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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, *Cows* : EDITOR AND PROPRIETOR.
WM. L. HILL, : GENERAL AGENT.

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Vol. II--No. 2.

AN ESSAY ON THE CULTIVATION OF CORN,

BY DR. THS. P. ATKINSON, OF DANVILLE, VA.

To which was awarded the First Premium by the Central Agr. Society of N. C.

“Where grows, where grows it not? if vain our toil,
We ought to blame the *culture*, not the soil.”—POPE.

In the cultivation of corn, as in the construction of a compass or a telescope, due regard should be had to the principles of Philosophy and Science. It is true that one who is ignorant of both may plant and plough, and reap a fair return for his labor, when the heavens prove propitious and favor him with “the early and the latter rain.” But if genial and fruitful showers be denied him during the formation of the ear and the perfecting of the grain; if the dreaded drought appear about this juncture, and he has failed to regard the character of the plant and the principles which govern its growth and development, he will find himself unable to meet the exigencies of the case, and be left to lament over his blasted prospects and to utter the usual complaint that he will not make “half a crop.” To be what is worthy to be called a successful raiser of this invaluable cereal, one must call *his mind*, as well as his body, into requisition. Neither of these can be excused from making its contribution without great damage to the crop. I shall write first on the proper mode of cultivating

HIGH LAND.

As preliminary to this, I will say something on the selection, preservation, preparation, and planting of the seed.

Mrs. Glass wisely remarks, in her directions for cooking fish, that the first thing to be attended to is to "catch the fish." So I would say, if one desires to make a good crop of corn, he should first obtain good seed, and then, if practicable, good land; since it requires as much labor to cultivate an acre which yields only one barrel, as one which rewards you with fifteen barrels. This, I know, is in most cases impracticable; hence it becomes important that the system of cultivation be such as will solicit from the unwilling soil the richest reward for the labor bestowed.

The seed should be carefully selected and gathered *in the Fall of the year*, from those stalks only which have two or more good large ears on each of them. Let it be kept in the shuck, in some dry place, until needed for planting. To protect the grain against the ravages of moles, crows, and other depredators, and to insure its putting forth a vigorous bud, it should be soaked for twelve or eighteen hours in a solution of saltpetre, (one pound of the salt to a gallon of water,) and well rolled in plaster of Paris immediately before planted.

With the seed thus prepared, and properly planted, of the mode of doing which I will treat hereafter, a good stand may be confidently expected. If the land to be cultivated be hilly, or from any other cause liable "to wash," I first construct hillside trenches at suitable distances apart, taking care to let them empty *up stream*. The bottom of these trenches should be eight inches wide, *not level* across, but inclining to the hillside above. In laying off the rows, I run a deep coulter furrow three feet from each trench and parallel to them. Continuing these parallel furrows alternately with the trenches, I finish in the centre of the plat, thus *forming all the short rows near this point*, which is a matter of great importance, and the neglect of which has done much to bring the system of hillside trenches into disrepute and disuse.

A little reflection will convince any one that if the short rows be made near the trenches they must discharge their water, and along with it their loose dirt into them, and thus, in a short time these last will be filled up at various points, where the water will cause breaks, and go coursing down hill with ever increasing force, and making along its track the much dreaded and most unwelcome gullies. In hauling off the corn the wagons *should never be driven across the beds*, but along the furrows to the end, where, turning, they should be directed between other rows, and so on as before. By observing these directions the beds will remain unbroken, except at the ends, and so, continue to serve as barriers to the passage of

the water down hill. A neglect of these simple precautions, the importance of which must be apparent to any thinking mind, has done much to injure our lands, by causing their owners to attribute to the *use* that which is solely due to the *abuse* of the system of hillside trenches, and so to discard an invaluable preventive of "washing."

It is of very great importance that this "leveling operation" be accurately done; and remembering the old maxim "If you would have a thing *well done*," &c., I always do it myself. I use a rafter level, of twelve feet span, and having adjusted the plumb correctly, I cut from one to two inches off one of the feet, according to the formation of the surface to be laid off. This will give the proper fall to the trenches; which should be kept free of grass and dirt, not only whilst the crop is under cultivation, but during the winter. I have deemed it proper to offer this defence of that which, for the last forty-five years, has rendered me good service, and which has been discarded by most others without just cause, and with as little thought, I imagine, as was given to its adoption. I commence preparing my land immediately after housing the preceding crop, by throwing it into beds with a double Dagon plough, *commencing on each side of the coulter furrows already laid off*, following each turn with a deep coulter furrow. This provides against the effects of a drought by affording a deep bed for absorbing and retaining the rains of the succeeding summer, whilst it protects the land against *washing*, that great destroyer of our farms.

I prefer bedding even high-land, for two reasons: First, it allows the winter's frost to permeate the land more thoroughly than when it is left flat; and secondly, because the water furrows thus formed afford a free passage for the surplus water that falls in winter, and the land is thereby left in a much better condition for cultivation in the spring.

I know that many persons object to this mode of cultivation because they think that corn dropped upon a ridge must suffer more from drought than if it were planted on a flat surface. This is unquestionably true; but only a slight reflection will teach them that they are not driven to the necessity of planting on a ridge because the land has been thrown into beds. They may, as I do, plant *in the water furrows and on the clay*. About two weeks before planting, say from the 10th to the 20th March, I begin to reverse the beds with the plough by which they had been formed; and if the ground be at all rough or cloddy, I run two furrows of a three-tooth coulter harrow over each bed. This puts the ground in first-rate

order, and pays better than any two ploughings after planting. On reversing the beds care should be taken to leave a ridge of one or two inches of the soil unturned. The dirt thus left will, when incorporated with the clay, by the process presently to be described, form a suitable matrix or bed for the reception of the seed. The roots of corn branching off *laterally and never penetrating the earth below where the grain is deposited*, (there being no tap-root,) it is all important *that the land be broken very deep and that the seed be planted very low in the ground*; otherwise it will wither and die on the approach of droughts. It is impossible to break the land too deep or to pulverize it too well, although it may be, and *often is turned too deep*. The turning plough should run just deep enough to penetrate a little distance below the soil, so as to throw up clay enough to glaze the surface.

The great advantage of very deep ploughing is that it greatly increases the power of the capillary attraction of the earth by which the moisture is raised from below to the roots of the plants. This power is augmented also by the separation of the particles of the earth which is effected by the plough, even as low as the bottom of the furrow.

The difference in the degree of this power of attraction, where the land has been well broken and where it has been left hard and cloddy, may be estimated by holding in one hand a lump of brown sugar with one end in water, and in the other hand a lump of loaf sugar similarly suspended. It will be found that whilst the last will be slow to absorb the water, the first will have become saturated and dissolved. This will be owing to the difference in the relative compactness of the two samples. Nor is this the only advantage of deep ploughing; for whilst it greatly increases the moisture by raising it in dry weather, it decreases it in wet weather by facilitating its gravitation. And yet, with the importance of this method of cultivation set before them, how many are there who will prefer the old mode of *scraping the surface*, and setting it running down hill with every rain?

Having thoroughly prepared the land as above described, I run three deep coulter furrows midway between the ridges. This forms a suitable bed, by the admixture of soil and clay, for the reception of the grain. *The opening should be deep*, and this, together with the dropping and covering, may be beautifully effected at a single operation by the Sulky Corn Planter, recently introduced. If this cannot be procured, the opening should be made by a shovel plough, with a small mould board attached on each side. The grain should

be dropped from the hand and covered with a hoe. Three grains of corn should be dropped where you intend but one stalk to remain.

I may be asked what distance I allow. On ordinary high land, I plant the grain 3+5 feet apart, which will give 2,900 plants to the acre. On better land, I plant it closer—say $2\frac{1}{2}$ +5 feet—and on very rich land, I would have it not more than 2+5 feet apart, giving, respectively, 3,625 and 4,350 plants to the acre.

I greatly prefer to maintain the full measure of five feet between the rows, because it will make the beds, when worked the last time, flatter, thus causing them more effectually to absorb and retain the water at a time when there is the greatest demand for moisture to sustain the stalk during the maturing of the grain.

As soon as the plant attains the proper size, I run a deep Coulter furrow (I desire to familiarize the reader with this term) on each side, and follow it immediately with the hoe; having the weakest stalks pulled out where three are found. A suitable time should be selected, about two or three weeks afterwards, when the ground is wet, to withdraw another plant, leaving only one.

About this time the land should receive a thorough harrowing with a Coulter Tooth Harrow, taking care to let the teeth run very deep. This will tear down the beds which have been formed by the reversing process above recommended, and leave a nearly level surface between the rows.

If, from frequent rains, the grass be likely to get ahead, a keen shovel plough may be substituted with advantage. Two weeks more will bring us to the fifth or tenth of June, at which time the corn will be in a condition to receive its last ploughing. This is effected by running one Dagon furrow on each side of the ridge, taking care to run as far from the plants as is consistent with making the dirt meet around them. The furrows thus formed should be filled by dirt thrown with a shovel plough having a small mould board attached. I prefer this to a second furrow from the Dagon, because it leaves a flatter bed, which I regard as of great importance.

In laying by corn, I *never plough every consecutive row*, but leave every alternate one to be attended to when the first shall have been ploughed. This will be in about six days, by which time the roots which may have been severed will have "taken hold" on the earth and be able to sustain the plants, whilst the last broken shall remain disrupted. The plants are thus protected from the effects of too great depletion at any one time, and are preserved in a green and flourishing state, when neighboring crops are parched and yel-

low. Every one knows that, if two quarts of blood be taken from a patient at one operation, paleness and fainting will be the consequence, whilst, if only half the quantity be drawn on one day and as much more six days thereafter, no such effect will be produced. It will thus be seen that the mode of cultivation here recommended is supported by analogy, whilst it is founded on reason and sound philosophy.

I take occasion, just here, to impress upon the mind of the reader the very great importance of allowing the loose dirt to remain where it is most needed, namely, equally diffused over the whole surface between the rows of corn. It is the custom with many farmers to draw the dirt from the middle of the rows, and to pile it in large hills around the stalks. Nothing can be more irrational and injurious to the crop. The large roots coming out above the surface of the earth afford no nourishment to the plant, but serve only as braces to preserve it from falling. It is the small fibrous, thread-like roots only which convey the nourishment to the corn, and they, as every observing individual knows, are found like net work extending entirely across the rows. If the soil which forms their bed be removed from its proper position, they will be deprived of all power to convey nourishment to the plant, and it will, as a necessary result, sicken and fade and twist, and thus the cultivator will, by his own folly, be deprived of a remunerating return for his labor. Should a drought set in during the process of earing and filling, he may boast of housing a few nubbins, but will gather no good corn. I have known many farmers to suffer severely for thus setting at defiance the laws of Nature, the teachings of Philosophy and the plainest dictates of common sense. From the tenth to the fifteenth of July I run two deep Coulter furrows in the centre between the rows, thus forming a fresh and deep bed for the roots and retaining the greatest amount of moisture at a time most needed. Let no one who shall try this mode of cultivating corn be discouraged in the Spring, when he shall see his neighbor's crops, planted in the usual way, (on a ridge,) outstripping his in growth. "Not having depth of earth," it may be expected thus to go ahead for a time; but he who shall follow the directions above given, will have the satisfaction of seeing his crop *green and flourishing during the summer*, when all around will be parched and withered. I am free to admit that there will not be this difference when rain shall fall in sufficient quantities whenever needed; but in all ordinary seasons the contrast will strike every beholder, and lead to the inquiry, "What causes this great difference in the appearance of contiguous

crops?" I have thus far written of the cultivation of corn on high land only.

On sandy low-grounds there need be but little variation of the mode; but in low-grounds with an impervious soil, or otherwise, liable to be saturated with water, an opposite treatment is required. Whereas, the object in the first case is *to solicit and retain moisture*, we are to endeavor here to provide the most effectual means of *getting it out of the land*.

In the preparation of land of this character, the first step to be taken is to cut a sufficient number of ditches in the proper place, and of the proper size and depth, to attract and carry off the surplus water. If the soil be of an impervious character, it will be necessary to construct blind ditches of the required depth, leading into the open sewers, taking care to have their covering so far below the surface as not to be reached by the plough. These, together with surface trenches made with a plough and properly located, will put the land in a proper state for cultivation.

Here I would throw up the beds four feet apart, pointing them in the direction of the trenches. I adopt narrow beds on such land for the same reason that I would discard them on high land; namely, because they can be made higher, (and so dryer,) and for the further reason that the water-furrows are thereby multiplied, both of which circumstances tend to dry the soil.

There is yet another reason for it. The higher and narrower the beds, the more effectually will they be penetrated by the frosts of winter, which exert a powerful influence in pulverizing and mellowing the land.

In opening the beds for planting, the depth of the furrows should depend on the character of the soil and the liability to injury from over-moisture.

In the cultivating, I would be careful to preserve the convexity of the beds as much as possible. Care should also be taken to keep the trenches and water-furrows well open during the winter.

An experience of more than a quarter of a century has fully satisfied me that this mode of selecting, preserving, preparing and planting the seed, and of preparing and cultivating corn on high land, will insure much larger crops than any other that has come under my observation. Let others try it, (as many have,) and I feel confident that the rich returns will bring them to a like conviction.

The comparative merits of this, and the ordinary mode of cul-

ture, should be tested by an experiment on contiguous portions of the field, and a fair statement of the result be published for the benefit of others.

Are Farmers Quacks?

NO. II.

Let me see. Mem. No. 1.—Guano is a humbug, as proved at wheat harvest of 1867. No. 2.—Stable manure is a little better. No. 3.—No manure is the best of all. The readers of the *Planter and Farmer* will remember the invincible logic of actual experiment and general arguments by which these conclusions have been established. Now Farmer Jones, who agrees with me in the main, as well as our friend of the raw-bone, will be astonished when I tell him that I have discovered a flaw in his logic. It is a canon of experimental reasoning that all the *essentials* of the experiment must be noted and duly weighed. In consulting the weather calendar, I find that we had the most remarkable, severe and prolonged rains in this section exactly when the guanoed wheat was in full bloom; that manured with stable and barn-yard manure had only partially bloomed, while the unmanured wheat was later still and not bloomed at all. The result was, the bloom was beaten off and the crop was most damaged where it was most forward. The purple color I noted was but the sign of barren straw. The late wheat was of the proper color and well filled. So I beg leave to correct my memoranda again. Mem. No. 1.—In 1867 the heavy rains damaged the early wheat by beating off the bloom, and developed smut, probably by excessive moisture, or by bruising the seed germs, or both. No. 2.—Late wheat on *good land* succeeded better than that which was stimulated by manures. No. 3.—I conclude that the failure of manures this season was not the fault of the manure, but the result of the season which brought general disaster to the very forward wheat.

So you see that I am ready for new experiments, and my faith in *remedies* for sick land is not yet wholly shaken.

But there are other forms of quackery besides that I have noticed: e. g., Gil Blas tells us that he served as valet to Dr. Sangrado, who paid him nothing and gave him very little to eat, but encouraged him to drink water freely. "Drink, my son, drink; you need not be afraid of it; water is the greatest purifier and invigorator. By no means neglect to drink a great deal of water." Gil Blas followed his directions with fidelity until he became so weak

and emaciated that he began to think of finding a new master and better cheer. But the doctor would not give up so docile a pupil, so he took him in as a partner in his practice after having taught him the whole science of medicine in one single sentence. "Make your patient drink a great deal of water and be sure to bleed him freely. Blood-letting and water-drinking are the whole of pharmacy." There is no need to pause to describe his career in assisting his master in depopulating the city.

Now, many farmers treat their lands in precisely this fashion. They feed their lands very lightly or not at all, and they rely upon *water* alone to make a crop. In the meantime they bleed as freely as possible at every harvest, and then apply leeches to the surface (in the shape of grazing stock) to extract the last possible drop of blood. After the system has been pursued for some time, the farmer is astonished to find himself poor, his land poor, and his cattle poor. Now, this is quackery, to produce a disease by injudicious treatment, and then aggravate it by continuing the same. I would recommend to this class of farmers to treat their lands by one of the rules of the Thompsonian practice by which they cure a great many patients, despite of their lobelia and steam; I mean good feeding and good nursing, so that Nature may do the rest. It is worthy of note that lands well manured and well cultivated seldom fail to produce a good crop, while those left to the fructifying influences of water (rain) alone, fail partially or totally in four cases out of five. I do not undervalue the rains and dews and sunshine of heaven, but for all that I am not a water-cure man.

