfing-spade. In the same neighborhood whole fields of corn, potatoes, and almost every kind of garden vegetable, had been eaten at the root and destroyed. Our more intelligent farmers, who have carefully studied out the cause of this unusual insect growth, have satisfied themselves that it is the legitimate result, the natural and inevitable consequence of our own acts. Our short-sighted and murderous warfare upon the crow has interrupted the harmonies of nature, disturbed her well adjusted ballance, and let loose upon agriculture its enemies with no adequate means of arresting their general increase.—*At. Monthly.*

### Is Farming Profitable in Person County, N. C.?

To Mr. M. McGehee, of Person county, N. C.:

Dear Sir,—I take the liberty of addressing to you, through the pages of the *Planter and Farmer*, some inquiries and suggestions in regard to the special interests of our immediate friends and neighbors. I know you to be alive to every question connected with the material prosperity of this section of our State. “How is this prosperity to be secured?” is a question which we are all prompted every day to ask. But after many and varied experiments, and after much and anxious conference, we are still compelled to repeat the question, and echo answers, “How?”

Limiting our view to our own county, we ask, Are we improving in wealth? This is a far-reaching question. At first blush, it may seem to be a sordid one; but we ask it here with no sordid spirit. We cannot stop to argue it, but venture to affirm, that there is an intimate and a necessary dependence of every other interest upon the material welfare of a community.

“Woe to the land to numerous ills a prey,  
Where wealth accumulates and men decay,”

may be, doubtless is, a true saying; but it is equally true, that prosperity in a community is the basis of all advancement, social, intellectual, moral, religious. Unless honest, earnest and well-applied labor is rewarded with success, the people will, in the long run, either emigrate or sink into stolid apathy, ignorance, and vice.

With an earnestness and anxiety far above all merely sordid feelings, we return to the question: Have we and our neighbors hit upon any means by which we can meet the claims that are upon us?

The question of profit and loss is ordinarily capable of an easy solution. The balance sheet, if fairly drawn, will decide. Unfortunately for us, in this case we have no balance sheet before us. In the case of every single person, he has only to offset his debits against his credits, to see where he stands. Let us endeavor to apply the same test to the county taken as a whole.

We make this general remark. This county produces no single article in sufficient quantities to meet its own wants, except bread, vegetables, and forage for its stock, and tobacco. We buy—shall I attempt an enumeration? Begin at the breakfast table. The table itself, the chairs, the cloth, the plates, spoons, knives and forks, cups and saucers, castors, salt, pepper and condiments, the coffee, tea and sugar, and the salt fish which we eat for a relish, are

all bought. Go out to the fields and stable yard—every implement, most of the horses and mules, and all the chains and harness, and a large part of the manure, the carriage in which you ride, the saddle and bridle, etc. etc., are all bought. Stop at the kitchen—the stoves, tin-ware, kettles, ovens, pails, buckets, and tubs, etc., are all bought. For dinner our people eat bacon, cheese, rice and molasses, most of which, in some cases, has been bought. In many of our stores Ohio lard is sold to our people. Then add the lists of clothing and furniture, almost all of which we buy. On the same lists we must put the reading matter, postage, taxes (State and Federal), insurance premiums, etc. etc. These items give us some idea of what we are paying out of the county. They are all indispensable. Still further, count the whiskey, brandy, and other articles of luxury or of vicious indulgence.

Now take the credit side. We export nothing in any considerable quantities except tobacco and wheat. I have no statistics which will enable me to set the bulk of sales against the aggregate of purchases, but I have a sad and sorrowful impression that the balance of trade is greatly against us. Take the county through, and the wheat crop for the last four years—1865-'6-'7-'8—has not been more than six for one, and this does not pay the cost of its own production. It has been a means of depression rather than of elevation. Can the tobacco interest, with all its accumulated load of burdens in taxation and hired labor, sustain our people? Let one fact answer the question. Tobacco, to the producers in this county, does not pay more than two cents to each hill planted, in the gross. Out of this is to be paid all the cost of making, handling, transporting and selling, with the manure added. These are glowing statements, you say. They are no less truthful, I fear.

A few deductions from these statements are obvious:

1st. We are not increasing in wealth, but our poverty is becoming more and more oppressive. A few men in specially favored circumstances may be doing well, but in the mass, we sell nothing with which to meet the aggregate of bought supplies. The result of all this is increasing indebtedness. If we could look below the surface of things, we should find that the credit system is working ruinously to many men. Many of our people owe hundreds, and some thousands of dollars, for supplies bought since 1864. Besides, notice the progress of dilapidation in houses, in barns, in stables, in inclosures, in wagons, in ditches, all showing that the capital—the sinews of agriculture—is wanting. Then consider the fact that the people have gone in upon their principal, by consum-

ing their stock of almost every kind—sheep, hogs, oxen and cattle—so that many who seem to have made both ends meet, have in fact intrenched upon their capital *somewhere*.

2d. It is as true of communities as of individuals, that if they spend more than they make ruin is inevitable. The evil day may be put off in one way or another, but after all it must come. We have nothing with which to meet the debts against us but land, and land must be sold at ruinous prices. It is a question, then, for our leading minds anxiously to consider, What are we to do? A vicious system must be altered or abandoned. The root of the evil must be found out and cut out, or inevitable desolation is before us. Churches, schools, and enterprises of every kind will languish, and our young men of energy will go off.

*But what are we to do?*

The object of this paper is rather to call out valuable suggestions from yourself and others, than myself to make any that are worthy of attention. Still, the tone of it is so gloomy that we do not feel willing to close without saying something which may suggest a hope of better results.

1st. For most of us, the cash system is of very great importance. At least so far as this—let us only contract debt to secure the means of production. It is madness to enjoy luxury of any kind, at the expense of toil in coming days.

2. We must reduce the surface in cultivation to the paying point. That is, we must cultivate no land when we know beforehand that the crop will not pay for the labor and the feeding and the manure and attention. If we cannot reasonably count on this, it would be better to go at something else.

3. Our main resort must be to mixed husbandry as opposed to the old scheme of planting. Let every man study to produce every thing that he needs for the comfort of his family. Let grass lots and orchards supply cheaper food than that gotten by the plough and hoe. Let barter in the small products of the garden and orchard and dairy pay the grocer and shoemaker. Let all idlers and unproductive consumers be banished from our homes.

4. Let us *slowly*, and as we have the means to pay, substitute machinery for bone and sinew, eschewing experiments, and being guided by the experience of those who have been in more favored circumstances. We cannot afford to be humbugged.

5. Let us endeavor each to practice self-denial to the full extent to which we may be called, and at the same time to encourage and build up home interests. A stitch-down shoe made of leather

tanned by my neighbor, and paid for with half the hide, the shoemaker also paid with a bushel of corn, or a few pounds of flour or bacon, suits me and my boy a great deal better than a pair bought from a distance. Then the money is kept at home, and home industry is developed.

Two other suggestions I leave to be developed by others—one, the relief to be gotten by the introduction of the capital and skill of a new population; the other, the hope which hangs on the subject of a railroad outlet.

Hoping to hear from you,

I am yours, &c.,

PERSON.

July 6, 1869.

P. S.—Person county has not been chosen because the writer thinks it is worse than all the counties, but as a type of the border counties of North Carolina and Virginia—worse off than the rest only in this, that it is farther removed from means of transportation.

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### Norway Oats,

*Editors Southern Planter and Farmer :*

In your May issue appeared an article taken from the *Rural New Yorker*, in regard to the Norway oat. It purported to be a statement from J. B. Garber, giving his and his neighbors' experience with this grain—that it weighed only 24 lbs. per bushel, contained seeds of the Canada thistle, &c. &c. I did not deem it proper to make this communication then, as the growing crop of this grain I had in cultivation had not developed itself. I desire now to make a plain statement of facts in regard to these oats, believing that in so doing I am benefitting the interest of my brother farmers.

In February last I received a circular from the originator and proprietor of these oats, D. W. Ramsdell, of Chelsea, Vermont, and sharing the general prejudice to Northern humbugs, I declined buying his seed at \$10 per bushel, but wrote to him that if he would send me a small quantity, I would sow, reap and thresh them, and we would share the crop. He accepted the offer—principally to introduce the oats into this State—and sent me fifteen bushels. By mischance they did not reach me till very late in April, when they were hurriedly and roughly gotten in on a piece of low grounds. The appearance of the oat was very fine indeed—a large,

dark, meaty grain, with very thin husk, and handling almost as heavy as wheat.

Now in regard to their weight. At the depot before they were taken out, I got several gentlemen who were present to estimate the quantity held by one of the bags, and they unanimously agreed that it did not exceed two measured bushels. We then weighed it on the depot scales, and it weighed eighty-one pounds—allowing one pound for the bag, the oats weighed forty pounds per bushel. After bringing them home I measured a half bushel, and they weighed in a fraction of the same, nearly nineteen and a half pounds. I am satisfied that they weigh generally from thirty-eight to forty pounds per bushel, and I have no doubt that it sometimes amounts to forty-five pounds per bushel, as Mr. Ramsdell claims.

The Norway oats are not as forward as my common variety sown one month and a half earlier, but I don't think that there is more than ten days difference, and I am sure, that sown at the *same time*, they are as early as the common oat. At present they have the appearance of being one hundred per cent. better than the common kind—larger stalk, branching more, double as many grains to the head, much taller, and altogether a healthier, hardier, and better looking grain, and this without any extra culture, as my object was simply to test the true merit of the grain.

On account of the cold and long-continued rains we have had this spring, the oat crop is generally a failure in this section, and the season has been particularly severe on flat land; consequently, the Norway has not had anything like a fair chance—sown one and a half months too late, and drowned with cold rains. It has, however, not been affected by the “rust” at all, although the common kind sown in the same field has suffered a great deal from this disease. The stalk of the Norway oat, as I stated above, is much larger, stouter and stronger than the common oat, and from this fact I judge that it is less liable to be affected by bad seasons, or by the usual diseases that destroy this grain.

I had almost forgotten a most serious objection of Mr. Garber to the Norway oat—the Canada thistle. I must confess that I do not know what the Canada “thistle” is; but if it is anything like our thistle, or, in fact, anything *uncommon*, I have not yet been able to find it in my crop, after a most diligent search. I am certain that Mr. Garber was imposed upon in the purchase he made, and bought a spurious kind. I have been informed that there are several counterfeits of this grain sold in different cities North. I am certain of this, from the fact that I recently met a New York gen-

tleman, who told me that he had cultivated the Norway oat, and that it was *perfectly white*. Now the truth is, that the oat is almost *black*, being of a dark rich brown.

