
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.

MR. BOOTH'S REMARKS

On the Trial of Reapers at Curle's Neck, and also on Drilling Machines and Water Rams.

Mr. Editor,—When I responded to the request of the Executive Committee of the State Agricultural Society in writing a communication on the subject of agricultural machinery, I had no anticipation of commanding a notoriety so undesirable, except so far as benefit is conferred on the agricultural community.

The engagements of a profession, very different, (unless in the similitude of "glorious uncertainty,") preclude any judgment on such a subject, on which I would desire or advise any person to rely. While I cannot withhold any opinion when called for, which may be considered useful, I will not be drawn into any controversy with any person. So far from being the partizan of any particular machine, I would be gratified to find one excelling all in use, or that the present inventors might, as it were, beat themselves by a degree of perfection not yet attained by them. I should have nothing more to say on the subject, but for the urgency of political as well as agricultural papers, and the possibility that some of my former strictures might seem, since the trial of reapers at Curle's Neck, to have inflicted injustice.

It will be recollected that in reference to reaping machines I gave a decided preference to Hussey's over M'Cormick's, and stated as a sufficient reason that every one of M'Cormick's which I had seen or about which I had any reliable information, had been laid aside, (one or two I have heard from since performed better.) So far from retracting any thing I then said about the kind of machine referred to, I could confirm it by additional testimony volunteered to me by a number of persons from different States, and none so strong as from Illinois, where their failure is reported by "thousands." The misfortune was that being regarded as the premium machine, and failing, not only did loss and disappointment ensue, but discouragement to try any other, thus precluding the use of a most valuable implement. Previous to the trial at Curle's Neck, I had received intelligence from a distinguished and reliable source that my essay had produced the good effect of causing the manufacture of

a much better machine. There may be some mistake as to the cause, but none as to the fact. It affords me pleasure to state that the machine which was operated by Mr. M Cormick at Curle's Neck, was not the kind condemned by me; but a very superior one, abandoning the principle I reprobated and embracing that which I advocated. This was the subject of observation and remark by every person on the ground who knew anything about it. I still think the reel, pulley, band and light material objectionable, unless under very careful management; but so far from condemning that machine, I shall have much to say in its praise when I can hear that any considerable number has operated well for several years.

I have seen too many machines succeed for a short time and afterwards fail to be hasty in any recommendation. Although not the first nor the second in the estimation of the committee, its performance was very creditable, and it certainly gained more reputation by the trial than either of the others, as the general failure previously left more room for it.

In reference to Burrall's and Hussey's, I can only express the opinion that either one will surpass the other, according to the superiority of the manufacture and management of it. There is some transposition of machinery in Burrall's presenting a different appearance—a perpendicular instead of horizontal crank motion, a longer crank giving longer motion to the blades. As a general principle, there is a loss of power by a long crank, viz. it is easier to resist it. Never having seen Hussey's miss a head of wheat from this cause, I am not prepared to decide on any superiority on this account. The manner of laying the wheat is identical, as well as the structure of the blades. Every person engaged in the management of Burrall's, while I saw it was entitled to a premium for skill and fidelity. It is considerably lighter than Hussey's last pattern (by three hundred pounds, I understand,) and pulls easier. This is certainly an advantage, where strength and durability can also be maintained. Hussey's latest improvement consists in making his machine heavier and harder to pull. I have worked two of them with two horses each; but all work better with four horses, as the motion is not so apt to be checked should any give back or slacken their gait.

I don't think any judge of machinery will undertake to point out any essential difference between these two machines. I have been induced to give my preference to Hussey's from superior opportunities of testing it. During the last harvest, I started one in the fifth crop in the presence of gentlemen I might name, favorably known throughout the country. Its performance was perfect, and continued so through a considerable body of low grounds, with water furrows opened by a plough first, and then with the hoe. The repairs during the five years have not cost me one cent. My own blacksmith has probably done about two dollars worth. At the same time, another was cutting successfully in clover, and performed as many as fifteen different days in wheat, clover, herds grass and timothy without any material interruption or repairs. When four horses are hitched to any such machine, dragging it over ground imperfectly prepared, and encountering various obstacles, some accident must reasonably be expected sometimes. I don't consider it safe to run a reaper over any field which has not been previously especially inspected and prepared for it, particularly in clover, where the blades run very near the ground. Accidents occur from negligence in oiling some of its parts, causing them to wear out or expand by heat. When the same machine is intended both for grain and grass, close examination is necessary, to ascertain whether a part is not prepared for grain and part for grass. I have known failure from this cause. Indeed, however simple machinery may be it should be adjusted right, to perform well. A friend and neighbor of mine was very near laying one of Burrall's aside under condemnation, from a cause removed in less than a minute—its subsequent performance being successful. I mention this to show that the mere fact of failure to perform well is not always indicative of worthlessness or imperfection. I tried Hussey's with the side delivery, and don't think that the additional labor and more tangled condition of the grain is balanced by the benefit conferred. Some prefer the rear delivery, not only because of the greater regularity of the sheaves and facility of picking up, but because the necessity of removal before the horses pass around is an incentive to industry on the part of the hands. The front wheels afford some relief to the wheel horses, but increase the difficulty of short turns.—They can be dispensed with if care be observed in so fixing the collars as to prevent the uncomfortable pressure of the tongue on the necks of the horses; or the front wheels of any two horse wagon will answer, by using a shorter axletree for the purpose—reducing the tread of the wheels at bottom to about four feet four inches outside measure. As all such wheels are not of the same height, care should be observed to give the proper elevation or depression to the blades, by means of the coupling pole which can be so bolted or confined to the frame as to accomplish this object; in

addition to the reversal of the boxes in which the axle of the large driving wheel runs.

The blades or shears in Burrall's and Hussey's being drawn with rapidity between irons fitting closely, rarely need sharpening, and will cut or break off the wheat even when dull. A file, however, is the most convenient material for sharpening.

Since the introduction of guano, and consequent cultivation of old fields, clear of stumps, and the high prices of manual labor, the subject of agricultural machinery in general and reaping machines in particular has acquired paramount importance. Where the wheat is very luxuriant and tangled, there is almost as much difference between reaping and cradling wheat as between threshing and treading. It was this conviction, and the further belief that the failure of M'Cormick's old reaper had prevented the use of others of great value, which induced the strictures in my former communication, and not any desire to injure its reputation undeservedly. I consider the agitation of the subject most fortunate, and that the Executive Committee could not otherwise have rendered more service to the community than in causing this trial. I think the result, also, most fortunate; for instead of concentrating preferences on any particular machine, inducing haste and imperfection in their manufacture, it puts all upon their good behaviour in fidelity and perfection of construction. It also impairs the importance of any particular patent, precluding the onerous increase of price generally claimed. From what I have seen and heard of Manny's machine, it will no doubt become a formidable competitor amongst the champions, as it embraces the angular blades, cutting by lateral resistance like shears, which must always be successful under proper construction. It is impossible for any machine to cut by the mere resistance of the wheat when it is inclined or light, unless while the blade is very sharp, and every thing in perfect order. All the machines I have alluded to now embrace it in a more or less degree; and the man who first introduced it (I know not who he is,) is entitled to the whole credit of enduring successful performance, and the man who will first make a good, strong, substantial machine, to last a number of years, for a reasonable profit on the cost of construction, will be entitled to a premium which nobody has ever yet secured. Hussey's, though the heaviest and consequently most costly, I think I have seen, I believe is still the cheapest at one hundred and five dollars, without wheels and mower—one hundred and fifteen dollars with mower—and he has promised to reduce when he makes some money, which he did not do when *struggling* into favor.

I would like to see the drill encouraged more than it is but for the unreasonable price. I did not design to discourage the use of it by my former remarks—having witnessed favorable results and performance. I only designed

to express a less favorable opinion of it as a *labor saving* machine, because in reality the labor required in *preparation* for it, will frequently sow the crop. There is so much humanity in accomplishing arduous work without the exhaustion of animal muscle, that I am fond of encouraging all within proper limits. The machinery described in former communications, has continued in satisfactory performance—particularly the combined action of steam and water, though there has been but little use for both lately.