By the way, I once read a book on "water-cure," and was somewhat captivated with its plausibilities. Not long after, one beautiful sunshiny morning, I saw a fowl of beautiful crest and snowy breast sporting on the surface of a limpid stream, sometimes diving and sometimes throwing the water over his glossy feathers in great apparent enjoyment. By-and-by he raised himself erect, and flapping his wings, he scattered the spray around. I was about to shout in ecstasy, "Cold water forever!" when he, more wise than I, opened his mouth and said, "Quack, quack, quack."

Mr. Editor, I do not desire to be impertinent or personal. Our friend of the *raw-bone* found me out immediately, but farmer Jones is so obtuse that he has never seen the point of the joke in No. 1. But the followers of Dr. Sangrado are so numerous in this section that there will be a whole troop upon me when you publish this.

There are other phases of Quackery which I shall endeavor to describe in my next.

J. B. S.

Geo. Watt's Plough in a Tight Place, and Some Thoughts on Ploughing.

Mr. Editor,—I have a piece of depressed low grounds about three quarters of a mile long. A ditch through its longitudinal extent vents the waters that gather from the adjacent hill, and also receives and discharges a portion of the tides every day. This shows that the land is low. It is of the best description of James river mud low grounds, but is subject to overflow. It has not been cropped since 1861; and of course had put up a heavy growth of weeds every year, varying from three to six and eight feet high. This growth consisted of iron weed or stick weed, of bull weed or wild hemp, and, below this, a rank growth of devil's bit, with its tough, strong white roots clumped like asparagus, both kinds of arse-smart, wild oats and other swamp grasses, and a running accompaniment of the annual vines that climb over and among the weeds. There were a few young sycamore and willow saplings interspersed, and an abundance of dwarf-ash—the bunchy shrub that infests low-grounds, and bears its seed in a button like the button of a sycamore. Generally it is thought impossible to plough such land without first burning it over; but I did not wish to do that. I designed the land for a succession of corn-crops, and its tendency is to become too stiff when the vegetable matter is worked out of it by repeated cropping. But I had never had a plough that could turn under such a coat of vegetable matter, the product of six successive crops of weeds; the present growth erect and matted or intertangled, and the prior growths lying cross and piled upon the ground in various stages of decomposition according to the age of the weeds. So I went to Mr. Watt and stated the case to him. He offered me for trial his three-horse left-hand plough. I took it, altered the set of it to suit the horses, and ploughed the land without difficulty about six or eight inches deep, subverting the soil and weeds completely and not distressing the horses.

I used a chain to drag the weeds under, but I think the work might have been done nearly or quite as effectually without it. The ploughman used an axe occasionally to cut down the dwarf ash and now and then a sycamore sapling, to allow the plough to come square under the roots; but with these exceptions there was no stopping except to blow the horses. From the time the plough became adjusted to its work in depth and width of furrow, and arrangement of drag-chain, there was absolutely no choking. I followed it myself for upwards of three consecutive miles, and in the whole distance it was not

necessary to thrust away a particle of the trash which usually gathers under the throat of the plough. Nor did that necessity occur at all until the ploughman undertook to change the point of attachment of the drag-chain; and when I had that restored it came back to its former perfect work.

And here let me say a word on the subject of the chain. Frequently it does more harm than good because it is not properly fixed. If attached to the beam at the throat of the plough, it is sure to get in the way and make the plough choke. Let it be fixed to a staple *temporarily* driven into the beam of the plough some inches forward of the throat, until, by changing it according to observation, the proper point is ascertained. There let the staple be fixed. I should have said that a small part of the land had been in corn last summer, that it had not been cut down, topped, or bladed, but the ears were gathered from the standing stalks, which had been mashed down by wagons and carts passing through them, and by cattle, which had browsed upon them. This piece was quite as well ploughed as the other, and with as little choking, the corn-stalks being completely covered.

The operation of this plough was wonderful. My friend and neighbor, Captain James B. Jones, calling to see me and hearing that I was trying a new plough in the low grounds, failed to find us at first, so hidden were we by the weeds; and when he did find us, he said, after looking at the work a while, "What made Watt such a fool as to try a new plough on that sort of land. It is the worst to plough I ever saw." He was well acquainted with foul land, as he had for years cultivated four hundred acres of reclaimed marsh on James river.

This plough, however, though new to that particular job, is not absolutely new; as a good many of them are in use by parties who bought them of Mr. Watt according to his published terms, viz: that if they are not liked the purchaser can get back his money by returning the plough.

I had previously subjected this plough to another test. I had ploughed a portion of my garden with it eighteen inches deep, turning the furrow perfectly with three horses, the ploughman walking by the side of the plough and rarely touching the handles except to turn the plough at the end of the furrow. There was no mistake as to depth, because the beam dragged on the ground all the way, the land being clean, and we had only to measure from the heel of the mould board to the bottom of the beam.

This garden soil was originally a stiff intractable clay, but is now

well-fertilized by tile-draining and an abundance of manure, though still difficult to work at such a depth. The low grounds were not ploughed so deep, because it would have been impracticable for the teams; and was useless had it been otherwise.

The horses averaged not more than 15 hands high; and though stout and strong, were not heavy.

I do not wish to be understood, in giving these instances of extraordinary ploughing, to recommend them as examples for everyday imitation. No team could stand it; and in each of the cases I record, the horses were rested occasionally. Indeed, as the plough was unimpeded in its course, the horses had to be stopped; for they could not rest, as is the case with so many other ploughs, while the ploughman laboriously clears his mould board. And it is the overlooking of this fact which makes some people think the draught of these ploughs much harder than it really is. As they need not stop for the plough, they forget to rest their horses.

What I aim to do, is to let people know that we have a better plough among us than any we can import, and to give my testimony to its merits. It follows that if it works with ease under the circumstances I have detailed, it must be far ahead of other ploughs under ordinary circumstances; and so far as I have tried it, that is my opinion. It must also follow that, as the excellence of this plough is due to its *model*, that the same model, if applied to the two-horse and one-horse plough, must make them, in like manner, proportionately superior to other ploughs of their class. This I have demonstrated in my own experience. I have substituted the two-horse for the *old* three-horse Watt plough, because I find it does as much work as that did. (Though, if I could afford to give up my two-horse plough, I would use the new three-horse plough to a much greater extent than my crippled means now allow.) I have also ploughed a hard-trodden clover sod seven inches deep and twelve inches wide, with one horse to the one-horse plough. But here, again, the horse could not stand it. Still, it proves the value of the plough.

And now for the second branch of my subject—some thoughts on ploughing. A short time since, a neighbor of mine asked me to recommend to him a good ploughman; and I told him, what I now tell your readers: there is a great deal of misapprehension as to the necessity of having “a good ploughman.”

My neighbor worked a pair of mules, very fine animals; but one of them kicked at every turn; and he had never made the plough the subject of any particular study. Such a man needs a good

ploughman, I admit. But can he find one among the negroes, or raw immigrants; and if he shall find one, how long can he keep him? Would it not be better, by a little trouble, to be able to dispense with him? If we procure gentle horses, or better still, mares' but either in preference to mules, and gear them properly, and then follow the plough observingly ourselves, studying the relation of its parts one to another, for one or two days, until we understand it ourselves, we can make any hand a good ploughman, if he has a fair share of good temper and has been at all accustomed to horses. This is contrary to the received opinion, which has always held that there must either be a natural aptitude for ploughmanship, or, in its place, a long course of training and experience. Formerly, that was so; but now, the theory and mechanism of the plough has so improved in the progress of invention, that all a ploughman need now do is to keep his plough at the set the master gives it—and this any sprightly youth can do.

The best plough I know is Watt's; and I have worked it before the war by the side of various patterns that I, from time to time, obtained to compare with it, but especially by my old favorite, the Livingston, which I ultimately discarded. But the new patterns (and *patents*) of Watt's plough are better than the old. One great advantage is, that they are left-hand ploughs.* With them the lead-horse walks in the furrow and very soon becomes so well-accustomed to that furrow as his guide, that he needs no checking by the rein to keep him in position. Whereas with a right-hand plough, the lead-horse or the ploughman, one or the other, must always watch the distance so as to keep the plough in place. Hence, the ploughman is eternally checking his leader to keep him in place, which is a worry to man and beast.

Another advantage of these ploughs is, that they work with less draught, when properly set, than any other plough (and even when badly set, they work as easily as any others); and, therefore, there is less occasion to drive the horses up to and beyond their strength, which frets and disturbs them. Again, this plough, *when properly set*, will frequently run one hundred yards by itself. I have often seen it do it. This makes it work more easily to the ploughman, who, not having to toil so much in clearing his plough, keeps in a better humor—a thing which, ridiculous as it may appear, is yet a very important consideration. And finally, the plough rarely ever

* He has also right-hand ploughs of the same pattern, but I think them inferior to his left-hand.

chokes, and never as much as any other plough, which, independent of its direct excellence, is a great benefit, because neither the ploughman nor his horses are so much fretted and strained.

As to gearing horses, it is usually thought that one man can do it as well as another. This is a mistake. The rule is very simple; but very few know it, and fewer still apply it. The line of draught is said to be from the centre of resistance of the plough to the horse's shoulder. But, practically, it is a broken line from the shoulder to the end of the plough-beam at some point of attachment to the clevis; and it is commonly supposed that the traces should go straight from the horse's shoulder to the clevis, the only use of the back-band being supposed to be to keep the traces off the ground as the horse turns or ceases to pull. Now, the true theoretical line is perpendicular to the slope of the horse's shoulder, and perpendicular likewise to the centre of resistance. But this also is practically unattainable, and a broken line must be substituted, as in the other case. It is very important, though, that this actual line—the traces—should leave the horse perpendicular to the slope of his shoulder, the slope and the trace forming a right angle; and it is an accident if it be unnecessary to use the back-band to obtain this line; for it varies in different horses as the shoulder is more or less oblique. In most cases, the back-band must be used to get this indispensable line; and if it is found to put any stress on the horse's back, it is better for him to bear it there than to pull outside his true line of draught; for any line above that point has a tendency to raise his fore-legs, as any below it has a tendency to lift his hind-legs; in other words, to make him turn a front or back somerset. Of course, I do not mean to recommend the absurd practice of working the back-band on the loin, which some persons do to keep the plough from running too deep—a proper plough has other devices to prevent that. If I had drawings, I could easily illustrate what I may have stated somewhat obscurely, but any one can do it for himself by any picture or engraving of a horse he may have, to which he can apply the lines with a pencil and ruler, and demonstrate it for himself. It will well repay the study, for whoever learns to gear by that line will have almost ceased to gall his horse's shoulders.

I say then that if, instead of a good ploughman, we will provide ourselves with good, quiet, manageable horses, and gear them *properly* to a plough capable of being *properly* set to run true and level, and to throw the furrow-slice well-off from the mould-board, and guarded, if necessary, with a chain, against choking; a plough,

in other words, made, as very few ploughs are made, after the right principles, we shall be able to dispense with a style of hand now deemed by many as necessary to the best ploughing, but which I venture to think an opprobrium on the farmer and the plough-maker. For the latter should make an implement which, as in so many modern inventions, supplements the skill of the workman by the genius of the mechanic; and the farmer should demand this implement at the hands of the mechanic.

These conditions of successful ploughing with an ordinary ploughman are very simple, but they are rigidly insisted on. And equally inflexible is the first condition, that the farmer himself shall master the other conditions. Any man of ordinary sense and application can do it; and once done, it is information which will last for life, and render him independent of a laborer, whom too many men now think absolutely necessary to the commonest, but most important process of farming.

Farmers would then as soon think of depending on the skill of a hand-loom weaver for the cheapest and best yard of cloth, as to the extraordinary skill of the ploughman as a *necessary* accomplishment for obtaining good ploughing.

I think the theory of the Watt plough and his models the best I have ever seen. I doubt if they are not the best in the world, destined, perhaps, only to be superseded by the steam rotary digger. I claim them with pride as the inventions of a Virginian. But I should not be perfectly candid if I failed to say that there are faults in the construction of these ploughs which should be corrected. His timber is not always of the best; his castings are sometimes defective, and his points almost always so—they are entirely too soft. Doubtless Mr. Watt, in studying as he has studied, to perfect the theory of the plough, has left the execution of details to others. But if he will only select model materials and model workmen, there will be but little cause to complain of his model plough.

As I have herein not only stated opinions, but given testimony, it is proper that I give my name.

FRANK G. RUFFIN.

Chesterfield, Dec. 31, 1867.

“Men’s actions are the greatest sign of their inclinations.”

“Money may credit you, but it is wisdom that must adorn you.”

“Much coin, much care; much meat, much malady.”

“Roult’s Shovel Plough and Corn Planter.”

Mr. Editor,—At the Agricultural meeting in Richmond in the month of November, 1866, I had the pleasure of meeting with Mr. A. P. Roult, of Liberty Mills, Orange county, who had on exhibition models of his “Iron Double Shovel Plough and Corn Planter.” Upon Mr. Roult’s recommendation, I ordered four of his ploughs and a corn planter, and having worked the same during last year, and tested them fully, I find they answered in every respect fully up to Mr. Roult’s recommendation. The Iron Double Shovel Plough is simple in construction, well made and very strong and durable, and, in my opinion, is superior to any plough I have ever used for the cultivation of corn and tobacco, and is a superb plough for putting in wheat and oats. With this plough, one hand and one horse can cultivate more land in corn and tobacco than two hands and two horses with any other plough, I have seen used, whilst the ground is thoroughly broken, and owing to the steadiness with which the plough runs, is but slight labor to the ploughman. My hands were loud in praise of this plough, and several of my neighbors ordered similar ones, after seeing them worked.

Mr. Roult’s Corn Planter is also a superior implement. It seems to me it cannot be improved. It opens and lays off the furrow for the corn, drops the corn, also the guano, covers up both at one operation, and this is done by a man and a good horse or mule. The machine is so constructed that you can drop from two to three, four, five or six grains of corn at a time, and as much guano, or manipulated manure, as you may wish. What a saving of labor! By the old system, it would take five hands and two horses to do what a man and horse do with the Corn Planter. It gives me great pleasure to recommend this plough and corn planter to the farming community. In the use of them there is such a great saving in labor, I am sure that they will pay for themselves sooner than any farming implements I have bought for years. I think you will benefit the farming community generally by making known the merit of these implements, and informing them they can be had of A. P. Roult, of Liberty Mills, Orange county, Virginia, who is still manufacturing them and other farming implements.

THOMAS F. PERKINS.

Buckingham C. H., January 12th, 1868.

Farm Accounts.

Editor Planter and Farmer,—When your North Carolina correspondent in the November number of the *Planter* says “set us in the habit of keeping strict and systematic accounts with our farms, and of settling up those accounts annually, or semi-annually, as punctually as we do, or ought to do, with our merchants,” he strikes one of the chief key notes to success in agricultural as well as other pursuits. And I will take the opportunity of remarking, by the way, that no people of any section of this great country are possessed of more good, hard, practical common sense than the people of that good old North State. The life of the farmer who keeps his accounts straight, and makes his crops before he spends them, is the happiest, the most healthful and independent in the world. Whilst, on the other hand, the farmer who is careless in the keeping of his accounts, and spends his crops by his estimates and not by measure, will always find himself behindhand at the end of the year, and will lead a life full of anxiety, apprehension and care. Let the farmer, therefore, “pay as he goes.” Let him lay down as a rule, never to be departed from, “to restrain his wants when he has not the means in hand to indulge them.” Let him be able, by a habit of systematic accounts, to make accurate estimates on the first of January of each year of the requisite amount for the year, for labor, for manures, for necessaries, for comforts and for luxuries, and if he has not, beyond a doubt, within his reach the means for a full supply of all he wants, let him cut down, where best he can, until he brings himself within his means. Let him then give up his gun, his fox-hounds, his fishing-rod, his barbecues and his politics, and devote himself earnestly to the personal prosecution of his business, and there need be no fear, but that soon he will be prosperous, contented and happy. I am satisfied that the same amount of money invested in lands and stock, with a year’s expense ahead, in hand, in Virginia or North Carolina, will give one more of comfort and quiet enjoyment than can be obtained from it by any other mode of investment.

My object in writing this is to say to you, and through you to “Farmer,” that, on page 502 of the report of the Department of Agriculture for 1865, will be found an essay upon a “System of Farm Accounts,” by John H. Bourne, of Marshfield, Massachusetts, which, whilst not exactly calculated for our latitude, yet presents a capital plan for a farm “inventory,” “journal” and “account book.” One idea which has struck me as valuable, now that we

may be forced to the conclusion that it may be best for us to reduce our area of land, is the keeping accounts with each field, thus enabling us to see which portions of our lands pay us best.

Can any of your correspondents give me the results of experiments with unleached ashes as a top-dressing for clover, or rather the full details of the experiments? X.

January 13th, 1868.

Report of Department of Agriculture, 1866.