In conclusion, Messrs. Editors, though a young farmer and an unpracticed writer, I make no apology to the public for this communication. Whatever benefits our agricultural community, benefits our State; and that the discovery of this oat is a grand stride in the march of progress and improvement, I have no doubt. I am glad to believe that its introduction here will tend to the resuscitation of our old mother State.

Very respectfully,

W. B. WOOTTON.

*Prince Edward county, Va., July 5, 1869.*

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### Soil Diagnosis.

The essential elements of all fertile soils, and the characteristic elements of all standard fertilizers, are now familiar to every practical farmer who reads an agricultural journal, and such may not only detect, but remedy the defects of their soils without professional aid on the one hand, or the old empirical application of manures on the other. An essay on this subject was promised to the readers of the *Planter* on the 337th page of this volume. The results of my own experience during the harvest of this month will illustrate the idea, and further expose the popular error, that the relative value of fertilizers can be exhibited by experiments in the field. Their absolute value may be illustrated by repeated experiments after it is determined in the laboratory, but nothing is more mischievous than that reliance on the empirical reputation of manures which inevitably feathers the nest of the quack or the gambler who practices on the indolence and ignorance of men of enterprise, who neither use their own opportunities of observation nor employ experts, but accept the most convenient means.

We may now calculate with some accuracy on the effects of certain elements of manure, but field experiments, frequently repeated, must be invoked to determine the most economical limits at which fertilizers operate when *concentrated* in order to save freight and packages.

A number of fertilizers and new varieties of guano were sent to me last Autumn, in order that their value might be thus demonstrated by field experiments. The intolerable trouble of cleaning and guaging the wheat drill for each, and the extensive area thus embraced, compelled a resort to the following device, which insured



the most accurate results, and avoided all risk as to a change of soil, drainage, exposure, &c., &c.

By the usual mode of "backing up" land with the plough, a strip of land was elevated say 15 feet wide and 100 yards long, and by repeated ploughing the surface soil was doubled at the width of the drill in the centre; over this elevated plateau one drill row was traced in the centre without manure, but with the same gauge that seeded the wheat on the rest of the field (or one and a half bushels per acre)—thus also illustrating the idea recently published in the *Rural American*, in my essay on "a new mode of wheat culture," with regard to the enormous waste of seed wheat that now prevails almost universally.

As a further result of this series of experiments, I may at some future time publish the weight of the wheat per bushel, and estimate the product per acre when the grain is separated from the straw; but any one can approximate to this result by multiplying the weights annexed with 32,670, dividing the result by 7,000, which will reduce it to pounds.

The almost incredible facts here exhibited and repeated after several years' trial of various localities, should indicate some mode of correcting the enormous waste in the usual cultivation of wheat. The samples represent in each case the most uniformly filled drill row from about thirty different spots in the cultivation above described. Unfortunately, I drilled some white Mediterranean wheat on this whole bed, where all of the fertilizers were subsequently spread, as described below. This seed was selected in New York, as I wished to use wheat from a colder climate. I should now prefer the German red, that I drilled on the rest of the field, as less liable to rust, although raised in Maryland, which I was tempted to secure at a cost of \$3.25 per bushel, because of its extraordinary weight (64 pounds per bushel). Moreover, it seems better adapted to our stiff clay or white oak soil.

Two pounds of each fertilizer were uniformly distributed on the drill row above described, it having been divided into sections transversely twenty feet each, by the width of the drill, say eight flukes or sixty-four inches, each embracing more than one hundred square feet; but the Carribbean guano was applied in double that proportion, as nearly all the rest cost about \$60 per ton. It is probable that one-half the quantity would produce an equal influence on the first crop, if drilled with the seed.

The relative value of the several fertilizers to the soil of this particular field is manifested (we suppose) by their apparent influence

in determining the more perfect development and vitality of all the wheat plants, and thus insuring a greater number on the same area, in spite of the extraordinary ordeal of last winter, being equally protected, as above, by the most perfect drainage and a double portion of surface soil. Moreover, the increased tendency to "stool," as evidenced by the number of heads of wheat on the same area, when compared with that of the best cultivations elsewhere.

The last estimate is based on two feet of a drill row uniformly filled with wheat from the best part of the same field, and contiguous to the experimental plots, where the fertilizer was drilled with the seed at the rate of about 300 pounds to the acre, it being composed of the best super-phosphate mixed with about 20 per cent. of Peruvian guano.

	D	C	B	A
Phosphatic guano alone.....	13.18	3050.	1422.	107.
The same with 25 per cent. of Peruvian.....	15.54	5726.	1772.	104.
The same with equal weight of super-phosphate.....	15.32	3698.	1302.	79.
The same super-phosphate alone.....	13.47	3176.	1132.	84.
Another super-phosphate.....	10.25	3506.	0984.	96.
A third standard super-phosphate.....	14.09	3226.	1142.	81.
The same containing Peruvian guano.....	17.22	4326.	1602.	93.
Another said to contain blood.....	13.20	3076.	1122.	85.
Caribbean guano.....	13.74	2226.	0852.	62.
West India guano.....	16.39	3376.	1262.	77.
Normal amount of fertilizer on rest of field drilled with seed...	11.96	1856.	0742.	62.

A—Represents the number of heads on 2 feet.

B—The total weight of these heads.

C—The weight of the whole crop.

D—The average weight of the heads.

It is clearly demonstrated that the wheat manure for the soil of above field is (for the present) the most soluble super-phosphate, or Phosphate guano combined with Peruvian guano. A good clover ley is no doubt the cheapest substitute for the latter.

DAVID STEWART, M. D.

Port Penn, Delaware, July 18, 1869.

To KEEP up the fertility of our pastures, it is evident that we must do our best to check the growth of such a vegetation as is rejected by stock. But it is not enough to destroy the useless and injurious plants; we must encourage the growth of the valuable ones. How shall these objects be completed?

A faithful following of a well selected plan of general farming will always be followed by larger profits, at the close of a long series of years, than will the following of that system which attempts to change from one specialty to another, as the prices of different products vary.

He is a good farmer who makes good compost heaps; he is a better who manages to have the manure applied as fast as it is made.

### Straight Ditches.

*Messrs. Editors,*—Your correspondent from Prince Edward does not seem to have gotten into the merits of the question discussed as to the advantage of straight over crooked streams with reference to the bottom lands. We do not suppose that any one ever doubted that the small streams are governed by the same general laws that apply to larger ones. We do not know that either are governed by any other laws than to follow, in obedience to the laws of gravitation, the channels marked out for them by nature; at least so long as the moving column is confined within those channels; but the question at issue, is whether those channels have been so formed as to control the forces of the currents during freshets to the best advantage of the bottom lands. To say that we cannot improve upon nature is saying nothing. Our great duty is to subdue the earth and make its forces subserve our purpose.

That a body, when not acted on by any external force, if in motion, will continue to move in a straight line, is the first law of motion; and the body is said to move *freely* when its path depends on the action of the impressed forces only; while its motion is said to be *constrained* when its path is confined to a given line or surface. Now the only question to be decided, in our opinion, (and we do not presume to be able to decide it,) is whether that constrained path of being made to correspond with the path the body would move in when *free*, applied to our water courses, would not render our bottom lands less liable to the ruinous washings during freshets. While this rule might not apply to our large water courses, yet we cannot but think the condition of our creek bottoms would be much improved, if it were in our power to give the streams a straight, free course, so that the water during freshets would not be continually breaking over their banks, in their effort to comply with the first law of nature. And would not this free course to the water render the bottom lands less liable to overflow, while the increased velocity and the correspondingly increased force or momentum of the currents would deepen the channel, and the better clear them of the washings and rafts?

In conclusion, we would like to hear from some of your correspondents the probable effect upon the bottom lands along the Mississippi, if its channel were entirely straight from source to entrance into the gulf. Would the levees be more, or less liable to destruction? Would the channel fill up or wash deeper? Would the overflows be more or less injurious to the bottom lands? Would the

velocity of the stream be increased, and if so, would that increased velocity extend to the water which spreads over the bottoms during the freshets, so as to be more destructive in its nature? Would not the overflows be much less frequent in consequence of the free and unobstructed course to the water, together with the probable increased depth of channel and velocity of motion?

Now, Messrs. Editors, as we have no pride of opinion whatever to gratify in the matter, and as all we have written has been rather an inquiry on the subject—has been rather an inquiry after the views of others—we hope you will not withhold your columns from these inquiries, however idle they may appear; especially when you remember it “hath been said by one of old” that the early press of your city was once very much perplexed on the philosophic discussion as to the relative velocity of different portions of a coach wheel, and no doubt the discussion and decision of that question gave the first impetus to that philosophic inquiry, which has developed the thrifty village into the manufacturing city.

J. V. B.

July 24th, 1869.

#### Experiment with Baugh's Raw Bone Phosphate.

*Messrs. Editors,*—For several years previous to “the war,” I was in the habit of using more or less Peruvian guano on my tobacco and wheat crops, and always with satisfactory results. Last fall I was induced to try two tons of Baugh's Raw Bone Phosphate on my wheat. I sowed three hundred pounds to the acre on part of the field, and two hundred pounds to the acre on another part. I also used one hundred and fifty pounds of Peruvian guano to the acre in the same field. It was also put in with the wheat, by shovel ploughs, on land that had previously been turned by Watt's two-horse plough, and then harrowed to receive the grain. The result was a fair crop where I sowed the Peruvian guano, with strong bright straw. Where the Phosphate was used, the straw was weak and much broken, and the heads very badly filled. I could observe no difference between the portions where three hundred and two hundred pounds were used—all alike sorry, and certainly not as good as I would have expected from the same land without any fertilizer. The wheat was sowed in September. I give this as the result of my experience with the only “manipulated” fertilizer I have ever used, and with the hope that further information may be elicited from those who have made more extensive trials not only

with the "manipulated" Phosphate alluded to, but with its congeners. I look upon the use of the best Peruvian guano at this distance from market as a luxury better suited to ante bellum times than to the present; and to persist in the trial of the many "manipulated manures" that are now offered to the farmers, and all at a high price, as worse than foolishness. We cannot afford to be cheated *now*, and rather than incur the risk, I am determined hereafter to rely upon home-made manures—clover, lime and plaster.

