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THE SOUTHERN PLANTER AND FARMER

DEVOTED TO

Agriculture, Horticulture, and the Mining, Mechanic 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.

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New Series. RICHMOND, VA., MAY, 1869. Vol. III---No. 5.

Tropical Fruits.

CLEAR WATER HARBOR, FLORIDA.

As much attention is at this time directed to South Florida as furnishing the soil and climate suited to the production of tropical fruit, I have thought that a communication through the *Planter and Farmer* would be acceptable to many of its readers. It is generally known that on the St. John's river and at several points along the Atlantic coast of this State, oranges have been cultivated for many years. Until recently no attempt has been made to cultivate them extensively in any other part of the State. At some points around Tampa Bay, and on Manatee river, small groves have been planted and have borne well for many years. It is only within the last two years that the idea of making the fruits adapted to this soil and climate a prominent object has been entertained. The experiments that have been made have proved entirely satisfactory, and preparations are now making for planting extensively, not only oranges, but limes, bananas, guavas, pine-apples, and several other kinds of fruit, all of which can be produced successfully; and now the prospect is, that as soon as the trees now planting can be gotten into bearing, a large business, in this branch of industry, will be done. In this communication I purpose to give some information concerning the general character of the soil and climate of this part of the

State, and of the cultivation of the fruits most important in the estimation of those engaging in this branch of industry.

SOIL AND CLIMATE.

The climate of Florida generally, but especially of East and Peninsular Florida, partakes largely of a tropical character. In ordinary seasons we can scarcely be said to have any winter. Sometimes there are light frosts, and sometimes a Texas Norther sweeps across the gulf and gives us a few days of weather a little too cool for comfort to those who hardly know what winter is. In the latitude of Tampa it is rare to have a night cool enough to make a scum of ice over a bucket of water. Sweet potato vines usually remain green through the winter, and pumpkins remain out and continue to bear through the coldest weather. The cold of the past winter was unprecedented. A large part of the mangrove bushes, and some of the more tender species of fruit trees were killed. Some of these must have passed fifty winters in safety. During the fall and winter months the weather is usually dry—only occasional showers; in the spring there are more frequent showers, but until after the middle of May, not more than sufficient to bring up the seed planted and keep them in thrifty condition until the first of June, when the rainy season usually commences, and lasts through the summer months, and sometimes extends into September, and occasionally into October. During this period there are usually showers every day, lasting from fifteen to thirty minutes; occasionally there will be a cessation for several days, and occasionally several showers each day.

Near the coast the country is generally low and flat—known here as "flat woods." Its growth is generally scrub pines and low palmetto bushes. It is usually wet and poor, and unfit for anything but range for cattle. Occasionally there are tracts of rolling pine land, with better timber and soil, that with moderate fertilizing will produce well. Such locations are generally free from annoying insects, and furnish pleasant residences. The first settlers of this region generally devoted their attention almost exclusively to cattle, and their only mode of fertilizing was by penning their cattle on small spaces of ground, which were then planted in potatoes, or sugar cane, or sometimes corn. As the country is now filling up with a dense population, the range for cattle must be in a great degree taken up, and a different mode of fertilizing adopted. Occasionally there are tracts of land called "hammocks." Some of these are large; in this vicinity they are generally small, embracing

less than one hundred acres. These are very fertile, and will produce any crop planted without any farther enriching. The growth of these tracts of land is a mixture of oak, ash, hickory, sweet gum, magnolia, and other trees common to this latitude. The growth on the land generally is purely pine. In some parts it is good for building and lumber, in others it is hard to split, and timber for rails hard to find.

The soil on the pine lands is generally of that light, sandy character common to the pine lands along the Atlantic coast. For ordinary farming or planting it is not well adapted, as the amount of land to be fertilized is too great for the ordinary means of the cultivator, and for remuneration by the crops produced. For fruit planting, however, this objection does not hold, as the amount of land planted is so limited that it can be fertilized without too great cost and labor, and the high remuneration will justify the outlay of money and labor which may be required.

The locality from which this communication comes is immediately north of Tampa Bay. The harbor is formed by a succession of islands thrown up by the action of the tides. The water in the harbor is generally shoal, with channels passing through of sufficient depth to admit vessels drawing seven or eight feet. The shore of the main land on the northern part is high, forming beautiful sites for residences. The land back from the shores for two or three miles, is rolling pine land, furnishing a fine location for fruit plantations. Into this there is now moving a good population, which is taking the place of the pioneer settlers, and will in a few years make this one of the most lovely spots in this "land of flowers." The harbor abounds in the luxuries of the ocean, and furnishes fine water for sailing and bathing. The means of fertilizing the land are furnished in the beds of decomposed shell found on the islands, and in the seaweed washed ashore by the tides, and the millions of fish which fill the bay in the fall and early winter. For healthfulness no location can be superior, while for the comfort of climate, taking the year round, few localities can compare favorably with it. The constant breezes, fresh from the gulf, so temper the summer heat, that such a thing as an oppressively hot day is very rare.

TROPICAL FRUITS.

Experiments have proved satisfactorily that nearly all the fruits common to the West Indies can be successfully cultivated. Oranges, lemons, limes, citrons, guavas, mangos, sugar apples, aligator-pears, sapodillas, pine-apples and bananas, all grow well, and stand the

ordinary winter without damage. Several cocoa-nut trees were growing finely on the writer's lot, but were cut down by the intense cold of the last winter. They were, however, only retarded a little in their growth, as they are coming up and look vigorous, and bid fair to do well, as the extraordinary cold of the early winter did not injure them.

Perhaps some statement concerning the cultivation and profit of several of these fruits would be as acceptable as anything I can write.

Oranges, Limes and Lemons.—When the stocks of the native wild orange can be obtained, it is best to get them and bud into them. When this cannot be done, they must be obtained from the seed. The only objection to this is that it requires a longer period to get the trees into bearing. When the wild stocks can be obtained, four or five years will be sufficient; from the seed it requires from six to eight. Generally at six years old, if the trees have been well attended to, the ground around the trees well enriched, and kept in good tilth, they may be expected to bear, on an average, 200 oranges to each tree. From this their production increases rapidly. At ten they will average 1,500; at twelve, 2,000. It is not uncommon to have individual trees bearing 5,000, and some have been said to double that number. The trees are planted at the distance of from twenty to thirty-five feet. I prefer twenty-one, which will give one hundred to a small fraction over an acre. Ten acres will make a grove of convenient size, and one hand can do all the work of cultivating it after it is planted. This would give 1,000 trees to the grove. Until the trees come to bearing size, the ground can be planted in any other crop desired, care being taken not to injure the trees while young by crowding them with other growths. At eight years they may be considered to be in fair bearing condition, and will then generally average 1,000 to the tree. These at one cent each sold on the tree, the purchaser being at all the risk and expense of marketing, will yield $10 to the tree, and the whole grove will bring the sum of $10,000 per crop—a very handsome crop and income for the outlay. But these long eight years of cultivating and waiting—what is to be done with them?

Bananas.—All you have to do to fill up this gap, is to plant the same ground which is occupied with your orange grove in this most delicious and productive fruit. In its native tropical climate it forms a large part of the food of the inhabitants. It is propagated by suckers coming up around the root of the parent stem, and grows off readily when transplanted, and yields very largely. In plant-

ing oranges it may be set out at the distance of about eight feet apart, so as to make two rows of bananas between every two rows of oranges. It will come into bearing in two years, and as it is well supplied with suckers, it keeps up a succession of bearing plants to supply the places of those which, having brought their fruit to maturity, cease to bear, and are taken off to give place to the young shoots which are coming on. Each stem which bears fruit will give about one to succeed it, and three for transplanting. If the ground is made very rich it will do more. It grows well on on ordinary light pine land enriched with leaves, or rotten wood, or dead grass. The rushes growing so abundantly along the beach and margins of our ponds, is found to answer the purpose admirably. By this method, while your orange trees are coming slowly and steadily into bearing condition, you have another crop on the same ground, which in two years brings you a crop perhaps equally or nearly equally as valuable. I say *perhaps*, only because it has not been grown as a market crop in this vicinity. We know that it grows well, will bear transportation to market, and sells readily.

Limes and Lemons.—Limes and Lemons are cultivated and planted very much as the orange. They are more susceptible to cold. They were killed down to the ground by the severe cold of last winter, when the more hardy orange was but slightly injured. I forgot to mention while speaking of the propagation of the orange, that it has recently been found that it can be readily produced from the slip. This will probably be the most common way of propagation as soon as it becomes known, as it will shorten the period of coming into bearing.

Guavas.—This I find a delicious fruit. There are several varieties ripening at different times, and differing in taste, like the different varieties of apples. As a fruit for market, it will probably be valuable only when made into jelly. In this form it is manufactured largely in the West Indies, and imported into our Northern cities. It is too soft and tender in its natural state to bear transportation.

Mangos.—This is a fruit in shape and appearance something like a large pear. It has a seed somewhat like the peach, but larger. Its pulp is a rich yellow, and its flavor strongly resembling the pine-apple. It comes from the seed, and comes into bearing in four years. It bears very largely, and will bear transportation well. I see no reason why it should not become valuable as a market fruit.

Alligator Pears.—I wish sincerely this noble fruit and tree had a

more civilized name; but by this only is it known. The tree is large, and ornamental as a shade tree. The fruit, when ripe, resembles that of the purple egg-plant; its shape is like the pear, and in taste it is somewhat like a rich muskmellon. It is eaten with pepper and salt, and by those who are accustomed to it is highly prized. I know no fruit which to my taste is more delicious. The last three fruits mentioned are tender, and though they stand ordinary winters well, yet by the unprecedented cold of last winter they were killed down to the ground.

The Pine-Apple.—This fruit has hardly been tried enough to speak with confidence concerning it. All the attempts to produce it have succeeded without difficulty. It has been successfully planted fifty miles north of this. It is a variety of the cactus family, propagates by suckers around the root and on the fruit—is easily transplanted, and comes into bearing in two years. It yields largely and bears transportation, and I see no reason why it should not be a valuable article for market.

The Sapodilla I have not seen. I have no doubt it will do well. It is said to be a delicious fruit.

These are the principal fruits to be cultivated. Some others of less importance it is unnecessary to mention.

The crops of sweet potatoes and sugar deserve some notice. The first of these is planted from slips of vines about eighteen inches long. The vines in ordinary seasons remain green through the winter, and may be planted any month in the year. Ridges are thrown up, and the vines cut in sections of proper length; they are then dropped about twelve inches apart, and with a stick having a notch cut in the end, are forced down about eight inches into the ridge. This is all that is done. The vine takes root readily, and grows off rapidly. The potatoes are not usually taken out of the ground, except as they are wanted for use. In the months of August or September is planted what is called the stand-over crop. This is intended to grow through the winter, and be ready for use by the first of May. The severe weather of last winter destroyed a large part of the crop, and by killing the vines has caused much damage. The potato is used largely for feeding stock, and being produced in large quantities and easily kept, answers well.

The sugar crop is important. The cane comes to high perfection, and grows well, with slight fertilizing, on our light lands. A gentleman near Tampa, last fall, from one and one-fourth acres, made fourteen hundred gallons of good syrup, worth fifty cents per

gallon. Half an acre is amply sufficient for the supply of an ordinary family.

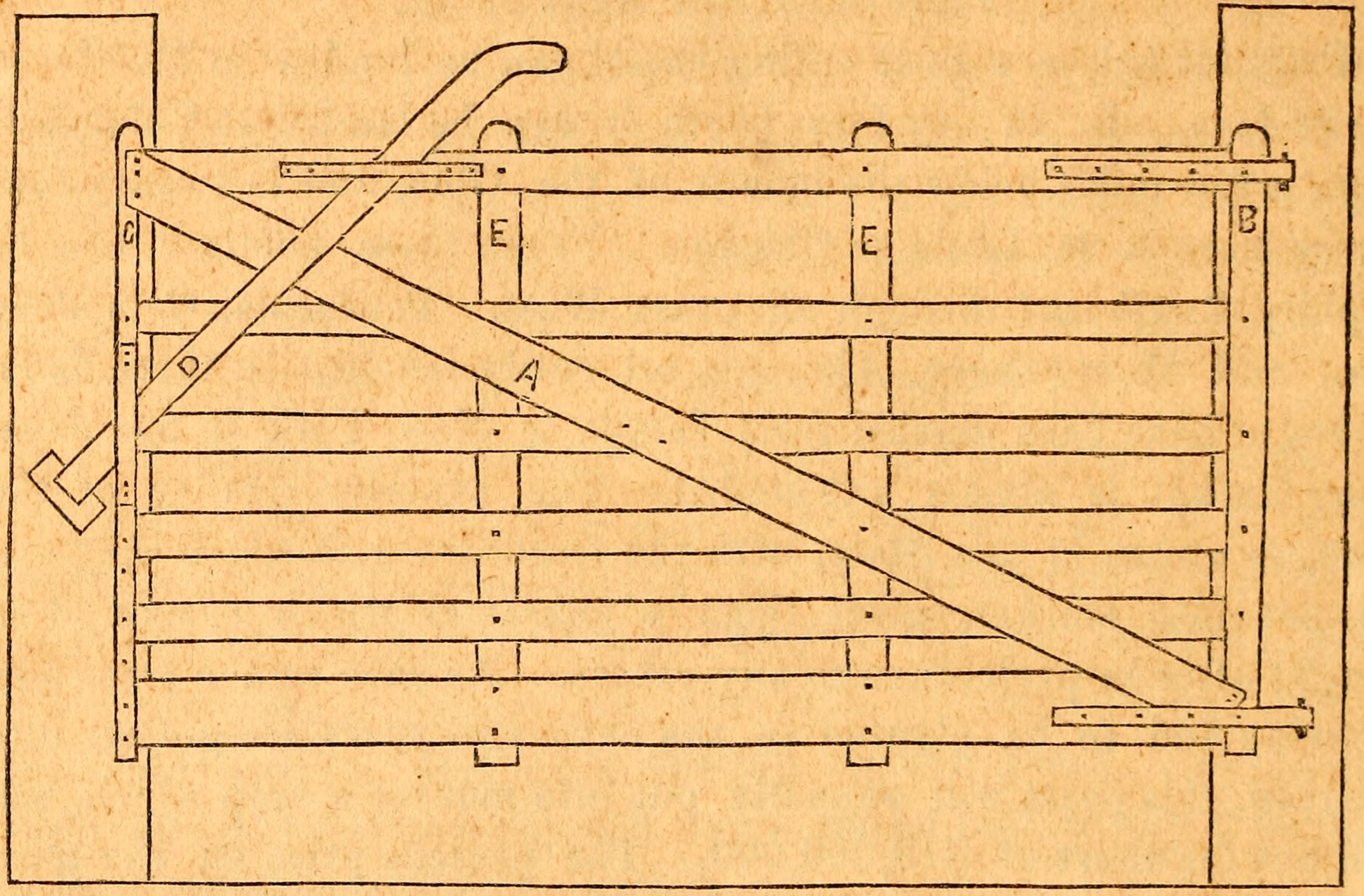
FACILITIES FOR MARKETING.

Fruit loaded on a good sailing vessel can be landed in Mobile in three days. In twenty-four hours it can be landed at Columbus, Ky., a few miles below the mouth of the Ohio, and in twenty-four hours more in St. Louis or Chicago. From these points it can be rapidly distributed through the vast West. Pensacola, Columbus, Ga., and Montgomery, Ala., are all easily reached in three days. Oranges have been carried from Tampa to New York in five days. Our market is almost unbounded. The superior quality of the oranges grown in this State, with the freshness with which they can be put into market, gives them a character which causes them sought after in preference to any others. As soon as the trees now growing and to be planted in the next two years are gotten into bearing, this coast will annually put into market a crop which will fall not far short of $10,000,000. The present price on the trees is about one and one-half cents; it will not fall much short of that for many years. At one cent each, an orange grove of ten acres is an independent fortune. I think our future is bidding fair for high prosperity, and our lovely shores will soon be adorned with beautiful residences, and become the homes of a prosperous and happy people.

FLORIDA.

NORWAY OATS.—We have published articles *pro and con* with reference to these oats. A mislaid letter dated February 10th, has just turned up. It is from J. B. Garber, Columbia, Pa., who writes us he sent to New York for two quarts thereof. To test their weight, he measured the "two quarts," and found that there were two quarts and three-fourths of one pint. Weighing them, he found they weighed exactly one pound and thirteen ounces, sack included. Calculating what one bushel would weigh with three-fourths of a pint to every two quarts, additional, we would have just twenty-four and eleven-nineteenths pounds per bushel instead of thirty-two pounds, the standard weight. Mr. Garber adds: "We have just been informed by a neighbor, who also invested a dollar, that on measuring the quart he had nearly a pint more; besides, he informs us that, on critically examining it, he found seeds of that worst of all weeds, the Canada thistle! The ten dollars a bushel to be paid for these oats is a mere trifle compared with the incalculable injury that farmers will sustain by the introduction of this pest on their farms. Will those who have secured these oats please weigh and measure their samples—and see how facts and advertisements agree?—and search closely for the seeds of weeds also? My neighbor says he will commit his sample to the flames, and advises me to do the same."—*Rural New Yorker.*

Description and Illustration of a Good and Cheap Farm Gate.