I have in recent operation a water ram supplying my dwelling, bath house and kitchen with a good and constant supply of spring water, from a distance of three hundred and thirty yards, which could be accomplished at a cost not exceeding one hundred dollars, until a recent advance in the materials. Mine is of Field's patent, with a suction valve designed to use the water twice in working the ram where the supply of water is scanty. I don't think much of that part of it, and have not used any long enough to recommend it. But if it continues as at present and previously, I should think the investment every year fully repaid, by the comfort, convenience, security against fire, saving of labor, &c. The fowls appear particularly grateful. Mine was constructed under the supervision of Mr. S. J. Cralle, of Lunenburg, who can be relied on for faithful and successful construction.—Gatchell's patent is also operating finely in my neighborhood. Should any be attempted, great caution is essential for the joints, which must be air and water tight. The India rubber packing, used for a steam engine, is the best material I have tried.

I have designed this communication somewhat as a review of my former article on the same subject, and as the trial of reapers was induced by it, it seemed appropriate and desirable by many it should be made, as the committee, composed of gentlemen selected in consequence of their acknowledged judgment, had differed so much in their preferences. A peculiarity fancied by one man may be objectionable to another. One may prefer a light machine, which pulls easy, and delivers the wheat at the side; another may prefer a heavy machine, if in consequence of it greater strength and durability are secured, and may also prefer a smooth rear delivery to that at the side, if more tangled. So it is important to present the different peculiarities, that the predilections of each may be gratified. McCormick's and Manny's deliver at the side alone. I suppose a reel is indispensable to a *convenient* side delivery. Burrall's and Hussey's are so constructed as to deliver more conveniently in the rear, though they *can* deliver also at the side; but not so conveniently as the other two. Prompted by no other impulse than the promotion of agricultural benefit and a disposition to respond to any call made on me therefor, I hope I have said nothing at which any person

can take proper exception, as such was not my intention or desire.

As matters stood when the subject was first agitated, *no* inventor would ever have sold many in this section, as what was regarded as the premium reaper had almost universally failed; though in justice, I may repeat that one or two had previously performed better than my information at that time allowed me to conclude.

As circumstances now exist, I think it probable that each inventor will sell more than he otherwise would had matters remained as they were, which I hope will be regarded as a sufficient atonement for any supposed injury my remarks may have inflicted. One of my most judicious and best calculating neighbors, who used one of Hussey's for the first time last season, remarked to me that where the wheat was very rank and much tangled, he thought the reaper would pay for itself, while securing six hundred bushels, counting the amount saved in wheat and labor. Indeed, where they perform well, as they must do, unless from imperfect manufacture or management, when anything will fail. There cannot be sufficient objection, having heard none concerning mine, except from my hog manager, who says "they are a cheat upon the hogs," leaving nothing for them. The recent improvements in threshing machines are also encouraging to the agriculturist, as they now go to the extent of threshing and preparing for market, and afford great facilities for stacking the straw—all by a simultaneous operation. My observation and experience do not allow a particular description and recommendation; but I think it the duty of every farmer to contribute any information he may possess, promotive of general interest and benefit.

EDWIN G. BOOTH.

Nottoway, August 1st, 1853.

For the Southern Planter.

SHEEP.

Mr. Editor.—To M. L. A. in your June number, which, from absence and other causes, I have only recently seen, I answer, I must decline his proposal of trade, believing with him that the common sheep are unprofitable. As to the comparative expense of keeping, I will refer him to a communication to your journal in 1851 or 1852, by "Valley of Virginia." I think probably the information is also given in the number for last March, but I have not the number by me.

Price of Lambs.—I have always, though against my interest, advised against the purchase of lambs. They do not sometimes develop at a year old as they promised. Such I decline selling. Another reason—neither sex ought to be put to breeding until fall after one year old; it would then be too long before a

return could be had for the outlay. If breeding ewes were purchased, they would in the coming spring bring lambs worth as much as the outlay, and then if the ewes themselves should die, they have left enough to remunerate the expenditure.

How to get them to Buckingham.—In cars to Baltimore in one day from here; then to Richmond by steamboat, &c. or by rail road to Culpeper, thence to be driven, or in a two-horse wagon. I have lately received your July number containing a cut of "Matchless" and an answer to my communication in the March number, from Mr. Campbell of Vermont. I expect, of course, a difference of opinion on the comparative merits of the improved Cotswolds and the French Merino sheep, for surely Mr. Campbell, if convinced he had not the most profitable breed, would at once change—he would surely not sacrifice interest to a false notion of pride of opinion.

He ascribes to me the expression "that they (the French Merino) will or are not allowed* to breed before they are three or four years old." I have not the March number by me, but am sure if Mr. Campbell will examine my communication he will find I said no such thing. The very quotation he makes, following the sentence, shows that it was not mine, but the remark of the communication I was answering from Mr. Gilbert and Mr. Cugnot's letters to Mr. Rives, and they were the owners of the French Merino from whom Mr. Campbell procured his. Is it likely they would underrate them? I should think not. I said nothing of the sheep of my own knowledge. It was *their* information to your Southern Planter I was extracting from and commenting on, that "they were not permitted to copulate until three or four years old," "by means of the good care given them and the judicious selections of rams to unite with the best ewes, there was obtained," &c. rams weighing, three years old, something under 200 lbs., ewes 132 lbs.—live weight of course. Now, Mr. Editor, reduce this to mutton, and what would be the yield, his heavy head and immense horns, his fleece and other offal off? Do you suppose the

* If we mistake not, it was myself that said the French Merino sheep were not allowed to breed before they were three or four years old, and not Mr. Campbell of Vermont—so that we are in fault, if any one be, and not Mr. Campbell. Whence we derived the information we know not, and we did not state it as an absolute fact, which it may not be.

Col. Ware hardly does Mr. Campbell justice in imputing to him a desire to throw dust in the eyes of the Virginia farmers. He very distinctly states that for wool alone, or mutton alone, there are better sheep than the French Merino, but says that they are the best for the combination. In this we suspect he is right, though at the same time we think that the French Merinos are one of the humbugs of the day; from which class we are sorry that we cannot exempt Col. Ware's New Oxfordshires or Cotswolds, so far, at least, as their merits are stated by the Colonel.—EDITOR SOUTHERN PLANTER.

200 lbs. gross of that sheep will net 100, or any thing like it? or I may say even 80? A common sheep would scarcely do so without the immense horns. Now who made this statement quoted?—not I. I knew nothing about them; but from my experience of the improved Cotswold, we should not at all be astonished at a yearling—part bred at that—upon our ordinary treatment—no feeding (except when snow was on the ground) that would equal the three and four year old French Merino, gross, and beat him far, net; and yet their owners say it was all this management that "enabled" them to accomplish such weights.

Why (immediately after quoting from my communication "most probable that is desirable, if not necessary, to that breed of sheep," i. e. to "enable" them to accomplish such weights,) does Mr. Campbell go on to say "I would inform your correspondent that it is not necessary to wait three or four years before they will breed, (italics mine,) but, on the contrary, they are inclined to breed before they are one year old, nor is this all—many of them have twins—and will, if well kept, breed twice a year." Now could my communication bear, even by force, such construction? Is this designed by Mr. Campbell to throw dust in Virginia's eyes?—to humbug? Is there a Virginian who cannot see through such a mist? Who doubts, that knows any thing about sheep, but that any breed of sheep will go to the buck before one year old, or will occasionally bring twins—or will bring lambs twice a year under good management? It is not unusual, near cities, where there is demand for lambs, for ewes to be managed to accomplish that very object. My communication showed on its face that my comment was on the publication of the letter of Mr. Gilbert, &c. in the Southern Planter, stating that by keeping from breeding until three and four years old—by "judicious selections of rams" to go to the "best ewes" and by good treatment, "they were enabled" to accomplish such weights. I said then and believe now, that give the same treatment to the common Merino and they will bring the same results. Will Mr. Campbell say they are not in fact the common Merino brought to their qualities in that way? I certainly did not say or express an idea that even by contention would bear the idea that they would not breed until three or four years old, or any thing like it. Why infer or ascribe such to me?