Very respectfully,

C. M. REYNOLDS.

*Woodburrn, Botetourt county, Va., July, 1869.*

### Value of Super-Phosphate of Lime for Fertilizing Purposes.

From the *Farmers' Club of the American Institute*, as reported for the *American Artisan*, we clip the following :

"The question of the relative value of super-phosphate of lime for fertilizing purposes was called up by a letter from a correspondent, and led, among other things, to a brief statement of the characteristics of bones as variously prepared for manure. When bones are boiled, the gelatine, which is capable by decomposition of generating ammonia, and has therefore a high manurial value, is removed; hence for bone-dust unboiled bones are best. By dissolving the bones in sulphuric acid the phosphoric acid in them is rendered more soluble and capable of more easy assimilation by the plant; hence, where a quick-acting phosphatic manure is required the super-phosphate should be used; but where it is desired to distribute the effect of the fertilizer over a greater length of time, bone meal will be found better; and, as is generally the case where nitrogenous manurial agents are requisite, the efficacy of the bone-dust, for the reason herein-before indicated, will be enhanced if made from raw or unground bones."

A Massachusetts farmer says he can winter his cows on steamed feed for one-third less expense than on dry feed, and get one-fourth more milk. This is the result of five years experience.

A small or moderate sized tree at the transplanting will usually be a large bearing tree sooner than a larger tree set out at the same time, and which is necessarily checked in growth by removal.

SPIDERS BENEFICIAL.—All spiders, without exception, prey largely upon insects, and chiefly upon the plant-feeding or injurious insects.—*American Entomologist.*

SCHEDULE OF PREMIUMS  
OF THE  
**Virginia State Agricultural Society,**  
AT ITS  
FAIR TO BE HELD AT RICHMOND,

*On the 2d, 3d, 4th and 5th days of November, 1869.*

CLASS I—SECTION I.

ESSAYS OR WRITTEN COMMUNICATIONS.

1. For the best essay on the practical management of a farm of not less than 150 acres, in *Tide-water Virginia*, devoted to mixed husbandry. The necessary farm buildings to be described; the proper division of the farm into fields; the force in teams and farm hands necessary for its cultivation; the rotation of crops pursued; the artificial grasses cultivated; the green crops ploughed in for manure; the quantity and kinds of stock which may be usefully and profitably kept upon it; and all matters deemed necessary by the writer for its profitable and economical management to be distinctly stated. Also, the proper preparation of the land for the different crops and products, the best times, in the opinion of the writer, for planting and sowing these crops, and the method pursued in the management and disposal of them and their offal. Premium, \$40

2. For best essay as above, applicable to the Granite section of Virginia, similar premium of 40

3. For best essay as above, applicable to Piedmont Virginia, similar premium of 40

4. For best essay as above, applicable to the Valley of Virginia, similar premium of 40

5. For best essay on the manual labor presently and prospectively available to the farmers of Virginia, and the actual or supposed comparative value of the several kinds, and the best mode of magaging the same, premium of 40

NOTE.—One essay may embrace two or more of the subjects of the four first named, at the option of the writer; and in case of superior merit, may claim the award over competing essays confined to any one or more of the above named divisions, provided, that but one premium shall be awarded to any essay.

*Judges.*

N F Cabell, Nelson.  
Dr. Thos. P. Atkinson, Danville.  
J. Ravenscroft Jones, Brunswick.  
Wm. H. Harrison, Amelia.  
J. W. Sheffey, Smythe.  
Dr. Wm. B. Cochran, Loudon.

SECTION II.

6. For the best essay on the cultivation and management of tobacco from the plant bed to the warehouse, premium, silver medal of the value of \$15

7. For best essay on the cultivation and management of the ground pea, premium, silver medal, 15

8. For best éssay on manures, including lime, and the mode and time of applying them, with a statement of the quantity pro-

per to be applied per acre, for each of the several crops embraced in the rotation of the principal staple or farm crops, premium, 20

9. For the best essay on grasses adapted to Virginia, with a statement of the kind of land proper to each variety, and the best mode of preparing the same; also the manner of harvesting each crop, premium, a silver bowl, value 25

10. For best essay on swine, premium, 20

11. For best essay on cattle, premium, 20

12. For best essay on poultry, premium, 10

#### Judges.

John R. Edmunds, Halifax.  
W. M. Tate, Augusta.  
E. T. Tayloe, King George.  
Wm. Sayre, Portsmouth.  
B. J. Barbour, Barboursville.  
Wyndham Robertson, Abingdon.

### CLASS II--SECTION I.

#### CATTLE DEPARTMENT.

##### *Short Horns of native stock.*

13. Best bull 3 years old or upwards, \$30

14. Second best do., 15

15. Third best do.,

#### CERTIFICATE OF MERIT.

16. Best bull 2 years old and under three, 25

17. Second best, 10

18. Third best,

#### CERTIFICATE OF MERIT.

19. Best bull 1 year old and under, 10

20. Second best do., 5

21. Third best do.,

#### CERTIFICATE.

22. Best cow 3 years old or upwards, 30

23. Second best do., 15

24. Third best do.,

#### CERTIFICATE.

25. Best cow or heifer 2 years old and under 3, 20

26. Second best do., 10

27. Third best do.,  
CERTIFICATE.

28. Best heifer under 2 years old, 10

29. Second best do., 5

30. Best calf, CERTIFICATE.

31. Best imported bull, 50

32. Best imported cow or heifer, 50

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#### *Herefords of native stock.*

33. Best bull 3 years old or upwards, \$30

34. Second best do., 15

35. Third best do.,

#### CERTIFICATE OF MERIT.

36. Best bull 2 years old and under 3, 25

37. Second best, 10

38. Third best,

#### CERTIFICATE OF MERIT.

39. Best bull 1 year old and under, 10

40. Second best do., 5

41. Third best do.,

#### CERTIFICATE.

42. Best cow 3 years old or upwards, 30

43. Second best do., 15

44. Third best do.,

#### CERTIFICATE.

45. Best cow or heifer 2 years old and under 3, 20

46. Second best do., 10

47. Third best do.,

#### CERTIFICATE.

48. Best heifer under 2 years old, 10

49. Second best do., 5

50. Best calf, CERTIFICATE.

51. Best imported bull, 50

52. Best imported cow or heifer, 50

#### Judges.

James Newman, Orange.

A. T. Caperton, Monroe.

J. F. Kent, Wytheville.

E. Rosenberger, Shenandoah.

B. F. Grayson, Smythe.

S. F. McGehee, Charlotte.

## SECTION II.

*Devons of native stock.*

53. Best bull 3 years old or upwards,	\$30
54. Second best do.,	15
55. Third best do.,	
CERTIFICATE OF MERIT.	
56. Best bull 2 years old and under 3,	25
57. Second best,	10
58. Third best,	
CERTIFICATE OF MERIT.	
59. Best bull 1 year old and under,	10
60. Second best do.,	5
61. Third best do.,	
CERTIFICATE.	
62. Best cow 3 years old or upwards,	30
63. Second best do.,	15
64. Third best do.,	
CERTIFICATE.	
65. Best cow or heifer 2 years old and under 3,	20
66. Second best do.,	10
67. Third best do.,	
CERTIFICATE.	
68. Best heifer under 2 years old,	10
69. Second best do.,	5
70. Best calf,	CERTIFICATE.
71. Best imported bull,	50
72. Best imported cow or heifer,	50

*Judges.*

W. B. Stanard, Goochland.  
 S. T. Stuart, Fairfax.  
 James Taylor, Hayfield Caroline.  
 W. W. Walker, Westmoreland.  
 S. M. Byars, Glade Spring.  
 Thos. A. Hardy, Norfolk.

## SECTION III.

*Ayrshires of native stock.*

73. Best bull 3 years old or upwards,	\$30
74. Second best do.,	15
75. Third best do.,	
CERTIFICATE OF MERIT.	
76. Best bull 2 years old and under 3,	25
77. Second best,	10

78. Third best,  
 CERTIFICATE OF MERIT.

79. Best bull 1 year old and under,	10
80. Second best do.,	5
81. Third best do.,	

CERTIFICATE.

82. Best cow 3 years old or upwards,	30
83. Second best do.,	15
84. Third best do.,	

CERTIFICATE.

85. Best cow or heifer 2 years old and under 3,	20
86. Second best do.,	10
87. Third best do.,	

CERTIFICATE.

88. Best heifer under 2 years old,	10
89. Second best do.,	5
90. Best calf,	CERTIFICATE.
91. Best imported bull,	50
92. Best imported cow or heifer,	50

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*Alderneys of native stock.*

93. Best bull 3 years old or upwards,	\$30
94. Second best do.,	15
95. Third best do.,	

CERTIFICATE OF MERIT.

96. Best bull 2 years old and under 3,	25
97. Second best,	10
98. Third best,	

CERTIFICATE OF MERIT.

99. Best bull 1 year old and under,	10
100. Second best do.,	5
101. Third best do.,	

CERTIFICATE.

102. Best cow 3 years old or upwards,	30
103. Second best do.,	15
104. Third best do.,	

CERTIFICATE.

105. Best cow or heifer 2 years old and under 3,	20
106. Second best do.,	10
107. Third best do.,	

CERTIFICATE.

108. Best heifer under 2 years old,	10
109. Second best do.,	5



- 110. Best calf, CERTIFICATE.
- 111. Best imported bull, 50
- 112. Best imported cow or heifer, 50

*Judges.*

J. B. Crenshaw, Henrico.  
 Geo. Watt, Richmond.  
 Rev. T. W. Sydnor, Nottoway.  
 D. H. Hatton, Norfolk.  
 Wm. Bentley, Pulaski.

SECTION IV.

*Dairy.*

- 113. For best cow of any breed, \$30
- 114. Second best do., 20
- 115. Third best do., 10

*Judges.*

Raleigh Colston, Albemarle.  
 Wm. N. Radford, Bedford.  
 Lewis Bailey, Fairfax.  
 J. S. Stansberry, Spotsylvania.  
 Wm. L. Harrison, Henrico.

SECTION V.

*Work Oxen.*

- 116. Best yoke oxen, \$20
- 117. Second best do., 10

*Judges.*

P. B. Jones, Orange.  
 Dr. J. W. Blanton, Cumberland.  
 S. S. Gresham, Norfolk.  
 Norman Smith, Henrico.  
 Wm. W. Gilmer, Albemarle.