As the report cannot reach the hands of all your readers, it is proposed to bring it to their notice in a review of its contents.

This is the last report of Mr. Isaac Newton, the First Commissioner of this Department, to whose sagacity and common sense, aided very little by education or intelligence, it owes its present prosperity. He collected around him practical, useful assistants. His disposition was kind. This was manifested by the warm interest he showed in extending all the assistance he could to the Southern States, by the wide distribution of useful seeds, and of the publications of his Department. The writer can witness his goodness in this regard, and is glad to throw a grateful chaplet into this old man's grave, whose last act evinces his desire to improve Southern husbandry.

The report is dated November 20th, 1866, and is now being distributed, more than a year after its date. This delay impairs, to a very great degree, its usefulness. It is to be hoped that hereafter there will be earlier distribution of a document interesting to so large a portion of the people.

The Commissioner tells us that, of fifty-five varieties of wheat grown in the experimental garden, only six were worthy of remark. The Premium White Mediterranean, sown October 9th, was harvested June 29th, and produced 48 bushels per acre. The Red Bearded Mediterranean produced nearly the same. "Both proved of fine quality, and are recommended for general cultivation. The Tappahannock and Russian 'Scheffel' wheats succeeded admirably."

Of sixteen kinds of rye, "Probstier and the Ternia (from Saxony) are considered the best."

"Seventeen varieties of oats were sown. The White Swedish, Yellow Lethurian, Black Tartarian, Black Prussian and Nuns succeeded best."

From seventy varieties of peas, the earliest were Dixon's First and

Best, Wheeler's First Early, Sangster's No. 1 and McLean's Little Gem. The Epicurean, Princess of Wales and Premium (each McLean's) were fine. Saxton's Prolific, Yorkshire Hero and Madgeburg Gold are in high repute as second crop peas.

Alsike Clover was cut three times—Lucerne was a success—the Esparset is remarkably adapted to light soils.

Of potatoes, Orono, Samaritan and Early Goodrich rank first.

The wheat crop of 1863, in twenty-two States, (Northern and Western,) was very large; in 1864, 160 million bushels (13 millions less in '63); in 1865, 148 millions; in 1866, the estimate is 143 millions. Seventeen millions, the estimate from eleven Southern States, and twenty millions from the Pacific States, the whole crop is assumed to be one hundred and eighty millions. The crop of 1859 being one hundred and seventy-three millions, the crop of 1866, by the ordinary rate of increase, should have reached two hundred and forty-two millions. The supply is about five bushels to each inhabitant, or half a bushel less than in 1859.

The corn crop of 1866 is estimated at eight hundred and eighty million bushels—about forty million bushels more than in 1859.

The loss of stock in the Southern States for 1860 to 1866 is estimated thus: Horses, sixty-eight per cent.; mules, seventy; cattle, sixty-five; sheep, eighty; hogs, fifty-six per cent. In Virginia, the estimate is, 172,547 horses, 28,710 mules, 543,122 cattle, 761,586 sheep and 959,951 hogs. This, of course, excludes Western Virginia.

The report of the Commissioner is followed by those of his subalterns. First comes a practical one of Mr. Saunders, Superintendent of the experimental garden. He gives useful directions for Strawberry culture, of which delicious fruit he places in the front rank the Jucunda and Triomphe de Gand, next, the Agriculturist.

The Concord maintains the first place among the grapes.

Of pears, he says: "For many years the dwarf pear has been planted very extensively, and while a considerable amount of success has resulted, it cannot be denied that great disappointments have also been experienced, and that, too, in cases where a knowledge of tree culture was by no means of an inferior order. It is a common remark that dwarf pears are always successful under proper treatment. This may be so, but what *proper treatment* really is, has not been very satisfactorily defined."

Of raspberries, "with proper Winter care (covering the canes), Brinkle's Orange, Franconia, Hornet, Falstaff and Red Antwerp will give entire satisfaction."

He gives useful directions for treatment of orchards and sowing seeds.

Eighteen pages follow on Entomology, interesting to Science, and in which the farmer and gardener will find to be their best friends, insects which they have treated as enemies. This article proceeds from Townend Glover, of the Agricultural Department.

The Chemist, Dr. Antisell, says much upon the subject of sugar. He thinks that "after a few decades have passed, the amount of sugar required to be imported for our own use will be enormous. At present, we supply only one-third of the demand, leaving nearly 350,000 tons of sugar to be supplied from foreign sources—an amount which, in every future year, will need to be increased. Thus the necessity for the more extended cultivation of sugar plants is incontestable. There are but two of these at present known to the civilized world which can, by process of manufacture, steadily and profitably yield crystallizable sugar. These are the sugar cane and the beet. There are few countries so favored by their extent as to be able to cultivate both plants. The Sorghum and Maple, as sources of sugar, may be placed out of view, inasmuch as the supply from both is limited, and the separation of the sugar is not a remunerative process."

Mr. J. R. Dodge, the Statistician, reports the crops of the country. He shows bad taste and no kind feeling, and no just discrimination, in this as well as in former reports, in referring to the late war as "a rebellion"—page 52. In noticing the report of the Commissioner, the statistics of the wheat and corn crops have been stated. A general table of the principal crops shows over fourteen hundred and fifty millions of bushels, raised from sixty-two and three-quarter millions of acres, valued at \$1,191,843,405—an average of nearly nineteen bushels per acre. Another shows the average cash value of farm products per acre for 1866, in which Virginia ranks twenty-four in corn, eighteen in wheat, twenty-nine in rye and oats, twenty-six in potatoes, fourteen in tobacco and sixteen in hay. In the average yield per acre, Virginia is twenty-three in corn, nineteen in wheat, twenty-three in rye, twenty-two in oats, eighteen in buckwheat, eighteen in potatoes, nine in tobacco and ten in hay. "The yield of wheat per acre in 1866, exhibits a remarkable range. While the Northwestern States generally show an average about equal to the average for four years previous, and in some of them a somewhat superior yield, Ohio falls to 4.5 bushels in place of 12.19 for the previous four years; Indiana 5.9 instead of 13.1; Kentucky 6.5 instead of 8.75; Delaware and Maryland

show a decrease; the Southern States uniformly have low averages, and 1866 was no exception."

Cotton and rebellion are linked together when the Statistician comes to the cotton crop; but he shows a laudable interest for the successful culture of this plant. "A careful observation of each county in detail, aided by all outside reports and estimates attainable, with a final analysis of all the causes of success or failure, led to the Department estimate, early in October, of 1,835,000 bales." He states, with just pride, "that after the heavy losses by floods and army worm in Louisiana, and the repeated insect depredations in Mississippi and elsewhere, that estimate was modified to 1,750,000 bales. The result proved the former figure to be a remarkable approximation to the actual return—an almost literal record of the year's production—though the statement was decried at the time as half a million bales too large, and no other estimate approached it by four hundred thousand bales. Obtained by elaborate calculation of current facts, it may be taken as evidence of the reliability attainable under our present statistical system."

The tables show a decrease of farm stock in 1866, compared with 1860. There is a loss of six per cent. in horses. The number in Vermont is reduced about 20,000; New York over 66,000; Ohio over 78,000. These were results of the war. Mules declined thirty per cent. in number. Kentucky fell from 117,634 to 59,752. Horses and mules must, therefore, remain high until these losses are more than regained. The number of sheep and hogs has increased largely.

Your readers will be surprised to learn that, in five hundred and thirty-nine counties of the States, 130,427 sheep have been killed by dogs—4,272 were killed in seventeen counties in Virginia. This proves the wisdom of the dog tax. It is to be hoped that it has been assessed in every county.

There is an interesting notice of the "Wages of Farm Labor," from which we cannot copy as we wish, and must be content with this reference.

The agricultural exports of 1865 are shown to be \$193,121,365—\$412,284,392 in 1866. Cotton is the regulator of this large excess—its value in 1865 being \$5,720,549; in 1866 \$281,385,223. Is it, then, for the welfare of the Union, that cotton culture should be crushed in the South? Can an impoverished South buy the supernumerary products and manufactures of the Northern States? Are blacks likely to be as good customers as the white race? It trenches too much on politics for the Statistician to suggest these queries.

An interesting and instructive article of Mr. Saunders, of the Department, follows on pruning and training the grape. An extract or two must suffice. "There is one well authenticated fact in the fruiting of the grape; viz., that the finest fruit, the best, the earliest and largest crops, are produced upon the strongest shoots of the previous year's growth. The only proper system of pruning will therefore be that which encourages and secures an abundance of such shoots," and he proceeds to prove that this principle has been constantly recognized for nearly two hundred years, and illustrates the system by numerous drawings.

"It cannot have escaped the observation of those whose attention has been directed for a series of years to the culture of the grape, that the best fruit is produced from terminal shoots; also, that even under what might be termed indifferent treatment, young vines will bear good crops for a few years; farther, that under any mode of pruning that involves the retention of wood beyond five or six years, as in the case of spur-pruning, the results are weak, imperfectly ripened shoots and bunches. Under this head, we also place all those methods where fruiting shoots are produced from permanent horizontal branches, as in the Thomery system. In all such limited modes of training, it is absolutely essential to remove the older wood at certain periods, and replace it with young wood from near the base of the plant."

Grape growing and wine making from other writers fill the next ten pages.

"Botany and Agriculture of the Rocky Mountains," and "Popular Varieties of Hardy Fruit," with excellent drawings, fill ten pages more.

A very elaborate article of fifty-three pages on "the Fruit Regions of the Northern United States and their local climates, imparts no interest to us of the South.

Twenty pages are on cotton culture. The first article is a brief, suggestive essay by Dr. Cloud, of Alabama; the other by Mr. Lyman, late of Louisiana.

Turnips and corn fodder are recommended by Mr. Abbott, of Ohio, as "aids to cattle feeding." The White Norfolk Turnip is esteemed the best. The Russian Turnip will keep into July.

There is an excellent article on corn culture by a Pennsylvanian, from which I could extract, but I fear I have encroached too much upon your space.

In half a page, we learn wonders of California. Besides her precious metals, she exports *millions* of bushels of wheat and mil-

lions of pounds of wool annually. The average yield of wheat is twenty-four to twenty-six bushels per acre. Grapes, oranges, olives, almonds, English walnuts, are cultivated with success.

The most valuable article of the book treats of "Improved Farm Implements." Its author, Mr. Todd, of New York, seems to be a mechanic and a farmer. Its eighty-three pages contain useful descriptions of about fifty implements, illustrated generally by cuts. The only defect seems to be that he does not, except in one or two unimportant instances, give the selling price of the article. This is the common defect of the catalogues of agricultural machine shops. Our thanks would have been due to Mr. Todd, if he had supplied this defect.

The "History of Mowers and Reapers," p. 264, would make an interesting extract for your journal. The one-horse mower "Pony Clipper," seems well adapted to the pony-purse of poor old Virginia.

From the notice of a Corn Husking Machine, lately introduced and praised highly, I must make one extract. "The husk crop is one of the most valuable which we produce. It would amount, if saved, according to the estimate of some persons, to not less than 8,000,000 tons annually; and would bring, at \$15 per ton, \$120,000,000. In Austria *the husks make paper superior to that from linen rags. The largest paper mills in the world—those near Vienna—employ nothing but husks, brought from Hungary, and costing \$40 per ton, about the price of white rags in the Austrian market. From the long fibre of the husk excellent cloth is made; from the short fibre paper of superior quality is produced, while the gluten of the husks makes excellent bread.*" This machine costs \$75, weighs 200 pounds, and is manufactured by Fuller & Co., 57 Broadway, New York. Let our Virginia paper-makers encourage this production as a valuable help to the farmers of the State.

We must close this notice of one-half the volume with a brief account of the "Origin of the Domestic Turkey" by Mr. Baird, of the Smithsonian Institute. In spite of its name, this bird is of North American origin. It was first discovered in Mexico, taken thence to the West Indies, and from there, probably, found its way to Europe, reaching England in 1541. There are two species—one confined to the Eastern and Southern United States, the other to the Rocky Mountain Region and Mexico.

E. T. T.

January 20th, 1868.

Our readers will feel themselves under especial obligations to our esteemed correspondent, for the benevolent regard to their interests, which has prompted

him to the patient research and comprehensive survey of the various branches of industrial economy so strikingly manifested in the above review of the report of the Commissioner of the Agricultural Department for 1866.

We thank our correspondent for this seasonable and valuable contribution to our journal, and beg him to be assured that we shall always be glad to receive his valuable contributions.—EDITOR SOUTHERN PLANTER AND FARMER.

Corn Fodder.

It is said that it was once the custom to go to mill with the corn in one end of the bag and a large stone in the other to balance it. On one occasion, as the fashion began to change, one neighbor explained to another the advantages of throwing out the stone and arranging the corn in the bag so that one half of it might balance the other. The argument seemed to have some influence, for Mr. Oldtime slowly dropped the stone in the road and rode on a short distance. But habit and a reverence for the old landmarks soon made him halt, and his soliloquies were as follows: What am I doing? My father before me and my grandfather always carried their corn to mill with a stone in one end of the bag, and they prospered in the world. Shall I profess to have more sense than they? Besides, that stone has been in the family for three generations. No, no, I can't do it." So he went back and picked it up and went on as before. Now, I am satisfied that many of the operations constantly performed by farmers are just as stupid as this. "*This is the way daddy always done.*"

We may see one illustration of this in the management of corn fodder, or more properly, corn forage, including stalk, blades, shucks, tops, &c. Now, I agree with your correspondent "Marlow," that the stalk ought to be cut off at the ground, and thus all the forage is saved at once and much expense of handling avoided. But that is too long a leap for our old fogies to take at once. "Marlow" has nearly graduated. I have not got so far myself, though I hold *in thesei* that the stalk itself is worth as much for forage as all the blades and shucks upon it. But Marlow has one lesson still to learn before he can take his degree. It is this: he will find in practice that his cattle will trample the mass of that forage under foot after nibbling at it for awhile, and thus a great part of it is lost. He must tell us how to cut up this long forage so that the cattle will eat *all* of it. Now few of us are prepared to do this, and we are not likely soon to be. So I will content myself with giving an easier lesson. You know we must spell before we

can read. I could give the entire lesson as Marlow gives it, and close by saying to the farmer, Buy a patent double action, revolving, self-feeding *straw chewer*, with extra blades and balance wheel all complete. But the common farmer will retort upon me as the Prussian fifer did to his drum-major, who kept calling upon him to blow louder. "Tis very easy for you to keep saying, *louder, louder*, but *vare is de vint to come from.*" More than this, the most of them already have pretentious but worthless instruments of this kind among their old lumber. It is the old story, "the burnt child dreads the fire."

Now the common custom of the country is too well known to require much description. Some pull off the blade up to the ear and then cut off the tops; others pull off the blade up to the tassel and leave the entire stalk in the field. The man who cuts the tops is much the more sensible of the two, provided he makes a good use of them; but there is the rub. Others, again, are so pressed with their tobacco, &c., that they do not save fodder at all, always saying that it costs more than it comes to; that 'tis worth the fodder to pull it, and then it injures the corn to some extent.

Those who save the shucks most frequently use the tops for thatching a temporary house for holding shucks and protecting them from the weather. Every Virginian is familiar with this usage. Then, late in the winter, after the shucks are fed away, the tops, washed and leached with the winter's rains and snows, are thrown down to the cattle to be trampled under foot, and the farmer says, they make fine bedding. So they do, but they are too expensive.

It would really be more economical to throw down the blade, fodder and shucks for bedding and take care of the tops and feed them in a proper manner. This is a strong statement, but nevertheless, true; for, by actual experiment, the tops from a crop of corn are worth more than all the shucks and blade fodder stripped off below the ear, taken together. In other words *the tops will feed a given amount of stock longer and with better results than the blades and shucks together.* But the tops must be taken care of and then cut up fine for the stock. Indeed, my rule is to cut up every thing I feed away, wheat straw not excepted. They ought to be put into a house if possible, or if not, they should be well put up in small stacks around a pole, and transferred to the cutting room in a *dry* state. For *any* ordinary cutter that will cut up oats or shucks will cut up common top fodder with equal facility, provided it is *perfectly dry and crisp.* It is only when the tops are damp that there is any difficulty in cutting them. They must also be fed to the

stock dry, for if you undertake to mix them up with meal and water they will become so tough before the animal finishes, that part of the stalks will be left in the trough; but if they be fed perfectly dry, the animal will hardly leave a trace in the trough. Top fodder is my favorite feed for *milch cows*, both on account of its cheapness and on account of its intrinsic excellence. Last winter I fed two milch cows (which had dropped their calves in April,) on top fodder from December till March, and they supplied milk and butter for fourteen in white family. It is true that I gave each cow two quarts of meal a day in addition. But when the tops gave out and I commenced on shucks, my wife complained of a falling off in both milk and butter in less than forty-eight hours, and we had to buy butter all the spring. But some one may say that it was time for the cows to fail in milk. Not so; for we killed one of the cows (a mischievous one) in November last, and she was still giving a good quantity of milk, though her calf was eighteen months old and she had been chained in her stall and fed on dry food for more than a year. The other cow we are milking now, January 15th, 1868, in connection with a fresh cow I have bought that dropped her calf in January last. The two are about equal to each other in product of milk, and they supply my family, and are fed precisely as the two were fed last winter—on top fodder. The same basket is used in feeding them with tops as with shucks. The results are better with the tops than with shucks, and the tops being much more bulky go a great deal the furthest.