Again, Mr. Campbell says: "Now, sir, the French Merino will give at least as many lambs—which, at the lowest calculation, will sell at \$100 each—\$300—and if twins \$600, besides a fleece of at least 25 per cent. more value than the improved Cotswold." It is a known fact that the Merino are not so prolific as the Cotswold. I have two ewes now whose mother at a birth produced three ewe lambs. These two were in the pen that won the highest prize at the Fair of the Royal Agricultural Society of England, the other was in the pen that won the second, and the next year the

same ewe produced three more ewe lambs. Now as to the comparison of the produce—can Mr. Campbell consider his position a fair one? Can he avoid seeing that it appears very much like a strong tendency to humbug the Virginia farmers? And if there is a Virginia farmer that cannot see Mr. Campbell is drawing a comparison between the sales of my PART BRED YEARLING *muttons* and the sheep he sells for BREEDING PURPOSES he deserves no mercy from Vermont enterprise. Suppose I were to calculate the same way. I have sold a sheep for \$500—in the three years three sheep for \$1500—while he has sold three for \$300, and where his sales amounted to \$600, mine would amount to \$3000. Would this be a fair criterion to judge the value of breeds of sheep by for general farming purposes? In nearly the commencement of my communication I said “I shall only calculate their profit for general farming purposes, sales as breeders not being a fair criterion.” All do not raise bucks for breeding purposes; if so, who would be purchasers. All do, *muttons*. It seems to me Mr. Campbell has taken the bit between his teeth and run off with the subject. Can he think he has stated my position fairly? My whole calculation was made in *MUTTONS ALONE*, and they only PART BRED—only YEARLINGS, carried through the winter on ordinary treatment, *not fed—not pushed*, and *when sold* to the butcher had only been fed two weeks; they were afterwards fed until taken away. And this has been the case for years; nothing is more *uncommon* than to find a two year old mutton of this breed in all this country; I do not know one; and nearly all the yearlings are gone already; they are always taken up in their yearling form by butchers. To prevent the possibility of my being misunderstood I repeated (I believe in the same page) “this statement, you will see, is made solely in reference to mutton.” Again, “do you think I have priced them high? Why, sir, I have used the *lowest* given by butchers for even PART BRED YEARLINGS.” “I sold, last November, to them the wether lambs that were lambed the preceding spring for over \$3 10 each.” So careful was I not to mislead that I took into my calculation *part bred yearling muttons only*. I did not even take into the calculation the muttons two and three years old I sold to a New York butcher for \$25 and \$35 each, who came to the farm and bought them *after seeing and handling* them. I was offered \$50 each for them if I would separate them from the yearlings, which I refused. All the sales were made on the farm, *after* the butcher had examined and handled them—the farmer not bound to drive them one foot. Nor did I calculate offers of \$100 each for muttons to be prepared for the butcher to a certain age, all as being extra, out of the scale of general farming operations, to accomplish my object of showing their value as *yearlings* over all other breeds. Mr. Campbell says, “one of our French ewes that did not breed last season, got so fat by grass,

that she was said to be worth \$20 for the New York butcher.” I gave no remark that might have been an idle one of a casual observer or even that of a good judge after handling, but *actual sales*, and the lowest prices for years back. And none have ever purchased yet that did not desire to do so again. Is this not *proof conclusive* of their value for farming purposes? But, says Mr. Campbell, “I have seen many a lamb in Mr. Cugnot’s or Loroux’s sheepfold that at six months old would weigh 80 to 100 lbs.” and “it is no uncommon thing in France for sheep at eighteen months old to weigh 200 lbs.” (both live weights of course.) Of course I cannot gainsay this; I know nothing about them; but does it not seem “*passing strange*” that the very same gentlemen, owning the very same sheep from whom Mr. Campbell bought, in their correspondence with Mr. Rives, to give Virginia an idea of the great value of the sheep, should make no such statement? So far from it, they say “by means of the *good* care given to them and the *judicious selections* of rams to unite with the *best ewes*, there was obtained from them rams which at *three years old* weighed” something under 200 lbs.—and *this* live weight. Does not this sound as their best, even at three years old? Do they recede in weight as they progress in age? or do they acquire 200 lbs. at year old and cease in growth after? But he further says, “By continuing that *extra* treatment he has RAISED rams weighing at three years 275 lbs.”—live weight. This certainly sounds like the *very best*, and this was by the extra keep, best selections of rams and best ewes, and not permitted to copulate in that time. Mr. Campbell gives a cut of his French Merino buck, “Matchless,” and says, “which was selected by myself from the flock of Mr. Cugnot, now four years old, and weighs two hundred and eighty pounds.” He was selected from Mr. Cugnot’s flock by himself, had received all the advantages of high treatment, was the “*best specimen of his kind*,” and only five pounds heavier than the heaviest that was instanced in France, and he only weighed two hundred and eighty pounds live weight—very fat—with his whole fleece on, with the large rolls of skin around his neck, his large head and immense horns—reduce this to meat, and would he, rid of all this offal, as well as the usual offal of all sheep, draw one hundred pounds. Why, sir, can it be possible that the “best specimen of his kind” with such keep for three years more, and all the advantage of growth of carcass, skin, wool and horn, in that time can be brought to only eighty pounds heavier than the “no uncommon ones of eighteen months old,” or only one hundred and eighty pounds heavier than “six months old lambs?” If this is all the improvement between the “no uncommon” ones and “Matchless” “the best specimen of his kind,” in three growing years, it would be curious to inquire what he weighed a yearling—his improvement must have been less, for he is unquestionably, I have no doubt,

the best of his kind. Now, my buck, not claiming to be the best of his kind, no horns, and sheared, weighed four hundred and twenty pounds. I bought him a yearling—no doubt his treatment was good until then—after that the only food he had, except grass, was turnips, and that only when snow was on the ground; and every year he served a large number of ewes. How would they compare? Mine would be a heavy sheep—heavier, without any French necklace or head ornaments, than the best French Merino of his kind, with *all* his. What would mine not have been, if he had been raised like the French Merino? A Cotswold mutton has been brought to 300 lbs. net—20 lbs. heavier than “Matchless, the best specimen of his kind,” head, horns, wool and all. A lot of my imported ewes, just *fourteen months* old and just sheared, averaged 220 lbs. A piece in your July number (that contains the cut of “Matchless”) from Mr. Allen, instances a less than fourteen months old buck, I let him have, that after sheared, and *no horns*, weighed 209½ lbs. Now here is a yearling that, both to net meat, would probably equal, if not beat, the acknowledged “best French Merino of his kind,” full grown, and I know he never eat a mouthful of grain until he went to Mr. Allen last winter. “Matchless,” full age and every advantage of raising and care in breeding, with his heavy head, immense horns, rolls of his neck and fleece, weighing only 280 lbs. and a *fourteen months* old Cotswold buck, sheared clean, *no horns* or other offal of the kind, weighing 209½ lbs.—add the weight of his fleece, 17½ lbs. (this fleece is not common); total 227 lbs.—only 53 lbs. difference between the best of the French Merino *full age* and a yearling Cotswold. Horns and the extra rolls of the neck off the Merino, and you will see their live weights differ but little. Could not four of the Cotswold—such as Mr. Allen’s—be sold to the butcher by the time “Matchless” came to this? Does it not prove my position, even giving to Mr. Campbell in it, the best specimen of the French Merino? Now, who can doubt which is the profitable sheep to the Virginia farmer?

Mr Campbell says: “At present the French sheep cannot be sold for mutton on account of the high price of them.” The improved Cotswold has been brought into this country for some years and the demand for them is still so great that we cannot use the thorough-breds for muttons—indeed, has so *increased* that I am unable to supply the demand, and have been compelled to send to England this year for a lot of bucks to fill it, at a loss to myself; but can we not form some idea of the results from part bred? Has every person that bought a French Merino buck so many thorough-bred ewes that he cannot put him to other breeds? My instances are altogether part bred.

Mr Campbell and myself do not differ so widely about breeding sheep too young. I have always advised against breeding from either sex until the fall after one year old, for

from their size there is always a tendency to do so from Cotswold lambs; and I have frequently refused to sell lambs to prevent it. And he is probably right (he knows more about them than I do,) about breeding from the French Merino only after arriving at maturity; but if we had to delay breeding from improved Cotswolds until that age, it would materially impair their value in my estimation. But, sir, if French Merinoes are not matured enough for breeding purposes until four years old, are they matured enough for profitable mutton before? And if they do not mature enough until four years old, and the improved Cotswolds do at one, do not the Cotswolds sell four muttons while the French Merino sells one, and at a higher price, too, than the French Merino at any age?