In riding over the country you rarely see good gates on the farms. And those that you see, not one in a dozen will shut of itself. Some, in fact, instead of closing, will actually fall open, and require some force to close them. Enclosed I send you a rough draft of a gate, that I know from experience is not only a good, but a cheap one; and any good mechanic can make one or more a day. The gate should be made of slats four inches wide by one inch thick, of good heart pine, or white oak. I prefer the pine. The brace (A) ought to be at least six inches wide, one inch thick, and run the whole length of the gate from the bottom of the rear post to the top of the gate, resting and shouldered a little on each post, and fastened to them with a few wrought nails. The rear post (B) should be made of 3x4 inch heart timber, and morticed through the wide way of the timber. The front post (C) need not be so heavy, but made of 3x3 inch timber. This post ought to be light. The short braces (E) may be made of the same stuff as the slats; and there ought to be at least two of them put on the opposite side of the gate to the main brace (A), and extending from the top to the bottom of the gate. Wherever the braces cross the slats they ought to be riveted, having a burr on the side that is rivited. The burrs may be very conveniently made by punching suitable holes in hoop iron, and then cutting them off with a cold chisel diagonally across the iron, so as to make diamond shaped pieces; now turn the sharp points of the burrs at right angles in a vice or the claw of

hammer, so that when you put the burr on the rivet it will drive into the wood, and serve to hold it in place while riveting. Or you may use either large wood screws or wrought nails, clinching them; but neither will last like the rivets. The latch (D) ought to be made of oak 2x2½ inch timber, dressed so as to slide smoothly on its bearings, and shouldered so as not to fall more than a certain distance, and put on at an angle of 45 degrees. The catch ought to be not less than 3 inches wide, made with a long and easy slope of six or eight inches, and fitted so as to drive in the post after a 2 inch augur. If the latch and catch are well made, they will keep in order longer than any other I have ever seen; but if indifferently made, will not work well. The gate ought to be from ten to twelve feet wide and five feet high. Ten feet is sufficient for a common road gate, but it will take a gate not less than twelve feet wide for reapers to pass.

Such a gate as above described may be made for two dollars and fifty cents without the hinges, and will keep in order, with but little trouble, for ten or fifteen years. The hinges should be made of good tough iron, 2 inches wide by some ⅜ or ½ inch thick. The bottom hinge should be stout and strong, and is most conveniently put on with small screw bolts. The top hinge should stand out from the post say two inches, and the bottom one at least two inches longer than the top one.

Now to hang the gate properly your posts must be put in not less than three and a half or four feet, and be firmly rammed in the ground; for if your posts are not firmly set, you need not expect that your gate will keep in order but a few days at a time. There should also be a log of wood fitted in between the posts, and let in the ground so as to be out of the way. Your hinges being already fastened on the gate as directed, set the gate in position against the posts as near level as possible; now mark the places for the hooks, and bore the holes for them; put the hooks in the hinges, and drive them a little way up into the holes. The lower hook should be longer than the top one, and stand out from the post an inch and a half or two inches more than the top one. Do not drive at first as far as you intend, but drive the lower hinge nearly as far as it ought to go; say let it stand out from the gate post four inches; now drive the top hinge, and regulate the fall of the gate by driving it and trying the gate until you get the proper fall. It will fall too hard if you drive the top hook up close to the post. The gate ought not to have any more fall than will make it catch with certainty; if it falls too hard your gate will knock to pieces.

Having regulated the fall, you may now bore for the catch, drive it in position, and fit the latch so as to bear evenly on the slope; grease the slope, and your gate is finished, and will give satisfaction if the work has been properly done, and the above directions have been followed. In opening your gate, instead of dragging on the ground, the outer end of the gate will rise from the ground, and after passing a certain point will stand open without propping; so that you will not lose time looking after a stick to hold the gate open while your teams are passing through. It will also close with certainty.

If you think the above suggestions are worth anything to the public, you are welcome to use them as you think proper.

Yours, &c., A FARMER.

Orange county, Va.

Horses for Farm Work.

One of my neighbors, who formerly did all his work with oxen, but who gave up and bought a span of heavy Canadian horses, is about to return to the oxen. He says if you get the right kind and *know how to manage them*, they will do nearly or quite as much work as horses; they cost less; do not require so much care; there is no expense for harness; and they can be turned off to the butcher, generally with a profit.

On a rough farm, where there are stumps and stones, and more or less logging to be done in winter, especially on swampy land, a yoke of cattle is indispensable. But when the farm is cleared of stones and stumps, horses, it seems to me, are more profitable. Our seasons are so short, and wages so high, that it is very desirable to push forward the work rapidly. There is a great difference in cattle, just as there is in horses, but, as a rule, horses will get over the ground faster than oxen. If two horses cannot walk along with a plough or a harrow at a fair rate, put on three.

The more I read of them, the more I am convinced that the Percheron horses, say half or three-quarters blood, will prove to be just what American farmers need. When I read Mr. Du Hay's charmingly written and interesting work, "The Percheron Horse," I feared, from his remarks in regard to the climate of Perche (page 80), that when bred here they might lose some of their energy. But I have just read an article in the Journal of the Royal Agricultural Society of England, which indicates that we need have no fear on this point. Our climate is vastly more stimulating than

that of England, and if this breed does not degenerate there it certainly will not here. Mr. W. Dickenson, the writer of the article, than whose there is no higher authority, says if he had not gone to the Paris Exposition in 1855, he "should have continued thinking there was no better class of farm horses in the world than the English." But in the streets of Paris he saw a class of horses that "astonished" him. "These horses, walking so nimbly with great loads of stones, were not so fat as our own favorites, but they seemed to me to be doing twice the work. Although leaner, they bore the strictest scrutiny; the more I saw of them, the more I admired them. Meeting Mr. Jonas Webb, I called his attention to them. He said he had never seen such before; he had observed a horse taking into the show yard an immense load of provender, that astonished him beyond measure; he had resolved to try to buy him, but he lost sight of him that day and never saw him afterwards." Mr. D. obtained a stallion which he called "Napoleon," and says: "He has been at work on my farm ever since, almost always with mares. I have never had so good, quiet, active, and powerful a horse before. He is unlike our English cart-horses, for with great size (16½ hands high,) and immense substance, he shows a dash of blood. He has an Arabian head, not small, but of fine character, well proportioned to his size. The neck is very muscular and well turned, the shoulders large, very deep, without lumps on the sides, and oblique—such a shape as would not be objected to for a riding horse; the bosom open, the fore legs magnificent and very short, with great bone, hard sinews, and little hair upon them. His feet are perfect in shape, and perfectly sound in work, his back short, rather dipped, round-shaped ribs, large loins, rather plain, drooping hind-quarters, very large thighs, low down and tightly joined together, with prodigiously powerful, clean hocks, and very short hind legs, well under him. We never have had a difficulty with the engine or thrasher, or with anything in the mud, that Nap. could not extricate us from. His stock are as good and kind as possible. It is a saying with the men, that Nap's colts need no breaking. My mares are small and active; the stock are considerably larger than the dams, but so cleanly, that as foals they look more like carriage horses."

It is very evident that the Percheron stallion is what we want to improve our race of farm horses. When grain and hay were cheap it did not make so much difference what kind of horses we kept, or how many of them. We could, perhaps, afford to let them lie idle half the time. But all this is now changed. Horse feed is expen-

sive, and wages of the teamsters high, and it is very important to keep none but the best horses, and to study economy in using them. I have seen a farmer draw a load of only 22 bushels of potatoes to the city, while another farmer, by having a large, double box, drew over 50 bushels. And even this is a small load—only 2,800 lbs. for two horses.—*Prof. Harris, in American Agriculturist.*

Breaking Colts—Rarey's Method of Horse Training.

The more high spirited and the more valuable the colt is, the more likely is he to be spoiled, by trying to do at three years old the work that should have been done before he was one.

He should be brought into the stable, and visited, and handled often, until he is somewhat used to it, then portions of the harness tried on; if he can be accustomed to it without showing fear, lead him out into the yard, and make him turn to the right or left at the word or the reins. If he refuses to obey, which is quite likely, we know of no way but to whip him into subjection. When he does obey, caress and reward him. If you succeed in making him obey here, fasten him beside a steady horse with a light wagon, and make him go, peaceably if he will, forcibly if you must. If after all these operations he shies from the harness, tries to run from the wagon, or refuses to draw, do not give it up, but use every exertion to bring him to submission, and, finally, to the process known as taming. No horse properly gentled and trained according to the above directions will need taming, but as the majority of colts are never trained, a great many horses will have to be tamed.

Rarey's method is the best. It consists in fastening up the left fore leg, by a strap, buckled tight over the ankle, and the arm near the body, and the second strap attached to the right foot, run through the circingle to the right hand of the tamer, while the left holds the bridle. The horse is now harmless, and should be made to hop, when a vigorous pull with the right hand will throw him on his knees, where he can be held until he is ready to turn on his side, which he should be encouraged to do. These operations will take from fifteen minutes to three hours, according to the strength and spirit of the horse. When once fairly down, he should be caressed, handled, and a saddle or portions of the harness put on him until he finds that none of them will do him any harm. This throwing should be repeated several times, until the horse readily submits and allows his master to do whatever he pleases. By this method Mr. Rarey has tamed the most vicious of horses.—*American Stock Journal.*

Distemper in Cattle—Preventative.

Messrs. Editors,—Having seen it stated the past year that the distemper prevailed amongst the cattle around Richmond, as also in some other places, I feel disposed to re-publish the substance of a communication of mine in the *Southern Planter* for 1854, which, as a preventative, I have never yet known to fail.

About the first week in May procure a trough to correspond in size with the number of cattle; place it where they are penned, and bore a hole through the bottom to let off the surplus water after a rain. Fill it nearly full of red clay, then put on a liberal quantity of salt, and when the cattle are penned at night, they will invariably go to the trough and lick to their satisfaction. The first rain that falls, the salt will saturate the clay, and the cattle will consume the whole of it. This remedy must be continued until the first hard frost.

My father was the first that I know of who adopted this treatment, he having heard that cattle afflicted with distemper had been known to resort to red clay and get well. He, I suppose, recollecting that nature often performed a cure beyond the powers of art, salted his cattle some two or three times a week on a red galled spot, and although his neighbors' cattle were dying rapidly around him, and that for several years, yet he never had a solitary case amongst his stock. For some two or three years he kept them in his enclosures, but after this, in consequence of an imperfect fence, his cattle would go on an adjoining common, and roam with his neighbors' distempered cattle from week to week, yet they entirely escaped this infectious disease. These facts speak for themselves, and go to prove that my father's remedy is a specific to stay this fatal malady.

An uncle of mine told me years ago, that the distemper being amongst his cattle, one of his milch cows was taken with the disease, went off, and when found, was in a gully eating red clay, and got well.

One of my sons at one time lost all his cattle except a milch cow, and when taken with the disease, she went off, was gone several days, and when found, was in a gully eating red clay, and she got well.

Here we have the instincts of nature beautifully exemplified, and we may add, the dog, when sick, seeks relief from herbs, and the guayakil, when bitten by a serpent, finds an antidote in a certain plant.

In the *Southern Planter* for '45, *lime-water is recommended as a sovereign cure for distemper even in the last stages of this disease, and by the way, this is said to be the best known remedy for distemper in horses.

The late Dr. Wm. S. Morton, in a communication to the *Southern Planter* in '54, on distemper in cattle, said: "I strongly suspect that what we call distemper, is the bloody murrain of Scotland and other parts of Great Britain, and that it was carried to North Carolina by Scottish immigrants." The above suggestion I have reason to believe is correct, as I once lived in North Carolina, and from authentic information, I learned that the first cases of distemper occurred in that State near Fayetteville, which was settled principally by the Scotch. Hence the new name—"Carolina distemper."

W. R. HATCHETT.

Keysville, Va., April, 1869.

Condition of our Bottom Land.

Whilst I have pen in hand, I will offer a few remarks relative to the present condition of our bottom lands.

When the streams were in their natural state, every freshet would impel the currents to strike the curves in the stream with such force that the washings or sand were floated or thrown on the adjoining lands; consequently, the bed of the stream remained stationary. This fact every owner of bottom lands has noticed. But since the streams have been straightened, do they throw out the same amount of washings as when in their natural state? No, verily; but, on the contrary, they have continued to accumulate in the bed of the streams until the banks have become so shallow that they afford no protection to the bottom lands, consequently they are nearly valueless.

I have observed when a stream has been straightened near its source, that it is not so liable to fill up; but when it extends for miles, the reverse is the invariable result.

Some twenty-five years ago, an old and intelligent friend, who owned valuable bottom lands, directed my attention to the mistaken policy of straightening the creeks, and regretted having fallen into this error, as he found after his creek was made straight, the sands were accumulating in the channel, the banks were shallower, and

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* Half bushel of water to a peck of lime; let it stand until the water is clear, then pour off the water, and drench with a quart twice a day, until the animal recovers. Three or four doses are generally sufficient.

his bottom lands more subject to be overflowed, (although the stream had been straightened in its whole length below him,) and he feared that from this cause his lands would ultimately be ruined; and how truly has the foreboding been verified; for at this day these lands are nearly worthless. This stream, in its natural state, had excellent banks.

If this theory is deemed erroneous, I would ask, why is it that the rivers are not filled up? Are they not governed by the same natural laws as the smaller streams in their primeval state?

Entertaining these views, I think we should go back to first principles, and give our ditches a serpentine curve to reclaim our bottom lands, which should be carried through the whole length of the stream.

It is with some degree of diffidence that I submit the above views to your consideration and that of your readers, lest they might be deemed a vagary; yet I have arrived at these conclusions from observation and the teachings of nature, which are the charts by which we are enabled to substitute philosophy for error.

Respectfully, WM. R. HATCHETT.

Keysville, Va., April, 1869.

Results of Experiments with several Fertilizers.

Messrs. Editors,—You have several times requested correspondents to give you their experience in the use of fertilizers. I propose to give you the result that has followed my use of them. Last year I purchased two tons poudrette from the Lodi Manufacturing Company, near New York, and used it on my corn at time of planting—dropping a good size handfull to three hills of corn, and in same field mixed equal quantities of poudrette and plaster, and dropped a handful to two hills of corn. The land was of a thin light gravelly quality. I don't think it was of any more advantage to the corn than if I had used same amount of sand. We suffered very much from a drought in June and July in this county, and that may have been the reason; but whatever the reason may have been—either the character of the land or the drought—I derived no benefit from the use of poudrette.

In the Spring of 1860 I used Peruvian guano and plaster in equal quantities at time of planting my corn, to wit: a handful of the mixture to two hills of corn. The corn grew off very beautifully and green. In this instance it "kept the word of promise to the ear, but broke it to the hope;" for the ears of corn were no

better than where plaster alone was used, though the luxuriance of stalk and blade was very appreciable, and could be seen for some distance.

Last Spring I used a ton of Lardy's soluble Pacific guano on my tobacco, two hundred and fifty pounds broadcast to the acre. The land was good fresh land, having been cleared the year before and planted in tobacco. I derived no benefit whatever from its use. On part of the land where no guano was used, the tobacco was equally good and ripened as early as where the guano was sown. I also purchased two tons Baugh's raw bone phosphate, one ton from the manufacturer in Philadelphia, and one from Baltimore. I used three hundred pounds to the acre. The tobacco started badly, and in several places commenced to "french." I gave it two workings, and it improved so slowly and looked so badly that I then purchased a ton of Peruvian guano, made an equal mixture of the guano and plaster, and sowed broadcast about three hundred pounds to the acre, and hilled the tobacco up. It was several weeks after this before we had rain, but the tobacco commenced to improve, and so soon as it rained grew off well and made a fair crop. All signs of "frenching" disappeared. How the tobacco would have matured without the application of guano and plaster I cannot say, but it certainly gave no indications of making even a third of a crop until the last mixture was applied.

I also used a ton of Eureka ammoniated bone super-phosphate of lime on my tobacco, 250 lbs. to the acre. This was decidedly better than either of the other two preparations, and made a fair crop with no other assistance except plaster dropped on the plant. On balance of my crop I used equal mixture of Peruvian guano and plaster, two hundred and fifty pounds of mixture drilled to the acre. The tobacco was good size and leafy; but I find all, in handling, poor and thin in quality. This, however, I attribute to the excessive rains we had in August last. The crop everywhere, so far as I have seen and heard, is thin and poor—which is always the case, so far as my limited experience goes, when there is much rain in August and September.

I had an opportunity of seeing several times during last year the crop of a near neighbor, Mr. T. W. Leigh, who used the soluble Pacific guano (Reese & Co.) His tobacco was large and fine. It was grown on second years' land, and about 250 lbs. to the acre. By the side of this he used Peruvian guano, and I could see no difference in the tobacco. I was so much pleased with his experiment that I purchased two tons last fall for my wheat, and the

wheat is looking thrifty and well, though not so well as where I used the Phospho-Peruvian prepared by the Messrs. McGruder of Richmond.

On my wheat crops for the last two years I have made experiments with other phosphates, but found them of little advantage, except Bradley's Super-Phosphate of Lime. This was nearly equal to Peruvian Guano. This may be owing to the character of my land and the bad seasons we have had for wheat. Whatever may have been the cause, they have certainly not paid for their use.

Last Fall I purchased my seed wheat in the Valley of Virginia (the Lancaster), and with the exception of the two tons Soluble Pacific, have only used Peruvian Guano and the fertilizer prepared by the Messrs. McGruder; and this last was purchased from the letter of recommendation given by Mr. Ruffin in their published advertisement. The wheat where it was used is looking very fine—equal to any crop I have seen except that of Mr. John R. Edmunds, and his wheat was seeded on a heavy Pea-fallow, without any fertilizer. I was so much pleased with my Valley wheat that I am planting seed corn obtained from Augusta county, and at the last working propose to sow 100 lbs. Guano to the acre broadcast.

I hope other farmers will give their experience with fertilizers and the Pea-fallow.

Very respectfully, &c.,

PAUL C. EDMUNDS.

Round Hill, Halifax county, Va., April 12, 1869.

Postage on Seeds, &c.

Seeds, vines, grafts, &c., can be transmitted by mail, very cheaply and safely, if not exceeding the limitation prescribed with regard to the weight of the package. Postage must be pre-paid by affixing stamps for the proper amount, according to the following rates: "On one package to one address, not over four ounces in weight, two cents; over four ounces and not over eight ounces, four cents; over eight ounces and not over sixteen ounces, eight cents; over sixteen ounces and not over thirty-two ounces, sixteen cents—thirty-two ounces being the heaviest weight allowed to pass through the mails. No writing of any kind can accompany the package; if it does, letter postage will be charged. The character of the contents of the package should be marked on the outside—whether seeds, vines, &c."