There is one practical difficulty in cutting the stalk, forage and all, at once, on "Marlow's" plan, so that it is difficult of universal application. The weather in the tobacco region continues warm so long after the corn and forage mature, that it is extremely difficult to shock it at the proper time and escape the inevitable heating and the mould in the greener ears, especially if a spell of damp weather ensue. I am aware that this difficulty does not exist to the same extent where the seasons are shorter and colder. I would be glad of more light just here.

With the experience I have had, I reach the following conclusions as safe and economical for planting farmers:

1. It costs as much as it comes to, to pull the blades at all, even when the seasons are favorable. Let any man keep the account of the labor, &c., and he will see for himself. If the season be unpropitious, 'tis a *dead loss*.

2. The corn is materially injured by the operation, as may be seen from the rapid drying of the shuck after the blades are pulled, to

say nothing of the accurate experiments of others who tell us of great diminution in the weight of the grain.

3. Cutting off the tops at the proper season does not materially injure the crop, because I have noticed that a stalk of late corn (as the re-planted commonly is) retains the greenness of the shuck a surprisingly long time after the top is taken off, if the blades are left below, and my conclusion is, that the ear breathes mainly from the blades below it.

4. The tops may be saved in almost any season, contrary to the general opinion. Let them be set up as they are cut, in the usual way. They will take a great deal of rain before they are thoroughly cured, without material injury. Fall before last, mine were caught in the field by late rains, and when they were hauled in, the blades on them were so much blackened as to smut the clothes. But the value of the forage was but little impaired, owing to the fact that the boot and the stalk were by far the most valuable part, and they are not soluble in any *brief* period.

5. Then let the farmer be careful to save the tops and house them or stack them, and then pass them under an ordinary cutting blade before feeding them to *any* stock. he desires to feed, *horses not excepted*. In cutting the tops, every barren stalk and every stalk with a barren shoot should receive the knife at the ground. Such stalks are very rich in saccharine matter.

6. If, afterwards, at gathering time, the farmer can manage to haul up the stalks to his farm-pen and allow his dry-cattle to nibble them all winter, instead of allowing them to do it in the field in all sorts of weather, he will find that he has taken a step in the right direction, especially when he comes to fork up his manure in the spring.

I hope soon to see the day when I can realize my dream of feeding entirely on hay and corn forage (blade, stalk, shuck and all), then I can let oats alone.

J. B. S.

Fodder.

Let none, not a corn-stalk, be fed upon the bare ground—make racks of some kind. It is poor policy to feed cattle in the yards in any way. Stalks cut up, sprinkled with warm water, a little meal or bran, and a small quantity of salt, will be eaten with as great a relish by almost all stock, but especially cows and oxen, as good up-land hay, and will go as far, ton for ton.—*Lawrence Journal*.

Inquiries of a Young Farmer.

Mr. Editor,—I am aware that it is much easier to ask than to answer questions. But being a young farmer and having very little experience and knowledge of the system, I hope some of those who are capable will give to such enquirers as myself the benefit of their knowledge through your valuable journal. Let none whose experience enables them to answer the following questions fail to do so, thinking some other will, for, in that way, they may not be answered at all. I earnestly seek information, and hope any one capable of answering the following questions will do so promptly:

1st. When farm-yard manure cannot be obtained in sufficient quantity, what fertilizer is best on poor, old land, and how used?

2nd. Should corn rows be the same distance in thin as in good land, and what should be the distance, and also the proper distance in the drill?

3rd. What system of cultivation and fertilization is most economical to restore land which has been in cultivation many years and much exhausted, where farm-yard manure is scarce?

4th. Lime—what are its uses and benefits; on what kind of land and crops can it be most judiciously applied, and how and when?

5th. Plaster—what are its uses and benefits; on what land and crops can it be most judiciously applied, and how and when?

6th. Agricultural salt—what are its uses and benefits; on what land and crops, and in conjunction with what other fertilizers can it be most judiciously applied, and how and when?

A YOUNG FARMER.

The More Lime the More Manure.

The old saying that "lime makes a rich father and a poor son," conveys, we think, a serious error, though the idea it is based upon is a correct one. That is, that lime, while it makes the soil more productive in crops at first, will finally leave it barren if its use be continued; that it will force the ground, so to speak, to its utmost power of production, and finally leave it powerless—exhausted of the elements of plant food. This might be, in a great measure, the case, if we assume that everything made upon the farm was carried off from it, as is only possible under very bad management.

But let it be remembered that in any proper use of lime, the first effect is a great increase in grass crops, filling the ground with

masses of roots, estimated sometimes to be equal to the whole crop above ground. This alone makes a heavy manuring, and is so much added to the lime dressings, and yielding, on decay, all the elements which plants need to feed upon.

But then with grass comes grain, furnishing large quantities of straw, and corn-stalks and blades, giving material for great quantities of manure, and with these comes stock to consume them on the farm. More horses, more cattle, more sheep, more hogs—the manure manufacturers of the farmer—turning all these to the best account, are, year after year, leaving great quantities of the best manure behind when they go to market; the best because containing not one element, as lime, but all that is needed.

Then, if the farmer be wise enough to feed away his grain instead of selling, the manure is the richest and most valuable, and the soil may be kept at the maximum of fertility, if well managed. This accounts for the answer of an extensive and observant Chester county farmer to the question whether, after the application of lime for so long a period of years, there had been any symptoms of decline in the production of the land or diminution of the benefit derived from it? His answer was decidedly in the negative, for, he said, “those who have limed the most have been pretty sure to manure the most.” Those who have the spirit to improve freely in one direction are not apt to stop at that, but use well, all the means at their disposal; they are the best and most careful farmers and their land is constantly advancing in productiveness.—*Am. Farmer.*

Nitrate of Lime as a Fertilizer.

In the recent struggle for Southern independence, the fact is generally known that large quantities of saltpetre were made from the nitrate of lime found in numerous caves which exist in Northern Alabama, Middle and East Tennessee, Kentucky and Virginia. The formation of so much nitric acid in the limestone caves referred to, presents facts of great importance to all in any way interested in the fruitfulness of farms or plantations. Probably no scientific man regards an atom of nascent nitrogen liberated from hydrogen, as the two elements exist in ammonia, as better for any agricultural purpose than an atom of nitrogen, liberated from oxygen, as they exist in nitric acid. Nitrogen in a nascent state being alike available as plant food from ammonia and nitric acid, it follows that, if we can form nitric acid from its very abundant elements, as it

appears to be produced in caves, (one of which is on the writer's farm,) then we can make at will, with lime and loose soil, the most valuable element in Peruvian guano. Unfortunately, all the conditions necessary to the most successful nitrification, whether in caves or compost heaps, are not so well understood as those relating to combustion. Opinions among scientists differ in regard to the fact whether nitrification is limited to the nitrogen derived from animal or vegetable substances, in caves, stables, or nitre beds artificially prepared, or often extends indefinitely beyond, taking nitrogen from the atmosphere. Knapp, in his *Chemical Technology*, favors the former idea; while Boussingault, Sprengle, and others believe that the chemical union of nitrogen and oxygen, in the form of nitric acid, once set in motion in the presence of a strong base like lime, potash or soda, in a porous body, (probably to condense the gases,) may continue until the favoring conditions fail. It is well known that an excess of water in wood or coal will extinguish combustion. The same is true of nitrification.

Firebrands will burn rapidly if put close together so as to heat one another; but change their condition, by separating them, and the fire on each will go out from the loss of radiated heat. Those seeking to form the nitrate of lime must study the conditions of temperature, moisture and porosity, which control nitrification.

What are the conditions under which such vast quantities of cubic nitre (nitrate of soda) are formed partly in Chili, but mostly in Peru? There is no apparent organic source, either animal or vegetable, that can furnish so large an amount of nitric acid. If not derived from substances once endowed with life, it must have a mineral origin, or come from the atmosphere. Boussingault traces all the nitrogen in guano to the atmosphere; and there need be little doubt that all nitric acid has a similar origin. Europe and America are supplied mainly with saltpetre and cubic nitre from the warm climates of India, Egypt, Algeria, Spain, and South America. The inference is plain that our nitre beds should have a bottom heat, such as we give to pine apples, cocoa-nuts and other tropical fruits. They require for perfect development a higher temperature than our climate affords; and the most efficient production of nitric acid appears to demand a similar condition.

With regard to moisture, it should be considerably below saturation. Too much water reduces temperature, and otherwise prevents chemical action or nitrification. It very rarely rains in the districts of Peru where the nitrate of soda is formed in such vast quantities. A porous soil or earth, some moisture, a pretty high degree of solar

heat, and a strong alkaline base to take up each particle of acid as soon as formed, appear sufficient to effect the chemical union of nitrogen and oxygen. Whether nitrification is started by some decaying animal or vegetable substance in the ground, by decomposed ammonia, or by electricity, is a matter of little consequence. What we want is to make at will large quantities of nitrate of lime, by using the same forces and conditions that nature uses in making so much cubic nitre and saltpetre.

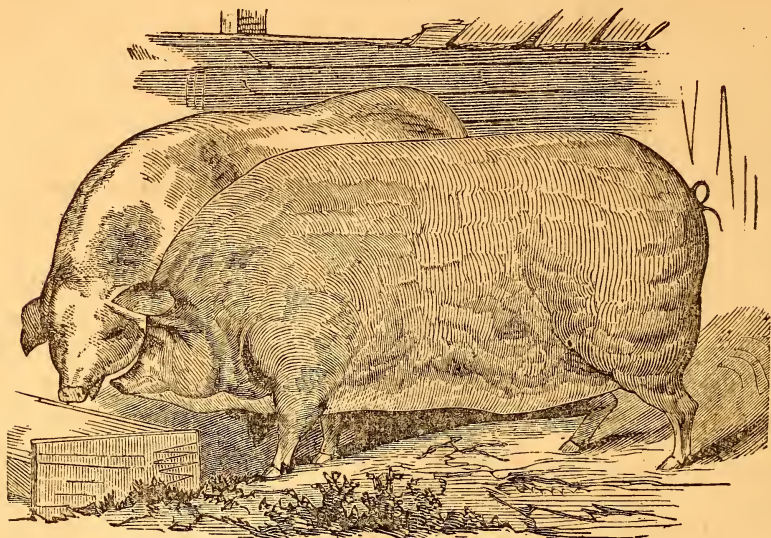
During the late war I bought a farm on the Tennessee river, which had a cave, from the debris of which a good deal of saltpetre was manufactured. The nitrate of lime dug up with earth, on the bottom of the cave, appeared to grow from year to year, without any help from man or animal, very much as I have seen gypsum grow in Western New York. A few words, showing how gypsum grows in some places, will aid in illustrating the chemical formation of the nitrate of lime.

Some earths contain not a little of sulphuret of iron. Under favorable conditions this sulphur is oxidized into sulphurous or sulphuric acid. More acid is formed than the iron will combine with; and in Genesee county, New York, there is a large spring of water strongly impregnated with free sulphuric acid. It is obvious that any water charged with this acid in passing over lime rocks, or their debris in soils, will form the sulphate of lime, which is gypsum. Now, so long as the earth supplies sulphur, and air and water yield oxygen, sulphuric acid will be formed, and from this and lime, gypsum will grow on from year to year indefinitely.

Make the conditions *right*, and oxygen is as ready to unite chemically with nitrogen, to form nitric acid, as with either sulphur or phosphoric acid.

The facility with which nitric acid is formed in limestone caves in this country and Europe proves clearly that lime, as a predisposing base, is fully equal to either soda or potash; and as lime is a cheap article, especially in marl districts, I venture to suggest to such as have marl or lime to try to form the nitrate of lime for manure. By referring to page 169 of the December number of the *American Farmer*, it will be seen that Dr. Voelcker found a fraction less than 2 per cent. of nitrogen in box manure, i. e. the excrement of cattle well fed in boxes. Nitrogen is estimated 7 3-10 pence per lb., in gold, equal to more than 20 cents in our currency. These facts indicate the great value of assimilable nitrogen. So far as the crude nitrate of lime or of potash has been tried by farmers in Tennessee and Southwestern Virginia, the reports are favorable.—D. LEE, in *American Farmer*.

Gap Creek, Knox county, Tenn.



Engraved for the American Stock Journal from Photograph.

Chester White Boar GRANT, 18 months | Chester White Sow BEAUTY, 15 months
old, weight 800 lbs. | old, weight 750 lbs;

Bred and owned by N. P. BOYER & CO., Gum Tree, Chester co., Pa.

We are indebted to Messrs. N. P. Boyer & Co. for the above cut. As this breed of swine has attained a world-wide reputation, we have deemed it proper to give our readers a short account of its origin accompanied with a description of some of the chief characteristics of this variety of the *genus sus*.

“They are generally recognized as coming fully up to the requirements of a farmer’s hog, and are rapidly superseding Suffolks, Berkshires and other smaller breeds. They originated about fifty years ago, through the exertions of a number of prominent and enterprising gentlemen of Chester county. They imported, at great expense, the best hogs to be found in England and other European countries, and crossed them on the sows of Chester county, from which have sprung a breed of hogs whose reputation is world-wide. This has only been accomplished by long years of careful breeding. They endeavored first, by a wide selection, and a judicious and discriminating coupling, to obtain the type desired; and then, by close breeding connected with vigorous weeding out, to perpetuate and fix it. The best specimens may be described as long and deep in the carcass, broad and straight on the back, heavy hams, full shoulder, well pushed forward, admitting of no neck, wide chest, plenty of play for the lungs, a very small proportionate head, short nose, dish face, breadth between eyes, moderate ear, thin skin, straight or wavy hair, a capacity for great size, and to gain 2 or 3 pounds per day till they are two years old. Add to these, quiet habits, and an easy taking on of fat, so as to admit of being slaughtered at almost any age, and we have what is considered in Chester county, a carefully bred animal, and what is known elsewhere as a fine specimen of the breed called “Chester County White,” and a pig that will grow to weigh from 500 to 800, lbs at 14 or 16 months old. They will make more pork in a given length of time, with a given quantity of food, than any other breed of Hogs. They have been known to weigh 1280 lbs at 21 months old.”

Messrs. N. P. Boyer & Co., Temple & Co., and Geo. B. Hickman, advertise, in our columns, thorough-bred specimens of this popular variety. Read their advertisements.



Horticultural Department.

The Kitchen-Garden—Vegetable Seed.

In the southern portions of this State and in North Carolina operations in the kitchen-garden may begin during this month, and many of the earlier vegetable seeds may be planted; even in colder sections a great deal of preparatory work should be done, and in all localities the necessary seed should be procured and had in readiness. It is to this most important part of gardening that we wish now to direct the attention of our readers.

Of the many causes of failure and disappointment, both to individual consumers and to the market-gardener, there is none so frequent and so general as that of inferior and worthless seed. The failure of one or more crops resulting from bad seed is yearly recorded in the experience of every vegetable grower, until at length it is the customary remark of the planter, "that if the seed is good he will have a good crop." Now, this is altogether wrong and unnecessary, and may easily be remedied by a little care and prudence, but to arrive at the remedy, it is necessary to examine the causes, so as to ascertain where the fault lies.

Too frequently the blame attaches to the seedsman, who, either from cupidity sends out old seed, which has been carried over unsold from previous years, or from ignorance and carelessness, puts upon the market immature and badly grown seed, or such as are untrue to name. There is scarcely any business requiring more skill, care and integrity, than the seed business, and a long experience is needed to enable any one successfully to operate in this branch of trade.

The very general idea which prevails, that certain seedsmen grow all, or even a large portion of the seed they offer, is very erroneous, for but few seed can be grown profitably or successfully in any one locality, consequently the wholesale seedsmen must make contracts with growers in all sections, not of a continent, but almost of the

globe, for a supply; and to do this, great caution is necessary to guard against imposture. Owing to these difficulties, few houses ever acquire the reputation of being first-class reliable seed establishments.

Notwithstanding all this, the fault is not altogether with the dealers, but as often, if not more often, with the purchasers.

