

# THE SOUTHERN PLANTER,

Devoted to Agriculture, Horticulture, and the Household Arts.

Agriculture is the nursing mother of the Arts.—*Xenophon.*

Tillage and Pasturage are the two breasts of the State.—*Sully.*

FRANK: G. RUFFIN, EDITOR.

P. D. BERNARD, PROPRIETOR.

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For the Southern Planter.

## TOBACCO.

*Mr. Editor.*—A very important part of making a crop of tobacco is to have an abundance of good plants in good time. Excepting the advent of a hail-storm about the time when we intend to make the first large cutting, or a freshet when we have a fine crop growing in its reach, I know of nothing so vexatious to the planter as a scarcity of plants. Indeed this ought to be more mortifying to him than either of the above casualties; for they are unavoidable, while every planter who will can always raise plants enough in good time.—Some years ago a very skilful and energetic planter told me that he would dismiss his overseer for a failure in plants as surely as for any other cause, and said that no man is excusable for such failure. Then I thought his judgment harsh and unreasonable—but now I agree with him. An experience of seven years has convinced me that he was right, for in that time I have invariably succeeded while many around me have frequently failed; and I have had fine plant beds where no one else expected any thing but emphatic failure.

Land bearing a virgin growth of small post oak, and sloping gently southward, is preferred. In this region such land is generally of thin soil, but very retentive of moisture, even on the ridges and hill tops. The wood for burning should be hauled to the place before Christmas or as soon after as possible; and the bed should be burned the first suitable spell. The common practice of burning a long heap of logs, laid upon skids, is considered the safer plan; the firing ought to be begun very early in the morning, whenever the earth is dry enough. It cannot be too dry—but many beds are ruined by burning too wet. The first fire ought to burn about an hour and a half—after that, one hour will be enough in a place if the fires be kept well burning. Great care should be enjoined on all hands to see that this is done, and that all leaves and trash are swept off clean in advance of the fires, and that the fires are not moved too far. Attention to these points is necessary to ensure a well burnt patch, and good burning is essential to success.

It is good policy to burn just so much in one place as the force can complete in one

day. By morning the earth will be cool and ready to be broken up. Upon the manner of doing this a great deal depends. Beds on the hills, if imperfectly broken, are very apt to fail in dry seasons. The operation should be performed by the most careful men, under the master's or manager's eye, (N. B.—*The former is the best,*) not with the common hoe, but with grub hoes, long, strong and sharp. The hoe should be driven in up to the eye; then by using the helve as a lever the earth is easily loosened or broken up, and the hoe withdrawn, or rather lifted out, without inverting the soil or exposing the clay. The strokes of these hoes should be close, so that no unbroken intervals may remain. During this process a good many small roots will be removed. The next step is to chop the surface closely with hill hoes, the hands walking backward; then rake over. A second chopping and raking complete the preparation. But in large beds on hill-sides there ought to be one or more small drains opened through the beds. And all beds ought to be protected from washing rains by good trenches around them.

Experience has taught me that double the usual quantity of seed ought to be sowed, and I never put on 100 yards less than a table-spoonful and a half, heaped slightly. Mix the seed thoroughly with clean, dry ashes, and sow one-half the mixture over the bed, and returning on the first track, sow the other half. The bed must then be trod closely by the hands, and covered tolerably thick with straight, fine brush. I like to lay the brush up and down hill—tails up; and the butts of the second course upon the tails of the first. This arrangement tends to prevent washing, and on southern slopes lets in the sunshine better than any other. On level beds the brush should be laid north and south.

If the soil be poor, it is well to put on a cart load of fine manure after breaking up the bed, and chop it in with the hill hoes. On all land this will give the plants an earlier start. But whether this has been done or not, the bed should be top-dressed soon after the plants are up well, and half the quantity of seed first sown ought to be scattered over at this time. If the first sowing give plants enough, the re-sowing will do no harm, for the first growth will smother the last. But if by any accident the first be destroyed, the last may be forced, by frequent manuring, to the size for planting

by the middle of June. The beds ought to be top-dressed several times before any plants are drawn, and after every drawing. Fine, well-rotted stable manure, mixed with the sweepings of tobacco-house floors, may be used. But I prefer a compost made in the stables, by littering them with tobacco stalks, and sowing a little plaster on the litter occasionally. This should be made in the spring, before any grass seed ripen; and the horses should be fed on corn fodder while the stalks are in the stable. When taken out it ought to be heaped under a shed, and when wanted for use a little beating and picking will make it very fine.

When the above process has been faithfully applied to my beds they have not failed, even in the most difficult seasons, to yield from 10 to 15 or 20,000 plants per 100 yards; and since I adopted it I have had an abundance of plants, and many to spare every year but one.

The land for tobacco, if it be an old lot, and particularly a clover lot, should be broken up close and tolerably deep in autumn. If the subsoil be a cold, wet or tenacious clay, only the surface should be inverted by the ploughs—and a subsoil plough ought to be run in the furrow of the turning plough. But if it be a dry, red clay a few inches may be thrown up by the turning plough without injury. In any case, the land ought to be re-ploughed about mid-winter, say in January, for the better amelioration of the soil, and still more for the destruction of the cut-worm. I have not often been troubled by this pest except when this ploughing has been omitted. The best time to apply manure is at this ploughing—but if not applied then, let it be put on by all means before the corn crop is planted—and plough it in as fast as it is hauled to the ground. A heavy drag ought to be run over the land just before it is bedded, and the beds thrown up with one-horse ploughs. When ready to plant, send a steady fellow, with a three-foot stick in his hand, walking along the beds and testing his stride occasionally by the stick. Chop in his foot-prints with hill hoes, clap and plant thus in the beds. If the land has been prepared as early as indicated there will be season enough in it to plant any time in May, without a rain, and the plants will live better than when planted just after a rain; and if the weather continue dry after planting, there will be less danger of injury to the tobacco from the formation of hard lumps around the roots. If proper attention has been given to the plant beds, the plants will be ready by the middle of May. But if it should be necessary to plant in June, or to re-plant much in that month, it is an excellent practice to put a good handful of dry wheat chaff upon the plant as soon as it is stuck. This covering is better than any other I have used, and so far as I know, the credit of discovering it is due to an overseer in this neighborhood. The chaff must never be removed; every living plant will grow up through it in a few days, and

thus all "missing" hills will be easily recognized in re-planting.

Instead of "ridging down," or "scraping down," it is far better to put a little fresh earth to the plants at the first working. Run three-tooth cultivators twice in the row, and deep as one horse can draw them; and then let every hoe hand take one bed and work it as in weeding corn. As soon as the tobacco starts, or as soon as the grass begins to spring up, or whenever a crust forms on the surface, it will need a second working. I am disposed to think that the growth of the crop depends mainly upon this working. At any rate I have never seen a good crop made that had been slighted at this time: it is now that the plants take a set, either running up with slender stalk and narrow, short leaf; or spreading out, broad and leafy. It ought to be thoroughly stirred now, and this will be done best by running broad-foot coulters close to the plants, two or four times in a row. Follow the coulters with small dagons, throwing the earth to the plants. Then with hoes dig deep in the step, and finish by putting up moderate hills. An old and skilful planter of my acquaintance says that fire may be prevented, in a great degree, by making small hills. He says facts led him to this belief, and he shows his faith by his works. The explanation is, that a large hill absorbs more water and retains it longer than a small one. It is probable that very deep ploughing is a better preventive. It is chiefly upon light soils underlaid by tenacious clays that the worst fire appears, and deep ploughing is certainly the preventive in such lands; but the two may be combined.

After the second working, one or two slight scrapings up will complete the cultivation.

These remarks, Mr. Editor, about the cultivation of tobacco, are based upon either experience or observation, and indicate the mode I intend to practise in future rather than that I have pursued. I have either tested in my own crop or seen in others the value of every part of the process, except the subsoiling.

As to the proper time of cutting tobacco and housing it, or the best mode of curing and ordering it, I shall say nothing. These are matters, in my opinion, which every one must learn for himself by actual experiment. General instructions indeed may be of some service, but would mislead as often as not.

Yours,

A PLANTER.

Prince Edward, January, 1853.

**FIRE KINDLER.**—Take a quart of tar, three pounds of rosin, melt them, bring them to a cooling temperature, mix with as much sawdust, with a little charcoal added, as can be worked in; spread out while hot upon a board; when cold break it into lumps of the size of a large hickory nut. The composition will easily ignite from a match, and burn with a strong blaze, long enough to start any fire.



For the Southern Planter.

### PROFITS OF GRAZING IN FAUQUIER.

*Mr. Editor*,—In a communication I had the pleasure to address you, which appeared in the October number of the Southern Planter, an account was given of a crop of wheat grown upon my farm. I now send you another paper of which *grazing*, as a branch of Fauquier husbandry forms the subject. Before, however, going into detail, allow me to say that the amount of profit exhibited is, by no means, remarkable in Fauquier or Loudoun; and even if it were, I should deeply regret to appear to boast upon such a theme. Authentic information, showing what *has been done* in any department of agriculture, creating thereby proper and laudable emulation in others, is, certainly, to be desired. To this object I am willing to contribute; and, in passing, let me add, this is my apology for troubling you again.

It is to be regretted that farmers in Virginia are so reluctant to publish accounts of the products of their estates. For, however modesty may deter them from doing so, surely they are, nevertheless, withholding a body of valuable statistical information which might lead to increased attention to an occupation, which, having long held the front rank in industrial pursuits, has, of late years, assumed a dignity and importance pertaining to the highest and most honorable vocations.

In the autumn of 1851 I purchased sixty-three head of small-sized western stock cattle at a fraction over nine dollars per head, which, after adding to the number two head of my own rearing, at nine dollars per head, averaged, at prime cost, to be exact nine dollars and nine cents per head. They were turned on a blue grass sod field of fifty-eight acres, and had access to another contiguous sod field of sixty acres. No other stock of any kind were allowed to run with them. As soon as winter set in, they were fed plentifully on wheat straw, and occasionally on chaff. About the first of March, feeding on what is called in this section of country, *stalk-fodder*, was commenced with them, and continued till the early part of May. They were not removed from the two fields from the time they first entered them till they were driven off to market, except for about a week, during which time they were turned on wheat stubble. They were regularly salted twice a week. No corn nor grain of any description was given them. These cattle, thus treated, I sold this fall, for twenty-four dollars (\$24) per head, *at home*.

It will be perceived, therefore, that they yielded a net profit of fourteen dollars and ninety-one cents (\$14 91) per head, which will be found to be one hundred and sixty-six and two-thirds per cent. upon the money invested in them. My neighbor and brother-in-law, Major John Thomas Smith, surpassed this—having realized a profit of one hundred and

seventy-five per cent. upon his sale of fat cattle this fall.

At the risk of being tedious, and I fear, egotistical, I will dwell, for a moment, upon some of the facts above stated, in order that inferences of a general and practical interest may be deduced therefrom.

It will be found, upon calculation, that the prime cost of the sixty-five head of cattle was five hundred and ninety dollars and eighty-five cents, (\$590 85.) They were sold, twelve months after the purchase, for fifteen hundred and sixty dollars, (\$1,560.) If the former sum be subtracted from the latter, nine hundred and sixty-nine dollars and fifteen cents (\$969 15) will remain—constituting the profit upon the cattle. Now the value of land upon which they were grazed, rated at fifty dollars (\$50) per acre would be five thousand nine hundred dollars, (\$5,900.) If to this sum the cost of the cattle be added, it will be found that the net profit (\$969 15) realized upon them is equivalent to fifteen per cent. interest upon the estimated value of the land and the prime cost of the cattle combined. No other element of expense, in my opinion, should be charged, because I think it will be conceded that the increased value of the land, from year to year, under a judicious system of grazing will more than compensate the cost of feeding in winter and the price of the salt consumed; while the land should no more be charged with an annual six per cent. interest than it would be in estimating its yield in wheat or corn or tobacco.

Why, then, should the farming interest be branded as unprofitable? As yielding a hard-earned support and meagre revenue? The *causes* why farming in Virginia is unprofitable, if it be so, might be easily assigned; but a full exposition of them would extend this communication to an unreasonable length. Surely, however, such facts as are detailed above demonstrate that the croaking we sometimes hear is unsustained by the truth of the case; and should tend to cheer the desponding, confirm the wavering, and animate to renewed efforts those who have been long and steadily toiling amid the pursuits of agriculture.

Yours, truly,

JOHN MARSHALL,

Oak Hill, Fauquier, Dec. 6, 1852.

### WET FEET.

I have only had three pair of boots for the last six years, (no shoes,) and I think I will not require any more for the next six years to come. The reason is that I treat them in the following manner:

I put a pound of tallow and a half pound of rosin in a pot on the fire; when melted and mixed, I warm the boots and apply the hot stuff with a painter's brush until

neither sole nor upper leather will suck any more. If it is desired that boots should take an immediate polish, dissolve an ounce of wax in spirits of turpentine; to which add a tea-spoonful of lamp black. A day after the boots have been treated with the tallow and rosin, rub over them this wax in turpentine, but not before the fire. Thus the exterior will have a coat of wax alone, and shines like a mirror. Tallow, or any other grease, becomes rancid, and rots the stitching as well as the leather; but the rosin gives it an antiseptic quality, which preserves the whole. Boots and shoes should be so large as to admit of cork soles. Cork is so bad a conductor of heat, that with it in boots, the feet are always warm on the coldest stone floor.—*Merchant's Magazine.*

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For the Southern Planter.