[The above is taken from Moore's *Rural New Yorker*.—ED.]

An Essay on the Social and Material Interests of Virginia.

To Col. Thos. Brown, President of the Meshodeck Farmers' Club, Westmoreland county:

Having been honored by the Club with the appointment of Essayist, with liberty to write upon any subjects that might suit my fancy, and communicate for publication directly to the *Southern Planter and Farmer*, I respectfully present to the columns of that excellent paper the following communication.

WILLOUGHBY NEWTON.

To the Editors of the Southern Planter and Farmer:

I very cheerfully comply with your request to continue my contributions to the *Planter and Farmer*. I have been, of late, actively engaged in settling up my affairs, which had been somewhat deranged by the ravages of war and eight years' neglect. Having accomplished this desirable object almost to my entire satisfaction, I breathe freely, and can now think of the future without being embarrassed by the past. I do not propose to bore your readers with a formal essay, but shall write with the freedom and ease which is my wont, and following wherever the humor of my pen may lead me, shall remark, after the manner of "Commentator," in the *Farmers' Register*, with frankness on the contents of the *Planter and Farmer*, or upon any other subject that may strike my fancy. I mean to be eminently practical, yet I hope to be pardoned if I mingle my facts with an occasional remark that might become a moral philosopher, or even "a retired political philosopher," after the manner of Taylor, Garnett, or Ruffin, who never lost an opportunity of enlivening the dullness of mere material investigations by the speculations of philosophy.

The first subject on which I shall remark, and by far the most important, is the settlement of the debts of the farmers. Until this object is effected, there can be no general improvement in the agriculture of the State. Much the larger part of the lands will continue to be cultivated on the wretched "Metayer system" or rented out to the freedmen, until, exhausted by imperfect and reckless tillage, they become utterly unproductive. A few farms cultivated by proprietors of means and capacity, like green spots in a desert, will render more conspicuous the desolation that surrounds them. All interests in the State are equally concerned in the speedy accomplishment of this object. Creditors are no less interested than debtors. If I am not greatly mistaken as to the amount of indebtedness, it is impossible that under any system of coercion half the debt can be paid. Judgment liens will prove utterly de-

lusive, and creditors who flatter themselves that they have secured their debts by suits, will find themselves no better off, with their debtors in a court of chancery, than if they had passed through a court of bankruptcy. The lien of the first judgment, the superior dignity of fiduciary debts, and rights of dower, will in nine cases out of ten absorb the whole property at a forced sale, and the large majority of creditors will go unpaid. I speak from long experience and much observation, and having no interest whatever in the subject, am at liberty to express freely my opinion. What is the remedy? Let creditors act with the utmost liberality. Foreign creditors have set our Virginia people a noble example. I have not heard of one of them who is not willing to accept the *face* of his debt, and many of them have volunteered to make much more liberal discounts. They are under no obligation, other than the claims of humanity and enlightened policy, to make these sacrifices. Virginia creditors should not only be affected by these considerations, but should feel bound by a principle of universal justice wanting only a legal sanction, to contribute rateably upon the principle of "general average," to the losses of their confederates, in a common enterprise. Yet I learn, to their shame, few are willing to make any abatement, but demand dollar for dollar. Such avarice will have its just reward, and no good man will grieve at the result. The present state of things cannot last much longer. Let creditors and debtors, each for himself, come together at once. A just and liberal spirit on both sides can effect wonders. Much can be done by what an old gentleman of this county used to call *ingotiation*, or exchanging one debt for another, as most men are both creditors and debtors. Let the settlement be final, and the debt be cancelled, if possible. Let no one whose debts are considerable trust to any arrangement to pay by instalments. The debt will never be paid, and the debtor and his family will continue slaves to the creditor. Better far make a clean sweep, and go through the bankrupt or insolvent court.

I have read with interest and admiration the report of our friend Captain Maury, foreshadowing the brilliant commercial future of Norfolk and Virginia, and hope ere long to make him a suitable acknowledgment for his kindness in sending it to me. I have read also his communication in the *Planter and Farmer*, and the letter of his Amelia correspondent. I will not anticipate your promised criticism on the *pro forma* statement, by entering into a detailed examination of it, but content myself with remarking that the result is far too favorable. I concur in the remarks of other corres-

pondents quoted. Trucking and farming are very distinct operations; and farming can only be profitably conducted on a comparatively large scale, as I have attempted heretofore to demonstrate, and as is conclusively shown in a most excellent article in the last number of the *Rural American*, which I hope you will re-publish.

What is your authority for the table of prices of land in the several States? I think it should be received with many grains of allowance. I am very confident that Virginia lands are intrinsically worth much more now than before the war, and a very few years will demonstrate the fact. If sold under the hammer now, there being no money, they would bring no price; but in this part of the State, whenever sales are effected, it is at prices quite equal to those paid before the war, and these prices are regarded by visitors as extremely low. I do not think that the cause of immigration or the interest of our own people is promoted by representing that large blocks of land may be purchased at fifty cents an acre, as has lately been done in a correspondence between Everett & Co., of London, and the Bureau of Immigration at Richmond. A country can hardly be worthy of the attention of immigrants, whose lands have been settled for more than two hundred years by an intelligent population, are in the centre of civilization, traversed by railroads and navigable rivers, and at the door of the best markets of the world, and are now rated at fifty cents an acre. Intelligent strangers seeing such statements, would naturally avoid such lands as hopelessly sterile, and like the lands on the borders of the dead sea, lying under the curse of God. To compare the value of our lands with those of the far West seems to me absurd. The poorest of our lands are, from mere location, cheaper at any reasonable price asked for them, than the lands of the far West at nothing. We need not be uneasy. The natural advantages of Virginia are so great, that the tide of immigration will soon set in with a rush, and the population will increase quite as fast as it can be assimilated, and few, I suppose, desire to see Virginia pass under foreign dominion. For myself, I wish Virginians ever to be the dominant race in Virginia—in the strong Anglo-Saxon of one of my correspondents, "the best *breed* of people that God ever made."

I looked with interest and high expectation for your promised article on fertilizers for corn. It is a subject on which I really want information, for although I have tried as many experiments as most farmers, I am still in the dark. Permit me to say that your article has not furnished me the desired light, particularly as you designedly withheld an important fact which I think you ought to

have communicated. The agricultural press should, as far as possible, protect farmers from imposition, and when the Editors know an honest dealer, it can be no reflection on others to recommend him. I am sure you would disdain, where duty is involved, to be governed by *policy;* but perhaps those who do not know you so well, may unjustly impute to you such motives. Our farmers' club have had this subject frequently under discussion without satisfactory results. The failure of fertilizers on the last year's crops was so general, and the results so disastrous, that the club declined to publish the report of the committee, lest it might injuriously affect the value of our lands. We came, however, unanimously to one resolution, to buy no fertilizers on credit if possible to avoid it, and to purchase from no dealer who sells at a higher price on credit than for cash. I may say on my own responsibility, that I know of but one such dealer, and I am very sure that his fertilizers are honestly compounded. That person is G. Ober, of Baltimore. By this I mean to reflect on no others, and hope that the remark may be applicable to all.

Jeremy Bentham, notwithstanding his eccentricities, mingled a great deal of sound sense with his philosophy. In his "Book of Fallacies" he exposed, with the quick perception of an acute observer, the gross errors into which mankind had often fallen by accepting as truisms maxims of life and manners, which are found upon examination entirely unfounded. A book of fallacies written after the manner of Bentham, for the benefit of farmers, would just now do a great deal of good. A fallacy now in the ascendant is, that every man should have his *specialty*. This fallacy is not confined to farmers, but has been proclaimed by a gentleman of fine taste and acquirements in the halls of the University. Our young men, instead of having their minds expanded and their hearts enlarged, by ranging over the wide domain of universal knowledge, must "cramp their genius over the pestle and mortar," or confine themselves to some narrow path which may lead to material wealth, at the expense of all that constitutes true greatness in man. Let specialties receive due attention. But the true aim of education should be, to develop to the utmost all the faculties; and so to train the mind, that it may be capable of rising to the loftiest contemplations, and of comprehending the smallest details. This has been the peculiar characteristic of the Virginia mind, as illustrated in the history of so many of her distinguished men, of whom Marshall, Jefferson and Madison were types; whose intellects, cramped by no artificial restraints, ranged the universe of thought, and like

the wonderful organ of the largest and most sagacious of living animals, could at once embrace the greatest and minutest objects. We are in great danger of sinking into a grovelling materialism. The souls of most of our leading men are absorbed by the desire of gain. Individually and collectively, they are making haste to be rich. Wealth is certainly desirable, but life has many nobler objects, and it is the duty of those who control the education of the young, to direct their minds to those higher aims.

Specialties are now all the rage with many of our farmers. *Potatoes* are to make fabulous yields, and to raise their producers to sudden opulence. They are almost as valuable as gold, and an alderman eats fifty dollars' worth of them at a meal. In the cant phrase of the day, "there is money in them," especially if you raise those *colouer d' rose.* Fruits of all kinds, great and small, are to produce fortunes. Grapes, blackberries, raspberries, strawberries, and even cranberries, have found an advocate. The profits, actual or estimated, from these ventures are so great, that the experimenter flatters himself he will soon find the lamp of Aladdin or the philosopher's stone. A retired merchant, an entuusiastic suburban farmer from the neighborhood of Philadelphia, who has settled among us, lectures us freely on our want of enterprise. "Why don't you plant potatoes? There are men in the neighborhood of Philadelphia who rent land at high rates, plant cabbages between the rows of potatoes, pay their rent and expenses from the sale of the cabbages, and have left fifteen hundred bushels of potatoes to the acre as clear profit!" He religiously believes these statements, though the average crop of Pennsylvania is only eighty bushels to the acre, and is planting potatoes vigorously. All these things are very good in their place, and no farmer should neglect them. But we should remember that they belong to the province of the gardener, the fruiterer, and the trucker, who in due time will find ample employment among us, when capital and labor and manure can be commanded to carry on these very costly enterprises, and new lines of ready communication are opened with the great cities.

Our friend the junior editor has, I perceive, again mounted his *special* hobby the sheep, and like the currier who insisted on fortifying the city with leather, I fear, it will be difficult to change his convictions. As he seems to be somewhat sensitive on the subject, I would not mention it, if he had not invited remark. Can our intelligent friend believe that it would be profitable to devote our lands, near to market and peculiarly adapted to corn and all cultivated crops, exclusively to sheep husbandry? Is there not land

enough remote from market, peculiarly adapted to sheep, to supply the demand, in the face of the fact that so great is the fecundity of this animal that the market is overstocked, and even during the last fall and winter thousands were slaughtered for their pelts and tallow?

This furor for change, this haste to be doing something, they know not what, which causes our people, like Bob Sawyer in the novel, to be always fussing and running about, to make at least a show of business, will have its day, and the quiet good sense of the Virginia people, inherited from their British ancestors, will finally prevail. Sooner or later we shall find that all the efforts of land agents and immigration societies will not change the essential characteristics of our people, or the nature of our agriculture. Virginia will still continue, under the influence of natural causes, which governments and laws may modify, but never destroy, to be a planting and farming State, and the laborers who worked for our fathers, will continue, with their descendants, to work for us and our descendants.

The English are a people of practical good sense and of enlarged philosophy. You do not find them given to specialties. The beautiful pictures of English rural scenes, sometimes found in our parlors, do not represent a sheep or cow or horse alone, or any special product of the farm, but from the duck and the dunghill fowl, through the whole range of domestic animals, and the varied products of the field, all find a place. These are true representations of British husbandry—such as have often been exhibited at Holkham and Triptree.

I was a farmer before the war, on the British system of alternate or convertible husbandry; and when I look back to the past, I may say without vanity, a most successful one. This is the only system which, notwithstanding the novelties which may amuse for a time, can be permanently successful in Virginia. You ask for facts; at the risk of the charge of egotism, I will give them. I acted on the principle, TO BUY NOTHING THAT COULD BE RAISED ON THE FARM. I raised my own horses and mules, and often had horses for sale. My pork, beef, milk and butter, lambs, mutton, fruits and garden stuff, were always in the greatest abundance. My clover fields were always luxuriant, and my irrigated meadows yielded the heaviest crops of the best timothy and herds'-grass hay, which I often sold to Yankee timber-getters in the neighborhood at $1 per hundred. The crops of grain were always large and of the best quality; and from one of my farms more corn was sold for a series of years, than from any farm of proportionate extent in Eastern

Virginia, though it supported a large number of negroes and horses, and fattened beeves for the family, and many hogs. The farm contains five hundred and sixty acres, including arable, waste, wood land and meadows. The sales for several years averaged 3,000 bushels of corn, being one year 3,600 bushels. I sometimes reaped from 20 to 22 bushels of wheat for one sown, and for a series of years the crops were large. I had no *specialty*, and my stocks of horses, mules, cattle, sheep and hogs were always numerous. If any person wanted a good cow or yoke of oxen he knew where to find them, and Baltimore butchers in search of mutton or lambs, were seldom disappointed. For more than thirty years I never failed to have lard and bacon to sell, and butter was so abundant that it was often given away, or used to grease machinery. My horses and mules were all lost during the war, and many of my hogs and sheep wantonly destroyed. Yet I saved a flock of sixty sheep, and sent to Hanover, for safe keeping, one hundred and thirty fine grade Cotswold and Southdown, that were greatly admired on the road. These on our salt water pastures had never cost a cent in food or salt; yet more than half of them died in Hanover, on a range of five hundred acres, in a few weeks, for want of salt.

I continued this system as far as possible during the war, and furnished to the Commissary large numbers of fine cattle, and as much as seven thousand (7,000) pounds of bacon at one time; and immediately after this contribution, when General Lee made his last appeal for provisions, I was able to furnish bread for one hundred men for six months, and a considerable quantity of bacon. It is impossible to estimate the quantity of grain furnished to the army and to the suffering people in the devastated districts. It was numbered by thousands of bushels; and when the war was ended, though much of it had been wasted or burnt, I had several thousand bushels left, with which to begin operations anew. I have pursued the same system since the war. The corn has been short and the crops of wheat have failed, but the stock has not. We have sold a considerable number of fine work oxen and cows at good prices and some beef cattle from time to time since the close of the war. In the last three months we have sold seven work oxen for $400. Notwithstanding these sales, the number of the original stock has not been diminished. We have had lamb, mutton, beef, milk and butter, generally, in abundance, and every year since the war have sold more or less bacon and lard. This year I think the proceeds of bacon and lard will supply the family with groceries. Like other patriots, we have been greatly oppressed by old debts, the failure

of crops, the inefficiency of labor, and the scarcity of money; yet a system which under varying circumstances has produced these results cannot be a bad one.

This brings me to what the *Planter and Farmer* says upon the *pork question*—a subject of great importance and greatly neglected. Raise your own pork. It is far cheaper to raise than to buy it, no matter what may be the price of corn. You cannot risk your whole stock of hogs now in the fields or woods. Raise a considerable number in pens with water-proof roofs. Feed with all the slops from kitchen and dairy, which in my family are worth for this purpose nearly a hundred dollars a year. Add to this, refuse grain, vegetables, clover cut and fed in the pens, or in growing lots enclosed for the purpose. I raised fourteen last year in this way. Eleven of them averaged over two hundred—three, being younger, about one hundred and fifty pounds. The manure made from them, which is now ready to be applied to corn, will, I am sure, produce more corn than the hogs consumed.

I am more and more convinced every day that I live, that the alternate or convertible system of husbandry, with comparatively large farms, is the true policy for us in our present circumstances. The labor has greatly improved, and will continue to improve; and once freed from debt, with their energies untrammeled, the gentlemen farmers of Virginia will soon show the world that they are not the drones they have been represented. I fear I have incautiously used the word *gentlemen*. Gentlemen and ladies are terms now eschewed, unless it be by men in independent positions like the Chief Justice who, in sentencing criminals found guilty of a felonious offence, concludes by ordering the marshal to take *those gentlemen* to the penitentiary; or his honor, the Mayor, who, when females of equivocal character are brought into court, orders the Sergeant to escort those *ladies* to the lock-up.

There is another fallacy that ought not to pass unnoticed. All our young men are earnestly urged to strip off and go hard to work with the axe, the plough, the hoe. This is very well when necessary or profitable, but to the extent to which it has been preached, it is extremely mischievous. I doubt not it has driven from Virginia hundreds, nay, thousands of deserving young men, who have left their homes in sorrow and despair, as flying from a life of poverty and servitude. If they were rightly informed, who could blame them for emigrating, rather than remain at home toiling hopelessly at the average rate of farm wages from thirty to fifty cents a day? I would invite them to take a more cheerful view—

to return and reclaim the wasted farms of their fathers, and resume the position, which properly belongs to them, as country gentlemen. No man, young or old, should be too proud to take a hand at anything that is useful. My own son gives daily evidence of this. He is expert in the use of all implements and machinery; can run a line with a plough as straight as if laid off by a surveyor's instruments, and this he has lately done day by day, and was very profitably engaged, because he was leading others. This industry I encourage, but I always inculcate upon him that *brains* are worth more than hands; and as there will always be, in this State especially, plenty of laborers that will require brains to direct them, he will occupy his time more profitably in studying thoroughly the requirements of the farm, and seeing that they are strictly attended to by the laborers, than in drudging with a hoe from day to day. This doctrine of hard work may be pushed to extremes. I have known several worthy white men greatly shorten their days by too much work in our hot summer suns. Our friend, the President of the State Society, I think, rides this hobby rather too freely; and when he ventured, in his inaugural, to advise that the "patrimonial oaks" should be cut down, lest their shades should shelter old gentlemen disposed to indulge themselves, I could not but feel that he had committed an act of impiety—a crime without a name. In all the laws of Lycurgus there was no punishment denounced against paricide, because it was not supposed possible that such an unnatural crime could be committed. To cut down the *patrimonial* oaks is more akin to paricide, for it would break the *father's* heart if living. I confess my fondness for an arm chair, under an umbrageous tree, from which I can see in the distance the graceful movements of the reaper and the harvester, and cry out as they approach me in their round, after the manner of boys at play: "Fight on, my brave boys, your Captain is looking at you!" Surely a sexagenerian, not possessed of any nimble powers of locomotion, might be allowed this indulgence. *Deus nobis hæc otia fecit*, and it is clearly an act of impiety to deprive us of it. But our friend is too practical and utilitarian to enjoy the Arcadian scenes so sweetly depicted by the great poet of the Georgics. In one of these scenes he describes a shepherd with his flocks feeding around him, lying *at ease under a wide-spreading beach tree;* the sun is approaching the horizon; shadows are falling from the mountains; the air is tranquil and serene; and the smoke is ascending from the neighboring villages. This is a scene for a painter, but it has no charms for utilitarians. I confess myself to no little fondness for the ro-

mance and poetry of life. I recollect at this moment lines of Pope, as repeated to me by my father more than half a century ago:

"Happy the man whose will and care,
A few paternal acres bound,
Content to breathe his native air
On his own ground."