Mr. Campbell, in your January number says he claims “no such sleight of hand” weights of fleece; “but think I would be justified in saying that flocks of the above breed, *well kept*, will shear an average of from six to ten pounds;” in the July number, “for wool alone, I believe there are other breeds of the Merino quite as profitable to the wool grower.” This seems to be giving up the idea Virginians had of their value for wool; if other breeds of the Merino are as profitable to the wool grower, and gives so much less to the fleece, it must of course be because it brings a much higher price per pound, on account of its fineness. I am offered at home forty-one cents per pound for my wool, and a gentleman in New York, after seeing a sample, says I can get fifty cents per pound there. This would place the French Merino wool in the same standard with the improved Cotswold, and where is the 25 per cent. more value in the French Merino fleece over the Cotswold?

You will recollect some time since in my communication to your paper, I mentioned the value of sheep manure; and you are well aware, also, that England raises principally, if not entirely, large mutton sheep as the profitable sheep. I suppose she does not possess a Merino at all of any kind, though a near neighbor to France, and a manufacturer of broad-cloth—finding it more profitable to raise the mutton sheep and purchase the wool. She dates her agricultural improvement from raising them, and, consequently, turnips. I send you a letter from Mr. Burwell to the Alexandria Gazette, enclosing one from Mr. Lawrence, of Boston, to Mr. Barnard—please publish it with this. Mr. Burwell has been breeding for some years from bucks procured of me. It will sustain my position of having instanced the lowest sales of muttons in my calculations. Mr. Lawrence’s letter will show the value attached to the manure from such sheep by the English, and the value of their wool. Think of fifty million sheep averaging five and a quarter pounds *washed* wool, (all of them not Cotswolds,) and their manure valued at twelve millions of dollars.

Virginia has the subject now before her—

probably bought experience, though dear, may be best. I have done my part—Mr. Campbell his. She will act with her eyes open.

JOSIAH W. WARE,

Near Berryville, Clarke Co., Va.

August, 1853.

RAISING SHEEP.

To the Editor of the Alexandria Gazette:

As my brother farmers' attention seems to be at this time particularly turned to sheep husbandry, it may not be deemed amiss in me to say a few words with regard to the profit of rearing (my favorite breed) the Cotswold.

Mark you, it is only with regard to their profitableness that I now write, for to the man of taste, and who can indulge it, they so fill the eye and please the fancy, that it is not needful to hold out any other inducement.

In proof of their profit, I will give my experience of the last year, together with an extract from a letter from my friend, Mr. Barnard, of Boston, to whose kindness I am indebted for having drawn the attention of Mr. Lawrence and others, to a fleece of my wool. I shall, also, send a copy of Mr. L.'s letter to Mr. B.

I sold last February twenty-two muttons to a butcher from Philadelphia (two of which were old ewes not fit to breed, and nine of the others not two years old,) for ten dollars and twenty-five cents per head. My flock, consisting of breeding ewes and yearlings, yielded (at the last clip) an average of nearly six and a quarter pounds of washed wool, which I sold for thirty-five cents per pound. Mr. Barnard says: "The fleece of wool arrived in good order. Mr. Lawrence was much pleased with it, and has written me a letter, a copy of which I enclose. Since then it has been on exhibition in the office of Messrs. James Vila & Co., the first wool brokers in Boston. It has commanded universal attention. An immense amount of such wool would sell for forty cents per pound."

Should the above, together with Mr. Lawrence's letter (which I subjoin) prove of sufficient interest, please publish, and oblige your friend and subscriber,

NATHANIEL BURWELL.

Millwood, Clarke Co., Va., July 23, 1853.

JAMES M. BARNARD, ESQ., BOSTON:

Dear Sir,—I have carefully examined the fleece from a Cotswold sheep, and can say with confidence that your friend is quite safe in getting up a flock of this breed.

The wool is adapted for combing purposes specially, but can be used for other than worsted fabrics. The price for wool like this is not less than forty cents per pound, and millions of pounds beyond our home production are now required, to supply machinery already in operation.

The carcass of this breed has great value.

Within a few years in the great cities of this country, mutton has come into such favor, that it bears a price, when of prime quality, above the highest price for best beef.

If you will look at your hatcher's bills for two years past, you will find the prices from twelve and a half to sixteen and two-third cents per pound for mutton.

You are aware that this country takes from abroad yearly, about thirty millions pounds of wool for consumption, and that the entire clip here is less than seventy millions pounds.

We often hear wonder expressed at the enormous wealth of England. Among the thousand reasons why, I believe one to be her special attention to sheep husbandry. The United Kingdom of Great Britain and Ireland have over fifty millions of sheep, whose average weight of brook washed fleeces is five and a quarter pounds, giving over two hundred and sixty millions pounds of wool yearly.

The annual drop of manure from these sheep is worth to the soil over which they run twelve millions dollars; with no other resources, that country is rich indeed.

I firmly believe that no branch of industry in this country offers so many inducements as sheep husbandry, when it can be properly and skillfully attended to.

If I can give you any information further, on this most interesting subject of great national interest, I shall have much pleasure in doing so, and remain your friend,

(Signed) SAMUEL LAWRENCE.

Boston, July 14, 1853.

For the Southern Planter.

GOOD MANAGEMENT, NO MYSTERY— THE SECRET OF IT.

Mr. Editor,—A few weeks ago, I had the pleasure, in company with some others, of riding over the farm of a gentleman who stands high on the list of successful planters, as well as on that of the best farmers in Virginia—and when I speak of good farming in Virginia, I admit no superiority to any State or nation that the sun shines upon—all the circumstances material to make up the issue being taken into consideration. I do not intend to give a detailed statement of what we saw there, or to enter into a minute description of the management of this farm, (this I hope you will enrich your pages with, from the pen of the proprietor himself.) My purpose at present is different; I wish to give expression, if I can, to those reflections which arose unbidden to the minds of my companions and myself at the conviction of seeing a superiority so marked in our common pursuit. Why is it that, as in this instance, one man seems to get the start of the farming community around him and "to bear the palm alone?" And why is it that in every neighborhood in the State some one individual takes up a po-

sition in advance of his brethren and keeps it, and stands confessed by all the best manager amongst them? It is easy enough to answer these questions, as I will show; but it is *not* so easy to answer another which grows out of them, viz. Why we, who see their good management, do not profit by it, and "go and do likewise?" "Hic labor—Hoc opus est." But let us return to our first inquiry: Why is it that one farmer takes the lead of his fellows in the same pursuit and keeps it, unapproached and apparently unapproachable? He may be our own familiar friend. We may consider him inferior to ourselves in natural endowments, and far behind us in acquired knowledge; and yet he outstrips us in the race of life. He takes the position of the "America," and "the rest of us are nowhere." Why is this? I said it was very easy to answer the question, and I will proceed to do so; and you will find that it involves many practical questions, which your readers will do well to ponder. It is known to yourself, sir, and to your readers, that the last and the present years have been the most unseasonable and unpropitious for the farmer which have occurred for a long time, throughout the planting region of Virginia. Not only have our corn and tobacco crops suffered a material diminution, both in quantity and quality, but in addition, the ravages of the joint-worm threaten to exterminate the wheat crop. As in times of trial the statesman proves himself, so in difficult seasons the good farmer stands conspicuous. Whilst most of us yield without a struggle to a diminished income, because the seasons are perverse and untractable, I have not been able to detect any sensible diminution in the products of the good farmers of my acquaintance; and, sir, I have a good opportunity of judging, for my own farm adjoins and overlooks one of the best managed estates in Virginia, and I have the daily and hourly opportunity of witnessing the operations which lead to this success; and yet I continue complacently to follow my own imperfect and defective devices, as if they had never before resulted in comparative disappointment and failure.