#### HOW TO GET A STAND OF CLOVER.

*Mr. Editor,*—The frequent failures to get clover seed to "take" on thin land is, perhaps, one of the greatest sources of discouragement to many farmers, and one of the greatest drawbacks to the renovation of worn-out lands. It is exceedingly discouraging after having, at a considerable expense both of time and money, sowed a field down in clover to find after the first dry spell of weather in spring or summer that you have made an utter failure to get a stand. The mortifying reflection comes up that the land is annually getting poorer, and that in the next rotation the probability of not getting a stand will be still greater. What is to be done? To the planter who requires all the manure he can raise for his tobacco lots the idea of a top-dressing for an entire crop of wheat or oats is out of the question. With a debt, perhaps pressing upon him, he feels that to give up the culture of tobacco, the only sure crop by which he can raise money, would be ruinous, and to pursue a system by which his land gets every year worse and worse is equally so. This posture of affairs, I have no doubt, has often driven many a man to the conclusion, "I will sell out, pay out and move out." But suppose his condition is as mine—bound by ties not to be severed as long as the heart responds to filial obligations, and a home in the far, fertile west out of the question—what then must he do? "Root, little pig, or die." Such has been my inheritance,—poor land and indissoluble filial obligations. But my motto is, "Try again." Some six years ago, I bought a worn-out farm from an illustrious predecessor, and made several fruitless efforts to get a stand of clover on thin corn land sown down in wheat, but it "could not quite come it." I have, however, for the last

two or three years, been much more successful: in fact, I got a field well taken in 1850, and another last year. The first on oat, and the last on wheat land, notwithstanding the drought in the spring of 1850 and that of last summer, while some of my neighbors lost their entire seed. My plan has been to harrow or brush in all my clover seed, both on the wheat and oat crop, and to give the oat crop and the upland wheat a heavy dressing of plaster as soon as the clover seed comes up. The harrowing is rather a benefit than an injury to the wheat, although at the time it seems like "using it up," and it puts the clover seed *into*, instead of *on the top of* the land, and below the action of the frost and bleak winds. The plaster is much more necessary to the support of the clover while it is tender and feeble than at a later period, and will sustain it even during a protracted drought.

Respectfully, yours, W. P. S.  
*Nelson, December, 1852.*

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For the Southern Planter.

#### COMMON LIME—IS IT INDISPENSABLE TO THE FERTILITY OF A SOIL?

*Mr. Editor,*—In the January number of the Southern Planter I have read a very pleasing article from the pen of Dr. Morton of Cumberland, which is in every respect so entirely to my taste, I beg you will allow me in the same benevolent spirit he evinces, briefly to respond to some of his inquiries and suggestions on the "action of lime."

I will preface my remarks by saying it is in the form of *lime*, and not as a "carbonate of lime," that the earthy substance known by that name, is, in agriculture almost unani-mously applied to the soil. Limestone when pure is strictly a pure "carbonate of lime." But by the burning process (when complete) all the "carbonic acid" is driven off, so that simple lime—"quicklime," or "caustic-lime," as it is sometimes called—alone remains.—This lime before being applied to the soil is usually "water-slacked," by which operation it undergoes but very little change of any kind, *chemically*, but by the addition of the water in slacking it is merely brought from an "anhydrous" to a hydrated condition, so that each one hundred pounds of the powder that falls is made to contain about twenty-five pounds of water. In other respects the powdery mass is "quicklime," and nothing more. But when unslacked lime is for a long time exposed in the open air and allowed to "air-slack" *spontaneously*, it slowly but very partially becomes "carbonated," but it more, perhaps, while in the open air gets to be a pure "carbonate of lime," just as it was before it had been subjected to heat.

In the experiment with lime alluded to by Dr. Morton it was in the form of *lime*, proba-



bly, and not as carbonate of lime, that the thirty bushels of shells per acre were applied. The result of this experiment is but in accordance with those of many others I have heard of, on land somewhat similarly located, and the question now becomes an extremely interesting one in this region. Whether or not lime acts that important part in vegetable nutrition and decomposition, which has been almost universally ascribed to it—or if it do, and its presence in the soil in considerable quantities be absolutely essential to its fertility, whether or not that quantity be really present *naturally*, and the supply will be kept up for an indefinite period by natural agencies continually eliminating that substance?

That lime in the form of a carbonate is indispensable as a food for certain plants, as the clover for instance—and indeed for nearly every plant grown—chemical analysis has often demonstrated—that it is indeed the “basis of all good husbandry,” could not perhaps be successfully controverted, and that in comparatively large quantities it is absolutely essential to the fertility of a soil would seem to be pretty nearly proven, from the fact that no soil of known fertility and productiveness has ever yet been found wanting in a large per centage *relatively* of lime, and by the converse, which is true, that no soil, *barren* under ordinary circumstances, has ever been found to abound in lime.

But the next question to be considered is, what quantity of lime in the form of a carbonate, is necessary as food? This will depend, of course, on the kind of crops grown. Supposing the crop to be clover, an average growth would probably absorb from the soil one hundred pounds, which, if taken off and never returned in the shape of manure, would, of course, deprive the soil of just one hundred pounds of its lime. Should corn follow the clover and the yield be fifty bushels per acre, the quantity of lime abstracted would probably be nearly fifty pounds more—and should wheat follow the corn, and the yield twenty-five bushels, some fifteen pounds more would be taken up—so that should this system be continuously pursued, with the usual grazing allowed under the old three-field system, over a period of twenty years, it will be perceived that nearly a ton per acre of carbonate of lime would at the end of the twenty years be abstracted from the soil by the crops. But it is to be borne in mind that lime has a constant tendency to sink in the soil and to descend beyond the reach of the roots of plants, so that a soil which at first had two tons of carbonate of lime might at the end of a twenty years' cropping and grazing contain no more than a mere “trace” of that substance.

In the analysis alluded to by Dr. Morton there was found but one-tenth of one per cent. of carbonate of lime, which is equal to no more than about six-tenths of the one-tenth of “lime”—and really this would seem to be in hardly a Homœopathic proportion, but, in

truth, the aggregate quantity in an acre would be quite respectable, for estimating the depth of tillage at only six inches and the weight of soil per cubic foot at one hundred pounds, which is not too much if the soil contains as much as seventy per cent. of “silica,” the quantity per acre would be about 2,250 pounds, or fully thirty bushels over and above what exists in the subsoil, from which the roots would more or less draw their supply of lime. But in some granite soils the supply of lime, though more abundant, is pretty well kept up by the degradation of certain rocks peculiar to that kind of soil—and such soils will bear cropping for a very long time, often without any material diminution in the quantity of lime, or apparent falling off in the yield of crop. Why the application of the thirty bushels of shells, alluded to by Dr. Morton, failed to make any sensible impression on the soil or on the crops grown, would not be so difficult to understand on the presumption that lime only serves as a food for plants, and that a sufficient quantity was already present in the soil. But theory indicates and the experience of the thousands who practice “liming” extensively, demonstrates that it accomplishes, as a *decomposer*, another far more important end in the soil. The supposition of Dr. Morton that the successful application of lime in the tide water section of Virginia may be attributable to its combining with phosphoric acid present in those soils, by which phosphate of lime (bone-earth) is formed, will not account for the one thousandth part of the lime there *actually* found necessary, and besides phosphoric acid in a *free state* is but seldom or never found at all in old and barren soils—but the small quantity found is mainly already in combination with lime, for which it has a very strong attachment.

In soils abounding in *inert* vegetable matter, as insoluble humus or geine, an application of one hundred bushels of lime per acre, gradually converts the whole into a highly soluble humus or geine, said to be universally present in all fertile and productive soils, while for those apparently *diseased* soils which delight to grow a sour, unhealthy vegetation, large doses of lime prove a most potent and sovereign remedy. Why it does not exhibit these peculiar and characteristic effects on all soils may depend on various counteracting influences, which it would be tedious now to enumerate.

It is more than probable that the old lands in Virginia are generally almost quite exhausted of “phosphate of lime,” and it is highly probable that these lands, from applications of Peruvian and Mexican guano in combination, and under a liberal cultivation of the artificial grasses, might be brought up to a very remunerative state *without* any direct application of *lime*, but yet never be made very permanently fertile without it, and for that reason the tide water lands, where marl (impure carbonate of lime) and lime are ever

readily accessible to the farmer, must ever be more desirable for agricultural purposes than the uplands midway between tide water and the mountains, where neither "liming" nor "marling" can, as yet, be made practicable; but Providence, ever mindful of the "sons of toil," and as if to compensate, in some sort for these privations, has here blessed them with the purest water—a most salubrious air, and placed within the soil itself a sufficiency of lime to enable the industrious farmer to grow remunerative crops for a very long time without incurring the labor and expense of "liming," and when at last these fail, then by its own recuperative energies the soil begins afresh the great work of self-improvement by covering its sterile surface with a luxuriant vegetation of "old field pine"—and rapidly eliminating from its rocks by its own great digestive apparatus all the elements of fertility, speedily accomplishes the work of restoration, compelling the pine at last to give place to a sturdier and richer growth.

Louisa, January 12, 1853.

P. B. P.

#### BREAKING COLTS.

The breaking of a colt should be commenced before he is twenty-four hours old. Handle him frequently—make a pet of him. Bridle him young, and the winter when he is two years old, place a wagon saddle on his back, and buckle the girth loosely. Take it off at night, and after doing this a few times, add the breeching, and pursue this course with all parts of the harness, until the whole is familiar to him. Then add the whippetree, and while a careful person leads him, hold back so that he may feel the pressure of the collar or breastplate gradually. If he is high spirited, so much the better—if you do not beat him. Be resolute and firm with him, but not abusive.

Let him understand that you are master, but a humane and reasonable one. Treat him in this manner, and ninety-nine in a hundred will need no other breaking.—*Breaking* is the word, no other will express the practice which has obtained. They have been broken, head, back and legs, until they were nearly valueless, and not from any fault of their own, but from the ignorance of the *breaker*!

Colts do not refuse to work from any disposition not to earn a living, but because they do not understand what is required of them. They need to be educated, and this must be done gradually—not in a day, or a month, but months. These are only

a few brief hints—study the animal yourself, and you will learn what course is required to be pursued.—*N. E. Farmer.*

We have never known the above plan, or something like it, fail in breaking colts. We take up the subject now because we wish to recommend our own winter practice in the matter. Attached to the house in which we strip tobacco is a fine large shed, in which, among other stock, colts are kept, in large roomy stalls. Every day that it rains, whilst the other hands are stripping, it is the business of one to handle the colts. He is a fine tempered negro, who never abuses or scolds them. Beginning with those that are eighteen months old, he bridles them and puts them in the break harness, as it is called. This consists of a bridle with a bearing rein and check rein, a harness bridle, in fact, without the blinkers, a crupper, martingale and surcingle; the latter well padded on top, and provided on each side with buckles, to which the reins are attached. After letting them stand until they become pretty well worried, which is manifested by profuse sweating, the reins being gradually tightened so as to bring his head into the proper position, he is released, and the harness transferred to another, and so on, taking first one and then another through the day. It is the business of the breaker to remain with them all the time and to rub, pat and gentle them. In this way the colt becomes gentle without any loss of time, and is afterwards taken through the other stages of breaking to harness and the saddle without difficulty.—*ED. SO. PLANTER.*

For the Southern Planter.

#### EXPERIMENTS.

*Mr. Editor.*—The following experiments were made by the request of the Nottoway Club, and when reported, it was ordered that an account of them be sent to you for publication in the Southern Planter. This was done in August, but as you informed me at the meeting of the State Agricultural Society that you had not received my communication, I will, in compliance with your request, write them off again and put them at your disposal.

At the meeting of the Nottoway Club, June, 1850, one of the members and myself were requested to seed three similar acres of land in wheat—to apply on one guano alone, on



another guano and plaster, and on a third nothing, and report the difference in the times of ripening, the weight per bushel, and product per acre, in order to test the expediency of combining plaster with guano, and to ascertain the profit or loss by the use of guano. In accordance with the above, I selected three adjoining acres of gray, dry, thin land, of the same quality, judging both from the appearance of the land and from the growth of the corn then standing on it. On the first acre I applied 162 lbs. of Peruvian guano, on the second I applied the same quantity of guano and one and a half pecks of plaster, thoroughly mixed before sowing. On the third I applied nothing. The first and second acres were sowed the 5th and the third acre the 6th of November with early purple straw wheat, one bushel to each acre, (the wheat sowed first, the guano on it,) and all turned under with a single-horse plough, and then dragged.

The wheat on both acres dressed with guano looked decidedly better during the spring and summer than the wheat on the unimproved acre. The wheat on the acre dressed with guano alone looked better than that on the acre dressed with guano and plaster, so much so, that I expected it to yield one or two bushels the most. The wheat with guano alone ripened about six days earlier than that on the unimproved acre, and about two days earlier than that on the one dressed with plaster and guano. The wheat from the acre with guano alone weighed 64½ lbs.; that from the acre with plaster and guano, 64 lbs; and that from the unimproved acre, 62½ lbs. to the measured bushel. The acre dressed with guano alone produced 15 bushels 15 lbs. The acre with plaster and guano produced 15 bushels. The unimproved acre produced 5 bus. 15 lbs.