The last couplet of the next stanza is,

"Where trees in summer yield him *shade*—
In winter fire."

Perhaps my fondness for shade, and especially for that of the "patrimonial oaks," arises in part from these early associations. But enough of this. *Vive la bagatelle.*

Very truly your friend,

WILLOUGHBY NEWTON.

Cheap Local Fares and Freights the True Policy of our Railroads.

Messrs. Editors,—A friend who claims to speak by authority, tells me that a word or two from even so humble a subscriber as myself would not be totally unacceptable to you. It is in response to this suggestion that you are troubled with this communication.

After residing in Richmond from early boyhood, I have settled down in the country, to try farming in a very small way. Two reasons impel me to this course: the first arises out of considerations of health and economy; the second springs from a settled conviction that, while so many are falling away from the plough, every new comer is, in the present condition of the South, a sort of public benefactor. The soil here seems to be of a very generous disposition, but a course of hard treatment has reduced a tolerable garden spot into a sad wilderness; still I do not doubt that labor, which is the farmer's necessity, will turn the tide in the other direction, and that at no distant time we shall have the wilderness returning to its garden state. I have a notion that any man who has a tolerable share of common sense, joined with industry and perseverance, and will read and question closely, yet act with promptness and independence, may become a farmer. If you think differently, do not tell me so, I pray you, for the present, as I have much respect for your judgment, and may be discouraged. If, however, we shall meet with any measure of success, my better-half, who takes great interest in our movements, may some day trouble you with a sample of what we can do; and, if we can do no better, I dare say that a big blackberry, (a cultivated one, I mean,)

or a tolerable cymling, would not be regarded by you altogether beneath your attention.

As a Virginian, I am deeply interested in whatever concerns the happiness and prosperity of our people; and it is with a sad heart I see so many of our best men standing idle when the earth is still before us, out of whose bosom the prosperity of man has been dug, in every age of the world, upon the Nile, the Jordan, the Tiber, the Thames, &c. Nor can I see why we cannot build up upon the banks of the James an influence which, ere long, shall challenge the admiration of the world. But this last time of my pen is not without an object, as will presently appear.

The location I have chosen, or rather accidentally hit on, seems desirable enough. I am thirteen miles from Richmond, and about one and a half miles from the track of the Richmond, Fredericksburg and Potomac railroad—a sort of national highway, which has one of the finest opportunities in the world to acquire a large share of popularity and a still larger share of pecuniary gain. I wish, indeed, that the representatives of this road could have a just appreciation of its opportunity; but it often happens with corporations, as with individual men, that the sight of the present shilling forbids the contemplation of the contingent dollar. Easy of access from all points, and running, as it does, through one of the healthiest sections of country in the world, this road is well calculated to attract the attention of those who wish to settle in Virginia. And though the lands are often poor, yet they lay remarkably well, and are well capable of improvement by manures which can readily be brought from Richmond or Baltimore. Now if this road would, in view of the present situation of affairs, put its local fares and its manure and farming implement freights at a very low rate, it would need no prophet to foresee that its whole line would, at an early day, become a continuous village. Then the Company, instead of being frequently grumbled at, as it now is, would have the hearty regards of all, and where it is now receiving orders by the hundred, would find thousands flowing into its treasury. Then, too, the traveler as he went North, or came South, instead of beholding a sometimes desolate country, would have his sight refreshed by some of the loveliest scenery in the world; and even the good-natured "Yankee," as he journeyed hitherward, could believe the stories of the darkey who, having run away from his Virginia home, was last seen sitting on the banks of the Mississippi, singing,

"Carry me back to Ole Virginny."

It is strange to me that our railroad corporations do not see that every dweller on the line of their roads is a laborer in their interests, and that every bushel of manure and every farming implement transported by them is assisting in preparing produce which must find its way to market by their agency; and yet if the assumption here is correct, and I think no one can deny it, there is no road whose situation favors a really liberal policy more than does the situation of the Richmond, Fredericksburg and Potomac. For its own sake, as much as for the public good, I would be glad to see it adopt a policy which would infallibly pay so well, both in fame and money.

But I have exceeded the bounds proposed to myself, and I will close abruptly, with the words which Milton has made Satan address to his tardy co-laborers. If I had the voice of seven thunders, I would bawl them into the ear of every dreaming corporation and every indolent Virginian:

"Awake! arise! or be forever fallen!"

K.

Hopewell, Hanover, April, 1869.

Beet-Root Sugar in England.

There have been a number of visitors lately to the works at Lavenham, including M. Caird and Professor Vœlcker, and the experiment appears to be progressing very satisfactorily indeed. The whole of the machinery has been supplied by MM. Jules Reallier and Van Gœthem, Bruxilles, the Belgium engineers, who are fully acquainted with the details necessary for the manufacture. The works are carried on under the superintendence of M. Victor Ortamus, civil engineer, from Belgium, who has had considerable experience in sugar manufacture on the continent, and the principal workmen are foreigners, while for the purpose of enabling them to communicate with the English men and women employed at the works, a Frenchman is engaged as an interpreter, and through him orders are given to the various English employees. There is a lime-kiln on the premises, for the purpose of manufacturing the gas required for saturating the liquid; and from the kiln it passes along a pipe, and thence through two purifiers to an engine, by which it is forced to the spot wanted for use. After leaving the saturating pans the liquid is of a different color, having become a deep brown; and, although sweet, it has a somewhat earthy flavor. When it has been sufficiently long in these pans, it is drawn off into what are

called the decanting pans, where the temperature is again reduced; and it is subsequently transferred to two enormous evaporating vacuum pans, where a certain amount of evaporation takes place, and this completes the process at Lavenham, the remainder of the evaporation being transferred to Mr. Duncan's works in London, for which purpose the product of the roots is sent off, in casks, in a liquid state. The Inland Revenue Department keep an officer constantly on the premises, for the purpose of looking after their interests; and Mr. Duncan, with characteristic thoughtfulness and liberality, has had an eye to the personal comfort of this official, and presented him with a couch, rug, easy chairs, and washing stand. Mr. Duncan is rapidly using the supply of this district at £1 per ton.—*Mark Lane Express.*

We have procured the above cut, not without considerable expense, from N. H. Paaren, Vcterinary Surgeon, Chicago, Ill. It will be seen to exhibit the relation which the bony structure of the horse bears to the body, clothed with flesh and skin, and needs no explanation to render it intelligible to our readers.—Eds. So. Planter and Farmer.

M Ville's Book on High Farming without Manure Reviewed.

Mr. Editor,—For several years past the agricultural journals o the South have, from time to time, contained brief notices of the labors of Prof. Ville of France, who claims to have made important discoveries in practical agriculture, and in some instances formulæ have been published professing to represent the composition of certain applications found by him to be the best possible for certain crops. It is fair to presume, therefore, that a majority of your readers have heard something of Prof. Ville and of his new system, and like myself have seen enough to excite their curiosity, but not enough to enable them to judge of its merits, or profit by its teachings. The appearance among us of a little work by the Professor, translated and published in England, and republished in Boston, entitled "HIGH FARMING WITHOUT MANURE. *Six Lectures on Agriculture, delivered at the Experimental Farm of Vincennes. By* M. GEORGE VILLE, *Professor of Vegetable Physiology at the Museum of Natural History, Paris*," wherein the laws which he claims to have discovered, and some of the results of their application in practice are stated, affords us an opportunity for learning what the system really is, as well as for forming a correct judgment as to its merits, and of the service it may be to us of the South, if properly appreciated and applied.

M. Ville has, we are told, been experimenting for many years, first on a small scale; and after he had satisfied himself of the truth of certain laws of vegetable nutrition, he proceeded to put them to the test of actual practice. In the translator's preface we are told that "The researches of M. Ville, which are now placed at the head of the most important discoveries science has yet made for the benefit of agriculture, were, like all innovations, received at first with something more than coldness and indifference;" and farther on we learn that, at the time he was most violently opposed and unpopular, the Emperor "extended a generous and powerful hand to the Professor, and the most complete success has crowned his glorious initiative." A portion of the imperial farm at Vincennes was placed at his disposal, where for a series of years he has carried on his experiments at the Emperor's expense, and to which point large numbers of farmers, and others interested in the progress of agriculture, are annually attracted by the increasing fame of the Professor, and the very remarkable crops produced on those portions of the farm under his direction.

Instead of operating upon ordinary soil, or soil of known com-

position, M. Ville, for reasons which I shall advert to in another place, commenced his experiments by growing plants in flower-pots filled with calcined sand as a basis, to one of which he added one of the substances always present in plants; to another two; to another all save one, say lime; to another all save another, say potash; and finally to another every substance found in plants, each substance added being in an available form. He thus had every form of soil, from absolute sterility on the one hand to great fertility on the other, passing through every intermediate grade, the composition of each being, of course, known and recorded; and was enabled to compare the effects of each on vegetation, to determine, as it were, the relative values of the substances composing them, and to arrive at that combination of material best calculated to produce the most perfect plants and the largest yield.

After repeated experiments in flower-pots, he proceeded to repeat them on plots of ground set apart for the purpose, and from these he passed to an application of the principles evolved to some of the fields of the farm of Vincennes. One of the most important of his discoveries, and the only one to which I wish to refer in this place, was that, by the use of a mixture of various substances, all of which have long been known in agriculture, and constituting what he calls a *complete fertilism*, he unfailingly makes large crops, and for a succession of years, provided the application is sufficiently heavy. This complete fertiliser is composed of some substance capable of yielding nitrogen, either in the form of nitric acid or ammonia, together with phosphoric acid, potash, &c., all in an available form, and having such a relation to the soil that, when applied in sufficient quantity, this and the soil will be capable of supplying all the substances required for the production of a succession of heavy crops. In other words, we have not only a demonstration of the great benefits to be derived from the use of judicious mixtures of what are known as the commercial fertilizers, but we also have the assurance that in these fertilizers, properly used, we have a satisfactory substitute for stable manure, and may confidently hope for remunerative crops, and improvement in our soils, even though we may be deficient in what English farmers and our northern neighbors consider indispensable to all good farming—stable manure. In another place I shall resume the subject of the Professor's experiments and their results, contenting myself for the present with giving prominence to the important truth just enunciated.

For the English farmer, or the farmer from one of our northern States, who is a stock grower, and always has a large portion of his

land in meadow and permanent pasture, his stock necessarily consuming a large portion of the produce of the farm, and returning it to the soil in the shape of manure, the commercial fertilisms come in as simple increments to his general stock of manure. He may appreciate their value, and use them to a limited extent, but after all, he feels that they are not necessities. But such is not our condition. Our system of farming is not and, from the nature of things, cannot be self-sustaining. From causes which it is not necessary to discuss here, we are not now, and most probably never will be, a stock growing people, and hence let us husband our resources as we will, we cannot hope to keep up our soils by the manure made on our farms. The great bulk of our lands, originally light, has depreciated under a system of cultivation which, to say the least of it, is faulty, and must continue to do so unless we can check their downward course by the use of the commercial fertilisers. But this is not all: many, very many of our soils—soils on which our farmers are depending to supply the wants of their families—are in such a condition that the use of fertilisers is necessary before the production of a crop is possible. With our lands in such condition, how important is it that we should, if such a thing is possible, determine the principles which should govern us in the application of fertilisers, and having determined them disseminate them through every available channel!

It is my purpose to discuss the general origin of soils, with particular reference to the soils of Virginia east of the Blue Ridge, and the effects of cropping upon them; to explain the natural process of restoration of worn out lands; develop M. Ville's system somewhat in detail; and make such an application of it to our own condition as seems to me necessary, with the hope that I may be able to make the discussion of practical value to at least a portion of your readers.

Soils, no matter where found, have their origin either directly or indirectly in the decomposition and disintegration of the rocks which constitute the surface of our planet; consequently, in tracing the origin of any particular class of soils, not alluvial, a knowledge of the underlying formations, and of the processes by which a fertile soil succeeds the barren rock, becomes both interesting and valuable. The agents by which these changes are accomplished are the atmosphere, water and frost. To this action the hardest rocks must eventually yield, resulting in various mixtures of clay and sand, with smaller quantities of such other substances as were originally present in the rock, but often modified in form. The decomposed

rock, the mere mixture of sand, clay and other materials, is not, however, soil capable of producing crops: it still must go through a long process of amelioration. At first it is capable of supporting a scanty vegetation only; but whatever it can support, takes root and grows, drawing its organic matter from the air.

After a time this vegetation dies, and mingles with the soil, making a positive transfer of organic matter from the air to the soil. This process going on year by year, the organic matter of the soil slowly increases, the first scanty vegetation is supplanted by a more vigorous one, and this in time by one still more vigorous. At last shrubs and trees cover the ground, which, sending their roots far down into the subsoil, draw from it supplies of mineral food, which passing first into the leaves, eventually find their way into the surface soil, along with the still increasing stores of organic matter. *This annual top-dressing of both mineral and organic matter is necessarily composed of all the substances which enter into the composition of vegetables, and which are absolutely required in every soil to make it fertile*, and in such *form as to be available to whatever crops may be grown.* These are organic matter not composed of, but containing *ammonia, potassa, soda, lime, magnesia, soluble silica, sulphuric acid, phosphoric acid, chlorine, and oxide of iron.*

From what I have just said it is apparent that nature, in her process of forming arable soils, *is continually making additions to the stock of substances which are necessary to fertility*, and in so doing is gradually bringing them all, as nearly as the nature of the case will admit, to the same condition, no matter what be the source from which they may have been derived. It is equally plain, however, that there must be great diversity in soils, not only in their physical properties, but in their chemical composition also, and that soils of equal productiveness when first cleared, and of course of equal apparent fertility, must differ widely in their ability to meet the demands made upon them through years of continuous cultivation.

But if what I have said in relation to the origin of soils be true, there ought to be certain characteristic, or family resemblances between all the soils of a particular geological period, in spite of the tendency of all soils to assume a common condition, and such indeed is the case. Take, for example, the soils of the Valley of Virginia, resting upon and formed from the Valley limestones; we find, of course, every variety of fertility, and great diversity in mechanical condition, yet they are as a class clays, and essentially grass lands.

Nearly all of the country east of the Blue Ridge down to the head of tide, is covered by metamorphic rocks—rocks that, after deposition in water, were subjected to long continued and intense heat, whereby they have become highly chrystaline in structure, and materially modified in other respects. The decomposition of these rocks gives rise to a class of soils which are prone to wash, and liable to serious injury when naked fields are long exposed; a sort of sifting process goes on, resulting in the retention of the coarser particles, and the loss of the finer and more valuable portions. But whilst they all bear a certain resemblance to each other in these respects, and in others that might be pointed out, they yet d ffer widely in different counties, and in different portions of the same county, or even of the same farm. In one locality rocks of a granite type may prevail, producing soils well supplied most probably with potash, but deficient in lime and other equally important constituents, full of small scales of undecomposed mica, and never truly fertile. But let such a rock, retaining its feldspar, have its mica replaced by hornblende, or some allied mineral, and at once the overlying soil assumes a dark red color, and lime, magnesia, &c., if not present in quantity, are at least sufficiently abundant to make the soil fertile, and capable of a high degree of improvement.

The soils of Tidewater Virginia are, as a class, widely different from those just referred to. These soils constitute the upper beds or strata of what is known as the tertiary belt of Virginia. During the tertiary period the waters of the Atlantic covered the whole of this portion of Virginia, as well as the greater portion of both North and South Carolina, Georgia, Florida, &c., the shore line through our State being nearly on a line passing through the falls of the large rivers, and the last deposits of mud and sand which were borne into the ocean by the running streams, and other natural causes, now constitute the soils of this region. Rising from the waters before the close of the Tertiary period, still beds of mud and sand, plants took root in them, and by the same process by which all soils are made productive, they were gradually transformed into arable soils. They are, as a class, light and sandy, deficient generally in some important constituents, as lime and potash, but yet capable, by the use of lime, or marl, which is generally abundant, and other means, of a high degree of improvement.

Along the banks of streams we meet with *alluvial* lands, *or* "*low grounds*," which are generally very productive, and in some instances seem to be practically inexhaustible. Such soils are made up of the fine material that has been washed out of, and borne

down from the uplands. Such soils, besides being in a fine state of division, are made up of the very richest portions of the soils supplying them, and being composed of material from numerous points, are sure to contain abundant supplies of all the elements of fertility, in available forms.

Left-Hand Ploughs.