Many ask for cheap seeds—five or ten cents difference in the price of an ounce of seed will frequently decide the question; consequently, the pedlar who brings to Virginia this season the seed which he failed to sell last year in Ohio and the previous in Massachusetts, is preferred to the known and reliable merchant, who is too honorable to sell what he knows to be worthless.

Again, with many it is the want of thought. They suppose, or at least say they suppose, that one is as good as another, and take the first they see, while others, having frequently been deceived, refuse to trust any one and undertake to grow their own, with the natural and inevitable result of securing, in the course of one or two years, a splendid deterioration.

Now, the remedy for all this is very simple—purchase only of dealers whose reputation for skill and integrity is established—such there are in every State, and they can be found by a little inquiry. One sure way of determining such is, that they do not offer *cheap* seeds.

No one can sell fresh and genuine seed at the same price that his neighbor can sell old stock, and as a rule, reliable houses differ very slightly in their prices.

In this communication, we would caution our readers against the new “extra early,” “very superior,” “mammoth-sized,” and “tremendously productive” varieties of vegetable seed, with notices of which the advertising pages of magazines and papers teem. In the vast majority of instances, they are miserable trash sent out by as miserably worthless parties, who have no object save to make money, with a penchant to make it dishonestly, if possible. Of course, this is not always the case, but let our readers be certain that these novelties are endorsed by responsible parties before investing in them to any great extent.

A Nuisance Made Useful.

The Northern *Farmer* mentions a man in the southern portion of Wisconsin who destroys bugs on potato vines by sprinkling them with a decoction of May weed. If this is true, it is turning a farm nuisance to a good account.—*Rural New Yorker*.

Brief Suggestions.

Prepare, as far as possible, this month for the Spring work in the orchard, flower and kitchen-gardens, even though the ground may not be in condition to work—manure can be hauled on it and rubbish cleaned off.

Plant trees, shrubs and grape vines as early as the weather will permit.

Raspberries, strawberries, and all the small fruits, should also be planted early.

Vegetable seed should not be sown until the ground begins to grow warm. It is not always the earliest sown seed that produces the earliest crop, and frequently the seed rots in the cold wet soil for want of heat to bring it up.

In planting potatoes, cut the tubers into sections. It economizes seed, and the yield is better than from whole tubers. The early Goodrich variety succeeded remarkably well in this State last year, and is, we think, by far the best, both for earliness and productiveness.

Mulch strawberry beds with pinetags, leaves or straw, to prevent the fruit from being sandy by heavy spring rains.

If there are any worthless varieties of fruit in the orchard, cut off the heads of the trees and graft them with good kinds.

Manure as heavily as possible, and do not work the ground until it is thoroughly dry.

“The Grape Swindle.”

From childhood, Mr. Editor, I have been suffering from an incurable attack of vitomania, and as my experience is not of yesterday or to-day, I may be excusable for clothing my opinions in the drapery of ink. The other day I received a note from an eminent amateur vito-culturist, in which he states that “*the culminating point to the grape swindle has been reached.*”

I, for one, sincerely hope that my friend may be correct regarding the attainment of “the culminating point in the grape swindle;” for a gullible public have been swindled for years by false statements contained in the most beautiful productions of the printer’s art. It is amusing, as well as disgusting, to look over the huge pile of catalogues in my possession and read the glowing and transcendental descriptions of trash foisted upon the public by unprincipled par-

ties. In some of these guides, the party with \$5 to spare for an extra No. 1 plant, with three buds, will find the fair side of the picture with a sufficiency of descriptive falsehood, but not a cloud from the dark side. It seems that these figurative and descriptive gentlemen fancy that

“Man wants but little here below,
Nor wants that little long.”

We are of the opinion that it would be a manifestation of honesty and fair dealing if these descriptive gentlemen would cast overboard their twaddle and stuff, and add to their descriptions of vines—not thoroughly tested: liable to winter kill; mildew in some or most localities; a poor grower; not as hardy as an oak; not the best wine or table grape in America; not equal to the Muscat of Alexandria or Black Hamburg; in other words, dispensing with the varnish and veneer that deceive a gullible and confiding public, and fill the pockets of designing and unprincipled cultivators.

Yearly we have one or more bantlings sent forth at \$5 for a microscopic specimen, with the assurance that it will beat all creation. But, alas! the poor deluded purchasers are the only ones who suffer; for when they test their last dearly purchased pet, they discover that they have little else than a page of adjectives clothed in printer's ink. If we possessed the temerity, we could mention the name of one renowned for his adjectives and transcendental bosh, who has sent out at least one dozen of these wonderful productions, and, strange to tell, not one of them has stood the test of cultivation. Who can estimate the pecuniary loss sustained, or the disappointment incurred by the public through the misrepresentations of this vito-garometer?

We are of the opinion that the period has arrived for at least one vine-grower to publish an accurately descriptive catalogue, giving the dark as well as the fair side. In the event of any honest man being guilty of this meritorious act, we will liberally subscribe toward a statue to be erected in commemoration of the noble deed, so that his name may be handed down to posterity as a public benefactor. We would most humbly and respectfully suggest the propriety of some one of the fraternity publishing an accurately descriptive catalogue, calculated to enlighten and benefit the community—a catalogue giving *in extenso* the faults as well as the good qualities of the vines in cultivation. Such a meritorious individual would make his fortune, for the public would at once award him the title of a fair-dealing, honest man, and extend to him a correspond-

ing patronage. Unless some such course is adopted, vine-growers will have to "hang up de fiddle and de bow," and engage in stock-jobbing, or some such employment, where they can find a sufficiency of dupes. Americans are a gullible people, and run away with some mania for a time, and designing and unprincipled parties are ever ready to take advantage of their weakness. The mania followers consent to be sold for a time, but ultimately fly off at a tangent, becoming deeply prejudiced against everything savoring of their defunct pet. We have been credibly informed that vine-growers are clothed in sackcloth and ashes, lamenting the want of customers, and that some of the leading landmarks among them have already reduced their prices fifty per cent. This was to be expected; and we predict that extra No. 1 two-year-old vines, equaling Hamburgs and Muscats in flavor, will be plentiful and cheap in the autumn of 1868.

The vito-mania has reached its "culminating point," and unless vine-growers adopt a different course, the cultivation of the vine in the United States will receive a check from which it will not recover until vine-growers and their bantlings go where—echo answers where? With all due deference to the staff editorial as well as authorial; we have an inkling that they are, to a certain extent, censurable for giving undue prominence to new and unfledged bantlings; but as we are touching upon sacred ground, we must refrain from giving particulars.

Now, sir, as a guide for the uninitiated, I sometimes fancy that amateurs who "have no axes to grind" should publish the results of their experience and observation, and thereby benefit those who are exposed to an attack of vito-mania. The masses want a vigorous growing vine that will produce fruit of a fair quality, that will flourish in favorable as well as unfavorable circumstances, never mildew—never requiring an expenditure for sulphur or sulphurating bellows, and last, though not least, standing our winters without protection, leaving the new-fangled bantlings of unprincipled venders for the experimentation of vito-maniacs like the writer.

I will, as briefly as possible, give my experience during the last summer. My situation is elevated; exposure, good; soil, light sandy loam; subsoil, light, with perfect drainage; number of vines under cultivation, about two thousand; number of varieties, too numerous to mention.

Mildew appeared on the vines in the order as named; Iona, Rogers' 5, 15, 19, and 25; Israella, Delaware, Adirondac, Creveling, Maxatawney, Allen's Hybrid, Lydia, Alvey.

The only varieties that entirely escaped mildew and produced a vigorous growth, were the Concord, Hartford, Christine, Clinton, Ives, and Arrott. Our advice to the uninitiated, based upon some observation and experience, is—If you want fruit for your families, plant Concords and Hartfords; if you want fruit rivalling the Muscat of Alexandria and Hamburgh, erect a cold grapery and plant Muscats and Hamburghs; but if it is desired to waste money, buy the last bantling sent out by some designing vine-grower, and patiently await disappointment and vexation.

AL FRESCO, in *Horticulturist*.

[The above is a most timely article. Perhaps in no branch of Horticulture has there been, and is there now, more gross swindling perpetrated than in vine growing and selling. We caution our readers, as we have frequently done before, against these new and expensive humbugs.—EDITOR SOUTHERN PLANTER AND FARMER.]

Profit of Apple-Growing.

The apple is the great standard among fruits, as wheat is among grains, or potatoes among vegetables. Some localities, of course, give better returns than others, but everywhere the apple is looked to for a crop as is the potato, and it depends much on the cultivator's skill in managing and selecting varieties as to the amount of returns. Niagara county, N. Y., is put down this year at 180,000 barrels, and in that county one tract of apple orchard produced for sale 600 barrels of fruit, which sold at \$3 per barrel. One tree of Rhode Island Greenings produced *twenty-six* barrels. H. T. Brooks, Esq., at the New York State Fair, during one of the evening discussions, gave, among other evidence of the profits of apple-growing, the following:

“A tree in Middlebury gave 11 barrels; four trees in Le-Rey, 13 barrels each. Patrick McEntee, of Perry, took 14 barrels of Baldwins from one tree, and sold them to A. W. Wheelock for \$60. Mr. True, of Castile, took 15 barrels of Gilliflowers from a single tree. Enos Wright, of Middlebury, sold the product of two trees for \$100. Two years ago Mr. Hammond, supervisor of Middlebury, sold the product of 33 trees of Northern Spys for \$900. C. Cronk-hite sold the apples on less than four acres for \$1,000; they were immediately re-sold for \$1,500. He said that Edmund Morris, the admirable author of ‘Ten Acres Enough,’ who, by-the-by, with the usual consistency of preaching farmers, had added 13 acres to his

'Ten,' wishing to do some tall bragging, had told us of 20 apple-trees that paid their owner \$225 one year. Here, said Major Brooks, is a story to match: Robert McDowell, of York, Livingston county, has 22 trees, grafted nineteen years ago to Dutch Pippins, Greenings, Russets, etc., standing 35 to 40 feet apart—his soil sandy loam, annually ploughed and cropped, being also heavily manured every year, and protected by woods on three sides. He sold from these trees, after reserving his culls, in 1865, 163 barrels of apples for \$779 50.

"Prescott Smead, of Bethany, Genesee county, from six acres, on clay and strong clay loam, sold as follows:

1862, - - - -	750 barrels,	- - - -	\$2,370
1863, - - - -	590 do.	- - - -	1,790
1864, - - - -	600 do.	- - - -	2,100
1865, - - - -	810 do.	- - - -	4,500
1866, - - - -	150 do.	- - - -	863
1867 (<i>estimated</i>),	600 do.	- - - -	3,000

"Add to the above, copied from his income report (and reports of this kind are not apt to be over-stated), apples used in the family, and we have 100 barrels to the acre, and $2\frac{1}{2}$ barrels to the tree, *annually*, for the whole six years, paying \$400 per acre every year for the whole term.

"For practical cultivators, there is another fact of great significance. This same orchard, after coming into full bearing for some ten years, received only ordinary care, which means scarcely any care at all, and its returns were very meagre. It was then heavily manured, ploughed shallow, and suffered to lie two years longer, all the time uncropped; then it was manured again, and the same treatment repeated. The results were as has been stated.

"S. P. Lord, of Pavilion, bought a neglected, and, of course, unfruitful, orchard of seven acres—trimmed, manured, and ploughed it, when it immediately commenced bearing, and during the next six years yielded \$6,000.

"He recommended careful and moderate annual pruning where necessary, as contrasted with the too frequent slashing to which trees are subjected—keeping the heads of the trees low, which would favor ease in picking—objected strongly to the common neglect of cultivation, and also to the close cropping of the ground, in the attempt to obtain other products from the soil, the strength of which should be given to the trees. He cited cases where good clean culture had given high profits, and added that in nearly every instance where very large crops had grown on single trees, he had found

those trees to stand near wood-piles, slop-grounds, barn-yards, or on other spots where they received a good supply of enriching material.—*Horticulturist*.

Directions for Cultivating Asparagus.

[From the Southern Planter of Dec., 1841, p. 227.]

It will be remembered by those in this vicinity at least, that Gen. Richardson obtained a premium from the Henrico Agricultural Society for the extraordinary asparagus exhibited by him at their Fair last spring. Since that time, we have been requested, more than once, to obtain for publication the General's mode of cultivating this delicious vegetable. With this request we have complied in the article below.

C. T. Botts, Esq., Editor Southern Planter :

Dear Sir,—I give, as you have requested, not "directions for cultivating asparagus," but, as briefly as I can, the manner of cultivating mine; premising that, so far as I know, there is no skill or mystery involved in the matter.

The roots, then two years old, were planted in the month of March in trenches 1 foot deep, 12 inches wide, and 5 feet apart. The crowns of the roots were set on the bottoms of the trenches, so that the lateral roots interlocked, being about twelve inches from crown to crown. Previous to planting, stable manure was spread over the bottom of the trenches an inch or two deep, the roots were then set and covered with about as much earth well-pulverized, and the whole surface kept free from grass and weeds through the year. By the end of the first year, the trenches were filled up by the ordinary process of weeding, to within two or three inches of the general surface. I cut off the tops, filled the trenches to the surface with stable manure, and very early in the spring drew up the earth so as to form a ridge over each row of roots. The produce was more than sufficient for my family. We cut none after the month of May in this year, but kept the beds as before, clear of weeds and grass, and in the fall, before the berries began to drop, the tops were cut down and removed.

Finding that by the ordinary method it would take more time and labor than I had to spare, and supposing it would be better to apply the manure near the roots than on the surface, I split the ridges with a single-horse plough. The next season, running twice on each bed, removed the earth left by the plough with broad hoes, and put in an inch or two of fresh stable manure. The garden line was then set over the centre of each row of roots, about 12 inches above them,

the earth (well-pulverized) drawn up to the line, first from one side and then from the other with hoes, so as to form a ridge or bed 14 or 15 inches high, the line then removed, the bed raked over, and that completed the dressing. The produce was abundant, large, fine, and well-bleached. I have continued this practice ever since. The beds were never forked, but when they became dry and hard on the surface, a dressing with iron-tooth rakes puts them in good order again.

The crown of the root from which the shoots are thrown up seems to increase in size every year, buds forming upon buds, which give it somewhat a conical shape. I observe that more and more of these crowns are visible, and are cut in every succeeding year's dressing; but it does not appear to injure them. Forking, I suppose, injures them quite as much or more. I observe, also, that the lateral roots or feeders have spread across the intermediate space between the beds, and think it highly probable it might be better to apply the manure there than to the crowns. I tried the experiment last spring upon a small scale, but without any visible effect until the tops were suffered to grow up—it was perceptible in them, though it had not been in the shoots cut for the table, possibly because the manure was applied too late.

My success in raising this plant, so far as depended on my own knowledge or management, is entirely accidental. I never planted, or owned, or dressed a bed of it before—never heard of its being dressed in this way, and adopted the plan at first to save time and labor, which I had not to spare.

I have 39 beds (one row of roots in each) 60 feet long, which are usually dressed by four men in a day and a half.

Very respectfully yours,

W. H. RICHARDSON.

Window Gardening.

Thousands of persons, fond of flowers, are, during a great portion of their lives, confined to the house, even if they have a garden or pleasure-ground in which Flora's treasures are growing and blooming. To meet this love of the beautiful and gratify the taste, the common practice is to grow a rose or geranium in a pot upon the window-sill, or a stand near the window. Those who have command of means have had aquarias constructed, but rarely with any satisfaction to meet anticipation. Some time since, the London

Gardener's Magazine gave a representation of a case constructed in the window by removing the entire lower sash, and then projecting a frame to cover the whole width of the sill, inside and out, raising the lights and curving them until the top met the lower part of the upper sash; the bottom of the case to be made like a draw, showing paneling, to give artistic appearance, and to have its drainage made so that any surplus water that should be given the plants would escape from the outside. In this draw the earth is to be placed, and the plants either set directly in it or they may be in pots, and the draw filled to surround and cover the pots with moss. The cost of construction of this form of window-case would be quite small, and, except in severe weather, it would be no trouble, and mostly out of the way. It should be made, of course, to fit the window, and movable on approach of really cold weather.

Another mode is to have a draw eight or ten inches deep, and projecting into the room four to eight inches, having the sides, or ends rather, carried up as panels next the window, and sash-doors hung on the inside opening into the room. In the draw, pieces of rock and soil are placed, and the plants set among them and trained as they grow up the side or end panel work. The effect of this in the long French window is very good, especially when care has been taken to get plants that are good climbers, and with broad, glossy foliage.—*Horticulturist*.

The Goodrich Potato.