Charging 18 cents for 1½ pecks of plaster, (which includes cost, freight and interest,) and adding to that 22½ cents for 15 lbs. of wheat, at 90 cents per bushel, (that being the difference in favor of the acre dressed with guano alone,) it will be found that there was a loss of 40½ cents to the acre, by combining plaster with guano. As there was only a difference of one peck of wheat between the two acres, I consider the difference accidental, but conclude that it is inexpedient to combine plaster with guano. But perhaps the plaster may show its good effects by the future improved condition of the land, by having fixed the ammonia of the guano. In order to ascertain the actual profit or loss by the use of guano, I will give credit for the production of each acre, then charge for rent of land and for all other expenses for each acre. The northern farmer invests his capital in land expecting to realize a profit by cultivating it with hired labor, while many of the southern farmers either make no estimate of their capital invested in land, considering it only as affording an opportunity for their negroes to earn as much as they would probably hire for; or they make no estimate for their labor, as they

do not actually pay in cash for it by the day or month. These may be classed among many other reasons accounting for our not being as thrifty as we should be. But this is a digression, and I will return to the estimate, which is as follows:

<i>Cr.</i>	
By 15 bus. 15 lbs. of wheat from acredressed with guano alone, at 90 cents per bushel,	\$13 72½
By straw and chaff from do.	1 50
Gross proceeds of the acre dressed with guano,	\$15 22½

<i>Dr.</i>	
To rent of one acre of land, no labor for fencing estimated,	\$1 00
To 162 lbs. guano, at \$50 per ton, freight included,	4 05
To interest on do. 24 cts. and to preparing and sowing do. 20 cents,	44
To 1 bus. seed wheat 90 cts. and for getting in do. 75 cts.	1 65
To cutting wheat on one acre, supposing two acres a day's work,	60
To getting up and shocking do.	30
To hauling up, threshing and preparing for market 15 bus. 15 lbs. of wheat at 10 cents per bushel,	1 62½
To cost of getting do. to mar- ket and selling do. 10 cents per bushel,	1 62½
	<u>11 29</u>
Net proceeds of the acre dressed with guano,	<u>\$3 93½</u>

<i>Cr.</i>	
By 5 bus. 15 lbs. wheat from unimproved acre, at 90 cts.	\$4 72½
By straw and chaff from do.	50
Gross proceeds of unimproved acre,	\$5 22½

<i>Dr.</i>	
To rent of one acre of land, as above,	\$1 00
To one bushel seed wheat 90 cts. and getting in do.	1 65
To cutting wheat on 1 acre, supposing 3 acres a day's work,	40
To getting up and shocking do.	20
To hauling up, threshing, &c. as above, 5 bushels 15 lbs. wheat, at 10 cents,	62½
To cost of getting do. to mar- ket, &c. at 10 cts. per bus.	62½
	<u>4 50</u>
Net profit from unimproved acre,	<u>\$0 72½</u>

Leaving a clear net profit on one acre by the use of guano of \$3 21.

As the interest on the money invested in guano has been charged in the estimate for that acre, it should be added to the clear net profit, as above, in order to ascertain the rate of interest on the capital invested in guano. Thus 24 cents added to \$3 21, makes \$3 45, which shows rather more than 85 per cent. for one year on \$4 05, the money invested in guano, after making all the above charges except for interest. The above estimate is made on the supposition that all the fertilizing properties of the guano are taken up in the production of the one crop of wheat, which I by no means admit, as it is contrary both to my experience and observation.

But perhaps it may be more satisfactory to some, in making an estimate of the profit or loss by the use of guano, only to charge for the guano, seed wheat, and getting in the same. No one can object to these charges, as each acre experimented on had sowed on it an equal quantity of wheat, and each had an equal quantity of labor bestowed in getting in the same. It is evident that an acre producing 15 bushels will yield more than three times the net profit of one, producing only 5 bushels. To occupy as little space as possible, I will say, deduct from \$5 22½ the gross proceeds of the unimproved acre, as above, \$1 65 for seed wheat and getting in the same, which will leave \$3 57½; then deduct from the gross proceeds (\$15 22½) of the acre dressed with guano \$4 05 for guano, and \$1 65 for seed wheat and getting it in, then will remain \$9 52½, from which deduct \$3 57½, the net proceeds of the unimproved acre, as above, and \$5 95 will be the remainder, which shows 147 per cent. on the capital invested in guano. This estimate, like the first, is made on the supposition that all the fertilizing properties of the guano are taken up by the one crop of wheat.

In the above I have made no estimate as it regards the less liability of loss from rust, on account of the earlier maturing of the wheat, of the better quality of the wheat (as per above weights) nor of the improvement of the land by the use of guano. All these combined would not, I think, be over-estimated, if put at half the cost of the guano.

From the above experiments (not to say anything of more favorable results as reported by others) I would say that on poor land (and especially exhausted land that was originally good, not encumbered with rock nor pestered with sassafras, &c.) a farmer cannot in any other way that I know of, make so profitable an investment as by using guano for wheat.

Yours, very respectfully,

WILLIAM IREY.

Lunenburg, Dec. 30, 1852.

A man's nature runs either to herbs or weeds; therefore let him seasonably water the one and destroy the other.

#### USE OF GUANO ON SUMMER CROPS.

The general opinion in Virginia is that guano will not pay on summer crops. Inferring the contrary from a statement made in the Germantown Telegraph by Mr. Wilkinson, Principal of the Mount Airy Agricultural Institute, we wrote to request his experience, which he has very kindly furnished us in the following letter.

We are sorry, but not surprised, to learn, as we do in a private letter, that the Agricultural School at Mount Airy has turned out an unprofitable speculation, and that the Principal, who has been working there and elsewhere for the last eight years without pecuniary profit, is about to abandon the business. So long as it is thought by the agricultural community that farming comes by nature they will not receive much instruction from schools. The sordid bumpkin, ignorant as his beast, and hardly superior to him in taste, grows rich with his narrow income in spite of his bad farming. The man of liberal expenditure cannot, with his good farming, more than balance his outgoings. The result, in a mere pecuniary point of view, is, perhaps, in favor of the former; and men of sense, as if habits and modes of life were to go for nothing, refer the art of growing rich to the possession of a lucky secret, and set down the practices of each class as equally commendable, or give the preference to the farming of the clown.

For the Southern Planter.

Mr. Editor,—In reply to a request in your epistle dated December 25, 1852, I would say, that it is my pleasure to communicate my experience in the "use of guano," particularly as applied "to summer crops," for publication in your valuable journal. That experience has mainly been acquired in the five years last past, during which time I have used it more or less on nearly all my crops, and generally with decided advantage—equally as much so on summer, as on winter crops.

The quantity that I have applied has varied from 200 lbs. to 500 lbs. to the acre.

I have used but two varieties, viz: the Peruvian and the Patagonian—and I have used no Patagonian for the past three years, having found the use of the Peruvian the most reliable and profitable in its results.

My general practice has been to use guano in conjunction with stable manure, though I have produced excellent crops of turnips, oats, potatoes (Irish), barley, ruta-baga, and even maize, with no other application than from 250 to 400 lbs. of guano per acre.



My mode of applying it to the respective crops has been as follows: For turnips broadcast I sow the guano and cultivate it in with what we call a "gang plough,"\* to the depth of about four inches; then sow the turnip seed and harrow it in, completing the work by rolling the land. On oats broadcast I apply as above, except that I sow the oats and cultivate both oats and guano in at one operation. I have generally found from 100 to 150 lbs. sufficient for oats or barley. When I drill in any of the small cereals I sow the ground broadcast with guano and cultivate it in, as above; harrow the ground neatly, then drill in the seed as the last operation. In applying it to roots in drills I open the drills and make a calculation how much to apply in each drill to apply the desired quantity per acre; strew it by hand as siently as practicable in the open drills; then pass a cultivator, having but two teeth in it, and a wheel in front to steady it. The two teeth being made like little ploughs, so set that they close in the soil on both sides of the drill containing the guano; which operation covers it effectually, but does not mingle it with the soil sufficiently; and to do this I pass a common one-horse hoe with three teeth setting quite close to each other, twice through each drill. This operation being completed, the land is left nearly level. The next operation is to pass a light one-horse plough drawn by two horses through what were the ridges before the operation of covering the guano was commenced, closing up the ridges over the guanoed bed; after which a light grader and clod crusher, drawn by one horse, is passed over the land, the animal walking in the opened drill, and grading down two drills on each side of the horse at one operation. This last process either crushes or deposits all the lumps, stones, sods, &c. into the furrows between the ridges, leaving the ridges smooth, level and of uniform height, and in the best possible condition for the use of the dill-harrow, with which we plant the seeds of all our root crops, except carrots. Since I have given such a detailed description of my mode of applying guano in drills for roots, I would say that I pursue the same course when I apply fine stable manure or compost with the guano. To potatoes I apply the *guano compost* on the seed in the drills or furrows; but I have had the best success

\* The gang plough that I use is made by McKinney of New Britton, Bucks county, Pennsylvania. It costs twenty dollars, is drawn by two horses, it tills a belt of four feet in width at one operation, and the depth may be modified or changed from two to five inches.

† I use guano in no other form than as a compost, prepared thus: screen the guano, crush the lumps with flails on the barn floor, add to one bushel of guano two bushels of fine charcoal, and one peck fine gypsum—thoroughly incorporate the three.—The coal is obtained from locomotives burning wood, and costs nothing but the cartage. It completely absorbs the ammonia, and renders pleasant to sow.

when I have covered the seed (it being placed on a subsoiled bed) with stable dung, (long,) and strewed about 200 lbs. guano per acre on the manure. I usually plant my potatoes about four inches deep, as this depth will ordinarily secure those two great requisites for success in the culture of this crop—humidity and uniformity of temperature. This depth will also perfectly prevent the escape and waste of any portion of that most volatile constituent of the guano, that in which its value as a fertilizer mainly consists—or if not mainly, in a great degree.

Now, as to the mode by which I applied the guano to the corn crop, so indefinitely described in the report of the "Farmers' Club," published in the Germantown Telegraph, of which you desire a more definite description, I would say that it was as follows:

The land, a sandy loam, had been cropped within the last five years, thus: an orchard grass sward was turned under with about thirty two-horse loads of stable manure (principally from horned cattle) and one bushel gypsum per acre in planting potatoes in the spring of 1848. The yield was 250 bushels per acre. The land was sown with wheat (Mediterranean) the following autumn. The yield of wheat was 36 6-32 bushels per acre. The stubble was turned under immediately after harvest, subsequently 300 lbs. guano, and 10 bushels bone dust were cultivated in per acre, and 1 lb. purple top turnip seed sown broadcast per acre, and harrowed in with 12 quarts timothy seed per acre. The turnips, yielding 420 bushels per acre, were pulled in the autumn of 1849, and the ground was found to be well set with timothy. The timothy was mown for two successive years, (1850 and 1851,) and no fertilizer applied save one bushel gypsum per acre. The yield of timothy hay was about 1½ tons per acre each year. During the autumn of 1851 it was pastured after mowing, but very little. In March (about the 25th) of 1852 I sowed broadcast upon this lot about 150 lbs. of guano (composted as above) per acre, and allowed the grass to grow (which it did very rapidly) until about the 15th of May, when the ground was ploughed to the depth of eight inches, following the surface, with the subsoil plough, to the depth of six inches more. The ground was rolled with a light roller immediately after the ploughs—allowed to lie thus until the 25th of May, when the entire surface was gang-ploughed to the depth of three inches, harrowed four times, furrowed out both ways by a furrowing machine four feet each way, five kernels of mixed gourdseed and large yellow flint corn planted and covered with hoes about two inches in depth. When the corn was all up, I applied one bushel gypsum per acre, and when the corn was from three to five inches in height, I passed a light one-horse plough through it, turning the furrows about four inches in depth from the hills, following the plough and strewing 75 lbs. guano per acre in the furrows, and following imme-

diately with a common horse hoe, or cultivator, incorporating the guano with the soil. This completed, the same process was repeated by passing through the crop the other way, and applying 75 lbs. more of guano, making a total of 300 lbs. guano per acre. The crop was subsequently cultivated four times with a new cultivator, which I used for the first time in this crop. It is so arranged that the earth may be turned to or from the hills at pleasure, and complete the operation by passing it but once between the rows. The hand hoe was not used in the culture of this crop, and yet it was kept in perfect order. The yield was about seventy bushels per acre of beautiful sound corn. I do not think the land would have produced more than fifty bushels per acre without the guano, which was all the application that it had, save the large amount of grass, (the product of the first application of the guano,) which was at ploughing time sufficiently large to have cut a good swarth.

I claim that much of the guano used by the usual mode, that is, by applying large quantities at once, is lost, and the benefit derived from its use not in proportion to the quantity applied. Plants, like animals, require a certain amount of food every day throughout their lives. No farmer would think of placing before his horse at one time food sufficient for a year, taking the chances for its waste or preservation, and expect the animal to be as well and economically kept as if the proper amount of food was daily administered; and yet the general practice is to supply to the soil an amount of vegetable aliment, almost entirely resolved into an available form, sufficient for the crop in all stages of its growth, and in case of disappointment in the crop it is attributed to "bad luck," "unfavorable season," "adulterated manure," or something else as foreign to the true cause as either of the above, allowing nothing for the dissipation or waste of a large proportion of the volatile food supplied before it is needed or can be taken up by the plants it was intended to nourish—and yet this occurs in most soils with the application of almost all substances used as fertilizers, but more especially in the use of guano; hence I am induced to endeavor to feed my plants and animals on the same principle, *e. g.* I apply the guano at two or three different periods of the growth of the crop. I have tested this system by applying small quantities of guano (prepared as above) on grass land at three different times in one season and in the same field, applying the same quantity at once, and the direct effect from an application of 66 per cent. over the amount applied in three feeds was no more apparent, and the ultimate product far less, than that when the same amount was applied in three feeds. In order that a crop should have a proper supply of food during all the stages of its growth, those substances designed for its pabulum should be so distributed through the soil that the roots in their ramifications in pursuit of food may

come in contact with them, and the fertilizers applied should be of such a character, if all deposited in the soil at one time, that it will be gradually resolved as required, that no waste may result from so copious a supply being administered at one time.