Prejudices on this subject, like all others, are hard to remove; but if farmers would consider the question fairly, and what is better, if they will try both kinds of ploughs, they will find the left-hand plough decidedly preferable. As a general rule, farming in Pennsylvania is thought to be better done than it is in Virginia; but in some parts of Virginia, particularly the counties of Clarke and Jefferson, ploughing is better done than it is generally in Pennsylvania; and oue reason of this is the use of three-horse left-hand ploughs. In those counties two-horse ploughs are rarely seen, and right-hand ploughs are never seen. There are three reasons, not very potent, but sufficiently so to decide the question, why left-hand ploughs should be preferred. The first is, any horse which does not walk too fast makes a good leader, and all know, before the introduction of left-hand ploughs, the greatest recommendation to a work-horse was being a barshear leader. Secondly, the plough cuts uniformly a given quantity of land; and thirdly, when back-furrowing, the horses turn, at the ends, to the left, which is better than turning to the right, because, in this case, the leader has to push the other horses round, which takes up time and injures the horses' feet materially by treading on each other—whereas, turning to the left, the leader pulls the other horses easily around, and they do not hurt each other's feet and ankles. The advantage of back furrowing is, the horses tramping the unploughed ground at the end of each furrow, which is not the case when the ploughing is done in lands. Then they walk out at the extremity of every furrow on the ploughed ground, which renders it unfit for the seed until it is ploughed again.

Now, if the left-hand plough costs more than the right-hand, or if there could be any reason assigned in favor of the right-hand plough which the left-hand does not possess, we would not take up our time urging the superiority of the left-hand plough for the reason we have given. But both kinds are alike, except in those particulars we have named; and they are sufficient to induce every farmer, when he is obliged to buy a plough, to choose a left-hand, whether it be for two or three horses.—*Religious Herald.*

A Large and Paying Application of Guano to Tobacco.

The following very interesting article on the above subject reached us too late for the April number, but is yet in full time to be of great value to our planting subscribers. But we regret that our friend does not allow us to use his name, as well as his ideas. That being forbidden, we can only say that he is by inheritance, and by many years' practice, one of the best planters and farmers in the State, whose name is authority on the subject.

We only add for him, what we are sure he would have added for himself, that the wheat after the tobacco should be followed certainly with clover and, in our judgment, we presume with some of the spear grasses.—Eds. S. P. & F.

Albemarle Co., March 23d, 1869.

Col. Frank G. Ruffin:

Dear Sir,—When in Charlottesville, a few days since, a letter was handed me by our friend F*** C*** from you, in which you stated that you wished me to give you a statement of the fertilizers I used on my tobacco crop last year, and how applied, and that you wished to have it in your next issue of the *Planter and Farmer*. Before going farther, I must say to you that I don't wish my name given in any way, as I dislike to appear conspicuous. If what I have to say, however, is worth notice you can publish it.

But now to the point. I aimed at 150,000 hills of tobacco, but after finishing hilling found it was only 140,000. My intention was to put on 400 lbs. of Peruvian Guano to the acre, but as it turned out less than I laid off the land for, there was a little more than 400 lbs. to the acre put on. I applied the guano broadcast, with about two bushels of plaster to the acre also, mixed thoroughly before sowing. My land was broken up in the fall, and the next spring, after having finished planting corn, I leveled down my tobacco land and hauled out what stable and barn-yard manure I had, spread it, laid off the land as if to sow wheat or oats, about ten or eleven feet wide, and then sowed twice in each land. I then ran a heavy three-horse cultivator over the land twice or three times, as necessity required. Where there was a great deal of grass I had to use the one-horse McCormick or shovel-plough, as the cultivator would not answer where the land was foul. I don't like the two or three-horse plough for preparing land to hill, as it turns up too much soil that has not been pulverized by the frost and leaves the land too rough. I think I shall make from the 140,000 hills, after having one house burnt, when curing, containing 10,000 plants—38,000 or 40,000 lbs. of tobacco of fine quality, which I would like you to see when sold about the first or second week in May.

The application of fertilizers I made at first appears extravagant—a little over $20 to the acre—but I estimated in this way:

First, I would get not less than 400 lbs. of tobacco more to the acre than I would without the guano; second, I would get tobacco of such quality that it would bring from one to two dollars per hundred more than it would without guano; third, the benefit to the wheat crop not less than five or seven bushels to the acre over and above what it would bring without guano. The idea that guano makes tobacco thin has never been proven to me—that is, as far as my observation goes in the Piedmont region; it may be so on light sandy soil, which has never come under my observation. Wherever I have made a heavy application it looks, when ripe and when cured, as if manured with stable manure.

P. S.—Don't understand me as saying that all of my tobacco land was manured. I don't think there was more than one-fourth, and that very light. Where the land was best I put no manure but guano, and that produced the best tobacco.

J. W. G.

Manipulated Fertilizers—Gilham's, Wilson's, &c.

Messrs. Editor,—It is a source of sincere pleasure to Virginia and North Carolina tobacco raisers to find within their reach, at so reasonable a price, a manure so admirably adapted to their purpose as *Col. Gilham's "Tobacco Fertilizer."* To feel assured that, from his intimate knowledge of chemistry and his known character as a high minded, honorable gentlemen, they can rely implicity on the products of his manipulation as *genuine*, is a vast gain to agriculture. Though not a tobacco grower, I read the supplemental sheet of the *Whig* of the 25th inst., with genuine gratification, containing the testimony of so many intelligent *Virginia gentlemen*, many of them known to me personally, attesting its virtue as a fertilizer, in comparison with Peruvian guano, and in *every instance* showing its superiority, to say nothing of its *economy*.

Whilst we of the South have been victimized so often with spurious phosphates put up north of Mason and Dixon's line, and even south of that line—*at Baltimore*—'tis but just to the manufacturers to single out the *genuine*. In this too limited category of *honestly* manufactured phosphates, I take pleasure in mentioning "Wilson's Ammoniated Super-Phosphate of Lime," patented August 11, 1863, manufactured by the Rumford Chemical Works, Providence, R. I. I have used it on wheat for two seasons past, and on the crop secured in '68, feel well assured it effected a marked influence in preventing fly and hastening the ripening, as well as increasing the

product. Messrs. Spotts & Gibson are its sole agents, and Mr. S. induced me to try it from representing to me his uniform refusal to sell *any* fertilizer until he was satisfied of its genuineness. He visited and inspected the works, and saw for himself its *effects* on the barren "Seekonk Plains," in the vicinity of Providence. This is a section of country consisting of light, drifting sand, barren in the extreme. On this quality of land, on 11¼ acres in corn, he (Mr. Wilson) made 850 bushels shelled corn, or 80 *bushels to the acre*, 40 bushels of barley, and oats 30 bushels. From a lot of less than 16 acres, that four years before was a part of these plains, he took off at the first mowing 35 *tons of hay, and at second ten large loads.* It was first cropped two years in corn, and one in oats and barley.

A neighbor of mine, Wm. Temple, sold some weeks ago a young hog, less than two years old, that weighed 542 lbs. gross. The purchaser might have been tempted to fatten it for the next county fair, but injured it in putting it into a wagon to haul it home. It was not fat, but growing rapidly, and weighed nett. 440 lbs.

Yours respectfully,

J. M. McCUE.

Mt. Solon, Va., March 29th, 1869.

Practical Working of Mr. Gilmer's System of Farming—Fertilizers Used.

My Dear Sirs,—One year ago I wrote the article "Our Altered Circumstances Necessitate a Change in our System of Farming," which appeared in your May number, page 279, and drew from my esteemed friend Mr. S. W. Ficklin an article—"Mr. G. C. Gilmer's System of Farming Reviewed," in your June number, in which he says the communication of Mr. G. C. Gilmer in the May number is instructive, but not without errors. When I read this very sensible article from my very sensible friend, I at first thought of replying, and was asked by some of my neighbors to do so; but upon reflection came to the conclusion we were both aiming for the same great object, the greatest amount of benefit to us all, and to test fully these disputed theories, would take time and deserved much sober reflection. I therefore determined to delay my reply until I could the better convince myself, by a little more practice, of its benefits and its errors, for practical truths are what we all should be after, and not mere theories. Our country and countrymen are not now in any condition for testing mere theories, however plausible

they may be. I have not been able to carry out that plan as fully as I desired and intended doing, owing to the condition of our labor. I have tried whites and blacks, at low and high prices, but failed to secure such hands as one must have to carry out that plan fully, but did the best I could, and am so well convinced that it is now the very best plan for me, that I am now hard at work trying to test it fully. From past sad experience I am more fully convinced than ever that our profit does not consist in low wages, but the amount of work done for the wages given, and I have not been able to make one cent out of the common laborers, now to be found in the greatest abundance strolling all over our country; they wont work, but will steal more than enough to swell their receipts far beyond the high wages which should secure such hands as can and will do fair work, and take care of what is entrusted to them in teams, tools, feed, seed and manures. I was sadly disappointed in seeding wheat last fall, owing to inefficient hands, only seeding sixty-one bushels, on which I used (with my rye crop of twenty bushels) three and a half tons of manure, bought and paid for, for the last spring crops which could not be applied for want of efficient hands. I have now five bushels of buckwheat (on hand) purchased last spring by my efficient and esteemed friend Mr. John T. Armstrong, of Goshen Hill Depot, Rockbridge county, procured from Western Virginia, which could not be sowed for want of ploughed land to put it on, whilst I had an abundance of teams, but could not get the ploughmen. I was sadly disappointed in my hands procured last January for the year, and was unable to get good hands until the first and second of March. I think they are hands just suited to my mind. I give for my manager $200, for my white teamster $192, and for two colored men $156 each and their board. High wages, but they have paid me far better than any hands I have ever had, as my teams, feed, stocks, crops, and preparation for other crops, will fully testify, as any observing man can see for himself by looking over my farm as he travels along the main county road leading through my premises, so as to give a full view of my entire farm. Never have I done more good fencing; cleared up perfectly more land; had more good ploughing done; seeded more grass seed; a better crop of oats seeded in good time and style; my stables, manure heaps, old tobacco houses, cutting-room and hay lofts thoroughly cleared up; and the manure, grass seed, &c., all well applied in their proper places and time.

And now if friend Ficklin will pay me a social visit and see for himself, he can be fully convinced my hundred acres in yards,

garden, orchard, lawns and grass lots is not such a humbug as he seemed to be thinking when he was writing his review of my article. His plans, I have not the least doubt, are the best for him, and for all so fortunately situated; but mine, I still believe, the very best for me and for those similarly situated, for whom I wrote that article, and I fear nine-tenths of our whole farming community are in my condition. I think when friend Ficklin purchased his farm it was thought to be in a very high state of improvement, and he, with his ample means and fine practical sense, good judgment and great business capacity, has no doubt put it all in almost, if not quite, perfect order. His elegant mansion, sweet yard, beautiful lawn, thrifty orchard, fine crops and well selected stock of all kinds, denote means that but few can even hope ever to enjoy. For such I do not profess to write, but for those whose fields have been so choked out of their former appearance of thrift by the broom straw, wild briar and bushes. I can devise no better plan than the one offered in your may number of last year. I thought it the best then, and I do now believe it the very best for nine out of every ten of our Virginia farmers. This I do know, so far as I have been able to go, that portion of my farm shows this day as high a state of improvement as it ever did in the palmiest days of our once happy country. I then worked twenty-two slaves; I now work but four hired men, and my manager remarked last night that he had met and successfully conquered the advancing enemies the broom straw, wild briar and bushes, in the fields on which he had attacked them, and with his present force, in three years more, he could bury the last member of those unsightly and unprofitable pests. With my present force I can clean up, fence in, and work well this farm of six hundred acres under my present system, and I do now hope at a cheaper rate than when I had so many hands, and so many more useless mouths to feed, backs to clothe and diseases to doctor. With good teams, good hands, and well selected manures, judiciously applied, it is hard for one to say what he cannot do. I do not know that I shall put over ten or fifteen acres in corn—certainly not over twenty—all of which will be thoroughly prepared and manured and worked, which I think pays me much better than working so much land in corn. All spare time I will devote to fencing, cleaning up, ditching, picking up rocks, and thoroughly preparing my land for an early seeding of rye and a large crop of wheat next fall. I apply most of my home-made manures to top-dressing my grass land, and will so apply my wheat and oat straw on my young grass seeded this year, which I think

pays better than passing it through the farm pen. I use all the plaster I can, and am now using lime. I think with but little grazing, plaster and lime, and green crops for fallows, we may hope in a few years to be able to try our hands upon our friend Ficklin's plan successfully. I last year used upon my small crop of corn Baugh's Raw Bone Super-Phosphate and, I think, his blood manure, the Old Dominion, from our esteemed and reliable friend, Col. Gilham, of the Southern Fertilizing Company of Richmond, and a guano of Mr. Bentley's, of the James River Manufacturing Company, and the Pacific Guano of Messrs. Allison & Addison, of Richmond. All did well, except the manures of Mr. Baugh, which did not pay, and I have not purchased any more of it. It did well on corn and wheat the year before. Why it failed on my last crop I do not know. All I know, upon a fair trial, it failed to pay me and I quit it at once, which I will do with any manure which fails to act for me upon a fair trial. I was so well pleased with that I got of my friends, Gilham, Bentley, and Allison & Addison I shall try them all again, and shall so continue as long as they do as well as any I can get. I am also trying on grass, oats and corn this spring some of the manures from the enterprising company of B. C. Flannagan & Co., of Charlottesville, and if they pay as well, shall hereafter use mostly of theirs so long as it pays. I think we all should encourage our home factories. My enterprising young friend and neighbor (Mr. Howard Smith, of Morven,) tried the bought manures on my plan on corn last year, and thinks it has paid him better on corn thus applied than it has ever done upon any other crop. More will try it this spring. I do not write for a company, nor for a manure, but for the good of our needy farmers of Virginia. Let any one try it on one or two acres, and I think he will be fully persuaded to test it upon his entire crop. A little in the drill to force it beyond the worms and crows, and then broadcast the balance across the rows at the second working and the ears will come, I think.

With best wishes for all who are dependent upon the farming interests of Virginia, and the highest success of your valuable journal and the noble enterprise in which you have embarked, I remain,

Yours truly,

GEO. C. GILMER.

Near Charlottesville, Albemarle Co., Va., April 22d, 1869.

To Hasten the Thinning and Weeding of Drilled Corn.

Messrs. Editors,—When corn is planted or drilled as recommended by the writer of this in your last February number, the operation of thinning and weeding by the hand hoe may be greatly facilitated by the use of the following described harrow, with five teeth, and if the land is light and the team strong enough, more teeth may be added accordingly, by having the piece across the beam longer: Have the beam to which the horse is hitched about $4\frac{1}{2}$ feet long by $3\frac{1}{2}$ inches thick one way and $2\frac{1}{2}$ inches the other; the hole for the clivis pin 4 inches from the end of beam; the front tooth 8 inches from that; the piece for the other tooth to be the same size of beam and to be put on at right angles with it $2\frac{1}{4}$ feet from the front tooth, and the distance between the teeth in this piece must be regulated by the width of the teeth, the distance being no greater than just enough to prevent the loose earth thrown out by the teeth from covering up the remaining stalks of corn; a wheel, by means of two pieces of iron on the sides of the end of the beam, may be fastened, the centre of which, when revolving in the furrow made by the front tooth, to be $2\frac{1}{2}$ feet from the cross piece. The wheel may be sawed from a white or post oak, or black gum log, about 2 inches thick, and banded, the diameter of which must be regulated according to the length of the teeth from the bottom of the frame work. This implement to be used by going as nearly as practicable at right angles across the corn rows, soon after the first harrowing, as recommended in the February number (last), and to be used across corn rows 5 feet apart; but the harrow may be made for rows any distance apart by altering its proportions between the teeth and the centre of the wheel, and it is intended to be used more particularly on land bedded in single rows, but it can be used on level land.

Respectfully yours, &c., ARCHIBALD THWEATT.

San Marino, P O. Dinwiddle, Va., The Peek, April 20, 1869.

NEW POTATOES.—A few years ago the Early Goodrich was to be *ten* days earlier than any other; then Early Rose was to be *fourteen* days earlier than Goodrich; Early Prince is now to be *ten* days earlier than Early Rose. Thirty-four days is an enormous advance in six years! but does any body believe it? Gentlemen, take warning by the Tomato men; you have our encouragement in your endeavors to improve the breeds of things—we hope you will be paid well for every thing—except those marvelous statements, which we hope will not be charged for in the bill.—*Gardener's Monthly.*

Corn-Husking Machine.

[We may as well state that the object of the following queries is to get data on which Mr. Stacey can act in introducing into Virginia corn-shucking machinery. He wants the shucks. It is to our interest to let him have them on fair terms. He wants to know our views on this matter, and if we are wise we will let him have them. It is high time we had begun to count the cost of our various agricultural manipulations. Old times are changed, and the sooner we learn it and act on it, and shew brains about new matters, the better it will be all around.—Eds. So. P & F.

F. G. Ruffin, Esq.:

Dear Sir,—Will you please present the following important questions for the consideration of the readers of the *Planter and Farmer?* I would be glad to be favored with the conclusions of the best practical farmers in our community as data to govern me in a contemplated effort to introduce a machine designed to facilitate and cheapen the process of harvesting the corn crop, and hope to obtain their responses in time for the next issue of the *Planter and Farmer*:

1. What does the fodder saved in the usual manner, by pulling and cutting tops, generally cost per 100 pounds?

2. What is the percentage of loss caused by shrinkage or shrivelling of the grain, consequent upon pulling fodder and cutting tops in the usual manner?

3. What is the percentage of corn left in the shucks when the corn is shucked by hand?

4. What would be the cost of cutting the corn with fodder on the stalk and shocking it in the field, as is usual at the North?

5. What would be the relative proportion and value of the corn fodder, saved by the process of cutting the corn crop and shocking it in the field, as compared with the old method of pulling fodder and cutting tops?