Editor of Planter and Farmer,—As some of your readers may be interested in the cultivation of the potato—particularly the “Early Goodrich”—I enclose you a copy of a statement made to me by the gentleman mentioned below, whom I have known for a long time and have entire confidence in what he says. This statement does not say anything about the merits of the “Early Goodrich” as a forward potato, but clearly demonstrates what can be done by preparing land properly, using the right sort of fertilizers, and cultivating well afterwards. I saw the potatoes, and never before have I seen finer or larger potatoes, even for seed.

Mr. Joy, in charge of a farm near Washington city, belonging to George W. Riggs, Esq., planted not quite *one-fourth of an acre* in Early Goodrich potatoes, on which he sowed broadcast *three hundred pounds* of bone dust, and ploughed it in with a three-horse plough; planted the rows three feet apart; sowed in the drills or

rows at the rate of one hundred and fifty pounds Peruvian Guano per acre, and cut the potatoes each with two eyes, and planted them twelve inches apart in the rows. Just as they were coming up, they were harrowed across the rows; then a *sub-soil* plough was used three times in each row, from twelve to sixteen inches deep: after which, they were worked with a long tooth cultivator, sometimes called a "*Go devil*." Then the work was finished by one hoeing; and from two barrels planted, *two hundred and ten bushels* were dug up and saved.

H. B.

Alexandria, January 16th, 1868.

Sound Potatoes.

The wide-spread destruction of the potato crop, caused by the almost unprecedented rains of July and August of this year, amounting to millions of bushels, has naturally excited the earnest attention of the agricultural mind, and the question is anxiously asked on all hands, "how shall we escape the rot?" The potato disease has manifested itself, with nearly equal virulence and fatality, on all soils and under all modes of culture, throughout the region visited by the great rain-belt. No locality has been exempt from its ravages, and no panacea been found for its prevention, or cure. It becomes, therefore, a question of vital interest, not merely to the professional potato-grower, but to *every* farmer and *every* consumer of this now indispensable root—the fourth crop in value in the national soil products—what varieties to plant, with a reasonable prospect of a fair crop and exemption from disease.

In New England the standard sorts, the Carter, Jackson White, Davis, and Colebrook seedlings, have all failed to resist the rot; in New York, New Jersey, Pennsylvania and Southward, the kinds most popular and generally planted, the Peach-Blow, Mercer, Dykeman, White-Sprout, Prince Albert, Pinkeye, Jersey Monitor (synonymous with Shaker Russett and its pseudonym Shakers' *Fancy*!) have, with rare exceptions in favored localities, suffered equally from the rot with their Northern relatives. Some instances there are of entire exemption from disease, even of the Monitor, the most susceptible of all to its influence, but they are so rare as to be barely worth mentioning; nor is there anything in soil or culture in these cases that can enlighten us on the question "how to obtain, in seasons of potato rot, a sound crop of the standard popular kinds?"

We must turn, then, to an examination of the merits of those va-

ieties which have generally escaped the disease under the influence of the long, sunless, rainy season of 1867. From careful personal observation, verbal and written correspondence with friends, and assiduous reading of the agricultural press, I am satisfied that, taken as a *class*, the Goodrich seedlings more fully meet our requirements than any other. Not that they have proved invariably sound, but that with them health has been the rule and disease the exception—which is the reverse of our experience with all the older varieties.

Mr. Goodrich raised over 16,000 seedling potatoes, of which number less than ten sorts have proved of value to the general cultivator. They are the Cuzco, raised from the seed of the Wild Peruvian, and its progeny the Early Goodrich and Harison; the Garnet Chili, from seed of the Rough Purple Chili, and its progeny the Calico; lastly the Pinkeye Rustycoat, from seed of the western Red, and its progeny the Gleason.

In addition to these is the beautiful potato, the *Early Rose*, not raised by Mr. Goodrich, but obtained from seed of the Garnet Chili in 1861, by Mr. Albert Bresee, of Vermont, to which fuller references will presently be made.

Foremost among the well tasted of these sorts is the Early Goodrich, which is, this year, of unsurpassed quality, abundantly productive, a handsome market variety, next in earliness to the White Sprout, an admirable keeper, and as to health and soundness unequalled. Of the others, which are all winter sorts, the Harison, newly introduced, is the most productive and handsome, generally sound, and of medium but improving quality. Next is the Cuzco, also a great bearer, and this season of *good* quality, and growing in popularity.

The Garnet Chili and Calico are inferior in productiveness to the preceding, but are fair croppers, and generally sound; the Calico is very delicate in flavor, fully equal to Mercer.

The Pinkeye Rustycoat and Gleason are much prized by many growers for their truly excellent quality, productiveness and long keeping.

The *Early Rose*, although raised in 1861, and well tested by its originator, in Vermont, and by D. S. Heffron, of Utica, New York, who is the proprietor of the entire stock, is yet untried with us. It is the most promising, in general appearance and character, and certainly the best in quality, of any potato I have ever known. Mr. H., of whom I can confidently speak as one of the most conscientious cultivators in the land, assures me that thus far it has proved "as sound as any that Mr. Goodrich has ever raised, *ten*

days earlier than the Early Goodrich, more productive and with fewer small tubers than almost any other kind."

Should it fully bear out this description in our latitude, it will be the greatest boon to the farmer and to the community that this generation has yet witnessed. The fact that it is a seedling of the Garnet Chili, and has the Goodrich "strain of blood" in its veins, is greatly in its favor.—*Practical Farmer.*

Planting Vines Deep.

There are many, even among our best vine-growers, who advocate planting the vine deep—say eight and ten inches of soil above the upper root. Now it is well known that the most of grape roots, when left to themselves, are grown near the surface, and that one of the great objections to vine-growing, without pruning in a border, is that the roots, if not walled in, will soon extend beyond a desired limit, and that walling, to prevent their extension, causes them to seek food below the genial influence of light and air, and thus create disease. If this prove true, as record makes it in the border, why is it that compelling the roots in the field to seek their food deep below light and air can prove a healthy feature in grape culture? We hope some grape man will tell us wherein lies the value of keeping grape roots below the influence of atmosphere, for in all other fruits all growers advocate the reverse.—*Horticulturist.*

[We shall be as happy as the Editors of the *Horticulturist* to have some one assign a reason for this to us inexplicable practice.—ED. SOUTHERN PLANTER AND FARMER.]

Whole or Cut Seed Potatoes.

BY PLOUGHMAN, BALTIMORE, MD.

Being pretty well through with storing root crop, &c., and having a short time to spare, I give you a little experiment on a few potatoes, (called the Quaker,) which were presented to me by some Philadelphian unknown to me. They were large size and similar to the Harison in quality, and form:

- | | | | |
|--------|---------------------------------------------------------|----------|-------------------------|
| No. 1. | Potato weighing twelve ounces, cut in one and two eyes, | produced | 6 pounds. |
| No. 2. | Potato cut in halves weighing twelve ounces, | produced | 5 $\frac{3}{4}$ pounds. |
| No. 3. | A whole potato, weighing nine ounces, | produced | 3 $\frac{1}{2}$ pounds. |
| No. 4. | The sprouts of one potato weighing eight ounces, | duced | 1 pound, 2 ounces. |

Width apart, No. 1, ten inches; No. 2, eighteen inches; No. 3, twenty-four inches; No. 4, eight inches.

They were planted in meadow land and had a very wet season to contend with, otherwise I think the product would have been greater.

My object of trying the experiment was to ascertain if planting whole potatoes, (as has been recommended,) possessed any advantage over the old plan of cutting the potatoes in small pieces. If my exhibit is worth anything, it certainly shows that the old plan is best, saying nothing of the importance of economizing seed.—*Gardener's Monthly*.

Mining Department.

Topography, Geology and Iron Ores of the Valley of Virginia.

The following extract, from Colonel Hotchkiss' pamphlet, noticed in our last, was intended as a particular description of the Elizabeth Furnace Iron property of the Messrs. Forrer; but, as the topography, geology and mineral resources of this extensive property may be regarded as a pretty fair type of the whole of the great Valley which extends through Virginia, we have thought it might subserve the interest of that section to give it greater publicity through our pages:

TOPOGRAPHY.

The Great North Mountain has an elevation of some 2,500 feet above the valley of the Little Calf Pasture, but much of this elevation is comprised in the first portion of the slope of the mountain, rendering it too steep to be of much value, but all the lower portion of the mountain consists of long, gradually descending spurs, with intervening hollows, these are very good land and well timbered. The valley proper, having a width of some two miles, embraces much excellent grass land, and is covered with a very fine growth of original forest; much of this is comparatively level, dotted with some hills of moderate elevation. The western slope of the Little North Mountain is broken up into a succession of spurs and detached ridges, diminishing in elevation as they increase their dis-

tance from the axis of the mountain, with hollows and streams winding among them; many of these are well timbered and fertile, and among them are found the valuable iron ores and fossiliferous limestones that give to this property its great value; while from their sides gush numerous chalybeate, alum, healing, limestone and freestone springs, among the best of their classes, and valued for their medicinal virtues. But the topography of any region being but the incidents of its geology it will be better understood after that is briefly given.

GEOLOGY.

The Silurian limestone, with its associated slates and shales, that underlies the Great Valley of Virginia (and which has formed that valley by having had its upturned edges eroded,) is succeeded, conformably, on the west by the Medina Sandstone of the New York geologists, (called the Levant by Professor H. D. Rogers and No. IV. in the early surveys of Pa. & Va.,) and this, hard and unyielding, baffled successfully the denuding agency of the waters, and now forms the crest and eastern slope of the Little North Mountain; because this second great sand rock of the palæozoic system conforms to the dip of the limestone named, that is to the southeast, it necessarily forms the eastern face of the mountain and renders it rough and steep, but it furnishes fine quarries of excellent sandstone on the summit and beds of the finest sand on the sides of the mountain. It is needless to add that this sandstone renders the outline of this mountain bold and well defined; preserving a uniform elevation of from 800 to 1,000 feet above the adjacent valley. This sandstone is conformably succeeded on the west, about one-third of the way down the mountain, by a variegated fossiliferous limestone, (probably the Scalent of Rogers,) and there the character of the surface, of course, changes, and the harsh features that characterize the sandstone rim of the valley, or crest of the mountain, give place to the rounded spurs and winding hollows peculiar to limestone formations. This limestone is followed by a succession of softer shales and slates, with occasional sandstones, giving rise to the descending series of spurs and ridges we have spoken of in describing the topography of the western slope of the Little North Mountain. The valley of the Little Calf Pasture is derived from the slates and shales we have before spoken of, and as these harden towards the west they rise into the spurs of the Elliot's Knob, or Great North Mountain, and are then succeeded by the very hard sand rock that forms the crest of that mountain and gives it such a

commanding elevation, one of its knobs rising to a height of 4,448 feet above mean tide at Richmond. These features are clearly defined upon the maps.

This North Mountain is the same range that is known in Southern Pennsylvania as the Kitatinny, and as the Blue Mountain in the Eastern part of the State as at the Delaware Water Gap, it is the Shawangunk Mountain of New Jersey and New York; to the southwest of Elizabeth Furnace it extends through Virginia, under various names, the whole to the northeast and southwest "forming," says Lesley, "a succession of mountain outcrops that run into each other in curious zigzags, doubling like hares across a thousand streams, always wearing on their backs the red sandstone and the red shale, with certain marks, and the rich fossiliferous iron ore from which many of our largest (Pa.) furnaces obtain their stock." With this general reference to the geology of this region we now proceed to describe its

IRON ORES.

The system of mountains of which the Little North Mountain is a member is everywhere noted for its iron ores, and from a period anterior to the Revolution successful furnaces have drawn their supplies of ore from its extensive deposits, and now an almost unbroken chain of active furnaces, but a few miles apart, occupy the line of this system from New York to Alabama. Those familiar with the furnaces of Virginia will readily recognize well known names when we mention Zane's, Van Buren, Columbia, Esteline, Bath, California, Australia, Lucy Selina, Catawba, &c., furnaces, all of which draw or have drawn their supplies from the summit or western slope of this mountain range. This list could be greatly enlarged, and we have never heard of any iron from this region that was not of good quality, while much of it has enjoyed an enviable reputation.

This band of the great iron belt reveals the abundance of its iron ores by the numerous strong and bold chalybeate springs that flow from it, Orkney, Liberty, Rawly, Union, Yellow and Variety Springs are more or less widely known, but excellent "iron waters" flow from unnamed springs along this mountain, in almost every mile of its course—they show that the "soft ore" is abundant. As an illustration of the quantity of iron contained in some of the iron contained in some of these waters, we can instance Rawly Springs in the North Mountain, twelve miles from Harrisonburg—the flow of the water from one spring is one hundred and thirty

gallons an hour, and each gallon contains a half ounce of the very purest iron ore.

Professor William B. Rogers, in his Report on the Geology of Virginia, says: "The ores almost exclusively in use, are Hæmatites of various aspects, known under the names of Honey-comb and Pipe ores—many of which yield a metal of the very finest character." These Hydrous Peroxides of Iron, or Hæmatites, by the numerous analyses of the Rogerses, may be said to contain from seventy to eighty-seven per cent. of Peroxide of Iron, some of them a trace of oxide of Manganese, from one to two and a half per cent. of Alumina, from two to fifteen per cent. of Silica, from eight to fifteen per cent. of water and some traces of lime. The amount of metallic iron in one hundred parts is from forty-six to sixty.

The iron ore of the Elizabeth Furnace attracted attention as early as 1796, when Timothy Green obtained a patent for one hundred acres of land, known as the "Gum Ore Bank Tract."

This is near a notch, or gap, in the mountain and no one could pass along the road leading to it without noticing a bluff of iron ore, a dark brown hæmatite, rising some twenty-five feet above the surface of a spur on the left, and marking the eastern boundary of a belt of country about a fourth of a mile wide, and extending indefinitely to the northeast and southwest, scattered over with detached masses of the same valuable ore. This tract passed from hand to hand unimproved, until it came into the possession of the Messrs. Forrer, who have, within the past five years, partially developed its resources, and are now operating a single charcoal furnace, making from five to seven tons of pig metal a day.

From a recent survey of the property, I am enabled to make these statements.

GOLD.—The total production of gold all over the world, from 1848 to 1866, is estimated at \$3,341,500,000, or at the average of \$185,638,888 per annum. The weight of the whole would be 6,157 tons, nine-tenths fine, or 5,542 tons avoirdupois of fine gold, equal to 307½ tons per annum. The silver product of the same period was valued at \$1,629,460,000, or at the average of \$90,022,222. The weight of this nine-tenths fine would be \$47,743 tons, or 43,696 tons of pure silver, equal to 1,832 tons a year, or in the proportion of about eight tons of silver to one of gold.

Mechanic Arts.

Progress of American Invention.

Judging from the rapid progress made in invention within the last few years, it might seem to some that we must be naturally approaching the acme of mechanical perfection; but as we appear to approach this acme, it recedes and opens the field of invention wider and more extended, thus giving a greater scope to the energies of ingenious and enterprising men. Each invention, no matter how humble, opens a new field of greater or less magnitude, in which not only its inventor, but others may operate.

In respect of the inventions which affect the prosperity not of our own country alone, but the whole world, America stands pre-eminent, and not only pre-eminent in the introduction of such inventions and machines, but in their manufacture. As a proof of this fact, witness the result of the competition at the World's Exhibition at Paris, and we see that in the competition for sewing machines, reapers, mowers, locomotives, safes, and many other leading inventions, America bears the palm. It is but a few years ago that American mechanical skill was not very highly estimated abroad; but now a great change has taken place, and a high value is placed upon it. Thus encouraged, our inventors and artisans ought to, and will, redouble their energies until they outstrip all competition of other nations, and our country will be considered as a national workshop, and the world can order the products of our ingenuity and skill.—
American Artisan.

Advice to Young Mechanics.

There is a growing inclination on the part of young men, after they have served long and hard apprenticeships to acquire a good trade, to abandon that mode of making a living to enter the legal or medical profession, where it is supposed greater emoluments can be secured and larger honors won. In nineteen cases out of twenty such ventures are failures, for two reasons. First, the professions require peculiar talent and the most thorough education. As a rule, apprentices to the trades have neither the time nor the means to acquire this education. Hence, when a mechanic at the end of his apprenticeship aspires to and enters any one of the professions, he does so at a great disadvantage. He may be a fluent speaker, know how to argue a point in a debating society or harangue a

crowd at a ward meeting, but such talents do not fit him for the legal profession. He may know how to extract a splinter from his own hand, how to make a salve, how to mix a powder or administer a pill, but all this, while it might qualify him as a good nurse, does not fit him for the medical profession. The fact is, the young men who abandon their trades are tempted to do so by a feeling of false pride erroneously imagining there is no honor to be secured in a pursuit of the mechanical arts. History proves the fallacy of such suppositions.