Hoping that you will esteem the above worth publishing, and that your subscribers will consider it worth reading, it is submitted with the profound respect of

Your obedient servant,

JOHN WILKINSON,  
*Ml. Airy Ag. Institut, Germantown, Pa.*

For the Southern Planter.

#### ON THE USE OF SINGLE MANURES.

*Mr. Editor,*—Observing the increasing demand for single manures, such as super phosphate of lime, guano, &c. my mind has been directed to a question of some importance as to the tendency this will have to the fertilizing of our lands. It has often been observed that the use of these manures for one crop does admirably well, but if clover fail, no one can see any benefit. For two years past this has been the case, arising from the drought of summer in killing out our clover after the wheat has been taken off, especially on poor land. Let any one, for example, sow 200 lbs. of guano on very poor land, especially if there is little mould, and all he will ever get is the little crop of wheat. But as these single manures do not contain all the elements of a crop, then a further demand has been made on what was in this poor land to its greater depletion; and just as a man who has money can make money, so will the land that has the power to make clover make more clover; but the power given to such land has been only equal to making one crop and has left it minus two. Now this would not have been the case had a sufficient quantity of stable manure been put on, because all the elements of fertility are in it. Now suppose 300 lbs. of guano had been applied to such land, it is probable that you not only supply the wheat crop, but you have a power left to extract from the minerals in the land of a refractory nature a supply of alkalies which will give a good crop of clover, but then it follows that if the clover be taken off, especially by grazing, you still keep up the depletion, for it is a fact that grazing is worse than mowing. The roots on an acre of good clover being weighed (dry) have been ascertained to be 3,630 lbs. while the weight of roots from a portion of the same field, which had been pastured, gave only 1,433 lbs. Now if all the clover be returned, you give to the land not only the organic but likewise all the inorganic elements which are needed for future crops, and thereby convert into a rich mould what was before a barren field. I would now suggest the only plan I



can think of in reference to a great deal of land in our country that will not by the application of even 200 lbs. of guano produce clover after wheat. It is as follows: Plough up in the winter or early spring as much land as you can afford to operate on. About the last of May sow one and a half bushels of cow-peas, using at the same time 100 lbs. of guano to the acre. This quantity will give to poor land the power to produce a luxuriant crop of vines. When the pods are beginning to ripen, or rather a little before, turn them in, and then sow wheat on the land with 200 lbs. of guano; and you will have effected by this operation two things; or rather by helping yourself you have set nature to helping you in two ways: the pea-vine draws from the atmosphere a large supply, which, in the form of vegetable matter, is turned into the soil, and during its decomposition acts upon minerals which have locked up in them inorganic matter; these being set free will give your land a good pasture for all plants; for it must be observed that all vegetables have more potash in them when green than when dry. This you may have learned in noticing that unseasoned wood ashes make more soap than seasoned wood ashes. Hence if the greatest benefit is to be derived from a growth of vegetables you must turn them in before they ripen, as they are more abundant in fertilizing elements at such a time, and decompose sooner when in the soil. A friend of mine assured me that on an acre of poor land he had, by the application of 300 lbs. of guano, made a crop of tobacco that brought him one hundred and fifty dollars. Now it would be to the tobacco-maker a wise plan to take ten acres of poor land in the manner I have above showed, viz: plough it up deep in the spring and put in one and a half bushels of cow-peas with 100 lbs. of guano; turn all in during the fall, and the ensuing spring sow 2 or 300 lbs. of guano, observing the following rule before putting on the guano, viz: lay off the land in lists the width of the tobacco rows; then sow the guano and reverse the lists: this will throw the guano where you would wish it to be, and incorporate it with the soil at the same time. And by taking the above quantity of land every year for your tobacco, you will after your tobacco have good crops of wheat and clover, for the plain reason that you have in the land all the ingredients necessary for these crops. On the other hand, if we proceed with special manures (as guano and bone dust are called) containing one, or only three at most, of the elements of fertility, it is evident that we can make no progress in fertilization unless clover or the pea vine be added. A few years ago I purchased at the University a large amount of ashes, applying them to a piece of land which I supposed destitute of potash. To my surprise they produced no effect commensurate to the expense. We used a good many of them for the purpose of making soap, but it was a tiresome business; and yet you know, Mr. Editor, that they

use the very best of wood at the University. We have never found any difficulty in making plenty of soap from green wood, and yet in selling ashes I see no difference in price between ashes made from green wood and that which is made from seasoned. It would appear, too, that the ashes of young wood and the ashes of old wood differs very materially, and hence it follows that clover roots amount in value to more than is imagined when used young than when old, as a fallow.

Should any of your subscribers have a few acres of land too poor to put in corn with the rest of his field, as is often the case, he will find it a good plan to try the pea vine, as above described, for a crop of tobacco.

JAMES FIFE.

*Charlottesville, December, 1852.*

P. S.—We have on all lands lying between the South West mountains and the Blue Ridge, spots that defy the power of manure to make them rich. They are known by the name of chestnut lands. Sometimes you find an acre or more of this sort in a field on which clover will not take. There are, it appears to me, in this range three other soils—iron-stone, freestone and felspar or granite. If a club could be formed to raise a sufficient amount to have these soils analyzed it would be of use to us. I throw out these suggestions to you, but wish you especially to say if you know whether an application of lime would not remedy those chestnut spots so as to alter the nature of them. In other words, do you suppose they are deficient of lime? J. F..

We cannot tell whether the spots spoken of are deficient in lime or not, though we rather think that want of lime is not the defect of any of our red mountain country soils. We know that it is not in the case of the red, puffy, chestnut lands of the South West mountains, commonly called blow lands, of which we have some specimens, first, because we have never known lime, though occasionally tried, to do such lands any good; and next, because our friend, Major Gilham, subjected a sample of just such land to analysis at Shadwell last summer, with a view to exhibit the large proportion of sand and lime in it. Taking a tablespoonful of the soil, he poured over it in a saucer a small quantity of muriatic acid dissolved in water, and filtered the mixture through inside (or white) sugar-loaf paper. The residuum was almost pure sand. To the filterer's solution was then added hartshorn, and upon re-filtering, the clay and iron was left in the shape of a gelatinous solution, as it is called, which, upon drying, shrank away to a very inconsiderable proportion of the sample. To

the re-filtered solution—about a fourth of a pint tumblerful of perfectly clear water—were added a few drops of oxalic acid, which immediately changed it into a milky fluid, showing the presence of a large per centage of lime, which finally settled down, or was “precipitated” on the bottom and sides of the glass, covering them completely. The analysis was not made with any attempt at scientific accuracy, either of elements or proportions, but merely to exhibit the abundance of lime and sand in a soil commonly supposed to be deficient in one and nearly destitute of the other. We, however, became satisfied, by ocular demonstration, that the reddest of our South West mountain lands contained about 75 per cent. of white sand, (mostly in the shape of an impalpable powder,) and a large per centage of lime. The lime occurs, most probably, as a silicate, from which form it is slowly changed into a carbonate in quantities ample for the wants of the plant. See Johnson’s Agricultural Chemistry, part 2, p. 307—Art. Silicate of Lime.

But there is a considerable difference between our soil and Mr. Fife’s, and we would, by all means, advise him and his neighbors to unite in an analysis of this and *other* kinds of soil. The cost will not be very great, though it will certainly exceed five dollars, the sum asked by the quacks and impostors, but the satisfaction will be worth the money, even if no practical result be obtained. We will take charge of the specimens and have them properly attended to.

One word, in conclusion. Is Mr. Fife perfectly sure that the lands in question do not suffer from superfluous water?—ED. PLANTER.

#### CURE FOR ROSEBUGS.

*Messrs. Editors,*—A subscriber wishes to know if any one can suggest a method of preventing the yearly incursions of the rosebug, and having heard considerable complaint among our neighbors at having their cucumbers, grapes and other fruit destroyed by these insects, I will suggest a remedy. Plant in the centre of your garden a few damask rosebushes, and they will never light on anything else. We have a large garden with almost every kind of fruit, vines, shrubbery, and flowers,

with several kinds of roses, and in the centre we have four bunches of damask rosebushes, and I never saw in the whole garden a rosebug on anything but the damask rose. When they are in blossom, I go into the garden once a day with a pan of hot water and shake the bugs from these roses into the water, and get about a pint at one time; this I practise for a few days, and then they will disappear.—*Boston Cultivator.*

From the Farmer and Planter.

#### PEAS AND PEA-HAY.

As to a choice of varieties, we think it depends very much on the object for which they are grown. If the object is to feed negroes, we prefer either what is called the Crowder, the most prolific of all kinds and mild to the taste, or the white pea, of medium size, with a black eye, which is also a good bearer, and quite mild when cooked.

For cows, if the pea is to be gathered, we again prefer first, the Crowder, and next the large, pale-yellow, called the cow-pea, from its excellent qualities for milch cows. But if the pea is to be left on the ground for stock of all descriptions, especially when they are to be exposed for any considerable time to the weather, we decidedly prefer, first the black, and next the red, or “Tory.” It is said the black pea will not injure stock of any kind; and if the deleterious effects are, as some suppose, owing to a chemical change they undergo in sprouting, or to the decomposed state in which they are when taken in the stomach, we believe they would be less apt to produce bad effects than any other variety, as from their peculiar quality they will lie in the ground throughout the winter, without imbibing the least particle of moisture, apparently. For the table, we use only what is called by some the lady, by others the gentleman pea; very small in size and white. If the object is vine, either for the improvement of the land or for hay, we are not aware that there is much difference, provided they are planted at distances according to the size of the pea. The larger varieties will yield more vine than the small, but the vine is usually coarse and more difficult to cure. The quantity of vine, however, depends much on the time of planting. Early planting, the seasons being equal, will usu-



ally produce more peas—the late more vine.

*Time of Planting, &c.*—This should be done at the first or second working of the corn, and in the centre of the space between the hills, and on the ridge. Peas never should be planted in the hill with the corn. We have seen much injury done the corn by this mode of planting. Nor do we like planting between the drills (in alternate rows with the corn,) because in ploughing, the finishing furrow is left open too near the corn. In other words, the bed on which the corn stands, is left too narrow. Light sandy lands may be safely planted much earlier than such as are stiff and cold. If the object is the improvement of the land, they should be planted alone. Nor should they be planted with corn, if the object is to obtain the greatest amount of corn the land is capable of yielding; for we are fully persuaded that even under the most favorable circumstances of late planting, and not in the hill with the corn, they do it much more injury than is by most persons supposed.

*Gathering and Curing the Vine.*—The ripening of the first pods indicates the proper time for cutting the vines. If cut earlier, the yield is less; if cut at a later period, the vine becomes woody and less nutritious, besides producing sometimes fatal effects on horses by lodging in the intestines. In this vicinage a farmer, a few years since, lost two fine horses from feeding on tough pea vines without cutting them up. On a post mortem examination he found pieces of partially masticated vine, a foot long, hanging in the folds of the intestines. These, from irritation, produced inflammation, mortification and death. The pea vine should never be *pulled up*. It is unpleasant enough to be under the necessity of robbing the land of its ameliorating effects even by cutting off—much worse to pull and deprive it of not only the vine, but the root also. Our practice is, with sharp hoes to strike off the vine at or near the surface of the ground, without disturbing it otherwise, and there to let it lie one or two days, according to the weather, then to take up, pile, and, as we never gather very much, because we do not like to impoverish the land, haul directly to the barn, or other shelters, under which it is secured in an open state, until cured enough to pack away. We cannot agree with our friends of the Conversational Club in the preference of the pole over the rail pen mode of curing. If, as

Mr. A. says, it is the most "economical," it is in our opinion economy only of labor. It is more convenient and more easily accomplished no doubt—but there the economy ends. The article thus cured may, as some say of badly made hay, "*spend better*," but that is saying but little in its favor. If the weather is favorable, and the stack removed early to the barn, the food secured in this way is usually good—but under other circumstances, it is any thing else. A stack of pea vine made ever so well, unless capped by a better material for turning water than itself, offers but little resistance to the beating rains, and after being exposed, has more the appearance of a stack of charred sticks than of well cured hay. Nor do we think that some we have seen would be regarded by a horse or a cow as a "perfect nosegay." The making of rail pens is attended with more labor and inconvenience at the time, especially in large fields, but when once made and properly filled, (putting in a few rails every two or three feet,) it will contain as much as fifteen or twenty six feet stacks, and after being covered with either straw or boards, all is secured till it may suit the farmer's convenience to remove it. Cut the vines after the dew is off, and in this way they may be put up on the same day, and on opening, will be found as bright and sweet as the best made Northern hay.

*Feeding.*—Having invariably made other provisions for fodder, we have not much experience in feeding pea vines to horses, we nevertheless know that when cut at the proper time and well cured, they are equal to the best clover hay. We have fed most that we have saved to our milch cows, calves and work oxen. The pea vines should never be fed to any animal, especially a horse, for the reason already stated, without first cutting them short. It affords us much more pleasure, however, to feed them to mother earth, from which they sprung, either as a mess of green salad, or in their maturer and cooked state, after having passed through the digester of the genus leas.