SECTION VI.

*Fat Stock.*

- 118. Best fat bullock over 5 years old, \$30
- 119. Second best fat bullock over 5 years, CERTIFICATE.
- 120. Best fat bullock under 5 years old, 30
- 121. Second best fat bullock under 5 years, CERTIFICATE.
- 122. Best fat cow or heifer, 30
- 123. Second best fat cow or heifer, CERTIFICATE.

- 124. Best pen of fat sheep, 3 or more, 10
- 125. Second best do., CERTIFICATE.

- 126. Best slaughtered mut-ton, 5

- 127. Best pen fat hogs, 3 or more, 10
- 128. Second best do., 5

*Judges.*

R. J. Glendy, Augusta.  
 W. J. Glendy, Pulaski.  
 Samuel Bell, Augusta.  
 Jno G Moffit, Richmond.  
 S. McGavock, Wythe.

CLASS III—SECTION I.

HORSES, ASSES AND MULES.

*Thorough Breds.*

- 129. Best stallion 4 years old or upwards, \$50
  - 130. Second best, 20
  - 131. Best entire colt, 3 years old and under 4, 25
  - 132. Second best, 10
  - 133. Best entire colt 2 years old and under 3, 15
  - 134. Second best, 5
  - 135. Best entire colt 1 year old and under 2, 10
  - 136. Second best, 5
  - 137. Best brood mare 4 years old or upwards, 20
  - 138. Second best, 10
  - 139. Best filly 3 years old and under 4, 15
  - 140. Second best, 5
  - 141. Best filly 2 years old and under 3, 15
  - 142. Second best, 5
  - 143. Best filly 1 year old and under 2, 10
  - 144. Second best, 5
- No premium to be awarded to an unsound animal in the above class.

*Judges.*

E. A. Rawlins, Mecklenburg.  
 Wm. T. Johnson, Cumberland.  
 Wm. Berkeley, Loudon.  
 J. L. Carrington, Richmond.  
 Dr. R. F. Taylor, Amelia.

## SECTION II.

*Roadsters—adapted to quick light draught.*

145. Best stallion 4 years old or upwards,	\$50
146. Second best,	20
147. Best entire colt 3 years old and under 4,	25
148. Second best,	10
149. Best entire colt 2 years old and under 3,	20
150. Second best,	10
151. Best entire colt 1 year old and under 2,	10
152. Second best,	5
153. Best brood mare 4 years old or over,	20
154. Second best,	10
155. Best filly 3 years old and under 4,	15
156. Second best,	5
157. Best filly 2 years old and under 3,	10
158. Second best,	5
159. Best filly 1 year old and under 2,	10
160. Second best,	5
Form and action to be considered as well as speed. No premium to be awarded to an unsound animal in the above class.	

*Roadsters—Adapted to quick coach draught.*

161. Best stallion 4 years old or upwards,	\$50
162. Second best,	20
163. Best entire colt 3 years old and under 4,	30
164. Second best,	10
165. Best entire colt 2 years old and under 3,	20
166. Second best,	10
167. Best entire colt 1 year old and under 2,	10
168. Second best,	5
169. Best brood mare 4 years old or over,	20
170. Second best,	10
171. Best filly 3 years old and under 4,	15
172. Second best,	5

173. Best filly 2 years old and under 3,	10
174. Second best,	5
175. Best filly 1 year old and under 2,	10
176. Second best,	5
Form and action to be considered more than speed. No premium to be awarded to an unsound animal in this class.	

*Judges.*

Robert Edmond, Richmond.
Wm. P. Farish, Albemarle.
——— Trotter, Staunton.
John P. Ballard, Richmond.
Jas. Barbour Newman, Orange.
Col. Edmund Berkeley, Prince William.

## SECTION III.

*Saddle—Adapted to the breeding of improved riding horses.*

177. Best stallion 4 years old or over,	\$50
178. Second best,	20
179. Best entire colt 3 years old and under 4,	25
180. Second best,	10
181. Best entire colt 2 years old and under 3,	20
182. Second best,	5
183. Best entire colt 1 year old and under 2,	10
184. Second best,	5
185. Best brood mare 4 years old or over,	20
186. Second best,	10
187. Best filly 3 years old and under 4,	15
188. Second best,	5
189. Best filly 2 years old and under 3,	10
190. Second best,	5
191. Best filly 1 year old and under 2,	10
192. Second best,	5

*Judges.*

Wm. H. Southall, Albemarle.
J. Seddon Jones, Orange.
L. B. Northrop, Albemarle.
W. W. Michaux, Powhatan.
R. O. Morris, Louisa.
Gen. W. H. F. Lee, New Kent.
Thos. R. Foster, Salem, Fauquier.

## SECTION IV.

*Heavy Draught.*

193. Best stallion 4 years old or over,	\$50
194. Second best,	20
195. Best entire colt 3 years old and under 4,	30
196. Second best,	10
197. Best entire colt 2 years old and under 3,	20
198. Second best,	10
199. Best entire colt 1 year old and under 2,	10
200. Best brood mare 4 years old or over,	20
201. Second best,	10
202. Best filly 3 years old and under 4,	15
203. Second best,	5
204. Best filly 2 years old and under 3,	10
205. Second best,	5
206. Best filly 1 year old and under 2,	10
No premium to be awarded in this class to an unsound animal.	

*Judges.*

John F. Lewis, Rockingham.  
 Gen. Gilbert S. Meem, Shenandoah.  
 Warner Woods, Albemarle.  
 Josiah W. Ware, Clarke.  
 D. J. A. Reid, Madison.  
 N. M. Lee, Richmond.  
 Wm. Gibboney, Wytheville.

## SECTION V.

*Matched Horses in Harness, accustomed to be used together as such in pairs, for quick light draught.*

207. Best pair mares or geldings,	20
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*Matched Horses in Harness, accustomed to be used together as such in pairs, for quick coach draught.*

208. Best pair mares or geldings,	\$20
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*Saddle Horses under the saddle.*

209. Best mares or geldings,	\$20
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210. Second best, Form and action to be considered.	10
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*Ponies and Horsemanship.*

211. Best pony ridden by a lad under 15 years of age, the horsemanship also to be considered, FANCY RIDING BRIDLE.

212. Second best,	FANCY WHIP.
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*Judges.*

Capt. John Tayloe, Stafford.  
 Gen. John E. Mulford, Richmond.  
 Dr. J. P. Harrison, Henrico.  
 Gen. Wms. C. Wickham, Hanover.  
 Randolph Harrison, Goochland.  
 Philip Haxall, Richmond.

## SECTION VI.

*Mules and Jacks.*

213. Best jack,	\$40
214. Second best,	15
215. Best jennet,	20
216. Second best,	10

The premiums to be awarded to none but the finest quality of jacks and jennets, as above classified.

217. Best mule colt 3 years old, foaled in Virginia,	\$25
218. Best mule colt 2 years old, foaled in Virginia,	15
219. Best mule colt 1 year old, foaled in Virginia,	10
220. Best mule colt, a suckling, foaled in Virginia,	5

*Judges.*

James Hunter, Caroline.  
 Edmund Winston, Hanover.  
 John B. Davis, Henrico.  
 Robert Douthat, Charles City.  
 Wm. H. Clarke, Halifax.  
 Gray Boulware, Caroline.

## SECTION VII.

*Trials of Speed.*

221. First day—Premium \$200—mile heats to harness. Open to horses, mares and geldings. Time not to exceed 2:55.

222. Same day—For pacers—

Premium \$100—miles heats to harness.

223. Second day—Premium \$600—mile heats, best three in five to harness. Open to all trotters. Time not to exceed 2:40. If three or more start, the second horse to receive \$100 of the premium.

224. Same day—Second Premium, \$75—mile heats. For colts and fillies three years old and under five years.

225. Third day—First Premium \$100—mile heats, for double teams.

226. Same day—Second Premium \$150—mile heats, best three in five to harness, for horses, mares or geldings over four and under nine years old. Time not to exceed 3:05.

227. Fourth day—First Premium \$100—mile heats, for trotters with running mates.

228. Same day—Second Premium \$75—mile heats to harness, for colts or fillies three years old and under five years. Time not to exceed 3:35.

All the above trials will be governed by the regular rules of trotting; and no premium will be given unless two or more start.

All entries must be made to the Secretary of the Society, on or before 12 o'clock M. the day before the race; and each entry must be accompanied by 10 per cent. of the premium entered for.

The Society reserves the privilege to change the above programme so far as to substitute one day's trials of speed for another, so as to meet casualties of weather, &c.

#### Judges.

Thos. W. Doswell, Richmond.  
W. P. Balch, Boston.  
Aristides Welsh, Chesnut Hill, Penn.  
—— Chambers, Long Island.  
Col. F. G. Skinner, New York.  
T. S. Lang, North Vasselboro', Maine.  
Chas. H. Linthecum, Baltimore.

#### CLASS IV—SECTION I.

##### SHEEP.

*Fine Wools of native stock, including pure bred Spanish, Saxon, French and Silesian Merinos.*

229. Best ram,	\$15
230. Second best,	8
231. Best pen of ewes, 3 in number,	20
232. Second best do.,	10
233. Best pen of lambs (ram), 3 in number,	10
234. Second best do.,	5
235. Best pen of ewe lambs 3 in number,	10
236. Second best do.,	5
237. Best imported ram,	20
238. Best imported ewe,	20
239. Best fleece of fine wool grown in Virginia,	10

*Fine Wool grades, including crosses of above.*

240. Best pen of ewes, 3 in number,	\$15
241. Second best do.,	10
242. Best pen of ewe lambs, 3 in number,	10

##### Judges.

John Page, Clarke.  
David J. Miller, Frederick.  
R. H. Crockett, Wythe.  
John H. Draper, Pulaski.  
Wm. L. Wight, Goochland.

#### SECTION II.

*Middle Wools of pure native stock, including South Downs, Oxford Downs, and other pure breeds of middle wool.*

243. Best ram,	\$15
244. Second best,	8
245. Best pen of ewes, 3 in number,	20
246. Second best do.,	10
247. Best pen of lambs (ram), 3 in number,	10
248. Second best do.,	5
249. Best pen of ewe lambs, 3 in number,	10
250. Second best do.,	5

251. Best imported ram,	20	270. Second best do.,	10
252. Best imported ewe,	20	271. Best breeding sow under	
253. Best fleece of middle	2	2 years old,	10
wool grown in Virginia,	10	272. Second best do.,	5
		273. Best sow and pigs,	15
		274. Second best do.,	10

*Judges.*

Wm. N. Berkeley, Loudon.  
 James B. Newman, Orange.  
 A. D. Dickinson, Prince Edward.  
 R. H. Cunningham, Culpeper.  
 Wm. G. C. White, Washington.