6. What does it now cost to pull the corn off the stalk and shuck it, independent of the cost of hauling from the field?

Very respectfully yours, G. B. Stacy.

Digging Amongst Fruit Trees.—This subject is at length awakening attention even in slow and staid old England, where it is so very hard to get the wagon of process out of the venerated old ruts. In a discussion of the subject recently in one of their journals, a correspondent says that one of the most successful Strawberry growers of his time, the late Mr. Keen, raiser of Keen's Seedling, after a lifetime of observation, had come to the conclusien that shallow digging was the best for the Strawberry crop; although the correspondent himself thought it absurd not "to let in the atmosphere" by deep digging.—*Gardener's Monthly.*

French Roofs—A Valuable Suggestion.

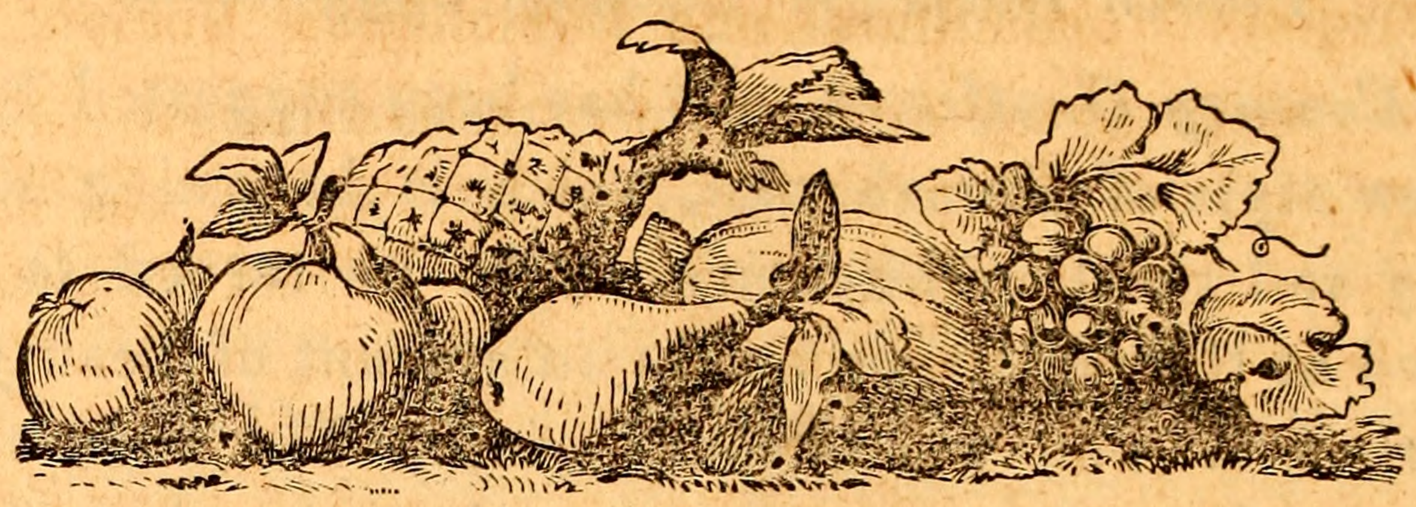
Editors Country Gentlemen,—It has been suggested by a friend that the new style of French roof, which is becoming so common both in city and rural architecture, might be turned to profitable account, and at the same time insure an amount of beauty and convenience that is well worth considering. The suggestion is to have the covering of coarse, strong *glass*, in place of slate or shingles, and thus, by the admission of light and heat, this part of the house would become an admirable conservatory, where fruits and flowers would flourish in the rankest luxuriance. In city houses, especially, water could readily be introduced in so convenient a manner as to insure the proper degree of humidity, while the simplest possible arrangement would secure ample ventilation. Grapes of all kinds, dwarf fruit trees of plum, apricot, peach, &c., &c., could be readily grown, as well as all kinds of flowers, and the attic of one's house become the most profitable and delightful feature of the domain. Glass suitably cast could be more cheaply produced and applied than slate, or even good shingles, and would be quite as strong and durable as either. The introduction of colored material would add very slightly to the cost and could be applied with charming effect.—J. B. OKIE, *in the Cultivator and Country Gentleman.*

South Carolina Negroes.

Mr. Thurlow Weed publishes in his paper, the New York Commercial, the following:

Of the population of South Carolina, 400,000 are colored and 300,000 white. The ratio is changing fast. Emigration helps and so does the death rate. A *Times* correspondent says that the mortuary reports in Charleston for the year 1868 exhibit the fact that out of a population of about 40,000 in the city—about half white and half black—there have died 1,208 persons; of these, 818 were colored, and 390 white. That is, more than two negroes to one white died last year in Charleston. More exactly it is, one negro in every twenty-four dies annually; while in the same time only one in every fifty-one whites dies.

The vote of the State is about one in seven; that is, about 100,000 votes in all. Of these 60,000 are negroes and 40,000 whites—the majority of negroes being 20,000. The black race is crowding toward the coast, leaving the upper and middle country. This gives the mountain counties already a majority of white votes; and this majority must increase on that side of the State.



Horticultural Department.

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

Is it True that Nurserymen and Seedsmen oppose the Spread of Horticultural Magazines?

In the April number of the *Gardener's Monthly*, Mr. Charles Arnold asks what steps can be taken to prevent vagabond fruit tree vendors deceiving the people by selling all manner of trash under stolen names.

So long as the public are not only willing but apparently anxious to be humbugged, we fear no means will avail for this purpose. Each man must learn in his turn, by painful experience, the folly of listening to any one who offers to deliver at his door articles at lower prices than responsible nurserymen quote them at their grounds, before he will agree to forego the seeming advantage of cheap stock. But the point we wish to bring forward is an incidental one, arising from the remarks of the editor of the *Monthly* upon Mr. Arnold's inquiry. He says: "The best thing we know is to *encourage every one to read the papers*. And here let us speak a truth we have never liked to tell before, namely: as a rule, those most opposed to the spread of horticultural magazines are *nursery* and *seedsmen*." Can Mr. Meehan, who is both a nurseryman and seedsman, mean that any considerable portion of these gentlemen are opposed to horticultural magazines? We can hardly credit it. It certainly is not true of our Southern growers and dealers. None could be more active and liberal in their aid and sympathy with everything calculated to disseminate sound information than these very gentlemen. As a case in point, we turn to the Catalogue of Messrs. F. Davis & Co., nurserymen of this city, and find an earnest commendation to their patrons of the *Gardener's Monthly* and other periodicals.

We are not so familiar with the Northern nurserymen as is Mr. Meehan, but judging from his columns we should say that they certainly do not "hide their light under a bushel." Not the least attractive part of his excellent journal is from the pens of nurserymen and florist contributors. If these discountenance the dissemination of light and knowledge, why do they, by their advertising patronage, sustain such publications? Without this last, three fourths of them would die out.

There may be here and there a blockhead who would have the rest of the world as stupid as himself; but as a class, our nurserymen, &c., are too intelligent and practical men of business, to put it on no higher ground, not to know that information increases interest and brings with it a corresponding growth of trade. Can't you think better of it, Mr. Meehan?

Virginia Horticultural and Pomological Society.

MEETING OF THE EXECUTIVE COMMITTEE.

A meeting of the Executive Committee of this Society was held at their rooms on the evening of the 15th of April last. A very encouraging report was received from the canvasser, and it was, thereupon, decided to offer a premium list amounting to EIGHT HUNDRED DOLLARS.

The following Standing Committees were announced (the first named of each Committee being Chairman):

Flowers.—Dr. J. T. Johnson, Dr. Thomas H. Williams, Dr. Richmond Lew is Wm. G. Taylor, Esq., and Dr. C. W. P. Brock.

Vegetables.—Joseph R. Rennie, L. Chamberlayne, William L. Harrison, J. O. Austin and J. W. Gordon.

Wines.—William H. Haxall, Richard L. Christian, John J. Werth, M. B. Buck and Colonel William Gilham.

Fruits.—Franklin Davis, Chairman; the others to be announced.

Essays.—Dr. S. P. Moore, Hon. R. M. T. Hunter, General B. T. Johnson, Hon. B. Johnson Barbour and Professor Mallet.

Statistics.—Professor William Allan, Jacob Fuller, Jed. Hotchkiss, Rev. Leonidas Rosser and John T. Griffin.

Horticultural Implements.—I. S. Tower, E. B. Addison, John Asher, A. P. Routt and John T. Early.

Arrangements.—Captain C. H. Dimmock, T. A. Brander, John Poe, Jr., and M. T. Clarke.

In consequence of the illness of S. P. Moore, Chairman of the Committee on Premiums, the list was not acted on, but was deferred to a future meeting.

On motion of Dr. Johnson, a committee of six was appointed to make the necessary arrangements for a strawberry and flower exhibition during the season.

The President appointed the following committee: Dr. J. T. Johnson, Franklin Davis, J. E. Stansbury, John Morton, Rev. Leonidas Rosser and Colonel J. J. Werth.

The Committee then adjourned to meet on the 27th instant, at 5 o'clock P. M., at which time it will take action on the premium list.

Navy Beans.

We are in receipt of several inquiries about Navy Beans. We do not know what to say more than has been said in the February No. of the *Planter and Farmer*. Navy Beans are in demand, have been for years past, and doubtless will be in the future. They are readily grown, requiring the same soil and culture as any snap bean. While extremely rich land is not necessary to their successful cultivation, very poor will not produce them profitably. A happy medium is to be preferred. Plant in drills about three feet apart, and in hills in the drills, putting three to five beans in the hills, these last to be one foot apart. Cultivate sufficiently to keep down weeds. When ripe gather by hand, if practicable, saving the first ripening to sell for seed. When gathered in bulk and flailed out, their market value is very materially reduced. But in any case two dollars per bushel may be expected, and fifty bushels per acre will not be an extravagant yield.

Nut Culture.

Messrs. Editors,—In reply to your request to your readers, to give their experience in *nut culture*, I will give what little I have. About six years ago I planted a number of our native chestnuts and shell-bark and hickory-nuts. They came up finely, and the largest chestnut tree is now about ten feet high. The shell barks were planted in poorer soil, and I suppose are naturally slower growers than the chestnut. They have not attained more than three or four feet. The chestnuts are growing in a stiff clay soil, which has been enriched from time to time for the purpose of raising potatoes, corn, &c. None of them have ever received any attention, except that the crops near them were cultivated.

In the autumn of 1867 I had a handful of Spanish chestnuts and pecans planted, placing a stake at each nut; but I had very little expectation of their growing, and consequently was not very careful to exclude cattle and hogs from the field. Last spring, however, I was gratified to find *one* Spanish chestnut and *four* pecans stretching up their slender stems, through the grass and weeds, to the light. Whether the others failed to vegetate, or the nuts were eaten by the hogs, I cannot tell, but I think the latter supposition more probable. At any rate, I was encouraged to plant more, and therefore enclosed two dollars to a friend in New Orleans, requesting him to send me not only Spanish chestnuts and pecans, but also filberts and English walnuts. The quantity sent for this small amount surprised me. My friend, however, informed me that he purchased them from Mr. A. F. Cochran, importer of fruits and nuts, who, with a patriotism worthy of commendation, furnishes all who wish to *plant* with nuts at *cost of importation*. I therefore advise all persons who wish to engage in the nut culture to send their orders to this gentleman.

I planted them carefully, but find to my sorrow that either some mischievous *persons* or *hogs* have played the wild with my nut plantation, but I hope a few have escaped, and I will report to you perhaps again in the spring. I then sent to Mr. Thorburn (No. 15 John street, New York) for some nuts of that splendid nut-tree of Southern Europe, the Italian pine (*Pinus pinea*) and some filberts and pistachios (*Pistachia vera*). I planted the Italian pines in a grove of our native pines and the filberts in some *rows of early corn*. I thought the native pines would protect the young foreigners until they grew large enough to stand our summer's sun and winter's wind, and then old "pitch, tar and turpentine" must give way to the woodman's axe, and leave their native soil to the occupancy of the beautiful invader. The nut of the Italian pine is somewhat similar to the English walnut in taste, but of a more tender texture. The word "buttery," so often applied to pears, describes it very nearly. It is smaller than the almond. The tree, you know, is an evergreen, and may be seen in the pictures of Salvator Rosa and other great landscape painters.

H. M. J.

Pecan Nuts.—The shell of the pecan nut raised in Texas is so tough, and the kernel so compactly wedged in between the bitter dividing membranes as to render the work of opening them, even when provided with nut crackers, absolutely unpleasant at times, to say the least of it. The Louisiana pecan nut has a much softer shell, and the kernels do not cling so tenaciously to the bitter membrane. The Louisiana pecans are said by connoisseurs to be less rich than those grown in Texas, but in our market they are preferred for the

reasons we have given. We saw yesterday, in the Crescent Fruit Store on Canal street, a small sample of Louisiana pecans, grown somewhere on the coast, the shells of which are as thin as paper and as soft as the almond. This variety is said to be scarce, but if it could be introduced generally the nuts would doubtless command a very high price. The flavor of the "soft shell" pecan is very delicate and delicious.—*N. O. Picayune.*

Hops.

"Dell Pilot," in the *Prairie Farmer*, gives the following reasons why Hop culture will not be profitable in this country:

First, as to the cause of the decrease of demand, the hop is mainly used in the manufacture of lager beer, which is not only inessential to the support of life, but is an artificial, intoxicating drink, having at the present time a strong and growing moral sentiment waging war against its use, gradually and surely decreasing the demand for hops. This feeling is liable to change as temperance movements are more or less periodical in their nature.

Secondly, the hop loses its strength so rapidly that its value is reduced about one-half in a year from the time it is picked, so that it would become almost worthless before the end of two years, so that a surplus at the present cost of labor, etc., would naturally have the effect to reduce the price below the cost of raising.

Thirdly, by reason of the ravages of the louse and other diseases, the hop is one of the most uncertain crops, there being failures in important localities nearly every year to diminish the supply, thus losing even the present indications upon the fickle foundation of less than half a crop.

Fourthly, a deficient supply thus creates an unnatural price, giving a profit greater than almost any other product, by which large numbers are enticed into the business, (it being natural to leave and rush into a business offering better profits than the one engaged in,) thus quickly producing a surplus, resulting in a price often below the cost of raising, followed by a decrease of product, giving in a short time the demand the opportunity of gaining the ascendancy to create another big price. And so on from one extreme to another, to and fro, like the pendulum of a clock, the price goes up and down, seeming unable to find its level, there being too little knowledge with action, based upon the principle herein explained, the majority apparently being guided by common indications.

With a knowledge of the reactive principle described, let not growers flatter themselves that by the decrease of acreage that should follow this crisis, it will give them an opportunity of preserving their own individual yards, to take the advantage of the opposite reaction.

But as many growers are beginning to understand and work by this principle, reactions will become so much modified in their extremes, that under the most favorable circumstances, hop growing in the future will gradually become less profitable; since these reactions are the result of the business being abandoned when a surplus occurs to destroy the profits, and is taken up again when the demand makes it remunerative.

Were all conversant with this law, with the accessible statistics now to guide us, the price of hops would seldom deviate far from its proper level, except

from almost entire failures in the main hop districts of the world, which could hardly be possible, since remedies are being discovered by which the ravages of the louse and disease can be prevented, apparently rendering it impossible to ever again realize the prices that have prevailed. As the commercial, agricultural and mechanical world becomes more scientifically methodical and systematic, the price of articles and products will naturally tend to its proper level in proportion to real costs, and thus lessen the chances of accidentally stumbling on to fortunes or on to the almshouse.

I am satisfied that raising hops will be the poorest business that can be engaged in for at least three years. It is estimated that the yearly consumptive demand for the United States is about 100,000 bales, where really it does not exceed 80,000 bales, and there are over 50,000 surplus bales on the market; besides which, a large quantity has been exported to England.

Thus the temperance movement in progress, and the gradual loosening up of the tariff on alcohol, which will for a time decrease the demand for hops, and the fact that not more than 20,000 or 25,000 bales, with the present surplus, will be required to supply our next year's demand, in addition to the fact that by the addition of last year's planting—about 50,000 acres for the United States—there is a sufficient average of hops in our country to produce, with less than half a yield, should half be cultivated, about 400,000 bales, we ought to be satisfied that it will be poor business to raise hops for a long time—say three or four years.

With what I have said in merely giving my views of the matter, as I have done before in the *Prairie Farmer*, let growers judge for themselves, and be governed by their own judgment. My recommendation, however, would be that last spring's yards be reduced in size so as to avoid any outside expenditures, if possible; while old improved yards, with no demand for expense in building, etc., ought to be reduced to one or two acres, as may suit the grower's means and desire to stake labor and capital against chance.

Experiments with Potatoes.

Messrs. Isaac Hicks & Sons, Old Westbury, L. I., send to the *Country Gentleman* an account of some potato experiments in the summer of 1868. The soil is a light sandy loam; previous crop, corn in drills on inverted sod; 10 two-horse loads of city horse-stable manure spread to the acre. The corn stubble was spread with cow-stable manure and ploughed under about nine inches.

Planting was begun April 13. Rows were marked 3 feet apart and furrowed out with a plough; a 6 foot evener enabled one horse to walk in the drill last made, the ploughman having no obstruction in seeing ahead and making very straight and parallel drills; the plough was run twice in each drill, to throw a furrow each way and to straighten if necessary. Six two-horse loads of city manure and $1\frac{1}{2}$ tons of fish guano were scattered in the drills per acre—the latter broken up fine on rainy days and scattered by pouring it slowly out of baskets while walking fast. This having spoiled the shape of the drills, a small double mould-board plough was run through them, which straightened them and left neat marks of even depth to drop in, and stirred up the manure, fish and soil, so that the potatoes seldom touched a lump of manure or fish.