Notwithstanding the great value of the vine in fodder, and the pea as food for stock, we regard it as *most* valuable for improving exhausted soils. It will grow where almost everything else will fail. Land must first be made rich before it will produce clover, but a pine barren will bring quite a luxuriant growth of vine, and be benefited by the crop. It is said

of the late William Lowndes, that he became so impressed with the value of the cow pea, as a fertilizer, he took in special charge an experiment on poor lands near Charleston. The first year he gathered seven bushels of oats to the acre. Immediately after cutting, he sowed the field in peas, and in the autumn ploughed them under. The next year he gathered fourteen bushels of oats. Again as before, he sowed the pea and ploughed in the vine, and the following season took from the land twenty-eight bushels of oats. A third time he sowed and turned under the vine, and the succeeding harvest cut forty bushels to the acre.

Our experience has not been quite as specific and systematic as this—but it has been not less convincing. As an improving crop for worn-out lands, in our judgment, the pea has no rival. If the peas are sown broad-cast—which practice we do not approve—we think a suggestion of B. H. Burgwin, which we published in volume first, as worth a trial, particularly on good land. He says: "As it is important to give the peas a start over the weeds and grass, I soak them six hours in water, and rub them in plaster of Paris; and, when they begin to leaf and branch, say, when twelve inches high, I sow plaster at the rate of a bushel per acre. This stimulates their growth, and they over-ower the weeds and grass."

From the Genesee Farmer.

#### FLAX CULTURE.

There is much discussion in Great Britain at the present time, as to the necessity of paying \$45,000,000 to foreigners for flax, when their own climate is equally adapted to its growth as that of Belgium and other European countries. It is said that when wheat was from three to four dollars per bushel, land that was not well adapted to its growth was sown, and though the yield was small, yet, from the high prices obtained, it was profitable to grow it. But now, when wheat is but one dollar per bushel, this land can no longer be cultivated with wheat without *serious loss*. What, therefore, shall be done with it? The reply of many intelligent practical farmers is, "cultivate oats, peas, beans, turnips and flax;" and there can be no doubt that if free trade continues, which it undoubtedly will, a much smaller area of

wheat will be sown in future in England. The same thing is true in relation to France. Free trade with England promised high prices for the surplus wheat and a large breadth of land was sown in consequence; but prices are so low that wheat culture in France is anything but a profitable business and will not be so extensive as in the last few years. We therefore predict somewhat higher prices for the future.

At the Penrith Farmers' Club, Mr. Rome, a practical farmer who has been engaged in the culture of flax for some time, gave a lecture on the subject, from which we will make a few extracts:

"The value of a crop of flax, standing in a field, is from forty to sixty dollars an acre—the purchaser to pull the flax. The yield of flax will vary from thirty cwt. to forty cwt. per acre; the produce of seed about sixteen bushels. The price of the flax, after threshing out the seed, fourteen to fifteen dollars per ton.

"*Soils*.—The flax crop may be grown with advantage on all moderately cohesive soils, resting on a sound clay subsoil, providing the land is naturally dry, or thoroughly drained; but gravels or very light soils, or lands upon a weak tilly subsoil, are not suited to its growth.

"*Rotation*.—Flax will succeed best after clover sod, or oat stubble properly prepared on good land; and after a white crop following a green crop, or after potatoes or bare fallows on inferior land.

"*Preparation of Soil*.—Deep ploughing in early autumn by one plough following another in the same furrow, is necessary to the success of the crop under all circumstances, (except when the land has been previously subsoiled,) to break the crust or pan formed below the surface soil, so as to allow the roots of the flax and the surface water to go freely down; a second furrow will in some cases be necessary in spring before sowing, but generally running through the soil with the cultivator will be found preferable. Dry lands should be laid into flats, but cold ground ought to be ploughed into twelve feet ridges, very slightly raised in the centre; the manure should then be applied, the land well harrowed and rolled, the seed sown on the rolled surface and harrowed in with light seed harrows, taking care to keep the horses as much off the ridges as possible on cold land. It is very desirable that the ground selected for flax should be perfectly clean to begin with.



"*Manure.*—Super phosphate of lime, at the rate of four bushels per acre, has proved to be the most suitable manure for the flax crop. Guano raises a soft inferior fibre and injures the crop; and farm-yard manure is not approved of. The crop is found to derive most of its nourishment from the atmosphere and the subsoil.

"*Seed.*—The best seed is Riga, or the produce of this country, grown from Riga seed the previous year. Great care is necessary in the selection of the seed, so as to get it plump and heavy, and clear of the seeds of weeds. The seed should be sown at the rate of three imperial bushels on good land, and two and a half imperial bushels per acre on inferior land, as soon after the 20th of March as the land can be got into proper order, and the weather will permit, but not later than the 20th of April. Great care should be taken that the seed is distributed evenly over the surface. It is not desirable to sow grass with the flax crop, as it usually injures the fibre of the flax unless sown after the crop has been weeded. A crop of rape may be taken after flax with great advantage on good land, the same year, and the ground sown down with grass seed if desirable.

"*Weeding.*—If clean land has been selected for the crop, and ploughed early in the autumn and exposed to the winter frosts, few weeds will generally appear, if the seed used be thoroughly cleaned; but if there be any, they must be carefully pulled. This operation is best done by boys and girls properly superintended. It is necessary that they should always work facing the wind.

"*Pulling.*—The crop is ready for pulling when the seed in the bolls is beginning to change from a green color to a pale brown color, and the stalk becomes yellow for about two-thirds of its height from the ground; this is rather a nice point to determine and requires attention, as pulling too soon or allowing the crop to get too ripe are both injurious to the fibre. In pulling, it is necessary to clean the flax from all weeds (if any), to pull it when perfectly dry, to keep the root ends even, and tie it up in small sheaves to be stooked up and stacked when perfectly dry and thoroughly winned, which will be in the course of eight or ten days after pulling."

Some have thought the flax crop an exhausting one, but it is not considered so either by farmers who have cultivated it or by agricultural chemists. Dr. Anderson, chemist to the Highland Agricultural

Society, states, it is scarcely possible that the flax crop should produce greater exhaustion than a grain crop, certainly not greater than wheat; if a portion of linseed or oil-cake is consumed on the farm, we should have less exhaustion than from a grain crop. Mr. Brisco and Mr. Barker have both sown clover and grass seeds with flax and other grain crops—the ground occupied by the flax producing double the eatage in the following autumn of that produced where grain crops were sown, while the grass on the ground still remains superior.

Mr. C. Bedell, Berlin, Mahoning county, Ohio, writes us his method of raising flax, and the one usually adopted in northern Ohio. "If on sod ground, plough *very deep* in the spring, as early as frost will allow; harrow well till it is mellow; then sow about three pecks of seed per acre, and drag it lightly. We think three pecks little enough on sod ground, but less might do on corn stubble or fallow. It is less labor, covers the ground from the scorching rays of the sun, and leaves the soil in a better preparation for wheat than the old plan of summer-fallowing. We get on an average ten bushels of seed and four hundred pounds of dressed flax per acre. The seed sells here for \$1 25 per bushel, and the flax for seven cents per pound. So that a crop yields us \$40 50 per acre. Some seasons, if the soil is well prepared, we get sixteen bushels per acre, and 600 to 700 pounds of dressed flax. I do not think it impoverishes the land so much as a barley or an oat crop."

#### RECIPE FOR CURING SORES.

A writer in a late number of the *Genesee Farmer*, who signs himself 'R. R.' and dates at Centre Leslie, gives us the following recipe for curing sores:

Take two and a half drachms of blue vitriol, four drachms of alum, and six drachms of loaf sugar; or, we will say, blue vitriol of the size of a walnut, alum a size larger, and sugar the size of a hen's egg. Pulverize and turn into a glass bottle. Add one pint of good vinegar and one table-spoonful of honey. Cork, and shake the mixture three or four times a day, and when dissolved, it is fit for use.

This wash will remove the film from horses' eyes; will cure king's evil; and

most kinds of fever sores; will destroy proud flesh, and cause the sore to heal.

It is good for hoof rot in sheep, and may be applied to any sore with safety. The sore should be kept clean, and washed twice a day with the mixture, until completely healed. For the eye it may be diluted in cold water one half, but should in all cases be used as strong as the patient can bear. For hoof rot in sheep, add as much gunpowder as vitriol, pare away all the affected part of the hoof, wash freely every few days, turn the sheep into fresh pasture, and you have a cure.

For the Southern Planter.

### EXPERIMENTS IN AGRICULTURE.

*Mr. Editor*,—As there is such a diversity of opinion with farmers in regard to the system of farming, manuring, &c. it seems necessary that every thing should be tested by experiment, in order to a correct understanding of the subject. In 1850 I fallowed a piece of land for wheat. In the month of October I seeded it in wheat with one hundred pounds of Peruvian guano. The yield of wheat was twenty to one. After the wheat was taken from the field it was gleaned by the hogs; the field was to go in corn the next year. In the month of October I concluded to turn in the stubble and weeds; and did so on nearly one-half of the field. I had a strip of cow pens across the field. The first three pens were cow penned, and ploughed in at the time the other land was; the second was not ploughed until the spring; the third and last was ploughed at the time of the first, and penned on afterwards. Now for the result, as near as it can be given by the eye. The stubble land that was ploughed produced much better corn than the adjoining land with a heavy manuring; and while nearly every hill stood of the former, the latter was destroyed by the worm, and a large portion planted three times over. The first and second cow pens were about equal, while the third was very inferior. Although it produced a very heavy cover of crab grass.

My views on the above are these: First, I believe that the weeds and stubble turned in at that season have time to decay before cold weather, and is food for the corn plant in its early growth. Secondly, there is no harbor for insects; and thirdly, the decayed vegetable matter is where it ought to be, a little below the roots; and here I would remark that, from observation and experience, I am fully satisfied that manure for grain should be ploughed in, and for grass, top-dressed. I mean manure that is available for the young plants; it would be unavailing to turn in coarse wheat straw, corn tops or stalks, because the infant plant

could not get hold of it. It would prove an obstruction to the feeble roots, turning them out of their course when in search of food. All such rough material, if used in that state, should be applied to the surface. It was predicted by some that in case I made better corn by the operation I have imperfectly described, that it would injure the land. It will be remembered that this was fallowed two years in succession, one for wheat and one for corn, both crops very good ones. It is now in wheat, having the same treatment as the balance of the field, and I think the wheat is rather better. Had the prediction, above referred to, been true, yet I should not have lost by the operation, for the crop would fully have reimbursed for all injury. I hold the opinion that any good crop extracted from land without manure, leaves the land more destitute than it was before.

C. C. SNOW.

Northumberland, Jan. 12, 1853.

For the Southern Planter.

### LOSS OF BACON IN CURING.

#### IMPORTANT APPLICATION OF THE SYPHON PRINCIPLE.

*Mr. Editor*,—I promised you some time ago a memoranda I made of the loss sustained in curing pork into bacon. On hunting up the paper I find it was in 1832 that I took six hogs which weighed 1,080 lbs. and after cutting them out I weighed the different parts separately. They weighed as follows:

The heads weighed	- - -	105 lbs.
The feet weighed	- - -	37 "
The backbones weighed	- - -	84 "
The fat weighed	- - -	83 "
The ribs and small pieces weighed	- - -	22 "
		331 "
The hams, shoulders and middlings,		749 "
The 20th May, after smoking, weighed		621 "

Loss in curing - - - - 128 "

The memorandum does not say at what time they were killed or hung up, though it is not important; but I remember it was very good pork.

While I have my pen in hand I will give you some account of my syphon, as some one may wish to convey water in that way, and be as much at a loss as I was. I inquired of many persons and could find no one that had ever seen or heard of water being conveyed any distance in that way. I determined to try it, and have succeeded, contrary to the expectations of all my neighbors. I have the water coming to my house from a spring 440 yards distant. It comes over a hill 22 feet higher than the spring and about 50 feet higher than the house, in a leaden pipe three-quarters of



an inch in diameter, and has been running since last April. It affords water enough for all ordinary purposes at the house, kitchen, stable, &c. I had some difficulty in starting it to work, and after trying various plans, I laid the pipe down the branch and let it run full of water, then stopped up the discharging end and put it in place. It is  $3\frac{1}{2}$  feet under ground, and is rather warm in the heat of summer. The cost, besides the work of my own hands, was seventy dollars. To any one wanting further information it will afford me pleasure to give it.

Your friend,

H. MINOR.

Charlottesville, Jan. 20, 1853.



## THE SOUTHERN PLANTER.

RICHMOND, FEBRUARY, 1853.

### TERMS.

ONE DOLLAR and TWENTY-FIVE CENTS per annum, which may be discharged by the payment of ONE DOLLAR only, if paid in office or sent free of postage within six months from the date of subscription. Six copies for FIVE DOLLARS; thirteen copies for TEN DOLLARS, to be paid invariably in advance.

✂ Subscriptions may begin with any No.

✂ No paper will be discontinued, until all arrearages are paid, except at the option of the Publisher.

✂ Office on Twelfth, between Main and Cary Streets.

All communications for the columns of this paper, and all letters of inquiry, to insure prompt attention, must be addressed to Frank: G. Ruffin, Shadwell, Albemare County, Va.

All business letters connected with the Planter must be addressed to P. D. Bernard, Richmond, Virginia.

It is indispensably necessary that subscribers ordering a change, should say *from what, to what* post office they wish the alteration made. It will save time to us and lose none to them.