The brightest names which now adorn the annals of all countries are of the best mechanics who have blessed mankind with the productions of their genius. All that is beautiful and grand is the result of improvement in mechanics. The pendulum, the main-spring, the barometer, thermometer, printing-press, steam-engine, sewing-machine, telescope—all are the result of mechanics' arts, making those famous who produced them and the people great who adopted them.

A good mechanic who becomes a pettifogger or a quack merely because he is too proud to work at his trade, is indeed a pitiful object. A man of the right mental balance, who has proper mental force, with the necessary independence, will win as much honor and as fair a living in the trades as in the professions; indeed, an indifferent lawyer or doctor lacking briefs or patients, is always a miserable being, a bad example in the community. Let our young mechanics, then, become ambitious in their own peculiar vocations. If they dignify their trades by becoming proficient therein, the trades will dignify them with the highest honors. If mechanics pursue their business with a purpose to self-improvement therein, and not merely to hammer and file and saw, but to improve the art, to develop something new therein, the mind will be strengthened as the arm becomes muscular, and the heart of the mechanic will be made to swell with as true a pride as ever glowed beneath the doublet of a prince. Will the young mechanics think of these truths?—*State Guard, Harrisburg, Pa.*

BROWN'S CARPET-TACKING MACHINE consists of a serrated foot which is placed over the spot where the tack is to be driven, and is so held by a handle long enough to enable the operator to stand upright. The tack is dropped into a tube at the upper end of the handle and falls to the lower end, and then by pulling a cord a hammer is raised, and when acted upon by means of a spiral spring the tack is forced into the spot intended. The machine is intended to stretch and tack the carpet at the same time. The weight of the whole apparatus is about four or five pounds.—*American Artisan.*

Household Department.

Milch Cows.

Mr. Editor,—That far too little attention has been paid by our farmers and others to these useful animals, is a fact which your correspondent has had occasion to remark.

Accustomed, from infancy, to Southern plantation life, but in latter years familiar with Northern and Western processes, he has been led to compare the general neglect of cows on our plantations, and consequent deficiency of milk and butter, with the greater care and better results in these respects, witnessed in some other regions. On a small scale, too, he has put in practice a moderate amount of energy to endeavor to realize what care, directed by good sense, may accomplish in this latitude towards remedying the deficiency in question. The result has been gratifying, and he takes the liberty of making a brief statement, by way of inciting others to put forth endeavor in this direction, with even better reward.

Your correspondent has but a small body of land, on which he raises only a limited amount of corn, wheat, oats and hay. He keeps four cows. His care of them embraces these essential particulars:

1. That they be always dealt with gently—no hallooing at them, or violence allowed.
2. That they be sheltered, haltered in stalls, kept clean, and with good beds, in winter.
3. That they be systematically fed with food suitably warmed in winter.
4. That they be systematically and thoroughly milked—by a man, if possible.
5. That their tendencies towards maturity be so attended to, as to insure, if practicable, calves and renewed freshness every year.

By this course your correspondent is enabled to secure, in mid-winter, an average product of six or eight quarts of milk a day from each cow, supplying a large family with an abundance of milk, cream and butter, the gross value of which, at this season, may be fairly estimated at not less than twelve dollars a week, besides the comfort which no such outlay could, in general supply.

His personal attention is given only in the way of exact supervision, half an hour in the early morning and again towards night-fall. The work is done by a negro man, hired at ten dollars a

month, who does a great many other things. The feeding is done in large troughs or cribs, subdivided, so that the smaller portion shall be water-tight for slops, &c., the other for fodder, &c.

In the early morning a mixed feed is given of Mangold Wurzel beets or turnips sliced up, and bran, thoroughly treated with warm water, in the tight portion of the crib. At the same time a sufficiency is put of shucks or fodder in the other portion of the crib. About a gallon of the sliced roots, and as much bran, to each cow, and two or three gallons of water to each, constitute this succulent morning's meal. At one o'clock they are fed again, differently. A quantity of straw is cut up with a cutting knife, treated with a few quarts of bran, put in the tight portion of the crib, and served with a considerable portion of warm water, and the whole well stirred. At night the morning process is repeated.

The stalls are cleaned out and relittered every morning, and again at night, if necessary. Being thus attended to, it takes but little time. The animals are let out in the stable-yard in the day, unless the weather is very bad, this being well floored with stalks, straw, &c. The haltering is with a small cord simply tied around the base of the horns. The animals, treated gently, are so tractable, although one or two of them had been extremely wild and unmanageable, that they are as readily haltered as the best trained horse.

The milking is done about the time of feeding, morning and night, and with energy and rapidity.

Your correspondent having important literary work to do, and very limited means, can give to matters of this kind only a fragment of time, and very little outlay. But he has been surprised to see what a little judicious care thus applied will effect.

One of the secrets in the case is, it will be observed, the summer cultivation of succulent roots, and their preservation in winter. This is essential. But it can everywhere be easily done; and it is astonishing that so little of it is effected. The warm water, too, is an important element. Everybody can secure it with some simple, economical appliance. Kitchen slops are also used.

Under the changes wrought in our labor system, things of this kind will have to be attended to; and your correspondent will be rewarded for this unpretending contribution, if others in our dear suffering South gather from his suggestions a few profitable hints.

P—.

How to Make Milkers.

No matter what breed you have, whether Ayrshire, Jersey, Short Horn, or grades, something is necessary to be done to reach the highest success in raising milkers.

It is a great thing to have good blood, but apart from this advantage, the course of raising a milker is somewhat different from that of raising an animal for beef or for labor.

The calf should be well fed and petted while young.

Fondling helps to create a quiet disposition, so important in a dairy cow, and this education must begin when young.

For a milker we would have the heifer come in at two years old, and if she has been well kept, so as to have attained a good size, she is then old enough to become a cow. She will give more milk for coming in early. It forms the habit of giving milk, and the habit, you know, is a sort of second nature. We use too many young bulls. An older bull is better. A three or four years old is far better as a stock getter than a yearling, and many prefer a five or six years old to any other. After the heifer has come in, let her be fed regularly. A little oatmeal induces a large flow. Indial meal is rather fattening. In bad weather, give her a clean, airy stall.

A cow newly come in should not drink cold water in cold weather, but moderately warm slop. Calves intended for raising should be taken from the cow within a few days after birth. Feed them first with new milk for a time, then skim milk, then sour milk, taking care that all the changes are gradual, by adding only a portion first, and gradually a little meal.

Calves well fed and taken care of, with a quart or two of meal daily in winter, will be double the size at two years old they would have attained by common treatment.

Heifers thus treated may come in at two years old, and will be better than neglected animals at three, and one year of feeding saved.

Heifers dried up too early after calving, will always run dry earlier in after years; therefore be careful to milk closely the first year, until about six weeks before calving.

Hearty eaters are desirable for cows, and they may usually be selected while calves. A dainty calf will be a dainty cow.

Heifers should become accustomed to be freely handled before calving, and drawing the teats.

They will then not be difficult to milk. Begin gradually and never startle them.

Persons who milk should keep the nails cut short; animals are sometimes hurt with sharp nails, and are unjustly charged with restlessness.

To determine which cows are best for keeping, try their milk separately, and weigh their butter—for sometimes a cow may give much milk and little butter, and *vice versa*.—*Colman's Rural World*.

THE SOUTHERN PLANTER AND FARMER.

RICHMOND, VIRGINIA, FEBRUARY, 1868.

TERMS OF SUBSCRIPTION AND ADVERTISING.

SUBSCRIPTION One Year,.....\$2.00

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1 square, 10 lines or less, one insertion,.....\$ 1 00	¼ page, one year,.....\$ 35 00
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¼ page, six months,..... 20 00	1 page, one year,.....100 00

PAYMENTS.

Subscriptions—in advance. Advertising—annual—quarterly in advance. All others in advance.

Editorial Department.

Indian Corn as a Green Manure.

Will any of our readers who may have tried the broadcast sowing of Indian corn, for the purpose of ploughing under, as a manure, be so good as to favor us with his experience of the results of his experiments?

State particularly the favorable or unfavorable character of the seasons and whether light, dry and warm or stiff, cold and wet; or of what intermediate variations of condition.

We all know that green vegetable matter requires a greater amount of heat for its decomposition, than can always be found in cold, wet soils, and it is desired particularly, therefore, to learn from the practical farmer what has been his success upon this kind of land.

If, in answering this call, any person may feel disposed to enlarge the field of inquiry and give his views on the subject of green manuring generally, it will greatly enhance the value of his communication.

Correspondence of Southern Planter and Farmer.

Our thanks are due to the kind partiality of our esteemed correspondent for the following very flattering notice of the "Southern Planter and Farmer." We pass it over to our readers for such consideration as it may please them to give it.—ED. SOUTHERN PLANTER AND FARMER.

THE SOUTHERN PLANTER AND FARMER.

Unum, sed leonem.

The first number of the united *Planter and Farmer* came to hand by last mail. Allow me to congratulate you, Mr. Editor, upon this step in the right direction. It must be a great gratification to all who have the interests you advocate at heart, to perceive that we are thus in the way of being furnished with a periodical on agriculture fitted in so high a degree to meet the peculiar wants of the region, for whose benefit it is particularly designed. We, of the South, now more than ever—for scarcely any other alternative is at present left us

than plant or perish—stand in need of a superior and widely-circulating publication of this kind. With soil, climate and productions differing so materially in many points from those of our Northern fellow-citizens, their agricultural papers, however ably conducted and valuable in themselves, as a matter of course will pay less attention to, and often wholly overlook, things that are of the last importance in our latitude. In fact, many things highly concerning to us—such as the cultivation of all crops suited to our climate, but unsuited to theirs—the management of our thin, light soils; above all, the restoration of our old worn-out fields—could not be well admitted into them, without rendering them so far “flat, stale and unprofitable” to their home patrons. But the very length, breadth and depth of this want have led to the wrong policy with regard to its own supply; that is, to too much uncombined action. Every one has put his hand to the work in his own way, without consulting the general good, or the disinterested judgment of others. Every State has been trying to get up a journal of its own, as if that were at all necessary to its actual wants and success. The consequence of all this has been the defeat of the very object which the originators of such publications had in view. It has left us, not with many, as probably was hoped and expected it would, but without even one paper of that high character, varied contents, literary finish, extensive circulation, low price, and proper adaptation to our peculiar wants and circumstances, which it is admitted on all hands we require. Our strength—not from want of numbers, but from lack of interest and consequent inattention—never more than sufficient to support more than one really good paper, divided among so many, has been frittered away, and has gone to waste. These sickly, feeble, short-lived issues of an hour, even during the days of our prosperity and strength, have dwindled and died, almost without exception; and now, with diminished numbers and crippled resources, we are left to begin the work anew. Can we not be a little wiser for the future? We positively want but one paper of this kind from Virginia, where our peculiar products, soil, climate, etc., begin, to Texas where, as far as our country is concerned, they end. Cannot one paper represent these diversities and interests as well as a dozen? Why not, then, unite upon one paper, and use all our efforts to make that what it should be? The better supported, the greater will become its merits; and the greater its merits, the more extensive its circulation. Every year as that circulation enlarges, richness and attractiveness will gather upon its pages through the influence of growing means. What is of especial importance, as the number of subscribers enlarges, the amount of the annual subscription may be made less and less, till it comes within the reach of multitudes who ought to have it, but who can ill afford to take it even at the comparatively moderate rate of two dollars a year. In this way, with the united support of the whole cotton, tobacco, rice and sugar-growing regions, a paper cannot fail to succeed, whatever may be its name or the place of its publication. Why not, then, put our shoulders to this wheel as one man? Why not lay aside all petty State pride—which “was never made for men” in our present political condition—all selfishness, everything but love of the public good, and strive together as a band of brethren for the temporal salvation of our ruined, suffering country? Her agriculture is now her only hope. Again I say it, she must plant, and plant on a wiser and better system than she ever has done, or she must perish. The *Planter and Farmer*, as far as my knowledge extends, is now the most prominent and promising agricultural journal among us. Why not go to

work like a hive of bees, each one working with a will, and in his own way, to build it up, till it shall find its way into every household, laden with its treasures of thought and knowledge, and opening the way for the improvement and happiness of the great general life? It is a noble object. Let us work, and acquit ourselves like men. Then, as the queen of the forest said of her whelp, "one but a lion," we should have one paper only, but THAT ONE A
APER. T. S. W. MOTT.

Garden Farm, January 27th, 1868.

Barley.

INDUCEMENTS OFFERED FOR ITS CULTIVATION IN VIRGINIA.

Messrs. Yuengling & Beyer, proprietors of the large brewery in Richmond, propose to furnish *selected seed* of this valuable commodity at cost, for cash. Barley is the only grain from which beer is made, and the rapidly increasing consumption of this wholesome beverage among us, renders it a fit subject for trial on the part of farmers. In the selection of seed, great care should be taken that it is not of a *reddish* hue, as it is more than probable that, in such case, a great part of it will never vegetate. The sample should be of a pale, lively color, and uniform. We mention this as a reason why the novice in this business should avail himself of the practical skill of this firm in selecting their seed; not to speak of the obvious advantage of obtaining, through them, their seed at cost. The land that produces the best barley is generally of a silicious, light, dry nature; for a good mellow preparation and free soil are essential to the growth of malting barleys. Cold wet soils, which are peculiarly retentive of water, are ill adapted to the growth of this grain, both in reference to its weight and its malting qualities. The whole matter of barley and its straw contains more silicious particles than that of any other small grain; and hence, one reason why a sandy soil is most congenial to the growth of the plant, especially as it serves best to stiffen and harden the straw; and thus, to counteract its tendency to fall when it does not derive a sufficiency of this element, as it fails to do when sown on stiff wet lands. In harvesting barley, great care must be taken to avoid heating and sprouting of the grain, by thoroughly curing and drying before housing, and even after housing, watchful attention to prevent heating in the mow. The operation of threshing should not be done by a machine, as the injury done thereby is frequently of a very serious nature; it bruises the malting spear, which is as injurious to the malsters as if heated in the mow, and therefore should be guarded against.

M. Saussure, in subjecting barley to the test of chemical analysis, reports the following constituents found in the grain and straw:

The grain reduced to ashes, with its skin, gave, out of 100 parts, 18 of ashes, which contained:

Potash, 18.; phosphate of potash, 9.2; sulphate of potash, 1.5; muriate of potash, 0.25; earthy phosphates, 32.5; silicia, 35.5; metallic oxides, 0.25; loss, 2.8.

One thousand parts of straw produced 42 of ashes, containing:

Potash, 16.; sulphate of potash, 3.5; muriate of potash, 0.5; earthy phosphates, 7.75; earthy carbonates, 12.5; silicia, 57.; metallic oxides, 0.5; loss, 2.25.

These products vary, no doubt, in different soils, but the proportion of silica in the straw and in the skin of barley is remarkable. The subjects of these analyses grew on chalky soil.

This grain is cultivated largely in New York and in the West, where the crop is said to average 40 bushels, which, at late January quotations in New York, \$1 82½ to \$1.85 per bushel, is a remunerating price.

We have some results of the experimental cultivation of last year, which we will now state:

Twenty-five bushels per acre were reaped in Dinwiddie county under circumstances deemed not the most favorable.

Mr. Milton Barrett, near Keysville, about the last of April, 1867, sowed upon very poor land, with 200 pounds of Fisk guano to the acre, two bushels of two and four-rowed barley, which yielded ten bushels to the acre. This, he adds, "I consider a decided success, for the crop was sown at least two months too late."

Mr. E. S. Hammond writes from Lynchburg in March, 1867, to Messrs. Yuengling & Beyer. . . . Please inform me the varieties of seed you have, and if suitable for spring-sowing. . . . The objection to the kind I now plant is its falling; the stem is so soft and weak; but it has yielded me 60 bushels to the acre on low grounds, and no defect or blight in the grain. I wish a variety that has a stiffer stem.

We refer to the advertising sheet for the particulars of Messrs. Yuengling & Beyer's offer, and have been requested to say that applicants for seed will be furnished with particular directions for the proper cultivation of barley.

Beautiful Medallion Likenesses of Bishop Soule and Rev. Hezekiah G. Leigh, D. D.

We are indebted to the courtesy of the President of Randolph Macon College for the above named Medals. These eminent men of God, whose names adorn the annals of the Methodist Episcopal Church, South, and whose distinguished faithful and efficient labors in the gospel have enshrined their blessed memories as "holy relics" in the hearts of all true Methodists, are most beautifully and artistically expressed in *bas-relief* likenesses of admirable truthfulness on metallic disks of bright untarnished lustre. These souvenirs are offered to those who contribute to the fund being raised for the repairs of Randolph Macon College, upon the following terms:

A contribution of \$2 entitles the donor to the likeness of the Bishop.