The gentleman, whose management I alluded to in the beginning of this article, as well as my next neighbor, both raised full crops of tobacco last year; whereas most of us were content with from one-half to one-third of a crop. To one acquainted as I am with their management, there is no mystery about this. In the first place, they have their plants ready to embrace the early seasons, and in the second, their land is properly prepared and ready to receive the plants. The way to have good plants in time is as plain as the way to market, and yet four-fifths of the planters of Virginia neglect this, the first and most important step towards making a crop of tobacco. These gentlemen, after selecting suitable land, ample in quantity, (allowing one hundred square yards for every seven or eight thousand hills,) burn it thoroughly during a

dry spell in winter, prepare it *well*, and manure it *heavily* with the best manure they can procure, *free of grass seed*, at the time of preparing it, sow the seed, tread, and cover *thickly*. After the plants are up they are plastered, and occasionally before a shower, as much fine manure as they will bear is carefully sown over them. These farmers always follow this plan, and their plants are always ready for the seasons and the hills for the plants. Their crop is growing and luxuriating in a July sun which parches and withers mine, because, being just planted, it has not yet rooted itself. The good manager excels just as much in the after management of the crop. It is kept well tilled and clear of worms and suckers, and suffered to get ripe—then cured in the best manner, taken down in the right order, and never suffered to mould and funk in bulk; is then properly assorted, neatly tied and packed away, and of course commands the highest market price. Now, sir, we console ourselves for short crops and low prices year after year in some such way as this: "That we had a dry and cold spring, an unusual glut of worms, or a storm that blew and turned *our* crop, a warm, wet spell in spring caused our tobacco to mould in bulk, or it happened to get to market in rather, soft or hard order," &c. Now one would think that in the course of the fifteen, twenty, thirty or forty years that some of us have been farming, we might have sometimes escaped these disasters; but the letters of our commission merchants show that we have had no such good fortune. If the spring has been so forward as to push the plants upon us and force us to set them out in good time, the crop has been neglected or mismanaged at some other stage, and we have the same beggarly account to give. There is no mystery—there is no secret in *their* management of this crop; and yet four-fifths of us are as defective in our practice as if we were trying some new and untried experiment and had never before seen or heard of the successful experience of our neighbor. Why is it that we do not follow a practice which we know is attended with uniform success? Why do not we "go and do likewise?" This is a hard question to answer. Does the same relative superiority show itself in the other products of the well managed estate? As regards the crop of corn, they know no such word as *fail*. An unseasonable year they gather a crop which we would be satisfied with of a seasonable one. My neighbor actually makes an average crop of ten or twelve barrels per acre, while I make six on land which I should be unwilling to acknowledge as inferior to his. How is this? As in the case of the tobacco crop it is easy enough to them. The field for corn is deeply ploughed in winter, thoroughly pulverized and manured where it requires fertility. The corn is rolled in plaster and planted at the *right* time; taking care to use an abundance of seed, no replanting is required; and there are few missing stalks in the crop—the *thinning is done as soon*

as the corn will bear it—the working is begun with coulters as soon as the crop is well up—then with the winged coulters next the corn, followed by cultivators—and lastly with the mould-board plough; the whole operation being accompanied in the interim by such hoe work as the crop seems to require. Other implements are substituted by good farmers for those I have mentioned, but they answer the same purpose, viz. to keep the ground mellow, fine and moist, while the plant is small. The fodder being gathered and carefully stacked, and the corn housed in cool, dry weather, we never hear any complaints from them of rotten or unsound corn. Now all this seems very plain sailing!—easy enough to do; “no mystery or secret” about it, and yet most of us go blundering on from bad to worse through all the operations, from planting to housing. We begin with a bad preparation, late planting, late working, and late thinning, and often end the matter by putting the crop away in a green and uncured state, and for the next twelve months have to eat dark and musty bread, with the additional satisfaction of knowing that our horses and hogs are worse off than we are, as we have first choice. What is the reason that we neglect to follow a practice always before our eyes, and which invariably results in an abundant crop? But let us examine the good farmer’s management still farther, and see if the other products of the farm correspond with the corn and tobacco. They do! The wheat crop, not so much under the control of the farmer as the other crops mentioned, for obvious reason, is yet, under the good farmer’s management, comparatively certain. The past and present years they have reaped average crops, while the most fortunate of us have only reaped half a crop, and not a few have had to be content with a return of their seed. It would seem that Providence favors the good husbandman. There is no more “mystery and secret” in their cultivation and success in raising wheat than in the other crops already mentioned. They prepare their land perfectly and in time. They sow good seed on good land, naturally fertile, or made so by manure or guano. The seed is well covered and the land rolled if at all cloddy, and all these operations are performed in the best manner. Their fields are green, while in ours, a few spires only can be detected here and there, struggling through the clods. Therefore, it should be no matter of surprise if after harvest shocks stand upon their fields as dozens do upon ours, and that they should count by thousands, and we by hundreds of bushels. Don’t you agree with me that it is difficult to account for this state of things? Year after year we witness their good management and success, and yet we either sow defective seed, or too much or too little of it, or our preparation is slovenly, or the covering is imperfect, or we get our crop sprouted in the field, or injured in the stack, or heated in bulk. So that one good crop in our agricultural experience is

regarded as an event which a combination of fortuitous circumstances brought about; but the chances are against their recurrence, and we have no assurance of a continuance of our good fortune. The farmer who trusts important interests to the accidents of chance, is dealing with a whimsical and capricious jade and does not deserve to succeed.

I have taken the three most important crops, corn, wheat and tobacco, and have drawn a hasty comparison of their management by the good farmer and the indifferent one, and if I am not mistaken the wayfaring man, though blind, can not only see the difference, but also satisfy himself in what it consists. I shall briefly allude to some other points in their management, and the contrast will be found no less striking. The good farmer’s houses are of the best construction and kept in repair, also his fences and roads; he has no vehicles overturned or broken down, no bulks of tobacco or wheat leaked upon, no crop destroyed by stock. His horses and oxen are kept in condition to do their work—as the horses grow old their places are supplied by younger ones; (ours are suffered to get poor and die) his cows and oxen, as they grow old, are converted into beef, (whilst ours die of the hollow-horn, or another disease quite as fatal, which may be shortly described as—*an emptiness.*) He sells mutton, lamb, veal or pork—our lambs perish by neglect, or are destroyed by hogs; our calves die of starvation—our pigs come at the wrong time and are overlaid, or our stock hogs being mangy, are worthless. Now, sir, if we “look on this picture and then on that,” does it not afford matter for serious reflection? Is it exaggerated? I think not. You, Mr. Editor, will remember that at the meeting of the State Agricultural Society, held in Richmond in February last, when your delegation were requested to enumerate the good farmers of Albemarle, (the old banner county of the State in agricultural improvement,) twenty-five was the largest number which could be counted, and there were some of these few whose claim to the distinction was doubtful. The remaining four hundred and seventy-five farms in the county must be more or less mismanaged. Why is this? There is certainly as great an amount of information and general intelligence among the four hundred and seventy-five bad as among the twenty-five good farmers of the county. The bad have the example of the good continually before them, and every conceivable inducement to follow their example, because they have the evidences of their own senses, that by doing so, they can secure to themselves comfort and independence; but they don’t do it, and if we may judge the future by the past, they never will. The question still remains unanswered—I give it up in despair. If it is capable of solution, will you or your correspondents answer it intelligibly, and oblige

Your friend,

A VIRGINIA FARMER.

For the Southern Planter.

A TEXT BOOK OF AGRICULTURE.

Mr. Editor.—Yours is the great calling for health, wealth, innocence and virtue, and lies at the foundation of every other occupation. Without it commerce must stagnate, cities decline, railroads become useless, and every interest languish and die; and yet a majority of the rising race think it beneath their notice. *O tempora! O mores!* Adam, in his innocence and abundance was directed to dress the garden of Paradise, and shall his degenerate sons and daughters be unemployed? A great man has said, "the idle man's head is the Devil's workshop." And the Jewish proverb is, "he that raises his son without a trade teaches him to steal." There is a great disposition to seek after professions until they are overflowing with incumbents, and a growing dislike to manual labor, but that suicidal spirit should be met with decided opposition. I rejoice that we have yet in Virginia a few of the old Roman stock who are not ashamed to work, but consider it a shame for any man or woman to become a mere cipher in creation. The farmer has, or may have, the whole world in miniature about him, and is independent of the universe for sources of pleasure and profit. Let every true patriot teach his sons to rise early, stay at home, discard their sports, attend to business, and walk in the steps of the great Washington, who was the father of husbandry as well as the father of his country.