## STATE AGRICULTURAL SOCIETY.

There will be a meeting of this Society on the 23d of the present month (February,) to take into consideration the *possibility* of having a Cattle Show and Agricultural Fair in October or November next. A circular has been prepared and forwarded to a few zealous farmers in each county of the State asking their coöperation in procuring subscriptions to the State Society, and we urgently appeal to every farmer whose eye falls on this paragraph, to come to Richmond on the 23d if he can do so without great inconvenience. Let us not be forever laggards. A spirit of improvement has sprung up among our people. Let us cherish it, and let us determine to have this annual tryst of farmers, that each returning year may bring fresh evidence of the value and advantage of our Association.

## NEW ENGLAND HOUSEWIVES.

Many a time have we heard the matrons of Virginia bemoan their lot. The ordinary troubles of a family are to them aggravated by what they think the hard responsibilities of their condition in the midst of slaves, whose labors in many cases they must direct, whose well being it is at all times a part of their duty to consult, and whose comfort in sickness, in infancy and in age, it is, or ought to be their special province to provide for. We have never sympathized with their repinings, because we have always thought that such labors were good for them—that slavery had done them a decided benefit in giving them something to do; and that something equally well calculated to employ their hands and to engage their hearts. We have always regarded it as one, and by no means the least, of the blessings which we ascribe to slavery and which makes us love the word, that it compels us, by interest, if you choose, to dispense the charities of life with no niggard hand, and to contribute so much of the poor rates without municipal requirement.

We have sometimes heard these ladies compare their state with the imaginary comfort of free soil dames, and, from mere weariness of spirit, wish themselves surrounded by the same

circumstances of ease, comfort, and exemption from domestic care. We have combated this notion with them, have represented to them their superiority in the very particulars which formed the topics of their disparagement, and have exhorted them to patience and thankfulness. Of late we have been aided in these views by the two novels of a very charming writer, and have shown them how, both in *QUEECHY* and *THE WIDE, WIDE WORLD*, the authoress, having by her pictures of New England Rural Manners, shown its unfitness for the abode of the highest female refinement has, in each case, translated her heroines to England in order that they might continue to maintain the highest graces of country life. Still our friends have been incredulous. These were but novels, they said, and the lady that wrote them, charming as she was, and no doubt sincere, filled too with the most beautiful sense of propriety, and refined to the utmost tension of female delicacy, was yet rather high strung, and may have pushed her fastidious imagination into matters of fact. But what can be said, when, (as in the following extracts from the address of Mr. FRENCH, associate editor of the *New England Farmer*, from which paper we have taken it, an address accredited to us by the regular editor as one of the three best that he had ever seen,) "the peculiar station which woman occupies in New England society" is made the subject of stringent comment in a public speech. We shall not attempt to add one touch to this picture by a native limner, familiar with the scene he paints, and endorsed for accuracy by one of the leading agricultural journals of his section. We offer this picture to the contemplation of our lady readers. It is not of our drawing. Let them ponder it—let them consider that "*a majority of the wives of respectable New England farmers, aye, and of men of all other classes,*" in the country, are expected by their husbands "*to be at the same time cook and chambermaid, lady and serving girl, nurse and sempstress and governess, laundress and dairy-maid;*" and then let them ask themselves, first, if they would change places with the New England matron? and second, if *their* husbands would impose as much labor on four slaves as the men of New England require of one wife?

## COMPARATIVE MERITS OF FRENCH AND ENGLISH HORSES.

BY THE HON. WM. C. RIVES.

The following letter from Mr. Rives proves that he has not been idle whilst in Europe, nor unobservant of agricultural matters. As in his letter on the French Merino sheep, which we published a short time since, he goes fully into the subject he treats of, and shows that he does not take up the pen to conciliate the agriculturist, but to please himself and to contribute, as far as he may, to the advancement of a pursuit in which he has always taken the liveliest personal interest.

We had written to Mr. Rives on the propriety of importing the Norman horse to Virginia rather than the Cleveland Bay, of which latter breed he has, as he states, and as we know from actual inspection, introduced a very fine specimen. The answer to that letter we publish for the benefit of the readers of the *Planter*.

We had not, as Mr. Rives supposes, derived our ideas of the Norman horse altogether from Youatt; but partly from the observation of two gentlemen from Albemarle who had travelled behind them in France, and somewhat from accounts we had elsewhere seen of their speed, strength, hardiness and docility. Mr. Rives, it will be seen, gives the palm to the Cleveland Bay in these particulars, and in some other very important ones; such, for instance as their being, what the Devons are among cattle, of "*a type*" so "*thoroughly defined and long established*" as to enable them, with a good deal of certainty, to transmit their peculiar qualities to their offspring—a matter of the first importance in any breed.

Mr. Rives is a horse fancier, we know, and, being born and bred in the Ancient Dominion, must be taken for a judge, if not a jockey, and be allowed, not only with respect to the individual, but the race also,

"Betwixt two horses which doth bear him bravest,  
\* \* \* \* \*  
To claim indeed some shallow spirit of judgment;"

and though we ourselves are of like tastes and origin, and do not count ourselves altogether "stupid" "in these nice, sharp quilllets of the law" of steeds, we yet yield to his superior



opportunities for observation, and the weight of authority that he brings to bear against us.

—  
PARIS, December 24, 1852.

*My Dear Sir,*—I had the satisfaction, some few days ago, to receive your letter of the 19th ultimo. I proceed, with great pleasure, in obedience to your request, to give you the results of my observation on the horse in Europe. No subject, out of the line of my official duties, has engaged so much of my attention since my residence here as this—not merely from the strong bent of my own tastes and predilections, but because I have felt that much yet remained to be done with us for the regeneration and improvement of the most useful, as well as the noblest, of the domestic animals.

Horses here are generally divided (putting out of view, for the present, the race-horse,) into four distinct categories or classes, according to the nature of the service they are required to perform. There is,

1st, The heavy draught horse, (*cheval de gros trait*), used in towns for the dray or cart, and in the country for coarse farm work or the transportation of produce and merchandise.

2dly, The lighter draught horse, (*cheval de trait léger*), usually employed in public vehicles, the diligence, or post-chaise.

3dly, The coach or carriage horse, here called the *carrossier*.

4thly, The riding or saddle horse, sometimes called the *cheval de route*, sometimes the *cheval de selle*.

These several descriptions of horses have strongly marked characteristics, differing in general widely from each other, and are ordinarily supplied by separate and distinct races, which derive their appellations from the districts or provinces in which they are usually bred.

It is the race called *Boulonnais*, originating in the country about Boulogne-sur-mer and in the ancient province of Picardy, which supplies, for the most part, the horses for heavy draught. This race is very large and clumsy, with coarse limbs, short neck, very heavy and ugly head, and distinguished by their bushy manes and long and coarse tufts of hair constituting the *fedock*. They are, doubtless, of great power, but excessively slow and sluggish in their movements.

The second class of horses (those for lighter and quicker draught) is furnished mainly by two races, the *Breton* and the *Percheron*, the former so called from the ancient province of Brittany, in which it had its origin and is yet chiefly bred; the other deriving its denomination, for the same reasons, from the district of *Perche*, which under that name formed a part of the ancient province of Maine. These two races of horses are really of great value in reference to the particular service for which they are employed. They are very hardy and

muscular, of short but quick movement, making at the rate of from eight to ten miles the hour with the diligence or post-chaise, under a system of relays averaging about five miles each. They are round-bodied and compact, short and rather low, rarely exceeding five feet in height. They are disfigured, like the *Boulonnais* horses, by a big, heavy head and short, thick neck, which is owing, in part, to a circumstance common to both classes of horses—that they are almost always unaltered.

The carriage or coach horse in France, so far as it is obtained from the native stocks of the country, is supplied almost exclusively by the *Norman* race, coming chiefly from *Lower Normandy*. This race is of a much more distinguished appearance and character than either of those abovementioned. It bears a general resemblance to the coach horse of England, but is decidedly inferior, both in beauty and power, though of late years it has been progressively improved by crosses with the highest English breeds. It has not yet been brought to such a degree of perfection as to satisfy the demands of Parisian taste and luxury, and most of the superior carriage horses you see in Paris are still imported directly from England, or otherwise from Mecklenburg in Germany.

The best native riding horse of France is supplied by the *Limousin* race, so called from the ancient province of that name which was formerly much celebrated for its breed of horses adapted to the saddle. The *Limousin* horse is of Arab origin, as are almost all the horses in the South of France, and partakes of the characteristic lightness and agility of his oriental ancestor. From neglect and other causes, this peculiar race of horses has been very much reduced in numbers, and it is not often that you meet with a *Limousin* steed of the ancient strain and qualities. There is another race in the same part of France bearing a considerable resemblance to it, and also very much esteemed for the saddle, called the *Navarrin*, from the native country of "Henry of Navarre," (the ancient province of Béarn,) in which it is bred. Both of these races of horses are subject to the objection of being undersized; and the larger Anglo-Norman horse, produced by a cross with the thoroughbred English horse, is now more used than either. But almost all the fine riding horses you meet with in the capital are imported directly from England, being generally one-half or three-quarters bred.

Besides the abovementioned uses, there is a great demand in France, as in the other countries of Europe, for horses to supply the wants of the army. The cavalry horse is drawn from the one or the other of the two last named classes of horses, that is, the carriage and the riding horse, according as he is wanted for the heavy or the light cavalry, for the officers or the men. This being the case, no separate classification is made here of the cavalry horse, though he is always taken into consideration



in estimating the aggregate wants of the country and the interests of its production.

From this review of the principal breeds and actual condition of the horse in France, you will see that this country is not particularly distinguished at present for the possession of any very superior race. England is *par éminence* the country of the horse, and nowhere is this more felt and acknowledged than here. The attention and solicitude of this government have been earnestly and systematically directed for years past and at great public expense to the improvement of their native breeds. A special administration, composed of the ablest men, guided by the combined lights of science and experience, has been constituted to preside over and direct the work, and the avowed basis of their operations is the uncontested superiority of the English blooded horse and his various crosses, and the necessity of imitating the example and practice of the English breeders.\*

The valuable work of Youatt has made most persons in America so familiar with the varieties of the English horse that any detailed description of them, to you especially, is wholly unnecessary. The thoroughbred English race horse is an old personal acquaintance of most of us in Virginia, and we know him by heart. Then comes, next to him in blood, the *Hunter*, and then the *Hackney* or riding horse, and then the splendid *Coach horse*. Of the horses ordinarily employed for heavy draught, leaving out of view the mammoth London Dray horse, the two breeds now most popular and generally known in England are the Suffolk and the Clydesdale. Each of them has its special advocates and patrons. The Suffolk is the favorite of the Royal Agricultural Society, and generally carries off the prizes at its annual shows. It must be borne in mind, however, that the prizes in question are offered for horses "for agricultural purposes" merely, and none but horses belonging exclusively to that particular class enter into the competition.

There is a remarkable breed of horses in England which combines in itself the qualities and capabilities of the Hunter, the Hackney, the Coach horse and the Draught horse. This is the Cleveland Bay, bred in Yorkshire, the great horse-breeding county of England, from which are derived the best specimens of both the useful and the elegant English horse. In the language of Professor Low, author of the great work on the Domestic Animals of the British Islands, the Cleveland Bay is the horse which, "uniting the blood of the finer with that of the larger horses of the country," combines, in the highest degree, "action with strength." He gives the history of the origin and formation of the breed in the following words:

"It has been formed by the progressive mixture of the blood of the race horse with the

original breeds of the country. To rear this class of horses, the same principles of breeding should be applied as to the rearing of the race horse himself. A class of mares, as well as stallions also, should be used having the properties sought for. The district of Cleveland owes its superiority in the production of this beautiful race of horses to the possession of a definite breed, formed, not by accidental mixture, but by continued cultivation."

Youatt shows how by uniting this horse, which is peculiarly the type of the elegant coach horse, with mares of various degrees of breeding, you may produce, at will, the Hunter, the Hackney, the Machiner, the Poster and the common carriage horse; and, in point of fact, it is by the instrumentality of the Cleveland Bay, thus applied, that all those varieties of the horse are produced in the highest perfection in Yorkshire. That, under proper modification, by crossing with good common mares, this breed of horses is also the best for farm work, I have had frequent opportunities of satisfying myself by personal observation, both in England and Scotland. By far the most efficient, as well as noblest-looking farm horses I ever saw, were in the fields of a most intelligent and respectable farmer whom I visited in the neighborhood of Perth, who told me that all of his horses, without exception, were of the Cleveland stock, and that from long and close attention to the subject in a wide sphere of practical observation, having, as land agent, the supervision of a hundred farms of the Duke of Athol, he was convinced there was no breed of horses equal to them, whether for the farm or the road.

After three years of the most attentive study of all the varieties of the horse in this country and in Great Britain, I came, unhesitatingly, to the conclusion that the Cleveland Bay is the horse best adapted to the whole range of our wants in Virginia, and suited in an especial manner to correct those errors of breeding by which our Virginia horses have become very much deteriorated. We were formerly in the habit of breeding almost exclusively from the full-blooded race horse, the consequence of which was that our horses lost substance and size, and the bone necessary for serviceable uses. To correct these defects, we have of late years gone to the opposite extreme, and have bred, in some parts of the country, almost entirely from the large, coarse horse, without blood and wholly destitute of action. Of these two errors, both of them very serious ones, the latter, in my opinion, is the most mischievous and fatal. "Some blood is desirable even for the farm horse," Youatt (recognized as the highest authority on the subject both here and in England) tells us. Blood, in a larger proportion, is desirable in the coach horse, in the saddle horse, (or the Hackney, as he is called in England,) and in the Hunter; and yet each one of these descriptions of horses may be injured by having too much

\* See *Compte Rendu* of the administration of the Haras for the year 1849.



blood. In regard to the Hackney or riding horse, for example, Youatt says, "when approaching to thoroughbred, he may be a splendid animal, but he will scarcely be fitted for his duty. His legs will be too slender; his feet too small; his stride too long; and he will rarely be able to trot."