## SECTION III.

*Long Wools of native stock, including Bakewell or Leicester, Cotswold, or New Oxfordshire and Lincoln.*

254. Best ram,	\$15
255. Second best,	8
256. Best pen of ewes, 3 in	
number,	20
257. Second best do.,	10
258. Best pen of lambs	
(ram), 3 in number,	10
259. Second best do.,	5
260. Best pen of ewe lambs,	
3 in number,	10
261. Second best do.,	5
262. Best imported ram,	20
263. Best imported ewe,	20
264. Best fleece of long wool	
grown in Virginia,	10

*Judges.*

Jacob Fuller, Rockbridge.  
 George E. Page, Clarke.  
 J. Woods Garth, Albemarle.  
 R. H. Crockett, Wythe.  
 Cary Breckenridge, Botetourt.

## CLASS V—SECTION I.

## SWINE.

*Large breeds, including Chester, Russia, Bedford, Woburn, Grazier, Byfield, and all crosses thereof.*

265. Best boar 2 years old	
and over,	\$15
266. Second best do.,	10
267. Best boar under 2 years	
old,	10
268. Second best do ,	5
269. Best breeding sow over	
2 years old,	15

*Small breeds, including Neapolitan, Suffolk, Sussex, Essex, Berkshire, Chinese, improved Hampshire, and their crosses*

275. Best boar 2 years old	
and over,	\$15
276. Second best do.,	10
277. Best boar under 2 years	
old,	10
278. Second best do.,	5
279. Best breeding sow over	
2 years old,	15
280. Second best do.,	10
281. Best breeding sow under	
2 years old,	10
282. Second best do.,	5
283. Best sow and pigs,	15
284. Second best do ,	10

*Judges.*

R. T. Preston, Montgomery.  
 Jacob Shuey, Augusta.  
 J. M. McNutt, Prince Edward.  
 John Roller, Rockingham.  
 James C. Baker, Frederick.

## CLASS VI—SECTION I.

## POULTRY.

*Chickens.*

285. Best Bramah Pootras,	
cock and two hens,	\$5
286. Best Dorkings (white),	
cock and two hens,	5
287. Best Dorkings (gray),	
cock and two hens,	5
288. Best Cochins China,	
cock and two hens,	5
289. Best White Buff, cock	
and two hens,	5
290. Best White-faced Black	
Spanish, cock and two hens,	5
291. Best Hamburg Spanish,	
cock and two hens,	5
292. Best Poland, black and	
white crests, cock and two hens,	5

293. Best Poland, golden, cock and two hens,	5	317. Best pair Pea Fowls (male and female),	5
294. Best Poland, silver, cock and two hens,	5	318. Best pair Guinea Fowls (male and female),	5
295. Best Bantam, gold laced, cock and two hens,	5	319. Best collection of Pigeons,	5
296. Best Bantam, silver, cock and two hens,	5	320. Best display of Poultry of all sorts,	10
297. Best Bantam, white, cock and two hens,	5	<i>Judges.</i>	
298. Best Bantam, black, cock and two hens,	5	Wm. M. Bagley, Lunenburg.	
299. Best Bantam, game, cock and two hens,	5	Dr. James M. Smith, Pittsylvania.	
300. Best Dominique, cock and two hens,	5	Richard Powell, Goochland.	
301. Best Creve Cœur, cock and two hens,	5	Robert R. Jones, Brunswick.	
302. Best Houdans, cock and two hens,	5	Edward W. Morriss, Hanover.	
303. Best Le Fleche, cock and two hens,	5	—	
304. Best Leghorns (white), cock and two hens,	5	CLASS VII—SECTION I.	
305. Game, cock and two hens,	5	FARM PRODUCTS.	
306. Best variety exhibited by one party,	10	For the largest product per acre, of corn, wheat, oats and hay, provided that not less than 10 adjoining acres be cultivated in any of the said crops; and provided, also, that the corn crop shall not be less than 60 bushels (shelled,) the wheat 30 bushels, the oats 50 bushels, and the hay 2½ tons—premium,	
—		SOCIETY'S DIPLOMA.	
<i>Ducks, Geese, Turkeys, Pea Fowls, Guinea Fowls, and Pigeons.</i>		321. Best shipping leaf tobacco, growth of '68,	\$20
307. Best pair Aylesbury Ducks (male and female),	\$5	To be represented by samples of the crop in whole and prized in 1869.	
308. Best pair Rouen Ducks (male and female),	5	<i>Judges.</i>	
309. Best pair Poland Ducks (male and female),	5	Robert H. Jones, Petersburg.	
310. Best pair Muscovy Ducks (male and female),	5	Edward R. Johnson, Amelia.	
311. Best pair Bremen Geese (male and female),	5	Hilary Harris, Powhatan.	
312. Best pair Hong Kong or African Geese (male and female),	5	Thomas G. Peyton, Richmond.	
313. Best pair Toulouse Geese (male and female),	5	Richard S. Epes, Nottoway.	
314. Best pair White or Colored Swan Geese (male and female),	5	—	
315. Best pair Turkeys, common or crossed,	5	SECTION II.	
316. Best pair Turkeys, wild, crested, or any improved breed,	5	322. Best manufacturing leaf tobacco, growth of '68,	\$20
		323. Best fancy wrapper leaf, growth of '68,	20
		<i>Judges.</i>	
		James Thomas, Richmond.	
		John R. McDaniel, Lynchburg.	
		Wm. R. Johnson, Petersburg.	
		Thomas D. Neal, Richmond.	
		N. W. Harris, Louisa.	

## SECTION III.

324. Best specimen of manufactured tobacco for general home consumption,

## CERTIFICATE OF MERIT.

325. Best specimen smoking tobacco,

## CERTIFICATE OF MERIT.

*Judges.*

Samuel B. Jennings, Danville.  
T. C. S. Ferguson, Lynchburg.  
C. C. Read, Farmville.  
Lewis H. Frayzer, Richmond.  
James H. Grant, Richmond.  
B. F. Gravely, Henry.

## SECTION IV.

326. Best barrel flour,	\$10
327. Best bushel white wheat,	10
328. Best bushel red wheat,	10
329. Best bushel white corn,	
in ear or on stalk,	10
330. Best bushel yellow corn,	
in ear or on stalk,	10
331. Best bushel rye,	5
332. Best bushel oats,	5
333. Best bushel barley,	5
334. Best bushel clover seed,	5
335. Best bushel timothy seed,	5
336. Best bushel herds' grass	
seed,	5
337. Best bushel Kentucky	
blue grass seed,	5
338. Best bushel Highland	
meadow oat seed,	5

Exhibitors in this class must state in writing where the grain or grass or tobacco grew, kind of soil on which it was cultivated, time of sowing and planting or of ripening, with any peculiarity in mode of culture. The samples exhibited to become the property of the Society.

*Judges.*

Wm. T. Scott, Charlotte.  
Jacob Harris, Pulaski.  
A. B. Rucker, Lynchburg.  
John Rowlett, Petersburg.  
R. B. Somerville, Richmond.  
Dr. Wm. J. Cheatham, Amelia.

## SECTION V.

339. Best barrel sorghum	
gar,	\$40

340. Best barrel sorghum molasses,
 15 |

341. Best bale of cured sumac,
 10 |

342. Best bushel of ground peas,
 10 |

343. Best bag of cotton grown in Virginia,
 40 |

344. Best collection of seeds grown in Virginia,
 20 |

345. Best bale of corn shucks,
 6 |

346. Best bale of broom corn,
 5 |

*Judges.*

Wm. H. Burt, Surry.  
John Emmerson, Portsmouth.  
Major Jas Sloan, North Carolina.  
George P. Tayloe, Roanoke.  
Nathaniel Matthews, Lunenburg.

## CLASS VIII—SECTION I.

## DOMESTIC DEPARTMENT.

347. Best specimen fresh butter not less than 10 lbs.,
 \$5 |

348. Second best do. do.,
  |

## CERTIFICATE.

349. Best tub of firkin butter not less than 6 months old, 40 lbs. or more, with written statement of process of packing,
 20 |

350. Best specimen of butter (10 lbs.), potted in July or August, with written statement of process,
 15 |

351. Best cheese not less than 20 lbs, Virginia make,
 15 |

352. Second best do.,
  |

## CERTIFICATE.

353. Best peck dried apples,
 5 |

354. Best peck dried peaches,
 5 |

355. Best peck dried small fruits,
 5 |

356. Best collection of can fruit, Virginia make, with process and cost of canning,
 20 |

357. Best bacon ham cured by exhibitor, with written statement of process of curing and cooking,
 10 |

358. Best specimen of honey, taken without killing the bees, and hive described,
 5 |

359. Best specimen of apple cider,
 5 |

360. Best barrel cider vinegar, 10  
*Judges.*  
 J. C. Spotts, Richmond.  
 Ed. Cunningham, Powhatan.  
 Jed. Hotchkiss, Augusta,  
 George Anderson, Montgomery.  
 William Eggleston, Giles.  
 R. S. Paulett, Farmville.