Columbia's sons, spurn not the rugged toil,
Your country's glory is her cultured soil,
Mount Vernon's patriot of unrivalled worth
Increased his laurels while he tilled the earth.

But I wish to make a suggestion about books and schools in relation to agriculture. I wish to see a short system of agricultural science taught in our common schools, so that every boy in the State may have, if possible, some knowledge of it, and imbibe a taste for it. The book should give a sketch of botany and vegetable physiology—a description of soils and manures—an account of the various crops, and the best modes of cultivation—the comparative value of the different kinds of stock and the best modes of fattening hogs, beeves, &c.—together with instruction upon draining, fencing, agricultural implements, &c. Perhaps Stephens' Book of the Farm, abridged and adapted to farming operations in this country, might suit as well as any work, but it should have questions on the lower margin of each page adapted to the subjects. We should not calculate that children in school would thus learn in a few months to be good farmers, but they might learn something valuable upon a subject that is of more importance than many other subjects they have before them, and in times of recreation the most of them would be employed at home in its

practical operations. Something has been said about agricultural colleges, but while possibly they might benefit a favored few, they would not suit the mass of the people. Few could afford the expense, and it would require the removal of the youth from the parental roof, and they might learn more evil than good. Let us have schools, books and papers for every family that may choose to avail themselves of such advantages, and no doubt good will be done. I trust the recent organization of the Virginia State Agricultural Society will give a new impulse to this great interest; but steps should be taken to organize societies in every county as soon as practicable. Could not the collecting agents of the "Southern Planter" visit our courts and address the people, both publicly and privately?

Respectfully, yours, J.
Rough Creek, Charlotte, Aug. 16, 1853.

For the Southern Planter.

REMEDY AGAINST CUT WORM.

Mr. Editor.—I very much regret that I have neglected until now to communicate to the farmers of Virginia an item of information which might have been of infinite value to them if it had been communicated in proper time this season. The information to which I attach so much importance, and which I humbly conceive will produce an immense saving of labor and a great increase of grain, seems very simple and open to the discovery of the least experienced.

About six years ago I ploughed up a grass lot of about six acres towards the close of the winter. Early in the month of April I planted it in corn in the usual drills. The seed was soaked for twelve or fifteen hours in a strong solution of saltpetre, and then mixed with tar and water, (a pint of tar to a gallon of very warm water,) pouring the mixture on the corn and stirring the mass so as to coat the seed, when plaster in sufficient quantity was strewed over the whole until it thickly enveloped each grain of corn. Being immediately planted in furrows five or six inches deep, vegetation speedily ensued, and in four or five days my lot was beautifully covered with the early risen corn plants. In the evening, perhaps of the fifth day after planting, I saw, and was delighted with, its appearance, but on the succeeding morning was shocked to find my expectations utterly blighted, my entire crop being prostrate on the ground, a victim to the ravenous cut worm, of which hundreds were found upon examination. It was very evident that to replant in the same rows would be utterly futile.

Reflecting that all the worms infesting the land had congregated along the rows, and that if any means could be devised to keep them there, their farther depredations might be pre-

vented, I first strewed along those rows a small quantity of seed oats, the earth being slightly mixed by running a cultivator along with and upon them, and in two or three days afterwards rows were laid off for the corn between those first planted. The oats came up quickly and seemed to afford an abundant supply of provender for the worms. In due time the replanted corn made its appearance; but the ravages of the worms were confined to the oats, to the lines of which they had collected—not a stalk of corn was cut down, and I had the gratification to perceive that my seemingly simple remedy had been entirely successful. This experiment occupied three acres only: the other three were replanted in the usual way, with the use of the weeding hoe, and were from time to time destroyed, and replanted three times before the worms permitted the corn to remain.

To make this plan available for the first planting, I would suggest that if there be cut worms in the field, which may be easily discovered by an examination of the surface, rows, the usual width of the corn rows, be first sowed in oats—they can be rapidly drilled by hand over a space of eight or ten inches, and covered with a small cultivator—and just as they begin to appear above ground, let the corn be planted. I have no doubt this will prove a remedy; and if it should, I shall consider myself well paid for the trouble of writing this article for those important members of society to whom, otherwise, the remedy might not have become known.

C. P. MCKENNIE.

University of Virginia, Aug. 20, 1853.

From the Farm Journal.

THE STRAWBERRY CONTROVERSY.

The statement of Mr MEEHAN, in the April number of the Farm Journal, alleging that he has observed the sexual characters of the strawberry flowers to be variously modified by culture, or different methods of treatment, has elicited some strong asseverations of opinion, in contradiction to that allegation of fact. One writer unhesitatingly declares the alleged change to be "utterly impossible;" and I understand that in the Queen City of the West they have had a public gathering, to deliberate on the subject, which resulted in a *pronunciamento* adverse to Mr. MEEHAN's statement—his facts and observations being rejected by a clear majority of the voters present! The matter being thus settled by preamble and resolution, after the manner of political difficulties at a war meeting, it may seem to be out of order, now, to offer any remarks on the controverted topic. Nevertheless, as this is reputed to be a free country, I should like to be indulged with the privilege of submitting a few suggestions—if not in arrest of judgment, at least as a plea in

mitigation of the sentence, against my friend MEEHAN. It is the remark of a vigorous and sagacious modern writer, that "no scientific question was ever yet settled dogmatically, nor ever will;" and I think the same may be especially predicated of questions of fact in Natural History. I may here observe, that I was favored with the opportunity of examining one of Mr. MEEHAN's specimens—in which there were certainly two scapes from the same root—one bearing a cyme of *pistillate* flowers (with minute rudiments of abortive stamens,) and the other a cyme of *perfect* or hermaphrodite flowers; and whether the specimen was the progeny of a pistillate, a staminate, or a hermaphrodite plant, I should think the inference plausible, if not irresistible, that the flowers on at least one of these two cymes, must have been a modification or altered product of the parent plant. It is this kind of change, in the character of the flowers, which I understand Mr. MEEHAN to announce, as having occurred in plants under his management. Now, in view of the countless modifications daily observable in the organs of plants—and especially in the floral organs—I can perceive no sufficient ground for declaring the changes, reported by Mr. MEEHAN, to be "utterly impossible." The modifications here referred to are a very different thing from the alleged *transmutation* of one kind to another—which is vulgarly supposed to take place in certain plants, just as the alchemists formerly pretended was effected among the metals. They merely alter the texture, distort the forms, or affect the development of organs; but do neither change nor annihilate those essential characteristics, by which the plant is rendered permanently distinct from every other genus and species. The floral organs of many plants are remarkably subject to modification, under the long continued influences of soil, climate and culture, or management. Some flowers are rendered *double*, as it is termed, by the expansion of stamens into petals; others become imperfect, and even neutral, by the abortion or blighting of the stamens, or pistils, or both. The *strawberry* appears to be very liable to this kind of blight; and hence the much talked of sorts, among cultivators, of *pistillates* and *staminates*—though in all the pistillate flowers, which I have examined, there were *vestiges*, more or less obvious, of abortive *stamens* on the rim of the calyx. It also varies much under culture in some other features—especially in the development and character or quality of the *receptacle*, or what is commonly regarded as *fruit*; but no one, I believe, has yet seen a strawberry plant transmuted into a *cinquefoil*—though so nearly allied in habit. The organs of plants may be greatly disguised by the influences above mentioned; but still the essential distinguishing traits are preserved—and there seems to be no insuperable obstacle to prevent a plant, with modified or abortive organs, from reverting, under a change of circumstances, to its original condition, and resuming its pristine form and