The Cleveland Bay hits the medium between too little and too much blood; and being of a well defined and long established race, (a consideration of the highest importance in breeding,) he may be counted upon to transmit his distinctive qualities with the greatest certainty. Having made up my mind, upon long and careful examination and comparison, in favor of this breed, my next object was to obtain the purest and best specimen of it. In this I esteem myself very fortunate. The French government, which spares no expense in obtaining the best types from abroad for the improvement of their native races, bought of two of the most celebrated breeders in Yorkshire, in 1849, a stallion and a brood mare of the purest Cleveland stock, and placed them in the National Haras at Versailles. The colt you have seen at Castle-Hill is the progeny of these two English parents foaled at Versailles. I bought him directly of the Government at the age of fifteen months, and have thus the highest possible guarantee for the genuineness and purity of his descent. I saw both his parents, and nobler animals for power, symmetry and action combined, I never saw. Being a thorough believer in the principles of breeding, the moment I saw them I determined, if possible, to become the owner of their offspring; and I have the most sanguine hopes that he will fulfil all the expectations I then formed.

You suggest the expediency of buying a Norman horse here and sending him out to Virginia. You will have seen from what I have already said that the *Norman* horse, properly so called, is of the same general description as the *Cleveland*, but decidedly inferior to him, in the opinion of the French themselves, as all their standard treatises on the horse abundantly prove. The particular characteristics you mention as belonging to the *Norman* horse are in reality the distinctive attributes of the *Breton* and the *Percheron* races, of which I have spoken with some detail in the first part of this letter. You had in view, I have no doubt, the description of a peculiar and valuable race of French horses contained in an extract given by Youatt from the work of Monsieur Houel on the varieties of the Horse in France. From the connection in which Youatt introduces that extract, it was quite natural that you should consider it as applying to the *Norman* horse, but it is applied by the writer himself to the *Breton* and *Percheron* horse.

These two races of horses are very valuable for the particular service in which they are employed here—that of the diligence and the post-chaise; and are, doubtless, excellent also for

farm work. They are the only races of great practical value which can be considered at this time as *peculiar* to France. But there are two considerations which, in my opinion, render it very doubtful whether the benefits of their introduction into the United States would justify the trouble and expense of attempting to transplant them. In the first place, they are not of a thoroughly defined and long established type, and you could not count, therefore, with any degree of certainty on their reproduction. Monsieur Gayot, the late Inspecteur-General of the Haras here, and who, of all the French writers on the horse, unites in the highest degree science and experience, says expressly that neither of them have that essential character of a *type*—the faculty of reproducing itself constantly and certainly out of the sphere of the local influence and particular circumstances which created and fashioned it.\* In the second place, if you could count upon the reproduction and transmission of the breed, its uses would be limited to one particular service, and that of the rudest and coarsest kind, whereas the actual condition and wants of our country seem to call for the introduction of some master type, from which by suitable modifications we can obtain horses of the best quality adapted to all the various purposes of social and domestic life.

If, however, these considerations should not have the weight in the minds of our friends which I attach to them, nothing will afford me more pleasure than to be of use to them in procuring, as I think I should be able to do through competent persons, good specimens of any of the races of the domestic animals which may have attracted their attention here. The highest gratification to me, in my present separation from my native land, is to have an opportunity, however slight, of showing the deep interest I feel in the daily pursuits and fortunes of my countrymen, and especially those of my brother farmers.

I remain, my dear sir,

Very truly and faithfully yours,

W. C. RIVES.

F. G. RUFFIN, Esq.

#### IRISH POTATOES.

We regret very much that the query of our correspondent came too late to be answered in this number, the Editor not having received it until the 24th instant, when he had no time, consistently with other pressing editorial engagements, to give it proper consideration. An answer of *some sort* will certainly be furnished by March, which will not be too late for the main crop.

\* See *Etudes Hippologiques*, Vol. III. p. 174-6.

TO AGRICULTURAL SOCIETIES, CLUBS  
AND ASSOCIATIONS.

By a resolution offered at the late meeting of the State Agricultural Society by Mr. Lewis C. Harvie, it was made the duty of the corresponding secretary "to procure a list of all societies, clubs, or associations, connected with agriculture in Virginia, and report them to the Executive Committee."

We call attention to this resolution, and request the proper officers of such bodies to report with all convenient dispatch to the editor of this paper, who is the corresponding secretary of the society.

There are many associations in the State unknown to us, and we are therefore compelled to take this method of addressing them. We hope it will be all that is required to elicit answers from the individuals addressed.

QUERY RESPECTING ARTIFICIAL  
GUANO.

"Will you permit me to inquire through the Planter whether or not any practical farmer has used artificial guano made according to the recipe frequently published in your paper? If so, on what crops, and on what kind of land, and how applied; whether ploughed in, harrowed in, or applied as a top-dressing, or any other information relative to the article that may be thought useful?"

UNIVERSITY PIGS.

"How you have improved during your residence at the University!" is a very common and agreeable salutation to the returned student, who looks *sheepish* because he is conscious of having brought away "a sheepskin" with him. We think the remark would not be misapplied to these "little pigs," as our friend, Col. Kemper, calls his young Rhinoceros—little pigs! A friend of ours told us one day that his father, living in Alabama, not far from Buzzard Roost Post Office, was telling a newly arrived Yankee of a hog he had slaughtered not long before which weighed 750 lbs. "That was a good pig," said the stranger. "Pig!" replied the old gentleman in unfeigned astonishment, "pig!! I should

like to know how big the *hogs* grow in your country." One is tempted to make the same comment on the Colonel's remark, who ought to have more gratitude in him than to be belittling his hogs in that style. They certainly do credit to their raising, as the saying is, and show the advantage of collegiate education, beating "the learned pig," in the main point for a pig, all to pieces.

We can, however, assure all who confide their boys to the watchful care of our friend, "the Proctor and Patron," that he never permits the students "to make *such* hogs of themselves."

In conclusion, we will say, in simple justice to Colonel Kemper, what we have known for some time, that he is the only Proctor, who, by superior judgment and skill, has made the University farm pay for its cultivation, support all the hands and teams employed about the establishment, and produce a small surplus for market, with means that have been heretofore wasted, and amid the pressure of daily and arduous engagements, he is going on to enrich the land; and will make a fine farm, as he now makes good crops, out of a very indifferent soil.

University of Virginia, Jan. 6, 1853.

F. G. RUFFIN, Esq.: Dear Sir,—We killed our *little* pigs to-day, and find their weights as follows:

362 lbs.
370 "
410 "
412 "
457 "
2,011 "

Making two thousand and eleven pounds—averaging four hundred and two pounds. They were a little under two years old, without any extra keeping, having run at large until about the first of December. If there are any of your subscribers who can beat this, I would be glad to hear from them.

Respectfully yours,

W. S. KEMPER.

THE WOOL GROWER AND STOCK REGISTER.—We invite the attention of our readers to the advertisement of this work, in another column. It is a valuable work for all who raise or own stock of any kind. It is published at 50 cents per annum in advance. Specimen copies can be seen at this office.



## SPECIFIC MANURE FOR TOBACCO.

The following recommendation of a specific manure for tobacco, we find in a letter printed in the Richmond Enquirer. We know nothing of the manure or the writer, and give the prescription for what it is worth; but it cannot hurt to try it at all events, as we mean to do. Should others do the same, we shall be glad to hear their results.

"The best preparation I have ever known for the *tobacco crop* is made of a mixture of Peruvian and Mexican guano, salt, and Kettlewell's potash and plaster. Last spring I mixed as follows: 2 bushels sifted Peruvian guano, 1 bushel salt, well incorporated with it, 2½ bushels Mexican guano, and 1½ bushels potash and plaster; the whole were well mixed in a close one-horse wagon body, and sown on an acre—the land had been previously pretty well dosed with farm-pen, stable and pit manures. The tobacco that was planted in good time was the largest I ever saw, and so said every one who saw it. If the land were thin, I would add to these quantities, say 150 pounds Peruvian guano, 1½ bushels salt, 200 pounds Mexican guano, and 200 pounds potash and plaster. The cost would be about \$8 50 per acre, and I am sure it would add more than four times that sum to the product."

## M'CORMICK'S REAPER.

In publishing, as we do with pleasure, the following letter from an esteemed correspondent, we merely wish to state our own position and that of the Executive Committee with respect to all such things.

The Planter is of no party in the matter of Reapers or any other machine, or agricultural process. It seeks only the best, and will neither commence nor carry on a war against any; but will only, as all, we are sure, will approve, express its candid opinion, when called on, as to the merits of each. But the Planter has stated, and we think proved, that all reapers sell for more than they are worth, whether we consider the reward to the inventor, the cost to the constructor, or the service to the farmer. A comparison of them with wheat machines as to cost of construction and saving of labor will prove this to any one.

The Executive Committee does not mean to endorse or be held responsible for what they permit to be published, and would not think for a moment of settling the merits of men or

machines by "an order of publication." They are merely the medium of communicating to the public certain essays which seem to them to possess merit. To alter or amend these essays would be to judge not only for themselves and for the public, but for the author also, which is more than they can undertake to do. As to the terms which an essayist chooses to employ, they are to a great extent matter of taste and opinion, and cannot be prescribed. For ourselves personally, we are willing to say that we do not consider Mr. M'Cormick a humbug at all, but a very ingenious and meritorious citizen; and such, in view of what he has done is, we presume, the opinion of the whole of the Executive Committee, including Mr. Booth, who, we have no doubt, used the term "Humbug" in the hurry of composition without intending to reflect injuriously on Mr. M'Cormick. The question whether or not there is a superior machine is a very different question; and the discussion of it will not at all affect Mr. M'Cormick's claim to originality and acknowledgment of service. We very much doubt if it will be in the power of the State Executive Committee to make such a trial as Mr. Grigsby indicates, however desirable it may be. But we promise, if it be practicable, to do all in our power to bring it about.

—  
Rockbridge, December, 1852.

Mr. RUFFIN: Dear Sir,—I have just received the *Southern Planter* of this date, and am sorry to find in it, what seems to me, a partisan attack on M'Cormick's "Virginia Reaper," and the more so, as it is endorsed by the approval of "the Executive Committee of the Virginia State Agricultural Society"—so far at least as to have ordered its publication. Now, as the patentee of that reaper is my county-man and personal friend, I beg, in his absence, to appeal in his behalf to the Virginia State Agricultural Society *itself* to afford him a fair trial of his reaper in competition with Hussey's and all others—not for "a half hour or half day," but for weeks, or as long as the material, whether wheat, oats, or grass, can be found to operate on. But as I fear that Society, for want of legislative aid, may too soon be numbered with "the things that were," I also appeal, through you, to Mr. Booth and the Executive Committee, to give Mr. M'Cormick a chance to rescue his "magnificent and

costly humbug" from condemnation on mere hearsay evidence. Let that committee organize an agricultural club to meet at Brandon, or any other place on James river, where large fields of heavy wheat and oats may be found, at the beginning of next harvest; offer an appropriate premium for the reaper that proves itself the best on trial of two entire days at least, and as much longer as the club may desire; invite competition, with the promise of a good harvest dinner; and I guarantee that Mr. M'Cormick and his reaper will be there, and that whether victor or vanquished he will so demean himself as to merit and meet the cordial approbation of the club. This is not written for publication, far from it, for there may seem to be something of the partisan in it, and such contests should never appear in the Planter; it should make friends, as its editor does, whenever and wherever known. But I ask you, as a friend, to use your editorial influence to have justice done Mr. M'Cormick; he is my friend, and worthy of the friendship of all. My motto in his case is, fair play and the public good.

I send with this a collection of extracts from English papers, which, I hope, may allay the fear of Mr. Booth that the premium awarded Mr. M'Cormick at the World's Fair will "strip America of the incidental renown." Make what use you please of them.

Remembering you with much regard,  
I am yours, respectfully,

R. GRIGSBY.

#### BONE MILL AT RICHMOND.

We are happy to inform our readers that there is a BONE MILL now established in Richmond by Mr. R. R. Duval. We have visited and inspected this mill, and can recommend it to such as want bones. There are two qualities of bone dust ground, the one, which is quite fine, nearly all in dust and the balance in minute particles, is called dust, and the other, which consists of coarser particles, should be called *chips*. Mr. Duval separates these by a sieve, and sells them at different prices. The first at 75 cents the bushel, and the latter, which is in fact the common Baltimore article, at 55 cents the bushel. We think the bone dust of Baltimore is nearly all made of bones that have had all the animal matter extracted from them, and have thereby

lost much of their value. Mr. Duval's not having been subjected to any such process are, of course, superior.

The advantage of the "dust" over the "chips" is in their more minute subdivision, and consequent more immediate action on the crops to which they may be applied. It will consequently take a less quantity, say one-half to produce the effect. But the chips will last longer.