## CLASS IX—SECTION I.

## HOUSEHOLD MANUFACTURES.

361. Best bed quilt, \$5  
 362. Second best do., 3  
 363. Best counterpane, 5  
 364. Second best do., 3  
 365. Best pair home-made blankets, 5  
 366. Best home-made carpeting, 5  
 367. Best home-made rug, 3  
 368. Best fine long yarn hose (pair), 5  
 369. Best fine long cotton hose, 5  
 370. Best half hose, cotton, 2  
 371. Best knitted worsted or yarn shawl, from yarn prepared at home, 3  
 372. Best knitted worsted or yarn hood, from yarn prepared at home, 2  
 373. Best home-made shirt, 3  
 374. Second best do. do., adapted for working purposes, 2  
 375. Best white yarn under shirt, 3  
 376. Best white yarn drawers, 3  
 377. Best grey mixed Kentucky jeans (7 yards), 3  
 378. Best five pounds white or grey yarn for knitting, 3  
 379. Best home-made family bread, 5  
 380. Best home-made pound or sponge cake, 3  
 381. Best five pounds maple sugar, 5  
 382. Best five pounds sorghum sugar, 10  
 383. Best and largest variety home-made preserves, 5  
 384. Best and largest variety home-made fruit jelly, 3

385. Best and largest variety home-made pickles, 3  
 386. Best catsup, either tomato, walnut or mushroom, 5  
 387. Best five pounds home-made family soap, the process of making to be described in writing by exhibitor, 5  
 388. Best specimen of white or scarlet flannel, from wool grown and made at home, 3

*Judges.*

- Mrs. John Stuart, Henrico.  
 Mrs. James Vest, Louisa.  
 Mrs. Chaffin, Henrico.  
 Mrs. T. E. DeWitt, Richmond.  
 Mrs. Philip Rahm, “

## CLASS X—SECTION I.

## LADIES' FANCY AND ORNAMENTAL WORK.

389. Best specimen of embroidery, \$8  
 390. Second best, 6  
 391. Best specimen of worsted work, 8  
 392. Second best, 6  
 393. Best specimen of crochet work, 8  
 394. Second best, 6  
 395. Best specimen of shell work, 8  
 396. Second best, 6  
 397. Best specimen of leather work, 8  
 398. Best specimen of needle work, 8  
 399. Most extensive variety of useful, ornamental and fancy work, not excluding articles which may have had premiums awarded them under the above specifications, a premium of 10

*Judges.*

A Committee of Ladies to be announced at the Fair.

## CLASS XI—SECTION I.

## AGRICULTURAL IMPLEMENTS.

- Trial of Reapers, Mowers, &c.*  
 400. For the best combined reaper and mower, \$50



401. For the best reaping machine,	50
402. For the best mowing machine,	30
403. For the best hay tedder,	25
404. For the best hay rake,	10
405. For the best wheat gleaner,	10
406. For the best grain cradle,	3

In addition to above premiums, diplomas or medals may be awarded, at the discretion of the committee.

*Judges.*

Hill Carter, Shirley, Charles City.  
James B. Jones, Chesterfield.  
Col. J. M. Wilcox, Charles City.  
James F. Kent, Wytheville.  
E. A. Rawlins, Mecklenburg.  
William Benton, Loudoun.  
Dr. George Newman, Orange.

The above trial was held at Westover June 9th and 10th, and the premiums will be awarded at the regular Fair and Exhibition.

SECTION II.

*Ploughs, &c.*

These premiums are offered for ploughs according to work actually performed, and tested by the Judges on the field.

407. For the best four horse plough, right or left,	\$10
408. For the best three horse plough, right or left,	10
409. For the best two horse plough, right or left,	10
410. For the best one horse plough,	5
411. For the best subsoil plough,	5
412. For the best hill-side plough,	5
413. For the best cultivating plough,	5
414. For the best scraper for tobacco, cotton and vegetables,	3
415. For the best hard ground plough,	5
416. For the best plough for digging ground peas,	5

417. For the best plough for digging potatoes,	5
418. For the best cultivator for corn and tobacco,	5
419. For the best two horse cultivator for corn and tobacco,	5
420. For the best harrow,	5
421. For the best drain plough,	10

*Judges.*

James B. Jones, Chesterfield.  
Charles Friend, Prince George.  
Col. H. P. Jones, Hanover.  
R. V. Gaines, Charlotte.  
James S. Cobbs, Halifax.

SECTION III.

*Drills, Broad Casters, &c.*

422. For the best drilling machine for grain and grass seed,	\$25
423. For the best machine for broadcasting grain and grass seed,	20
424. For the best corn planter,	10
425. For the best attachment to drill for distributing guano and other fertilizers,	10
426. For the best lime spreader, adapted to broadcasting lime and other fertilizers,	20
427. For the best machine for sowing and covering corn at or immediately following the last tillage, either with or without guano,	10

*Judges.*

Thos. J. Randolph, Jr., Albe-  
marle.  
Jacob Baylor, Augusta.  
Gen. Wm. H. F. Lee, New Kent.  
Robert Polk, Henrico.  
Waller Coles, Pittsylvania.

SECTION IV.

*Threshing Machine, &c.*

428. For the best horse power,	\$25
429. For the best railway power,	25
430. For the best machine	

combined for threshing, separating and cleaning,	50
431. For the best thresher and straw carrier,	20
432. For the best fan mill,	10
433. For the best grain and hay pitch forks,	2
434. For the best grain shovel,	2
435. For the best hand rake,	2
436. For the best machine for drilling and cleaning clover seed,	30
437. For best cockle machine,	10
438. For best plantation platform scales,	10
439. For best mower and reaper grinder,	5

*Judges.*

Dr. George B. Newman, Orange.  
Willoughby Newton, Westmoreland.

Dr. John B. Harris, Powhatan.  
Thomas F. Perkins, Buckingham.  
Thomas E. Barksdale, Halifax.

## SECTION V.

*Hay Press, &c.*

440. For the best hay press, exhibited on the ground, with specimen of work,	\$20
441. For the best hay hoisting apparatus, with specimen of work exhibited on the ground,	20
442. For the best sorghum mill,	20
443. For the best sorghum boiler,	10
444. For the best stump machine and rock elevator,	10
445. For the best ditching machine and rock elevator,	30
446. For the best rotary digger and rock elevator,	30
447. For the best corn shuck-ing machine,	25
448. For the best clod crusher machine,	20
449. For the best field roller machine,	10

*Judges.*

E. C. Jordan, Frederick.  
Dr. P. H. Purcell, Amelia.

C. C. Cocke, Fluvanna.  
W. Roane Ruffin, Chesterfield.  
Dr. Wm. C. Staples, Patrick.

## SECTION VI.

*Straw Cutter, &c.*

450. For the best hay or straw cutter for horse power,	\$15
451. For the best hay or straw cutter for hand power,	10
452. For the best corn stalk or fodder cutters,	10
453. For the best corn sheller for power,	10
454. For the best corn sheller for hand,	5
455. For the best root cutter,	3
456. For the best boiler for cooking food for stock,	10
457. For the best hominy mill,	5
458. For the best cider mill and wine press,	5

*Judges.*

Dr. Wm. F. Gains, Hanover.  
Dr J. J. Dupuy, Hanover.  
Dr. Gage, Wythe.  
Atcheson Pollock, Stafford.  
Geo. E. Harrison, Prince George.  
Edward Irvine, Campbell.

## SECTION VII.

*Wagons, Carts, &c.*

459. For the best harvest and hay cart for one or more horses,	\$10
460. For the best wagon for farm use,	10
461. For the best dumping wagon for farm use,	10
462. For the best tumbrel cart (iron axle),	8
463. For the best ox cart,	10
464. For the best wagon body for hauling grain in sheaf, hay or straw,	5
465. For the best sett of wagon harness,	5
466. For the best cart harness,	3
467. For the best ox yoke,	2
468. For the best horse collar,	4

- 469. For the best wheelbarrow for general use, 2
- 470. For the best wheelbarrow for dirt, 2
- 471. For the best wagon saddle, 3
- 472. For the best riding saddle and bridle, 5

*Judges.*

- Charles Old, Powhatan.
- C. R. Mason, Augusta.
- John R. Bryant, Fluvanna.
- Wm. D. Cabell, Nelson.
- Thos. G. Shannon, Giles.
- W. A. Perkins, Cumberland.

SECTION VIII.

*Agricultural Steam Engine.*

No awards should be made in this class except for machines of practical utility in the agriculture of Virginia.

- 473. For the best steam engine, applicable to agricultural purposes generally, \$100
- 474. For the best saw mill, suitable for farm purposes, 25
- 475. For the best steam plough adapted for farm tillage, 300

*Judges.*

- Gen. C. P. Stone, Goochland.
- Wm B. Wooldridge, Chesterfield.
- Dr. R. H. Stuart, King George.
- J. H. Dejarnette, Caroline.
- R. D. Minor, Richmond.
- Wm. Allen, Henrico.

SECTION IX.

*Miscellaneous Articles.*

- 476. For the best pump adapted to deep wells, \$10
- 477. For the best water ram in operation, 10
- 478. For the best scoop or scraper, 10
- 479. For the best levelling instrument suitable for draining operations, 10
- 480. For the best tide gate (model), 10
- 481. For the best farm gate, 5

- 482. For the best machine for shearing sheep, 5

*Judges.*

- Edward Turner, Fauquier.
- Asa Snyder, Richmond.
- Dr. R. Epes, Prince George.
- John G. Lane, Rappahannock.
- P. P. Nalle, Culpeper.

SECTION X.

*Domestic Machines.*

- 483 For the best sowing machine, \$5
- 484. For the best washing machine, 5
- 485. For the best clothes wringer, 2
- 486. For the best clothes boiler, 2
- 487. For the best sausage cutter, 1
- 488. For the best sausage stuffer, 1
- 489. For the best churn, 1
- 490. For the best butter press, for pressing out milk and water, 2
- 491. For the best fruit peeler, 1
- 492. For the best fruit drier, 5

*Judges.*

- Mrs. Wm. C. Knight, Richmond.
- Mrs. Thos. Branch, Richmond.
- Mrs. F. Stearns, Richmond.
- Mrs. F. B. Watkins, Richmond.
- Mrs. F. G. Ruffin, Chesterfield.
- Mrs. R. W. Burke, Staunton.

SECTION XI.

*Domestic Implements.*

- 493. For the best cooking stove, \$10
- 494. For the best heating stove for coal, 5
- 495. For the best heating stove for wood, 5
- 496. For the best heating stove for chambers, 5
- 497. For the best fire-place stove for heating two or more rooms, 10
- 498. For the best dough kneader, 2

- 499. For the best coffee roaster, 1
- 500. For the best coffee pot, 1
- 501. For the best sett wood-  
en ware, Virginia growth and  
manufacture, 5
- 502. For the best sett willow  
ware, Virginia growth and man-  
ufacture, 5
- 503. For the best half dozen  
ladies' work baskets, of Virgi-  
nia growth and manufacture, 5
- 504. For the best sett brooms,  
Virginia growth and manufac-  
ture, 2

*Judges.*

- Mrs. S S. Weisiger, Amelia.
- Mrs. J. Ravenscroft Jones, Brun-  
swick.
- Mrs. Chas. S. Carrington, Rich-  
mond.
- Mrs. B. H. Smith, Richmond.
- Mrs. J. B. Baldwin, Augusta.