character. The normal, or what may be called the constitutional character of the strawberry flower is to be perfect—i. e. furnished with both stamens and pistils, (possibly such may be the true normal structure of all flowers;) and although many other plants, as well as the strawberry, are found with imperfect, and even neutral flowers, every naturalist and careful observer knows that there is often an obvious effort and tendency in such flowers to a more complete development—i. e. to become perfect and regular. We occasionally see *diandrous* flowers become *didynamous*, and *didynamous* plants developing regular *pentandrous* flowers; and it is not at all unusual to find the *staminate tassel* of the cultivated maize (*Zea Mays*, L. a *monoicous* plant,) bearing *fertile flowers*, and exhibiting a very successful attempt at the production of an ear—or cluster of ears—of *Indian corn*. These instances, I trust, (for it is needless to multiply them,) may suffice to show that there is nothing irrational nor incredible in Mr. MEEHAN'S observations; and that it is rather strong phraseology, to declare such phenomena to be "utterly impossible." The polemic writers on this strawberry question, speak of the necessity of staminate plants among the pistillate to produce or perfect the *fruit*. No doubt, the pistils must be fertilized, in order to produce seeds that will vegetate. But what do those gentlemen understand by the "fruit?" Do they mean the little single seed *akenes* or *nutlets*, which are sprinkled over the enlarged pulpy receptacle—or do they refer to the *receptacle itself*, which in popular parlance is intended by the term "fruit?" If they have reference to the *real fruit*—the *nutlets* which contain the seed—there is probably no question (as already intimated) about the necessity of staminate influence to produce perfect fruit. But I have a suspicion, that by the term "fruit," they mean the delicious *receptacle* which bears the fruit, and if they mean to allege that the pistils must be fertilized by the stamens, *in order to produce that enlargement of the receptacle* which affords an *esculent substitute* for fruit, then I have only to say it is a *question of fact*, which I have had no adequate opportunity to determine, and concerning which I, for one, should be happy to receive reliable information. To ascertain the point satisfactorily, would require very careful experiments and observations. Whether such have been made, I am not informed. I may remark, however, by way of *analogy*, that there are instances in which *pistils*, and even *receptacles*, are enlarged, where no staminate influence has been exerted. The conglomerate coalescent *pistils* of the Osage orange (*Madura*), for example, attain to their full natural size (although the *seeds* are necessarily imperfect,) where no staminate plant is in the neighborhood; and, what affords a closer analogy, the including *receptacle of the pistillate fig* is fully developed, when entirely free from any staminate influence. Whether the *receptacle of the strawberry* ever enlarges, without the pistils being fertilized, (as already stated,) is more

than I can tell; but I feel well assured that any competent authority, who may furnish the information, will make an acceptable contribution to physiological botany.

W. D.

West Chester, June 6, 1853.

Dr. Darlington, of West Chester, Pa., is one of the most eminent botanists of the Union.

PRATT'S DITCHING MACHINE.

We find in the *Ontario County Times* some account of a ditching machine, invented by a Mr. PRATT, of Hopewell, in that county, which promises to be valuable to the farming interest. Steps have been taken to secure a patent. The Times says:

At a recent trial near Canandaigua, Mr. Pratt succeeded in digging twenty-five rods of ditch two feet deep, in two hours and a half with a single team; and those present were entirely satisfied with its operation. If it will work one-half as fast as it is said to here, it will be an immense labor-saving machine. It is a difficult thing to describe, but we will attempt to give an idea of its appearance and mode of operation. The plough which digs the ditch is attached to the bottom of a semi-circular tube of cast iron, resembling the box in which grain elevators load themselves. The elevators are of cast steel, twelve in number, and look like shovel ploughs; these elevators or spades are attached to a wheel, and when the machine is in motion the wheel revolves and they take up the earth as deep as the plough cuts it, carry it up through the cast iron tube, and when the dirt falls off it strikes upon an inclined plane and slides off on each side of the ditch. There are handles for guiding it, like plough handles, and the bar to which the team is attached has different holes for the clevis, so that it may be set to go deeper or more shallow, according to the nature of the ground in which it is to operate. Ditching is becoming an important item in the farmer's expense account, and any thing calculated to make it cheaper, will be received with favor. We trust that Mr. Pratt's ingenuity will be liberally rewarded.

THE HIGHEST PRICE YET.—A hogshhead of tobacco was sold in our market yesterday by Mr. D. E. Franklin, of this county, at the unprecedented price of \$110 per hundred. The tobacco was purchased by Mr. William T. Booker, to be manufactured for his New Orleans customers.—Lynchburg Virginian.

From the Farm Journal.

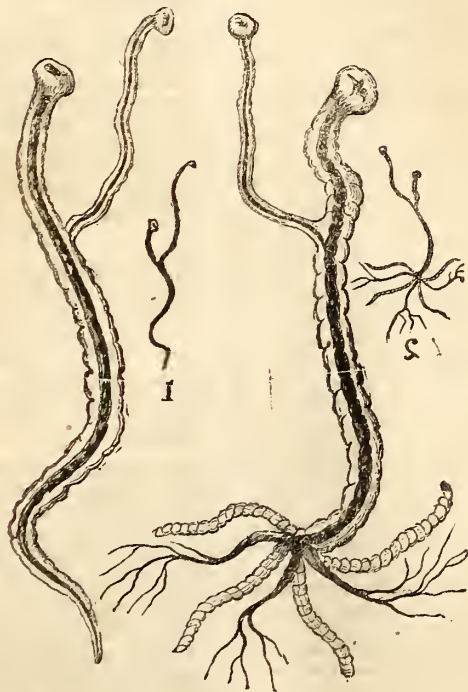
GAPES IN CHICKENS.

To the Editor of the Farm Journal,—Can you give any account of, or remedy for gapes in chickens, which, if not arrested, bids fair to

destroy the best half of my young poultry. Improved as well as the common breed are all attacked, and die in a short time afterwards. Any information through your valuable journal, will confer a favor on several of your subscribers in this section of the State.

Erie county, Pa.

H. SILL.



In reply to our correspondent, we give an engraving of the worms magnified, which are generally believed to cause the disease in poultry, called gapes. The most simple and effectual remedy we know of, is to make a loop of horse hair, and introduce it down the wind pipe of the young chicken, when, by twisting the loop a few times, the worms can be very readily drawn out. We have seen this process tried, and with great success. In Beament's Poultry Book, is a communication from C. F. Morton, and containing some valuable suggestions, which we copy below.

"From all I have seen and heard on the subject of what is called the gapes in chickens, it is a disease which is not generally understood, I shall, therefore, give you my opinion on its nature and cure. This spring, having my chickens attacked as usual with the gapes, I dissected one that died, and found its bronchus, or windpipe (not the throat,) filled with small red worms from half to three quarters of an

inch long. This satisfied me that any particular course of feeding or medicine given would not reach the disease. I therefore took a quill from a hen's wing, stripped off the feathers within an inch and a half of the end, trimmed it off with a scissors to about half an inch wide, pointing it at the lower end. I then tied the ends of the wings to the legs of the chicken affected, to prevent its struggling; placed its legs between my knees; held its tongue between the thumb and fore-finger of the left hand, and with the right, inserted the trimmed feather in the windpipe, (the opening of which lies at the root of the tongue;) when the chicken opened it to breathe, pushed it down gently as far as it would go, (which is where the windpipe branches off to the lobes of the lungs, below which I have never detected the insect,) and twisted it round as I pulled it out, which would generally bring up or loosen all the worms, so that the chicken would cough them out; if not I would repeat the operation till all

were ejected, amounting generally to a dozen: then release the chicken, and in the course of ten minutes it would eat heartily, although previous to the operation it was unable to swallow, and its crop would be empty unless filled with some indigestible food. In this manner I lost but two out of forty chickens operated on; one by its coughing up a bunch of the worms which stuck in the orifice of the windpipe and strangled it—the other apparently recovered, but died several days after in the morning. In the afternoon, upon examining its windpipe, I found a female worm in it, differing from the others by branching off at the tail in a number of roots or branches, between each of which were tubes filled with hundreds of eggs, like the spawn of a fish, and although the chicken died in the morning, the worm was perfectly alive in the afternoon, and continued so for half an hour in warm water. While I was examining it in a concave glass under a microscope, it ejected one of its eggs, in the centre of which was an insect in embryo.

From this fact, I have come to the conclusion, that when the female worm breeds in the chicken and kills it, these hundreds of eggs hatch out in its putrid body in some very minute worms, which, probably after remaining in that state during the winter, change in the spring to a fly, which deposits its eggs on the nostril of the chicken, from whence they are inhaled and hatched out in the windpipe, and become the worms which I have described.