#### STRAWBERRY CULTIVATION.

Those who know anything about the magnificent strawberries and the immense quantity of them raised in a bed thirty feet by forty, for several years past, in the garden formerly owned by me in King street, may like to know the process by which I cultivate them. I applied about once a week, for three times, commencing when the green leaves first began to start, and making the last application just before the plants were in full bloom, the following preparation—of nitre of potash, of glauber salts and sal. soda, each, one pound; of muriate of ammonia, one quarter of a pound—dissolved in thirty gallons of rain or river water. One-third was applied at a time; and when the weather was dry, I applied clear soft water between the times of using the preparation—as the growth of the young leaves is so rapid that unless well supplied with water, the sun will scorch them. I used a common watering pot and made the application towards evening. Managed in this way, there is never any necessity of digging over the bed or setting it out anew. Beds of ten years old are not only as good, but better than those two or three years old. But you must be sure and keep the weeds out.—*Friends' Review, Philadelphia.*

I made a solution and applied it by the above directions to a strawberry bed nineteen feet square, in the spring of 1852, and notwithstanding the season was unfavorable for the strawberry, I gathered two bushels and a half (even measure,) of the finest berries I ever saw; some of them weighed over a half an ounce, and measured between four and five inches in circumference.

P. D. BERNARD.

MARL.—Mr. R. M. Bridges, of White Chimneys, Caroline, Virginia, has left a specimen of marl at this office, which, from its rich appearance, we have no doubt will be a mine of wealth to him. Those who know the value of marl, are requested to call and see it

P. D. B.



EXTRACT FROM CORRESPONDENCE.

"I am glad to see Virginia awaking to some interest in agricultural improvement. From my observations in this State, I am led to the conclusion, that what you most need in your State to bring up your land to a fair value, is a better support of your Agricultural Journals, and the multiplication of agricultural societies in the several counties of your State; and if your wealthy landholders would each subscribe for fifty copies of your journal, for free distribution among those who will not subscribe, they could make no better investment for the advancement of their interests.

Very respectfully,

GEORGE VAIL."

Troy, New York.

PAYMENTS TO THE SOUTHERN PLANTER,

From January 1st to February 1st, 1853.

All persons who have made payments early enough to be entered, and whose names do not appear in the following receipt list, are requested to give immediate notice of the omission, in order that the correction may be made in the next issue:

John H. Bibb, to January 1854	\$1 00
Wm. W. Minor, to January 1854	1 00
Dr. F. Carr, to January 1854	1 00
Dr. W. G. Carr, to July 1854	3 00
Robert Campbell, to January 1854	1 00
Thomas Page, to January 1854	1 00
M. B. Brown, to January 1854	1 00
John McAlister, to January 1854	1 00
Edward Tarry, to January 1854	1 00
R. G. Cotton, to January 1853	1 00
Nathaniel King, to January 1854	1 00
Anderson Edwards, to January 1854	1 00
E. F. Pinchback, to January 1853	1 00
E. S. Acree, to January 1854	3 00
Volney Walker, to January 1854	2 00
Joseph T. Henley, to January 1854	1 00
Dr. P. Howard, to January 1854	1 00
J. R. Mann, to January 1854	1 00
Dr. N. B. Fleet, to July 1853	1 00
George R. Trant, to January 1854	1 00
R. M. Bridges, to July 1853	2 00
Colin Clarke, to January 1854	1 00
I. Irvine Hite, to January 1854	1 00
R. A. Higginbotham, to July, 1853	1 00
Daniel Jones, to January 1854	1 00
Wm. M. Marshall, to January 1854	1 00
B. M. Jones, to January 1854	1 00
John Simms, to January 1854	1 00
Wm. D. Bennett, to January 1854	1 00
J. H. Dejarnett, to January 1854	1 00
John England, to January 1854	1 00
James M. Wood, to January 1854	1 00
James M. Walker, to January 1854	1 00
Josiah Higgins, to January 1854	1 00

F. W. Connor, to January 1854	\$1 00
Joseph Damron, to January 1854	1 00
Wm. Massie, to January 1854	1 00
Rev. Peyton Harrison, to July 1853	1 00
N. C. Crenshaw, to July 1854	1 00
W. D. Clopton, to January 1854	1 00
Henry W. Wood, to January 1854	1 00
R. H. Pollard, to January 1854	1 00
Dr. John M. Garnett, to January 1854	1 00
R. M. Garnett, to January 1854	1 00
Dr. R. T. Baldwin, to January 1854	2 00
Charles A. Hundley, to January 1853	1 00
Robert Ritchie, to January, 1853	5 00
Charles McClung, to September 1853	2 00
John A. Tate, to September 1853	1 00
Murat Willis, to January 1853	5 00
E. W. Shepherd, to January 1854	1 00
Dr. T. Davis, to January 1854	8 00
Jared Chamberlin, to June 1853	1 00
Dr. E. P. Williams, to January 1854	2 00
J. B. Stovall, to January 1854	1 00
Thomas Leigh, to January 1854	1 00
W. W. Guy, to January 1852	6 00
Peter S. Triple, to January 1853	1 00
L. H. B. Whitaker, to January 1854	1 00
Wm. Hawkins, to January 1854	1 00
B. R. Wilson, to January, 1854	1 00
Thomas H. Saunders, to January 1854	1 00
Benjamin Holladay, to January 1854	1 00
J. M. Hite, to January 1854	1 00
Edward S. Russell, to January 1854	1 00
Howell Chastain, to January 1854	1 00
E. Wortham, to January 1854	1 00
Thomas Hackett, to January 1854	1 00
John H. Walker, to January 1854	1 00
John W. Paxton, to January 1854	1 00
Dr. N. T. Green, to January 1854	1 00
Maj. George Wilson, to January 1854	1 00
R. A. Higginbotham, to July 1854	1 00
William N. Tunstall, to January 1854	1 00
Carter Ball, to January 1854	1 00
Dr. N. M. Osborne, to January 1854	1 00
William G. Rogers, to January 1854	1 00
C. C. Curtis, to January 1854	2 00
M. T. Campbell, to January 1854	1 00
G. Boulware, to January 1854	1 00
William Gravat, to January 1854	1 00
S. C. Sutton, to January 1854	1 00
Thomas Lumpkin, to January 1854	1 00
Col. G. Durfee, to January 1854	1 00
P. Woolfolk, to July 1853	1 00
Jourdan Woolfolk, to January 1854	1 00
J. W. Taylor, to January 1854	1 00
H. L. Abraham, to January 1854	1 00
Thomas N. Green, to January 1854	1 00
F. B. Welton, to January 1854	1 00
Col. S. M'D. Reid, to January 1854	1 00
B. S. Scott, to November 1853	1 00
Edwin Edmunds, to January 1854	2 00
Dr. R. Shore, to January 1854	1 00
R. F. Ward, to January 1854	1 00
R. P. Graves, to January 1854	1 00
J. B. Lightfoot, to January 1854	1 00
Jos. P. Terrell, to January 1854	1 00
Archie Brown, to January 1854	1 00
Wm. M. Waller, to January 1854	1 00
Wm. Worsham, to January 1854	1 00

A. K. Fulton, to January 1854	\$1 00	Robert Grattan, to July 1853	\$7 00
Rev. W. H. Peace, to January 1854		Wm. F. Walters, to January 1854	1 00
Col. B. L. Barrow, to January 1854		Dr. B. P. Morris, to September 1853	1 00
Capt. W. J. Barrow, to January 1854		Mrs. L. W. Barlow, to January 1854	1 00
Wm. Thomas, to January 1854	5 00	W. C. Carrington, to January 1853	1 00
Wm. T. Justice, to January 1854		L. L. Lee, to January 1854	1 00
S. M. Kennedy, to January 1854		Capt. Thomas Nelson, to January 1854	1 00
W. A. Bonner, to January 1854	1 00	Wm. G. Friend, to January 1852	2 00
Col. Isham Trotter, to January 1854	1 00	Col. John Chowning, to January 1854	1 00
Capt. E. Haskins, to January 1854	1 00	Wm. A. Scott, to September 1853	1 00
Jos. Jones, to January 1854	1 00	Robert Gentry, to January 1854	3 00
David W. Barton, to January 1853	1 00	J. W. Shiflett, to January 1854	1 00
H. J. Butt, to January 1854	1 00	R. L. Walker, to July 1853	1 00
Jos. Turner, to January 1854	1 00	W. L. Wallace, to September 1853	1 00
Thomas Wynne, to January 1853	2 00	George W. Nelson, to January 1854	1 00
Charles H. K. Taylor, to January 1854	2 00	Wm. R. Taylor, to January 1854	1 00
Robert Garland, to January 1854	1 00	Wm. K. Perrin, to January 1854	1 00
Jos. C. Boxley, to January 1854	1 00	John Trimble, to July 1853	1 00
George W. Hunter, to July 1854	2 00	Wm. Guthrie, to August 1853	1 00
Henry Hill, to January 1854	1 00	A. T. Gilkeson, to September 1853	1 00
Wm. G. Crenshaw, to July 1853	1 00	Wm. R. Segar, to January 1854	1 00
B. W. Bass, to January 1854	1 00	Jos. S. Spangler, to September 1853	1 00
R. L. Gurganious, to January 1854	1 00	James Brown, to July 1852	1 00
John A. Fleet, to January 1854	1 00	Joseph W. Morriss, to January 1854	1 00
Allen Melton, to July 1853	1 00	A. Nicol, to January 1854	1 00
Col. J. W. Ware, to January 1854	1 00	Thomas C. Law, to January 1854	1 00
Wm. J. Robertson, to July 1853	1 00	Col. Thos. C. Dennis, to January 1854	1 00
Wm. H. Cosby, to September 1853	1 00	C. W. Montague, to January 1854	1 00
Dr. R. H. Stuart, to January 1854	5 00	Thomas B. Montague, to January 1854	1 00
Col. Wm. Bailey, to January 1854	1 00	Thomas Hardy, to January 1854	1 00
James Young, to January 1854	1 00	Wm. N. Williams, to January 1853	2 00
W. H. Clarke, to January 1854	1 00	N. P. Fitchett, to January 1853	2 00
Jacob Ham, to January 1854	1 00	James B. Scott, to January 1853	2 00
B. F. T. Conway, to January 1854	1 00	John R. Fitchett, to January 1853	2 00
John Thom, to January 1854	1 00	Dr. J. J. Simpkins, to January 1853	2 00
James T. Twitty, to January 1854	1 00	Thomas A. Downs, to January 1853	2 00
Dilmas J. Applebury, to January 1854	1 00	Nathaniel S. Goffgon, to January 1853	2 00
George W. Clarke, to January 1854	1 00	Charles C. Hightower, to January 1854	1 00
Adam M. Shultz, to January 1854	1 00	Wm. Thornton, to January 1854	1 00
James Trice, to January 1854	1 00	Dr. Peter Williams, to January 1854	1 00
James W. Glenn, to January 1854	1 00	Emanuel Gerst, to May 1854	1 00
G. H. Brown, to July 1853	2 00	Wm. R. Scarlett, to January 1854	1 00
Capt. Robert Eastham, to January 1854	1 00	Stephen Dickenson, to January 1854	1 00
R. D. Carter, to January 1854	1 00	Thomas Watkins, to January 1854	1 00
Adolphus Goddin, to September 1852	1 00	J. R. Watkins, to September 1853	1 00
Dr. H. Curtis, to January 1854	1 00	R. T. W. Duke, to September 1853	1 00
L. N. Davis, to January 1854	1 00	John S. Cocke, to September 1853	1 00
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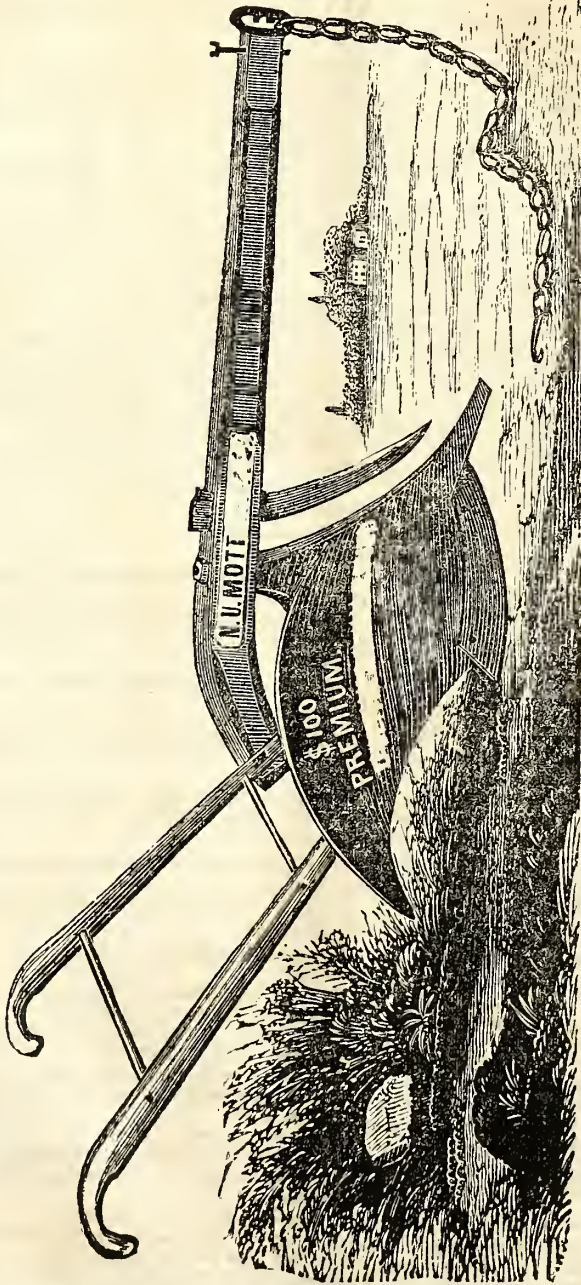
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Feb. 1, 1852. Lexington, Va.

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