The sets (large potatoes cut to 2 and three eyes each* on rainy days, two or three weeks before planting, excepting a few new varieties cut to single eyes,) were dropped 14 inches apart and covered with a plough 4 inches deep, the horse not allowed to walk in the drill.

On May 20 (Early Rose just breaking through,) the ground was harrowed; in four days the Early Samaritan and Early Goodrich came up; in six days after, the late varieties began to show, when they were again harrowed. June 10, Phifer's sulky plough was run through the rows. with only oue plough on each side of the drill set to plough very deep. On the 15th, a cultivator hoe, Ross' patent, with a guide that kept it very steady, was used twice in a row, running within an inch or two of the plants; what weeds were left were cut out with a hand hoe. Then a hilling cultivator, Burke's patent, was used once in a row; it consists of two long and narrow mould-boards, made of saw-blade steel, which can be sprung out to the width of row; this took soil from the middle and pushed it up under the vines, leaning the vines over a little and leaving the field neat and smooth. The potatoes were again cultivated before they were in bloom. The straight and parallel rows permitted the use of the cultivators almost to the exclusion of hand hoeing. Three men hoed two acres in one day. The potatoes were very clean, and their culture did not cost half as much as if planted and worked out in the old way.

June 23, Early Rose in bloom; the largest potato found in four or five hills was 1½ inches in diameter; that of Goodrich, ¾ inch; and Samaritan ½ inch. July 4, Rose large enough for market: July 20, Goodrich about same size. The turnip fly ate and killed the vines of Goodrich and Samaritan, without touching the row of Rose, which was between the two, or any of the other varieties. July 22, a few barrels of Goodrich were dug and sold at the village stores for $6 per bbl.; in two days the price fell to $4.

August 1, many of the Early Rose were found exposed to the sun and a few sprouting again. A bushel was carefully removed, cut to two eyes, wilted in the sun one day, and planted. It had been very dry for two weeks, which stopped the growth of the early potatoes; then a heavy shower washed away some of the soil around the vines, leaving them exposed to the sun. One-tenth of the second planting came up; the season was dry and short; the largest of the second crop weighed four ounces, and less was dug than had been planted. A neighbor planted a few a week earlier with better results.

Two rows were 186 yards long—1-26th of an acre; nine consecutive rows, with one variety in each, were dug when fully ripe, with the following result, allowing 60 lbs. to the bushel:

	Per acre.		Per acre.
Early Goodrich	188 bush.	Gleason	254 bush.
Early Samaritan	96 do.	Vanderveer	227 do.
Early Rose	235 do.	Gardner	215 do.
Harison	265 do.	Peachblow	196 do.
Calico	267 do.		

All were dug before the middle of September. The Peachblows (which would have been better if new seed from a distance had been procured,) were beginning to rot, and were sent to Washington Market (New York) as fast as

* An experiment two years ago showed that large potatoes yield the most, but cut potatoes are the most profitable, saving much more seed than the extra yield of large whole potatoes.

possible; three or four Gleasons in a barrel were found rotten—the rest all sound, and all kept well except Peachblows. These brought in Washington Market $3.75a4 per bbl.; Gleason, $2 50a3; Goodrich, $2.25; Calico and Vanderveer, $2 50. The peculiar season and the turnip fly caused most of the Goodriches raised near New York to be very poor for cooking.

In eating quality, our correspondents rank Mercer and Peachblow A No. 1; Early Rose and Sebec, No. 2; Vanderveer, Calico, Whipple Seedling, Early Samaritan, Chili Red, Harison, Prince Albert, Jackson White, Gardner, Dykeman and Cuzco, No. 2--the last not as good as the first. Sebecs do not cook well; Vanderveers are very sweet, but not mealy. The Early Rose and Harison are the smoothest and handsomest potatoes they have ever raised. In a patch of Harisons among raspberries, highly manured, a few hills gave over 5 lbs. each—one, 5 lbs. 6 oz.

In regard to profitableness:

Peachblow, 196 bushels at $3.75 per barrel, gave	$268 50
Calico, 267 bushels at $2.50 per barrel, gave	242 50
Profit per acre in favor of Peachblow	$26 00

These (Peachblows) would not have brought half so much if they had not been marketed as fast as dug—an uncertain crop for those who live far away from a good market.

Fish guano with manure does not give as good results on potatoes as on corn. City manure at $5 25 per two-horse load, and fish guano at $27 per ton, were compared, equal costs of each applied in two rows. The row with manure yielded nearly one-half more than the row with fish guano.

Transplanting Raspberries and Blackberries.

Nurserymen, of course, understand a great many arts that are unknown to ordinary cultivators: hence, in giving some facts that may benefit the latter class, I do it without any reference to the instruction of the former. However old my suggestions may be, I only know that they are not generally practiced by the mass of fruit-growers; and if I can show that they are not difficult to adopt, and that it is excellent economy to do so, I may accomplish some good.

Most persons who attempt to cultivate such raspberries as propagate by suckers allow the suckers to stand during the current season, under the mistaken impression that they cannot be safely removed until the season's growth is completed. Then they are transplanted, cut back, and must grow another season before fruiting. The result is, that two years elapse from the time the young plant appears before it fruits.

But there is a better way than this. In the spring, when the sucker appears an inch or two above ground, take a round-pointed shovel, and cut it out, and carry it, with the adhering earth, to the place where you desire it to grow. The ground and the hole should be previously prepared, the latter just about large enough to admit the ball of earth without allowing it to fall to pieces; slip it from the shovel carefully, draw the loose earth up with your foot, press it down slightly, and the work is done. In general, the young plant will not wilt, even if the weather is warm, and will continue to grow as if nothing had happened to it. Perhaps one in ten may wilt. But it is not an alarming symptom at all: it will almost always recover at night. Occasionally, the ex-

tremity of a plant may wither after some days; but even that is not a dangerous indication: cut it off, and, in a week or so, three or four branches will start from near the earth, and you will usually have a better and more symmetrical plant than if the single stem had gone on growing and thrown out branches near the top. In fact, though I have not yet generally practiced it, I am prepared to recommend that every plant—of the Philadelphia at least—be pinched or broken off at the distance of a foot or less from the ground. Probably it would be best to do this at transplanting; certainly, if the plant is six inches or more in length. It induces the growth of side-branches from near the base of the plant, makes more wood for fruiting, and the plant is better able to withstand high winds, exactly as is the case with a pyramidal tree.

My experience with raspberry plants grown from suckers is confined almost exclusively to the Philadelphia variety; but the Clark, though a stronger grower, seems to be similar in its habits, and the same treatment will no doubt answer for it.

My experience, too, in transplanting, has been mainly in the mode explained, because I considered that *certain* of success; while the loosening of the plants from the earth about them, and the exposure of their tender roots to the air, seemed to be dangerous. But, occasionally, a plant will be shaken loose in spite of the utmost care; these I always plant: and the result, with an occasional experiment in the same direction, leads me to conclude that, if there is no unnecessary exposure of the roots to the air, no serious danger need be apprehended. Keep the roots moist by plunging them into water or mud, or by covering with moist earth; waste no time in getting them to their places; cut or strip off most of the foliage, and, ordinarily, there will be no serious losses. The gain of this mode over the first mentioned is in the saving of labor and time, as the carrying of a ball of earth with each plant, if only for a few rods, will not be an amusement after a few hours.

Blackberries can be transplanted the same way with perfect success. With due attention at the time of starting a plantation of either of these fruits, the labor of carrying the young plants any great distance may be avoided, even with a ball of earth adhering. It is customary to set them about four feet apart in the rows, and the rows from six to eight feet apart. At eight by four, an acre will require thirteen hundred and sixty-one plants. If the cultivator, for any cause desired to start an acre from one-fourth of this number, he would need only to scatter his plants over the whole acre, but at regular distances, so that the vacancies and the plants would be duly proportioned. Then the labor of carrying the balls of earth long distances would be avoided, as well as the possible risks of the other system.

Raspberries and blackberries transplanted in this way will bear a fair crop the *second* year; that is, the second year of their existence. Treated in the usual mode, they never bear until the third year; and, so far as I can see, are no better.—Philip Snyder, *in Journal of Horticulture.*

Vineland, N. J., 1869.

Angers Quince.

A writer in the February number of the *Monthly* expresses *indignation*, or says it is expressed against persons that have sold Angers Quince for fruiting. I will leave others to settle this—I write to state a few facts:

Twelve years ago I tried, in vain, to find out the fruiting quality of the Angers, but nobody in this country could tell. I then wrote to M. Le Roy, of Angers, France, who sent me a drawing—a copy of which is enclosed—and the following as to the fruit:

"We consider this kind as the best one, as to the productive quality and size of fruit. This is cultivated on a large scale in our country as being the most advantageous for the market fruit."

I will further state that we have a good many bearing trees that were grafted with pear, but failed. These are now about 15 years old. They were from Ellwanger & Barry. They bear as well as Orange, but vary much in size and quality and earliness. Some of them are much superior in quality to Orange, and about equal in size. We see no difference in the hardiness of tree.

Some are small, some are a little later—but take the whole lot, perhaps 25 trees, they do not differ much from Orange. One thing is certain, that a selection could be made from them that would surpass Orange in quality very much.—J. H. CREIGHTON, *in Gardener's Monthly.*

Tap Roots.

L. S. B., Chicago, Ill., in a recent number of the *Gardener's Monthly*, remarking on roots, I was interested in what you say about tap roots. You seem to place very little value on them. I have been led to believe them very essential, and always give my gardener as my advice, to save the tap roots, when we are transplanting anything on our lawn. Was your remark intended to have the weight it seems to bear, or a slip of the pen? I have read so often of the great value of tap roots, that I want to be sure I understand you. It would seem as if nature would hardly make them, if they were of no use."

[No one disputes the last point—"nature makes everything of some use." Beards are of some use; perhaps to exercise our industry to keep them shaven away. As to tap roots, our correspondent understood us correctly to say that they are not of the slightest service towards the nutrition of the tree. The shortening of a tap root is of no more injury to a tree than is the shortening of the finger nails to a man. This matter was settled by Senebier and others over a hundred years ago. Their experiments we have repeated, and no intelligent man teaches any other doctrine.]—*Gardener's Monthly.*

[We are surprised to learn that any one ever supposed the tap root to be a feeder. Such parties must be very "dull of comprehension."]—EDITORS.

Theory of Grape Rot.

I was reminded of the old saying, that "one story is good until another is told," when reading an article in the *Cleveland Herald*, of the 2d inst., under the above head, and purporting to be a letter from Dr. Schroeder, of Bloomington, Ill., to W. L. Curtis, of Catawba Island.

The writer assumes that the cause of the grape-rot is now discovered; that it is owing to the age of the vines; that rot is sure to appear after the vines have been in bearing a certain number of years; and concludes by saying that the grapes will begin to rot next year in Cleveland and along the shore eastward.

Now, it must be patent to all who have given the matter attention, that when the rot prevails, it is found equally in vines just coming into bearing and those of the oldest growth. I have in my vineyard Catawbas which have been in bearing twenty years, and also vines which have been set almost every year during the whole of that period. In my experimental vineyard, where the first vines were set, I continued to add about fifty vines a year for a number of years. In this vineyard there is a difference between the first and the last planted of at least fifteen years; and, when the rot prevails, the latest planted suffer equally with the oldest in bearing. If there can be said to be any difference, it would be in favor of the oldest, since we have always found our best grapes on our oldest vines.

It may be, and observation seems to warrant the belief, that in certain localities, perhaps in all where the Catawba has been cultivated a sufficient length of time for the cause, whatever it may be, to develop itself, it is found more subject to rot than when just planted in that particular locality; but the theory, that the age of the vine has anything to do with it, observation and experience show to be as utterly without foundation as all the other theories which have been advanced, every one of which, so far as I know, have been demonstrated to be false by facts within the reach of all careful observers. Whatever the cause of the rot in the Catawba may be, it is yet to be discovered; until that time, the cause assigned by one of the oldest grape-growers, as the only one which would cover the whole ground, will stand good—"pure cussedness."—G. C. H., in Ohio Farmer.

Kelley's Island, October, 1868.

Iona Grape.

[Having said all we could against the Iona Grape, we submit the following in its favor, that our readers may see we are willing to hear both sides.—Ed. S. P. & F.]

After seeing the recent attacks on the Iona Grape, which seem to come from parties prejudiced, or else those who have not given it a fair trial, I deem it my duty to give you a statement of the result of my experience with four hundred Ionas obtained of Dr. C. W. Grant, and planted in the spring of 1866. They all grew vigorously, averaging canes from four to six feet in length the first year, with perfectly healthy foliage. The second season, 1867, every vine was living in its place, and made vigorous canes for fruiting the year following. The third season, 1868, the canes being pruned three to four feet in length for bearing, set fruit from every bud. Some of the canes produced as many as forty-two bunches of beautiful clusters, perfectly sound, without any mildew or rot. The result was far better than I obtained from Concords planted at the same time, and receiving the same culture; the Concords having the advantage of having extra layers. Now, I only wish to say, since enjoying the Iona Grape, that I consider it superior to all other native grapes with which I am acquainted. I also intend to have a larger and better crop of grapes next season from the same vines. The Iona, with proper culture, I consider a success.—R. B. Stevenson, in Journal of Horticulture.

Mr. William Day has invented a patent "velocipede" cultivator and strawberry scuffle hoe combined, for which he claims the following merits:

It will plough and harrow the ground both at once, thoroughly pulverize the soil from 3 to 10 inches deep *at the will of the operator*, and do this without turning any furrow or covering the smallest plant. It will adjust to any width between rows from 1 to 4 feet; is easy of draught—strong and not liable to get out of repair. It will do the work better and faster than 15 men could do it by hand in a given time. It will work up the soil between rows of onions, corn, beets, parsnips, carrots, turnips, cotton, tobacco or strawberries, as soon as the rows can be distinguished. It is *not possible to clog it*, working equally as well in fine garden mould or a stiff clay. It leaves no lumps. Any boy that can plough can work it.—*Gardner's Monthly.*

The Greeley Grape Prize.—Mr. Greeley does not seem satisfied that his $100 prize was awarded to the Concord. At a public meeting in New York, he recently said, "All my money did, was to advertise a grape already known; thus improvement was checked—not stimulated. I am a little discouraged by the result, and do not propose to offer another bank-note for a plate of common grapes."—*Gardner's Monthly.*

Big Apple-Tree.

Probably the largest apple tree in Virginia is now standing, in a dilapidated condition, on the farm of Mr. O. W. Purvis, in Albemarle county, three miles south of the Southwest Mountains, near the three-notched road to Richmond, and two-and-a-half miles from Keswick Depot. The soil that produced this noble old patriarch is loamy, of a mulatto color, and a littled mixed with small yellow gravel-clay subsoil, and immediately over the only bed of lime stone between the ocean and the mountains. This tree is upwards of three feet in diameter three feet above the ground—it has three main prongs branching off some five feet above the ground, and its present height is not less than thirty-five feet. One of its large branches has decayed and fallen off. The tree still bears fruit of medium size and indifferent flavor, but makes good cider. It has two or three neighbors standing near at irregular intervals—all are much decayed, and one, fully as large as the one I am describing, has fallen, and its bulky ruins still remain. All these trees are evidently *seedlings*. An old dwelling once stood near them, which was built and occupied by the Sharpe family, who were among the pioneers of this section. The scope of the writer's recollection is some fifty-five years, and these trees were good old specimens at his earliest recollection. They are probably not less than one hundred years old.

"All that has life must perish and decay,
Mix dust to dust, though long or short the stay.
Oft has dread lightning quivered o'er thy head,
And raging tempest rock'd thee in thy bed;
And winds less rapid oft have spread around
And cast thy fruit all pattering to the ground;
Where man and beast the benefit received,
And thou wert of the bending load relieved."

The Pomologist may infer that the soil above described is the very best, and most suitable for the growth of the most valuable of all fruits—the apple.

J. F.

Pleasant Valley, Va.

THE SOUTHERN PLANTER AND FARMER.

RICHMOND, VIRGINIA., ... MAY 1869.

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Editorial Department.

An Example of Rotation of Crops.

We are frequently asked some very embarrassing questions. Without knowout knowing more of the means and circumstances of the querist than we do, and without knowing much of the relation of the subject to surrounding circumstances that ought to influence the answer, we find ourselves called on for advice, when to give it judiciously would puzzle sounder counsellors than we can pretend to be.

This is most frequently the case with persons seeking to know what is the best rotation of crops.

The most important consideration connected with the whole subject is to be found in the pithy observation of a late friend of ours from the county of Rockingham, a gentleman who made all his money by his land; and starting in debt, became, at the age of fifty, the largest land owner in his county. "A rotation," he once remarked to us, "is a very good thing for a fool, who will break his neck if he gets off of the beaten track; but all a man of sense wants is a convenient division of fields, which he will then crop or graze according to the fitness of things."

But even this remark requires modification; for as the land improves, or circumstances change, the fields will require subdivision, or possibly enlargement. Thus we have known a gentleman who, beginning with a rotation of four fields, was induced gradually to enlarge his system to five, then six, then seven, and lastly eight fields.

In a word, so much must be left to the judgment of the farmer, that it is perhaps better to state leading principles, and work them out as it were by an example, than to lay down any absolute plan.

The old notion used to be that the same crop or class of crops should not be grown necessarily on the same field. But later practical and more accurate observation shows that in some cases and kinds of crops it is best to do so. For instance, we have often stated, and repeat, that oats may succeed oats in the same land for at least eleven years—our own experience runs to seven—with a progressive improvement of the land; and we have seen in Jefferson county,

near Charlestown, the sixth successive wheat crop on the same land, and that crop estimated at twenty bushels per acre.

The propriety of such practices is not now the point, but the fact is stated to show that when other consid-rations render it expedient, there is nothing in agricultural principles that should forbid it.