SECTION XII.

*Ploughing Match.*

- 505. For the best ploughman,  
white, Virginia born, not over  
25 years old, with four horses, \$50
- 506. For the best do. with  
three horses, 50
- 507. For the best do. with two  
horses, 25
- 508. For the best white  
ploughman, of any age, where  
ever born, 25
- 509. For the best ploughman  
with oxen, 10

*Special.*

- 510. A special premium for  
the best ploughman, a native  
white Virginian, offered by  
Watt & Knight, to be paid in  
their ploughs to the value of \$50
- 511. For the best team of  
horses or mules, not less than  
four, combining condition and  
training and equipments, paid  
in their ploughs, 30
- 512. For the best team of

- two horses, same conditions, to  
be paid in same, 15

*Judges.*

- J. Wayt Bell, Augusta.
- Wm. H. Ruff, Rockbridge.
- Wm. Benton, Loudon.
- Wilson Winfree, Powhatan.
- Wm. Shepperson, Henrico.
- R. Adams, Goochland.

CLASS XII—SECTION I.

FARM DWELLING, &C.

- 513. Best design of farm  
dwelling, out-houses, gate ways  
and grounds, \$80

*Judges.*

- Dr. John R. Garnett, Henrico.
- Thos. T. Giles, Richmond.
- Wm. A. Pratt, Augusta.
- H. D. Bird, Petersburg.
- Wellington Gordon, Louisa.

CLASS XIII—SECTION I.

MINERALS.

- 514. Best specimen of lime-  
stone, including marble and cal-  
careous tufa, \$5
- 515. Best specimen of marl, 5
- 516. Best specimen of green  
sand, 5
- 517. Best specimen gypsum, 5

*Judges.*

- Prof. Mallet, University of Virgi-  
nia.
- Col. Wm. Gilham, Richmond.
- Prof J. L. Campbell, Lexington.
- Prof. R. M. Smith, Randolph Ma-  
con College.
- Prof. B. Puryear, Richmond Col-  
lege.

SECTION II.

DISCRETIONARY PREMIUMS.

*Judges.*

- James A. Seddon, Goochland.
- Chas. B. Williams, Richmond.
- Wood Bouldin, Charlotte.
- Dr. Philip F. Southall, Amelia.
- Dr. Wm. B. Haskins, Mecklen-  
burg.



## Horticultural Department.

JOHN M. ALLAN, - - - - - EDITOR.

### Fall vs. Spring Planting.

A correspondent calls our attention to an address on strawberries, read by Mr. Edwin Satterthwaite, before the Pennsylvania Horticultural Society, in which Fall planting of strawberries is condemned, and inquiries made why we so persistently advocate it.

Without raising any questions as to the correctness of Mr. S.'s views, which are doubtless suitable to the latitude in which he resides, we content ourselves with giving the reasons which render Fall planting preferable in Eastern Virginia and North Carolina. Our Autumns are late, our Winters short and mild, so that the roots of vines, planted in October and November, take hold of the ground and grow frequently during the greater part of the Winter. Then again, we are subject to long droughts in Summer, and these often occur so early in the season as to destroy vines planted in the Spring, before they get sufficiently well started to enable them to resist the dry weather. Experience is the safest guide. Ours is, that trees, shrubs, vines, roots, &c., but more especially the small fruits, succeed much better when planted in the Fall. We have never lost five per cent. of Fall planting, while frequently fifty per cent. of Spring planting has failed, because of early droughts.

We often see August recommended in Northern journals as a good time to plant strawberries. This will not do here. Our Septembers are too hot and dry, October is generally too dry, so that November and December are by far the best months for transplanting all kinds of nursery stock. We even plant our seedling stocks for budding in these months.

In this connection another correspondent says: "I am advised to plant all kinds of fruit trees, except peach, in the Fall. The last, I am told, succeed best when planted in the Spring. Is this true?"

Our experience does not sustain it, and we can see no reason why it should be so. On the contrary, peaches do as well, if not better, than other trees, when planted in November.

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### Melons.

Too little attention has been paid to the improvement and development of the varieties of this fruit in the South. Here in Virginia we have been growing the Jackson and Mountain Sweet watermelons for years, without any attempt to produce varieties which will supply the defects of these, in many respects, admirable varieties. The Jackson, though highly flavored, will not bear transportation, while the Mountain Sweet has neither size nor productiveness to make it all that is desired. Last season the Joe Johnson was introduced, and it at once took the first place. If it succeeds as well this year, its reputation will be firmly established. But the very fact that a variety, so far exceeding the others, has been produced, should only stimulate us to further improvement in these, as well as in their kindred fruit, the muskmelons. Among the latter, the Hunter, a variety brought to notice last year, gave fine promise, and we await in it also the developments of this Summer to decide its future standing.

We hope the Horticultural and Pomological Society will arrange for a melon exhibition, so that the interests of this very popular, and, in this section, very profitable fruit, may be fostered and advanced.

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### Letter from Frederick County, Maryland.

*Dear Sirs,*—Your valuable journal and home have so filled my thoughts during a brief absence, that I am constrained to inflict upon you a short letter.

The hurry of the trip has prevented that close observation which might have discovered something of interest to your readers, but some things which are quite noticeable may be mentioned.

First, that the Summer crops, especially corn, are much farther advanced here than in the city of Richmond, which is two hundred miles farther South. Their average time of planting corn is from April 25th to May 10th. Can it be that under-draining, which is generally and thoroughly done, makes this crop so much earlier?

It is also observed that the early fruits are, this season, very little, if any later, than with us. Early harvest apples and Hale's

early peaches, grown here, have ripened almost simultaneously with the same varieties around Richmond. An extensive and intelligent fruit grower has suggested that this is owing to the exceptional mildness of the past Winter, which was not followed, as with us, by a cold, tardy Spring.

In all garden products, however, they cannot compare with us—neither in quantity, quality, nor earliness. Indeed, the vegetables found in the Richmond markets are not surpassed anywhere. The highest degree of cultivation and fertilization which they bestow upon their gardens here does not enable them to compete successfully with our natural advantages of soil and climate. The only thing we have lacked hitherto has been enterprise, and this is now being compelled by circumstances. As our land is so much better adapted to the growth of vegetables of nearly all kinds, and their production is, consequently, so much cheaper, it was a matter of surprise to find that a large canning establishment had been established at Frederick City. One would have supposed that Norfolk or Richmond would have presented superior advantages for such an undertaking. But as the proprietor has already amassed a large fortune in the same business elsewhere, we must suppose that he knows what he is about. The vegetables are furnished by contract—certain farmers agreeing to plant so many acres in any required crop; to cultivate, harvest and deliver at a stipulated rate per acre. For corn and tomatoes, the price agreed on this year is \$45 per acre.

Richmond badly needs something of this kind, and it is to be hoped that, if one man cannot be found with sufficient capital to undertake it, there may be several of the same mind. At the Fall exhibitions of the Agricultural and Horticultural Societies, a fine opportunity will be offered for making an effort in this direction.

Yours truly,

J:

*Frederick county, Md., July 16, 1869.*

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“FIVE ACRES TOO MUCH.” By Robert B. Roosevelt. Harper & Bros. New York. A. H. Christian & Co., Richmond.

Messrs. A. H. C. & Co. have placed on our table this sprightly satire upon the “Ten Acres Enough” style of horticultural literature with which the country is being now overrun.

We commend the book to the earnest perusal of many who are entering so rapidly, if not prudently, upon the practice of horticulture. It is agreeably written, (with the exception of one or two

paragraphs in which the gross want of refinement, indeed, exceeding coarseness, destroys the attempted wit,) and will suggest to its readers many ways and means by which the anticipated fortune may fail to be realized from the garden and fruit farm.

That it is a burlesque, and, of course, highly exaggerated, cannot be denied; but it nevertheless contains a great deal that may well be pondered by those who for the first time are turning their attention to horticultural pursuits.

Far be it from us to throw even a straw in the way of any who wish to aid in developing this great branch of industry. But we know of no surer way of raising mountains of disappointment and disaster, than the constant publication of marvelous and exaggerated statements of profits from an acre of this vegetable or that fruit.

The experience of many Virginians around Richmond, during the present season, has doubtless convinced them that in future they will be more benefitted in learning from others how and why they failed, rather than what under exceedingly favorable circumstances they have accomplished.

Horticulture is an experience, as well as a science—the latter can only ascertain objects; the former is necessary to bring about results.

If writers wish to accomplish good, let them honestly detail their failures, as well as (or rather than) their successes, and the public will be vastly more benefitted.

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#### The American Pomological Society.

The twelfth session of the American Pomological Society will be held in Horticultural Hall, Philadelphia, Pa., on the fifteenth day of September, 1869, commencing at 11 o'clock, A. M., and continuing for three days.

All Horticultural, Pomological, Agricultural, and other kindred institutions in the United States and the British Provinces are invited to send delegations as large as they may deem expedient; and all other persons interested in the cultivation of fruits are invited to be present and take seats in the Convention. From all parts of the country assurances are given of cordial co-operation and aid. Delegates have already been appointed from several States, among which we may name Kansas, whose Legislature has nobly appropriated five hundred dollars to defray the expenses of her representatives.



Among the prominent subjects which will come before the Society at this session, will be that of the further revision of the Society's catalogue of fruits.

Members and delegates are requested to contribute specimens of the fruits of their respective districts, and to communicate in regard to them whatever may aid in promoting the objects of the Society and the science of American Pomology.

Each contributor is requested to come prepared with a complete list of his collection, and to present the same with his fruits, that a report of all the varieties entered may be submitted to the meeting as soon as practicable.

All persons desirous of becoming members can remit the admission fee to Thomas P. James, Esq., Treasurer, Philadelphia, who will furnish them with Transactions of the Society. Life Membership, Ten Dollars; Biennial, Two Dollars.

Packages of fruits, with the name of the contributor, may be addressed as follows: "American Pomological Society, care of Thos. A. Andrews, Horticultural Hall, Philadelphia, Pa."

Arrangements have been made with several Hotels in Philadelphia for a reduction in price of board. Similar negotiations with the various Railroad Corporations are also in progress, and of which due notice will be given.

Let our State Horticultural and Pomological Society send delegates, and take steps to have the fruits of the State represented.