A contribution of \$1 to that of Dr. Leigh, the founder of the College. And for three dollars both will be given to the contributor.

Address Rev. S. T. Moorman, care of the Richmond Christian Advocate.

Club Rates.

We receive subscriptions for the following papers in connection with the Southern Planter and Farmer:

Richmond Christian Advocate and S. P. & F. together,	-	-	\$4 50
Cultivator and Country Gentleman and S. P. & F. together,	-	-	3 75
American Farmer, Baltimore, and S. P. & F. together,	-	-	3 50

New Publications.

THE SUNDAY SCHOOL MAGAZINE, devoted to the interests of Sunday Schools. Published under the auspices of the Virginia Sunday School Society of the Methodist Episcopal Church, South. Edited by Rev. W. W. Bennett, D. D., Vol. I. No. 1—32 pp. octavo. Price *one dollar* per annum in advance. Its ensemble is at once beautiful and attractive, being '*put up*' in the artistic style of workmanship and characteristic good taste of Messrs. Fergusson & Rady, Book and Job Printers, 1328 Main street, Richmond, Va. But these are but accessories. The **WORK ITSELF** is worthy of the highest praise, and commends itself, by the richness and variety of its contents, to the patronage of all Christian denominations as a choice manual of moral and religious instruction for the family and the Sunday School.

THE NEW ECLECTIC. The second or February number of this magazine has been received, and judging from the numbers already issued, it promises to equal the expectations of its most sanguine friends; and already deserves to be classed among the best periodicals in this country.

CONTENTS—I. Music and Architecture; II. Aunt Anastasia on Society; III. Mr. Arnold and Mr. Swinburne; IV. A City Apologue; V. Phineas Finn—the Irish Member; VI. Democracy, Carlyle and Whitman; VII. Ireland and the Irish; VIII. The Companionship of Books; IX. The Comedy of Convocation; X. Scientific—Reviews, Recent Publications, Miscellany and Editorial—128 pages. Price \$4 per annum.

BLACKWOOD'S EDINBURGH MAGAZINE. The December number has been received from the Leonard Scott Publishing Company, 140 Fulton street, N. Y. Price \$4 a year.

CONTENTS—Linda Tressel—part III; The Church—her State and Prospects; Nina; Sir Charles Wood's Administration of Indian Affairs; The Conversion of England; Cornelius O'Dowd; Garibaldi *versus* Pio Nino, &c.; Grimm's Law; Brownlow's—part XII; The Government and the Press, &c.

NORTH BRITISH REVIEW for December, No. 94, has also been received from the Leonard Scott Publishing Company. The character of this periodical is such that its own name is its sufficient recommendation.

CONTENTS—1. Relations of Heathenism and Judaism to Christianity; 2. Modern Provincial Poems; 3. Ralph Waldo Emerson; 4. The Natural History of Morals; 5. The Military Systems of Europe; 6. Population; 7. Italy in 1867; 8. The Social Sons of Britain.

DEBOW'S REVIEW. The January number has been received, and contains the usual variety of well-written articles on the subjects which will be seen by the contents below; before giving which we will state that we have seen in one of our exchanges that Wm. M. Burwell, Esq., has been called to the position of Editor-in-chief of this valuable magazine. He is well-known and appreciated at the South for his fine talents, qualifications and experience for such a position, and will, no doubt, contribute materially to the prosperity of this journal.

CONTENTS—I. Party Purposes and Personal Political Designs Associated with the Recent Popular Elections; II. Oratory—a Fine Art; III. Effects of Radicalism; IV. Recollections of Mexico; V. Gen. U. S. Grant; VI. Agri-

culture of Missouri; VII. Department of Commerce; VIII. Do. of Agriculture; IX. Do. of Mining and Manufactures; X. Do. of Internal Improvement; XI. Editorial Notes, &c.

NEW CATALOGUE OF THE HERMITAGE NURSERIES. Messrs. Allan & Johnson, of this city, General Agents, have sent us the new Catalogue of Fruit and Ornamental Trees, Plants, &c., grown and for sale by the VIRGINIA NURSERY AND WINE COMPANY. Office, 1506 Main street. Post-office box, 438.

This company has been organized under a regular charter, and is represented by the following officers:

Jacob Fuller, of Rockbridge county, *President*; L. W. Rose, of Richmond, *Treasurer*; John M. Allan, of Richmond, *Secretary*; Robert P. Richardson, of Reidsville, N. C., and John D. M. Ross, of Rockbridge county, *Directors*; Allan & Johnson, of Richmond, *General Agents*.

This Company have purchased the property and stock of the Hermitage Nurseries, whereby they are enabled, without delay, to offer a good assortment for the Spring trade. They will purchase largely of the fruit of the vine, and manufacture, on a large scale, the best qualities of wine the fruit will afford.

This Catalogue abounds in useful directions to the fruit-grower: on Planting and Cultivating Orchards and Vineyards; table of Distances for Planting, &c., and contains a full descriptive list of Apples, Pears, Peaches, Cherries, Plums, Apricots, Nectarines, Quince, Grapes of select variety, suited to this latitude, Strawberries, Raspberries, Gooseberries, Currants, Blackberries, Evergreen Trees and Shrubs, Deciduous Shrubs, Climbing Shrubs, Vines, &c.; Hedge Plants, Select Bedding Plants, &c.; and Roses and Flowers in all their Select Varieties. Also, Select Green-House and Hot-House Plants, &c., &c.

WILSON'S AMMONIATED SUPER-PHOSPHATE OF LIME.—Messrs. Spotts & Gibson, Agents for Richmond, have sent us the above pamphlet, describing it generally, and giving directions for its application with regard to Corn, Potatoes, Roots, Broadcast Grains, Top-Dressing Meadows, Trees, Vines, &c., and Cabbages.

This pamphlet can be obtained from the Agents, Messrs. Spotts & Gibson.

ALLISON & ADDISON'S HAND BOOK OF THE GARDEN, Seed Catalogue and Almanac for 1868. The publishers are seedsmen and dealers in agricultural implements and guano. Under the present postal law, seeds, &c., can be mailed in packages not exceeding four pounds in weight, thus affording a cheap and expeditious mode of obtaining them. Call at 1320 Cary, between 13th and 14th streets, Richmond, Va.

ANNUAL DESCRIPTIVE CATALOGUE OF GARDEN SEEDS, grown and for sale by Allan & Johnson, wholesale and retail seedsmen, 1506 Main street, Richmond, Va. Post-office box, 438. Seeds sent by mail to any part of the country, and their safe delivery guaranteed.

DESCRIPTIVE AND PRICED CATALOGUE OF PLANTS, grown and for sale at Pleasant Valley Small Fruit Farm and Nursery, one mile southwest of Moorestown, Burlington county, N. J., by John S. Collins.

KNOX FRUIT FARM AND NURSERIES. Catalogue of Small Fruits for Spring of 1868, by J. Knox—City office, No. 137 Liberty street, Pittsburg, Pa., with numerous illustrations of the various fruits offered for sale.

CATALOGUE OF FRESH AND GENUINE FIELD AND GARDEN SEEDS; also, Amateur's Price List of Fruit and Ornamental Trees, Grape Vines, Small Fruits, Shrubs, Roses, &c., grown and for sale by Edward J. Evans, York, Pa.

PRICE LIST OF R. H. ALLEN & Co., 189 and 191 Water street, N. Y.—of Seeds, Fertilizers, Agricultural and Horticultural Machinery and Implements, in great variety.

PRICE LIST OF PORTABLE STEAM ENGINES, manufactured by A. N. Wood & Co., Eaton, Madison county, N. Y., with testimonials of their merits.

CHERRY LAWN FARM. Price List for Strawberries. The Wilson—a Specialty; also, Prices of Blackberries and Raspberries, Rhubarb and Asparagus Plants. Address D. H. Brown, New Brunswick, N. J.

TRUE'S POTATO PLANTER. It is claimed to be the most valuable labor saving machine adapted to agricultural purposes ever introduced. Address J. L. True, Burton, Maine.

THE ORIENTAL BASE BURNING HOT AIR FURNACES.—We have received from Messrs. Snyder & Irby, Agents for this city, their Circulars setting forth the advantages of using these furnaces for heating purposes. These advantages are chiefly derived from their form, durability, convenience, healthfulness, economy and effectiveness. They are perpetual burners, and only require replenishing once in twenty-four hours. They will keep fire many days without attention.

HOVEY & NICHOLS' ARTIFICIAL FRUITS.—This firm announces that they can supply the public with new artificial fruit that is a perfect counterfeit of nature. Apples, Pears, Peaches, Plums, Grapes, Strawberries, &c., can be duplicated, at prices varying from one to two dollars at retail. Their address is 57 State Street, Chicago.

BLACKWOOD'S MAGAZINE, for January, is just received.

CONTENTS—Address of Working Men, by Felix Holt; Linda Tressel—part IV; Sketches in Polynesia; Brownlows—part XIII; Modern Cynicism; What I Did at Belgrade; The Night Wanderer of an Afghan Fort; The Education of the People of England and America.

THE NEW YORK TEACHER AND AMERICAN EDUCATIONAL MONTHLY, devoted to popular instruction and literature, by J. W. Schermerhorn & Co., 430 Broome street, New York, pp. 48, octavo, price \$1.50 per annum. January, 1868.

CONTENTS—Inner Life of Reform Schools; The Ranhe Haus, Hamburg, with an Illustration; The Classification of the Sciences; The Objects of School Training; Intervention of Government in Education; England and the English Colonies, from the French of M. Emile de Laveleye; Grammatical Notes—Verbs Modified by Adjectives; Cloverbobs, or How Dr. Rounder Beat his Boys; The Year; Shall the Truth be Told About School Books; Where are the Mothers; Play Grounds, &c., &c.

Increase of Original Matter in the Southern Planter and Farmer.

We have the highest satisfaction in being able to present to our readers the large amount of seasonable, practical, *original* matter which will be found in the present number of this journal; and with equal pleasure we add, that our kind friends are increasing our debt of gratitude to them for the extension of their beneficent labors in this direction.

Their previous communications are beginning to arrest attention, and are drawing out valuable contributions from other correspondents. These again draw out others, and thus, vivacity, freshness, and variety are imparted to our pages, while they become the vehicle for the wide dissemination of valuable and important instruction in practical husbandry and the industrial arts.

Thus, too, will our paper become, in due time, a recognized organ, for the interchange of the opinions and practices prevailing among our farmers; a focalizing centre on which the scattered rays of knowledge will converge, and thence be reflected in their combined radiance for the enlightenment of all within its sphere.

It is the interest of our patrons, as well as our own, that this ideal should be speedily realized. *Verbum sat.*

Commercial Report.

Just one year ago we prepared our first report for the opening number of the new series of the *Southern Planter*. Our field in the then existing state of things was an unpromising one, and amid the pall of gloom that overshadowed our people, it looked like a hopeless task to attempt any enterprise that required of them pecuniary support, or active and hearty co-operation. Looking over the whole ground, we determined to obey the war-cry of our noble Stonewall Jackson, who, above the din of battle, could often be heard exclaiming "press forward," and although "clouds and darkness" still encompass our land, we have no cause to regret our twelve months of toil, and hope there are not a few of our readers who feel that we have not labored altogether in vain. We stated in our first Commercial Report that it was our purpose "to use every resource at our command to make our journal a welcome visitor to the *merchant* as well as the planter;" and while the present subscription list of the *Southern Planter and Farmer* attests the esteem in which we are held by the planters and farmers of this and other States, we regret that we have so few readers among the merchants. We have offered our pages as a medium of communication to the Richmond Chamber of Commerce, the Tobacco Exchange and the Corn and Flour Exchange, but, as yet, we have not had the pleasure of hearing from either of the honorable bodies mentioned. We hope and believe that, with the return of that state of prosperity for which we are *all* longing, and hoping and laboring, our mercantile friends, who have thus far omitted to use our journal as a means of communication with the planter and farmer,

looking upon us as co-workers with them, will join hands with us, and help on those productive interests by which we all live.

Like the corresponding season of last year, this has been a winter of unusual severity, and we can hope for but little improvement in any branch of commerce until there is a general thaw, followed by the drying winds of March. When the produce, now locked up in the country, comes to market, we have every reason to think that it will furnish a basis for even more business than was transacted last Spring. How successfully the soil of the South is to be cultivated during the current year, is a problem yet to be solved, and every one must resolve to "act well his part," and master the difficulties of the situation as best he can.

TOBACCO.

We now proceed to give annual statistics, as extracted from the valuable Circular of Messrs. Norton, Slaughter & Co., of New York:

"Comparative stocks of leaf tobacco in the United States on 1st of January, 1868, and 1st of January, 1867:

	1868.	1867.
New York, - - - - -	23,876 Hds.	19,366 Hds.
Baltimore, - - - - -	8,506 "	17,645 "
New Orleans, - - - - -	875 "	4,507 "
St. Louis, - - - - -	2,199 "	793 "
Louisville, - - - - -	2,708 "	4,635 "
Cincinnati and Covington, - - - - -	2,150 "	2,700 "
Paducah, - - - - -	123 "	479 "
Clarksville, - - - - -		
Virginia, - - - - -	1,476 "	3,700 "
	<u>41,913</u>	<u>53,825</u>
Total Receipts at all American ports for the year 1867, - - -		220,166 "
Total Exports from the United States for the year 1867, - - -		189,648 "

Statement of stocks of American tobacco in the principal ports of the world on 1st of January for the past ten years:

January 1.	1868.	1867.	1866.	1865.
Liverpool,	22,715	23,642	27,820	23,514
London,	21,982	23,782	22,398	22,786
Bremen,	2,982	4,552	7,864	7,385
New York,	23,876	19,366	35,184	41,712
Baltimore,	8,506	17,645	22,297	20,938
New Orleans,	875	4,507	1,553	957
Virginia,	1,476	3,700*	10,593	
Total,	<u>82,412</u>	<u>97,194</u>	<u>127,709</u>	<u>117,292</u>

* Estimated. The stocks in Virginia on 1st January, 1868, were smaller than ever before in the history of the State.

January 1.	1864.	1863.	1862.
Liverpool,	20,598	18,216	18,519
London,	18,005	17,765	21,340
Bremen,	10,114	6,724	12,072
New York,	29,475	23,711	22,524
Baltimore,	21,560	6,470	24,500
New Orleans,	165	4,452	15,493
Virginia,			
Total,	<u>99,917</u>	<u>77,338</u>	<u>114,448</u>

	1861.	1860.	1859.
January 1.	1861.	1860.	1859.
Liverpool,	18,251	15,503	15,289
London,	27,187	22,445	19,376
Bremen,	7,720	5,533	6,484
New York,	16,274	19,048	8,644
Baltimore,	15,181	8,354	4,219
New Orleans,	13 271	19,547	20,167
Virginia,			
Total,	97,884	90,430	74,179"

Of the above stock of 82,412 hogsheads American tobacco on hand at the beginning of this year, we find the proportion remaining of Virginia and North Carolina growth, as follows :

	Hds. Leaf.	Hds. Stemmed.
In Liverpool,	2,261	951
In London,	1,797	1,790
In Bremen,	171	
In New York,	590	
In Virginia,	1,476	
	6,295	2,741
		6,295

Total leaf and stemmed,

* 9,036 Hds.

* Exclusive of Amsterdam, Rotterdam, Antwerp and South of Europe, from whence we have no returns.

The stock for corresponding period of last year was 9,882 Hds.

The tobacco inspections in this State, from October 1st, 1867, to this date, are as follows :

Richmond,	2,205	Hogsheads.
Farmville,	36	"
Petersburg,	1,424	"
Lynchburg,	340	"
Total for State,	4,005	

Unless causes arise that shall obstruct the present channels of business, there is every indication that the tobacco crop of last year's growth will be in active demand during the season just opening. The demand, thus early, is good at the following quotations :

LUGS.		LEAF.	
Common and light weights,	\$ 3 50@ 4 50	Common,	\$7.00@8 00
Fair,	5.50@ 6.00	Medium,	11 00@12.00
Good,	6.50@ 7.00	Good,	13.00@14.00
Bright Smoking:		Good and Fine Stemming,	
Good to Fine,	20.00@ 35.00		14 00@16.00
		Good Shipping,	14.00@18.00
		Good Bright,	25.00@35.00
		No Fine,	

WHEAT—Good White, \$2.45@2.50; Good Red, \$ 2 30@2.40.

CORN—New White, \$1.07½; Mixed, \$ 1.05.

OATS—66c.@70c. RYE—\$1.40.