The object of all farming is profit; first, and directly, in the revenues that the crops produce; second, in the increased production, and as a measure of the market value of the land; which, as a general rule, may be said to be sold not less than once in every twenty years. Upon a calculation of his life, and supposing him to live for his children as much as for himself, the man who does not seek to increase the market value of his land in our society is a fool, both present and prospective. The true point is to make both profits coincident and progressive. But as, no matter how rich the land may be, naturally or artificially, it will fail to produce its full yield, if not properly cleansed, so that no extraneous vegetation shall rob the crop, we think the final object is that the land shall be cleansed. To do this economically, it must be cultivated in cleaning crops, which should, at the same time, be made to pay a profit on the cost of cultivation.

This being attained, the next point is to cultivate crops of such kind as will yield most in proportion to the labor employed to procure them. But it must be remembered that this labor is represented not only by that bestowed manually in the growth of the product and its preparation for market, but also by the cost of transportation to market. Thus a man may grow tobacco in one place when it would be folly in another man differently situated to attempt it; one man may grow hay for market, when another man would be brought in debt by it, and yet ought none the less to have grass. These disadvantages, though, will be found to have more or less of compensation in the greater economy in the purchase of foreign, or the application of home made, fertilizers; and, in Virginia, will ultimately come to be represented by the price of lands; whose relative values are now so far reversed that those farthest from market actually sell for the most money.

But it may so happen that the land may have certain preferences for the kind of crops grown. It may, for instance, be good for clover and grass, but not so well adapted to grain; or very fine for corn, but not good for wheat. These and all other idiosyncracies the farmer must of course know and provide against. Still our general principle will be found to run through nearly all soils except barren sands and very rich alluvions, and that is, that they require for their highest development an alternation of grain and grass.

With these preliminary remarks we submit for examination the following formula, to which we invite criticism. It is assumed as a fair average production of fair land under the system prescribed. We know that it meets the experience of our own farming as to every item, though we have never ascertained them in this precise rotation, which we did not practice before the war, because the land was not in order for it; nor since the war, for want of funds.

It will be observed that the value of each crop per acre is stated, though it must be borne in mind that the profit is very different; thus the timothy hay crop is valued at $40 per acre, whilst the corn crop is put, including the shucks, at $44 80. But when the difference in labor and exhaustion of land is considered, the preponderance will be greatly in favor of the hay.

We have stated the values in this market, and we have made no allowance

for the freight, because that varies in each locality, and the intelligent reader will make the proper corrections to adapt it to his own case.

We have omitted the cost of teams, because they are supposed to be already provided; and we make no estimate for feeding them because of the different value of forage in various places.

For the same reason we give the value of the bought manures in this market. We have also restricted ourselves to the standard manures now in use, and have omitted all notice of the potash manures now coming into vogue, because they have not yet been sufficiently introduced, and because when they are, they can substitute an equivalent value in the fertilizers specified. We specify lime because it suits tidewater Virginia; but its value can be invested in other things better suited to the upper country.

We know that in some cases cleansing crops must precede the introduction of the small grains and grasses to a greater extent, perhaps going as far in some cases as three hoed crops in succession. These and many other things must be left to the judgment of the reader. But the main point remains, and that is that with capital judiciously employed in manures properly applied, there is to-day more money in agriculture than in any other business we know except *shaving;* and there is far less risk than in that. Assuming the land in the case supposed to be worth $100 per acre, then the advance for manures, $1,443 73, is only about 5 per cent.; whereas a man with his capital employed in commercial pursuits requires for its highest development a capital never less than 25 per cent., and frequently exceeding 50 per cent.

But really land capable of such results is worth generally in market very much less, which is all the more in favor of the investment.

The next question is, How can the money for such investments be had? This, as the present article is long enough, we propose to consider in the next number of our paper. It is entirely practiable if our people and legislature would only be *practical,* which is the weak point in our case; for of all people, ours we fear are the most unpractical; and if future legislatures are no wiser in such matters than our past have been, why then God save the Commonwealth.

With these remarks we submit our example of rotation of crops:

Estimate of Products and Cost of Working 300 *Acres in Eight Fields.*

PRODUCTS.

1.	37½ acres corn and 200 lbs. Phos. Peru. Guano.....	300 barrels.
2.	37½ acres oats and 400 lbs. Bone Dust.....	93,750 lbs. in sheaf.
3.	37½ acres clover and 10 bushels of lime.....	75,000 pounds.
4.	37½ acres wheat and 400 lbs. Phos. Peru. Guano.....	750 bushels.
5.	37½ acres timothy and 10 bushels of lime.....	150 000 pounds.
6.	37½ acres do. do.	150,000 do.
7	37½ acres do. do.	150,000 do.
8.	37½ acres do. do.	150,000 do

VALUES.

300	barrels of corn, at $5 per barrel, or $40 per acre.....	1,500 00
93,750	lbs. of oats, at $1 per 100, or $25 per acre.....	937 50
75,000	lbs. of clover hay, at $1 per 100, or 20 per acre.....	750 00
750	bushels of wheat, at $2 per bushel, or $40 per acre.....	1,500 00
4	crops timothy hay, at $1 per 100, or $40 per acre.....	6,000 00
1,800	lbs. shucks from corn, at $1 per 100, or $1.80 per acre.....	180 00
		$10,867 50

Values brought forward,		$10,867 50
MANURES.		
200 lbs Phos. Peru. Guano, at 3½ cts. per lb. on 37½ acres	262 50	
200 lbs. Bone Dust, at 2½ cts. per lb. on 37½ acres	375 00	
400 lbs. Phos. Peru. Guano, at 3½ cts. per lb. on 37½ acres	525 00	
Lime for 5 crops, 10 bushels each, at 15 cts. per bushel on 37½ acres, each crop	281 25	
	1,443 75	
LABOR		
6 hands, (including extra hands,) at $240, (not estimating horses,)	1,440 00	
		2,883 75
Net proceeds		$7,983 75

Cost of bought manures	$4.81	per acre.
Cost of labor	4.80	"
Gross produce	36.26	"
Net produce	26.65	"

Pressed Fish.

Messrs. Gresham & Shanks, of Norfolk, have sent us an advertisement, too late for admission into the advertising columns, stating that they will fill orders for pressed fish. As we have heard persons inquiring into this matter we take this mode of answering them.

The Religious Herald.

The agricultural editor of the *Religious Herald* says in the paper of April 23d, some very kind things of this paper, for which the editors return their thanks. If the other Christian newspapers, and the secular too, for that matter, would employ, as the *Herald* does, a practical and educated farmer to make agricultural contributions, it would, we think, be a good thing for them all. So far from fearing rivalry, we are sure this course would in time create a demand for more of the same sort of information, and so help the *Southern Planter & Farmer.*

Book Notice.

HIGH FARMING WITHOUT MANURE. Six Lectures on Agriculture, Delivered at the Experimental Farm of Vincennes. By M. George Ville, Professor of Vegetable Physiology at the Museum of Natural History, Paris. Boston: Press of Geo. C. Rand & Avery. 1866.

We have received from Messrs. West & Johnston a copy of the above book. It is one of the most remarkable books that has appeared since Liebig's celebrated work, or perhaps we should say the invaluable experiments of Messrs. Lawes & Gilbeck, of Rothamstead.

As the price is only fifty cents, and the book 108 pages, we hope it will be universally bought and read by intelligent farmers. We are having it reviewed and criticised by a gentleman who we think is fully competent to the work: the first part of which will be found in this number of the *Planter.*

Correspondence of Southern Planter and Farmer.

INQUIRIES TO WHICH WE ASK FOR RESPONSES.

Messrs. Editors,—Although you are frequently plied with questions by inquisitive correspondents, you not only submit with philosophic forbearance, but send out very useful information in reply, from yourselves and other experienced farmers. I am influenced by this commendable patience on your part, and the desire for information on mine, to ask you some questions also, viz:

1st. What is the minimum number of acres that a farmer may have in wheat and in grass, that will justify him in purchasing a machine to reap and to mow?

2d. What is the best machine combining the qualities of both reaper and mower?

3d. What number of acres in grass, yielding from 1,000 to 2,000 pounds of cured hay per acre, will justify the cost of a hay tedder?

4th. What is the best plan for saving hay with the assistance of a tedder and gleaner?

I am satisfied from my own experience that our farmers can, with the proper care and effort, not only raise enough hay for home consumption but a surplus abundantly sufficient to supply all our cities. I have heretofore saved clover hay according to the admirable plan of the late Edmund Ruffin. But this plan requires from four to six days time before the hay is sufficiently dry for housing. I have no doubt but that by the use of improved machinery, hay can be cut and secured in a shorter time.

I will be grateful to yourselves or to any correspondent for information upon this subject.

Very respectfully,

March 25th, 1869. GEO. E. HARDY.

FERTILIZERS.

Messrs. Editors,—Enclosed you will find $2.00, my subscription to the *Planter* for this year, and a small parcel of ground Plaster of Paris or Gypsum, from the banks near the Salt Works in the county of Smythe, to which I invite your particular attention. You will find on the application of sulphuric acid to the enclosed specimen, which has been ground at the mill of Messrs. Bonsack & Kizer, a *decided* but not *great* effervescence, indicating the presence of carbonate of lime. Thinking it not to be *pure Gypsum*, several of my friends in Bedford have abandoned the use of this Gypsum from Smythe and are now using the Nova Scotia. Last year my neighbor, Mr. Copland, and myself together used seven tons, applied to soils that I knew to be well adapted to the use of Gypsum. On one of these fields of forty acres, fifteen years ago I made 2½ bushels of clover seed to the acre and frequent heavy crops of clover hay. But last year neither of us could discover any benefit from the plaster in any of our fields to either the first or the second crop of clover. We could discover no marked spots of thin and yellow clover indicating the missing of the plaster by the hands in sowing, which I never failed to notice before. I wish you would have the enclosed specimen tested and its constituent parts ascertained.

The application of sulphuric acid will show you by the *effervescence that ensues that it is not pure.* I tried in the presence of several gentlemen of intelligence, at the same time, using Gypsum from Nova Scotia, sent up by the

canal from Richmond, in which we could not detect the least effervescence. I had determined last year never to use any more from Smythe, but was induced to make another trial this spring upon seeing at Bonsack's Depot what seemed to be a very fine lot in the hands of Mr. Kizer. Mr. George Shaver discovered the effervescing of this Smythe plaster a few days ago, after buying some and witnessed by several persons. Messrs. Bonsack & Kizer who brought it on from Smythe and ground it, are gentlemen of character and standing, above *all suspicion of any fraud or trick.* They have been, no doubt, deceived like others. Years ago I got good Gypsum at the Salt Works and tested it alongside of the Nova Scotia with no perceptible difference found in alternate lands through the fields. This is a matter that concerns the whole community and I wish you to publish this commnnication, or so much as you think essential, under my name.

Yours respectfully,

WM. M. RADFORD.

Amsterdam, April 21, 1869.

[The sample of plaster sent will be tested and the result noticed.—EDS. S. F. & P.]

DEAR SIR,—* * * I have always held that it was the duty of the farmers and planters voluntarily to contribute any information in their power which might likely advance the general welfare of the agricultural interest. I will, with pleasure, endeavor to meet my obligations in this regard, whenever I may find anything that may suit the columns of the *Southern Planter and Farmer.*

As I see there is an interest manifested touching the application of manures to corn, I herewith send you a brief account of an experiment I accidentally met with. In July, 1867, on returning from church through a neighboring farm, I approached a small field which had been cleared of the pines in the winter by a freedman. The land by nature and by cultivation was miserably poor, and I was surprised to see that any one had undertaken to clear and cultivate it. As I drew near the corn, I was struck with the green and thrifty appearance of some half dozen rows just midway the field, while the corn on each side, would not pay for the cultivation. On inquiring of the proprietor of the farm as to the cause of the difference in the appearance and growth of the rows of corn, he knew nothing of it but referred me to the freedman. On the last of August or first of September, while chasing a fawn with a party of gentlemen, I was carried just by the cabin of the freedman and observing that the half dozen rows of corn above referred to still kept its superiority over the others, I rode up to the cabin and asked him to explain the matter to me. He informed me that the proprietor of the farm had given him some guano to put on his tobacco land, and after he was done there remained some lumps which he beat up and on throwing the earth from the corn at its first working, he threw a little of the guano on each side of the corn, followed with the hoes weeding, and afterwards threw the earth back. In all respects the cultivation of the whole field was the same. I requested him to take notice of the corn in the half dozen rows when he gathered the crop and let me know the difference. The matter had escaped my mind till the recent discussion of the mode of applying manures to corn, caused me to recur to this experiment and I resolved to find the freedman if possible, and report the result. It so happened a few mornings after, he happened at my gate on other business. He informs me that he failed to measure the corn separately, but is satisfied that the half dozen

guanoed rows yielded at the rates of six barrels of good large corn per acre, while the remaining portion of the field made very little and that very indifferent. I have only further to say this negro is truthful and sensible, so far as I know and believe. If the above will fit a corner of the *Planter & Farmer*, you can use it, or so much of it as you may think proper.

Respectfully &c., R. P. Atkinson.

Brook Dale, Dinwiddte, Va., April 21st, 1869.

Messrs. Editors,—In the article on the Chesapeake Phosphate, there is a mistake as to the price of this fertilizer. It is $60 per ton, and pays the farmer well at that price. Please be so good as to insert this correction in your May number and greatly oblige me.

Respectfully, Sterling E. Edmunds.

News Ferry.

Messrs. Editors,—Please find enclosed two dollars, to pay my subscription to your most excellent paper to January next (1870). I make this remittance most cheerfully, and am sorry that I have not been able to do so sooner. I consider it the very best expended money in my whole catalogue of expenditures. Each number of your paper is more and more interesting and useful; the last (April) number is worth the whole two dollars. I am truly glad to see the course that you are taking on fertilizers. Stand up manfully, and "Lay it on, Macduff." Two-thirds of the miserable and abominable stuff now offered in the market are nothing but swindles and frauds practiced upon the innocent and unpretending farmer, who being honest himself, thinks that every body else is too. You call attention to the law in regard to the vending of fertilizers in the State of Massachusetts; but, gentlemen, haven't we got all the protection now that we need if the laws of Virginia were faithfully executed? I am neither a lawyer nor a doctor, but I am told that there is a law on the statute book of Virginia punishing any man who obtains money under false pretences, by a service in the Penitentiary; and if selling a fertilizer and setting forth that it contains this, that and the other, and representing that it will do thus and so, and it turns out not to be what they say it is, is not obtaining money by false pretenses, then I do not know what is; and I think an honest jury would so say. I may give my experience with fertilizers for twenty-five years past, and especially since the war, for some future number of your paper. Wishing you God speed in the good work,

I am, very truly, &c., R. H. Allen.

Oral Oaks P. O., Lunenburg county, Va., April 20, 1869.

CROP PROSPECTS IN GEORGIA.

Messrs. Editors,—Here we are—a Spring later than since 1849, when wheat was killed April 15th. On the morning of the 13th instant we had a heavy frost and considerable ice. Still wheat, which was very promising, was not killed. There is more wheat sowed this year in Georgia and Alabama than I have ever known before in the South, and it looks better. I have about fifty acres sowed late in October and early in November that averages knee high. Next to wheat our farmers are preparing to plant largely of cotton, and in the Southern counties of Georgia and Alabama, of cotton to the neglect of

grain. The negroes are working very well; in fact, I have never seen more, if so much, energy displayed by the planters and farmers of these two States, as has been this year in preparing for a crop.

Very respectfully, &c., F. C. TAYLOR.

Summerville, Ga., April 16, 1869.

SORGHUM SYRUPS AND SUGARS.

Messrs. Editors,—You have been pleased in your most excellent magazine to notice my effort to introduce to the farmers of Virginia the great Southern process for making sugar from sorghum canes. It has been the means of exciting much interest on the subject in different parts, the editors of the *Repullican* having received many letters of inquiry. As you have taken some interest in this matter, I take the liberty of enclosing to you a pamphlet which I have just gotten up containing a more accurate estimate of the cost of machinery, &c. I likewise enclose you a sample of sugar, such as is being made every day, and can be made with entire certainty by any one owning and properly instructed in the use of our process. * * *

Very respectfully, TH. S. PRESTON.

Lynchburg, Va., March 29, 1869.

[The sample of sugar sent with the above communication is a sufficient attestation of the superiority of the process by which it is made, and will bear favorable comparison with the best samples of unrefined brown sugar.

Mr. Preston is sole agent for the Southern Process of Manufacturing Syrups and Sugars from Sorghum Canes, and is prepared to furnish a pamphlet explaining the process and the economic advantage of making your own sugar. Address, Lynchburg, Va.—EDS. S. P. & F.]

Col. F. G. Ruffin—Dear Colonel,—Please pardon me for troubling you so much; but as I am a young farmer and you are one of long and successful experience, I write to seek information in regard to the treatment of bones. I have a large lot of them, and wish to know the cheapest way to reduce them to powder, &c.

Your early answer to the above will greatly oblige yours truly, ———

April 16, 1869.

["Look at your book," as the schoolmasters say. See pp. 252-3, April No. *So. Planter and Farmer.*]—EDS. S. P. & F.

Premiums for New Subscribers.

We are sometimes asked, Why don't you offer premiums for new subscribers to the *Southern Planter and Farmer?* We answer, so we do. We offer seven hundred and sixty-eight pages of choice reading matter, neatly printed on fine book paper, bound in strong thick covers and neatly trimmed, at a very small fraction over one-fourth of a cent per page. The only additional premium we pay—an involuntary one, it is true—is the premium on delinquency we pay to our subscribers who withhold our dues without interest, whilst the market value of money is at least one and a half per cent. per month. We once saw a man selling a pod of black-eye peas for sixpence, and give the purchaser a premium of half a pint of mean whiskey on each purchase. The result was a marvelous increase of "black eyes" towards evening.