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### How Cattle Kill Trees.

It is a noticeable fact, that a tree ever so thrifty, and of whatever kind, to which cattle gain access, and under which they become habituated to stand, will very soon die. In the case of a solitary shade tree in a pasture or by the roadside, this is of common occurrence. The query may have been suggested, To what is this owing? In the first place, rubbing a tree by the necks of cattle is highly pernicious, and if persisted in, it will commonly destroy it sooner or later; but if the body of the tree be cased so that their necks cannot touch it, death will ensue just as certainly as they are allowed to tramp the earth about it. But why should tramping the earth destroy the tree? The reason is one of wide and important application to the laws of vegetable growth. The roots of plants need air, if not as much, yet just as truly as the leaves and branches. Their case is analogous to that of fishes, which, though they must have water, must have air also, namely, just about as

much as permeates the water. If it be all shut off, so that none which is fresh can get to them, they will exhaust the supply on hand, and then die for want of more. So the roots of trees and vegetables want air. When the earth is in a normal or natural condition, it is full of interstices and channels, by which air gets to them. But if the cattle are allowed to tramp down the earth, and the sun aids their work by baking it at the same time, a crust like a brick is formed, wholly impervious to the atmosphere, and the tree yields to its fate. So a tree cannot live if its roots are covered with a close pavement. They will struggle for life by creeping to the surface, and hoisting out a brick here and a stone there, or find a crack where their noses can snuff a little breath; but if fought down and covered over, will finally give it up. So if a tree be thrust into a close clay, or its roots are kept under water, it refuses either to be an aquatic, or to put up with its aluminous prison. It will grow as little as possible, and die the first opportunity.—*Prairie Farmer.*

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#### Mushroom Culture.

The first thing to be done in their cultivation is to secure ample supplies of suitable manure; the best is that from the donkey stables, the next that from mules, and the third in value is horse manure; and the last is in more general use because of the scarcity of the former. It should be thrown into heaps, and fermentation induced by frequent watering. In a short time it acquires the necessary qualities, when it becomes short, unctuous, and dark in color, and is fit for use. Cellars and caves are, on account of the equable temperature, the best places in which to form your mushroom beds, particularly when it is designed to grow them each month in the year; but almost any building will do where a temperature between 55 and 60 can be maintained. The beds should be four feet wide, and of any desired length. Ordinary earth is first laid on to a depth of six inches; this is packed firm with the back of the spade, and is then covered with six inches or more of the manure, and this also is packed close with the spade; then the bed is ready to receive the spawn. This can be bought packed, fit for use, in the shape of bricks. These bricks of spawn are broken into small bits, and these bits are stuck an inch deep into every three inches space of the surface of the manure; the whole surface is then covered, two inches deep, with fine sifted earth, and this, too, is well packed down with the spade. Then a good sprinkling is given of

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water heated to 80 or 90 degrees, and within a few days the mushrooms will commence to spring up, and will continue to do so for some months.—*Turf, Field and Farm.*

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### Horticultural Patents.

We are glad at last to see the patent business for horticultural subjects has received a quietus—on full consultation with the different departments and committees at Washington, it has been decided as not advisable, nor even possible, to adopt a satisfactory method for the protection of this class of home productions.

We believe with others, that a man who originates a new vine, fruit, or plant, should have not only due honor, but profit for his long experiments; but, really how is it to be done?

Horace Greeley says, if he buys a new vine from a nurseryman, *that* is his particular property, and no one else's. Now, the wood that the vine makes that same year is his too, and if he chooses to sell it, it is no one's business to hinder him—he has a perfect right to his own.

We believe there is too much humbug in the revamping of old varieties under new names, and, as Mr. Fuller suggests, a good office of registration, with the power of a national authority, would be very desirable for reference and criticism at all times; but we cannot see how patents can be given, nor of what use they practically are after being given. Virtually they are a dead letter. A mowing machine or a garden cultivator cannot reproduce itself; but vines, trees, and plants do, and their produce belongs to their owner, and no one else. Hence we say, that we hope the patent business in horticulture has at last been laid permanently on the shelf as a useless project.—*Horticulturist.*

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### Grape Growers' Maxims.

BY A. S. FULLER.

1. Prepare the ground in the fall, plant in spring.
2. Give the vine plenty of manure, old and well decomposed; for fresh manure excites growth, but it does not mature it.
3. Luxuriant growth does not always ensure fruit.
4. Dig deep, but plant shallow.
5. Young vines produce beautiful fruit, but old vines produce the richest.
6. Prune in autumn to ensure growth, but in the spring to promote fruitfulness.
7. Plant your vines before you put up trellises.
8. Vines, like soldiers, should have good arms.

## SCHEDULE OF PREMIUMS

OF THE

## Va. Horticultural and Pomological Society,

AT ITS

## THIRD ANNUAL EXHIBITION,

TO BE HELD AT RICHMOND,

*On the 2d, 3d, 4th and 5th days of November, 1869, in connection  
and co-operation with the Virginia State Agricultural Society.*

I.—PREMIUMS FOR NURSERY AND OR-		Second best,	10
CHARD PRODUCTS.		For best dozen long blood beets,	2
For the best assortment of nursery		For best dozen cabbages,	5
stock,	\$30	Second best,	Certificate.
For best assortment of two-year ap-		For best half dozen cauliflowers,	5
ple trees suited to Virginia,	10	Second best,	Certificate.
For best assortment of one-year		For best dozen carrots,	2
peach trees suited to Virginia,	10	Second best,	Certificate.
For best assortment of two year pear		For best dozen celery,	5
trees, (dwarf and standard,)	10	Second best,	Certificate.
For largest and best collection of		For best dozen cucumbers,	2
fruits,	30	Second best,	Certificate.
Second best,	15	For best half-dozen egg plants,	2
For largest and best collection of ap-		Second best,	Certificate.
ples,	10	For best dozen kohlrabbi,	2
Second best,	5	Second best,	Certificate.
For best collection of pears,	10	For best dozen lettuce,	2
Second best,	5	Second best,	Certificate.
For best collection of peaches,	10	For best dozen parsnips,	2
Second best,	5	Second best,	Certificate.
For best collection of plums,	5	For best half dozen pumpkins,	2
For best collection of quinces,	5	Second best,	Certificate.
For best collection of grapes,	10	For best dozen radishes,	2
Second best,	5	Second best,	Certificate.
For best native apple,	10	For best dozen salsify,	2
For best native grape,	5	Second best,	Certificate.
For best bushel of dried apples,	5	For best dozen squashes,	2
For best bushel of dried peaches,	5	Second best,	Certificate.
		For best peck onions,	2
		Second best,	Certificate.
		For best bushel of sweet potatoes,	5
		Second best,	Certificate.
		For best bushel of Irish potatoes,	5
		Second best,	Certificate.
		For best peck of peppers,	2
		Second best,	Certificate.
		For best bushel of turnips,	2
		Second best,	Certificate.
		For best dozen endives,	2
		Second best,	Certificate.
		For best dozen broccoli,	3
		Second best,	Certificate.
		For best peck of tomatoes,	2
		Second best,	Certificate.
		In competing for the premium for the	
II.—PREMIUMS FOR VEGETABLES.			
For best cultivated five acres in gar-			
den crops,	\$50		
For best acre of Irish potatoes,	20		
For best acre of winter cabbage,	20		
For best and largest collection of			
vegetables,	25		

## Judges.

Gen. W. H. Richardson, Richmond.  
T. J. Finnie, Wytheville.  
E. R. Trumbull, Brunswick.  
Capt. B. F. Nalle, Culpeper.  
B. F. Wilson, Surry.  
John W. Minor, Gloucester.  
Rev. W. H. Ruffner, Lexington.

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Fall List for 1869 will be Ready in September.

We have given considerable attention to the preparation of small stock for distant transportation. We send thousand of trees annually hundreds of miles. Well packed and with good roots very few die in comparison with larger trees, even when obtained from one's own vicinity, and the freight (but a few cents per 100) adds very little to the cost. Farmers and Planters all over the country set out our trees in rows in their gardens, and the next year remove them to their final places. Our nurseries are well situated for cheap transportation, as water freights are very low, and there is boat communication between Philadelphia and all points South, and railroads inland.

Among the hundreds of items we offer in our list will be found particularly fine *Cherries*, *Pears* and *Apples* one year old, at from *five to fifteen cents apiece* when taken in large quantity; *Apple*, *Quince* and other stocks, and *Shade Tree Seedlings*. We give particular attention to *HEDGE PLANTS*, and have transplanted *Norway* and *Hemlock Spruce*, and *American Arbor Vitæ*, at from *three to fifteen cents* each by the hundred or thousand. Of *OSAGE ORANGE* we have the first stock in the East, and can make it the interest of any one to buy largely of us, either for their own planting or to sell again.

☞ Directions for planting, with the Catalogue, gratis.

THOMAS MEEHAN,  
*Germantown, Philadelphia.*

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My CATTLE are pure-bred Short Horns, and have them of all ages for sale.

Also, ALBEMARLE IMPROVED HOGS, (a cross of Chester Whites and Kentucky Woburn,) better suited to rough fare, and the pure Chester Whites, the best, when well cared for.

S. W. FICKLIN,

apl—tf

*Near Charlottesville, Va.*

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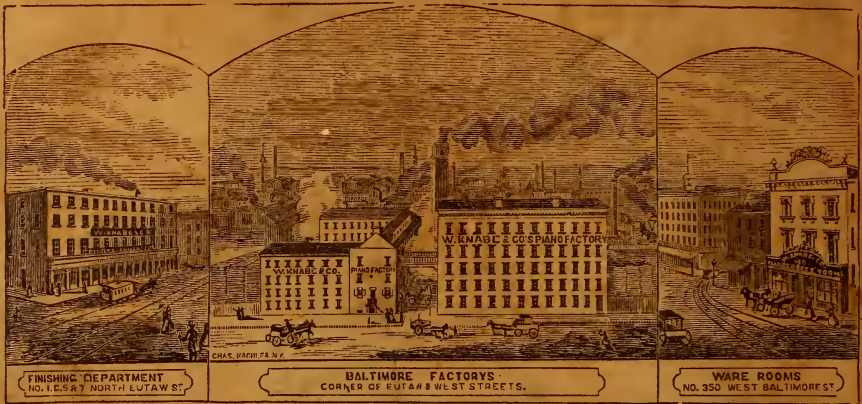
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