There is one fact connected with this disease—that it is only old hen-roosts that are subject to it; and I am of opinion, that where it prevails, if the chicken-houses and coops were kept clean and frequently white-washed with thin white-wash, with plenty of salt or brine mixed with it, and those chickens that take the disease, operated on and cured, or, if they should die, have them burned up or so destroyed, that the eggs of the worms would not hatch out, that the disease would be eradicated.

I am also satisfied that the chicken has not the disease when first hatched; several broods that I carried and kept at a distance from the chicken-house where the disease prevailed, were entirely exempt. And chickens hatched from my eggs where they had never been troubled with this disease, were perfectly free from it; and a neighbor of mine who built in the woods half a mile from any dwelling, and has raised fowls for six or seven years past, and has frequently set my eggs, has never had the gapes among his chickens.

With my first brood of chickens, there was not one escaped the gapes. But all that have been hatched since I had the chicken-house and coops well white-washed inside and out, with thin white-wash, with plenty of brine in it, and kept clean, have been exempt from the disease, with occasionally an exception of one or two chickens out of a brood.

In operating on the chickens, although one person can effect it, it is much easier done to have one to hold the tongue of the chicken

while the other passes the feather down its windpipe, and by having a small piece of muslin between the fingers, it will prevent the tongue from slipping, which it is apt to do, upon repeating the operation.

Accompanying this, I send you drawings of the gape worms in their natural size, and as they appear when magnified. No. 1 are the male worms, and No. 2 the female; you will observe the heads of both male and female branch off in two trunks with suckers like leeches at the extremities of the trunks, one trunk longer and thinner than the other. The intestines extend from the branching of the trunks downwards towards the tail, and are perfectly apparent when magnified. The female branches off like the roots of a tree at the tail, with intermediate tubes filled with small oval eggs.

Yours, &c.,

C. F. MORTON.

Mill Farm, near Windsor, Orange Co., N. Y.

For the Southern Planter.

DR. VALENTINE'S ARTIFICIAL GUANO.—"THE OTHER SIDE OF THE SHIELD."

Mr. Editor.—Last fall I obtained from Duval of Richmond the ingredients for preparing half a ton of this so called fertilizer, and having carefully mixed them according to Valentine's recipe, about 1st October I sowed it on three acres of land, and harrowed it in with the wheat; on the adjacent parts of the field, all of it thin grey land, sowed one hundred pounds of Peruvian guano per acre.

I have just threshed and delivered the wheat—the result was, less than four bushels per acre from the land sowed with the Artificial guano, and nearly eight from that sowed with one hundred pounds of Peruvian. The whole field was much injured by the joint worm—while another field upon which I sowed two hundred pounds Peruvian Guano, per acre, yielded fifteen bushels per acre.

B. H. MAGRUDER.

Glenmore, Albemarle, Aug. 2.

For the Southern Planter.

BLOOD ON GRAPE VINES.

Mr. Editor.—Mr. Alex. Bruce, of Farmville, has growing at his door one of the healthiest and most vigorous grape vines I ever saw, and the fruit mature very perfectly, and in abundance. He prunes, of course, pretty freely; but not as fully as others generally do. The sound and excellent condition of the vine and grapes is supposed to be owing to the use of *beef's blood*, with the usual manures. I know

that it would be impracticable to apply blood to a vineyard of any extent; but probably those who have a few vines might profitably collect the blood from beef and hog killings, and apply to the roots of the vine; and it may be that such an application, or that of the flesh of dead animals of any kind, might prevent the falling of the grapes, referred to by Major Yancey, in the August number of the Planter.

W.

Farmville, August 10, 1853.

CELERY.

The production of good celery is a point well worthy the care of the gardener. Few vegetables are more highly prized or require so much attention from the time the seed is sown till it is furnished to the table. The droughts of summer and the severe frosts of winter are alike injurious to it; and to insure a crop, the soil must be in the best condition. Moisture is essential to its cultivation, and a supply of well fermented manure or rich compost is one of the first conditions towards success. An open, free, loamy soil sufficiently rich in vegetable matter will suit it. Stiff tenacious clay is to be avoided, as it binds too much, and prevents the free development of the plant; such soil also induces canker, while free sandy loam, with a sufficient supply of well decomposed manure, will raise it, free from this. As a large quantity of manure must be supplied with the crop to insure its rapid growth, it is not essential that the soil should be previously very rich, its physical condition is more important. In choosing a piece of ground for celery it is advisable to take into consideration the nature of the crop that may follow, so that the best advantage may be taken of the high cultivation generally applied to it. The ground where good celery has been raised will be capable of producing any crop requiring highly manured soil, the following season. A very successful plan is adopted by some gardeners to secure a shade for the young plants; they plant a row of peas or corn between the trenches, which is taken off the ground before the soil is required for earthing up.

When the ground has been chosen, mark off a space of five feet in width, and open a trench eighteen inches wide, throwing out the surface soil a spade deeper, spreading it over the ground equally. In the bottom of this trench deposit the manure or compost. Farnyard manure, night soil, hog-pen manure, and other well decomposed material, is the best for this vegetable, which depends for its perfection on quick and luxuriant growth. This should be well incorporated with the soil and reduced to a fine state for the reception of the plants. Plant them in double rows in the trench at eight inches from plant to plant, and about four inches between the rows; the plants

should be alternate in the rows. Care must be taken in removing the plants not to reduce the roots too much, they may be removed without being checked by lifting them with a garden trowel. The soil about the young plants should be made as fine and mellow as possible. The middle of July is quite soon enough to plant out the general crop of celery in this climate; they cannot endure a much longer summer, and by planting earlier nothing is gained. The soil must be frequently stirred to keep down weeds and admit the air. It is not advisable to earth up until the plants have attained a good size; as they do not keep well during the winter when they are earthed up too soon in the season. Very good celery is grown and blanched without earthing, until the final covering is put on for the winter. Such as is not required for use until the latter part of the season may be safely treated in this way, as it will be sufficiently blanched by being covered during winter. A portion for immediate use must be earthed up as soon as the plants attain a height of six or eight inches. This operation must be carefully managed, taking care to keep the soil from getting into the heart of the plant. The most certain method is to fold the leaves closely together with one hand, while the soil is drawn up around them with the other.

The first earthing is the most important. If this is properly attended to, the succeeding ones are not so likely to be mismanaged. The five feet space is used for the purpose of covering up for the winter. Where such space is left, it is not necessary to remove the plants from the trench, as is sometimes done; but they may be covered up as they stand. The great danger is from rotting when covered up in this way, and to prevent this the soil must be made so compact as to prevent any water from entering. In a very severe season, boards are placed over the ridges. When the stalks are removed from the trench they are placed on the ground upright, and banked up with dry soil to a sufficient depth to exclude the frost, and covered with straw or boards. If covered when dry they are not likely to rot, and are well blanched by the latter end of winter. That portion of the crop for early use may be secured in a separate trench, and may be deposited in a dark part of the cellar.

There are only two or three varieties of celery cultivated to any extent in this vicinity, of which Seymours' White Solid is the most useful. The Red Solid is cultivated to some extent, but is not found so suitable as the White, and is not so much used now as formerly. There is a great difference in the quality of seed depending upon the stock from which it is grown. It is a seed which disappoints many persons in not germinating readily; a bed sown one week may come up freely, while another sown the following, from the same package, and on similar soil, may disappoint. Moisture in the soil is important.—*New York Agriculturist.*

FARMING ABOUT NORFOLK.

Extract of a letter received from Princess Anne.

TO GEN. W. H. RICHARDSON, Richmond, Va.

We are nearly through with the shipping of our vegetable crops.

The potato crop was not a very large one, owing to the drought; it is, nevertheless, a very remunerating one. Other crops, viz. peas, tomatoes, cucumbers; and fruits, strawberries, &c. &c. have turned out well and paid handsomely.

I cultivated no vegetables for sale, save the potato. The yield this year on my farm, is one-third less than last year. Last year I sold from eight acres, one thousand and thirty-five dollars worth of potatoes, and produced a second crop from the same land, worth at least half that sum. Have not quite finished digging my second crop, shall do so in a day or two, but am near enough done to form a pretty correct idea of the quantity produced. My crop will reach one thousand barrels, which will give me net, that is, clear of barrels, freight, commissions, &c. a little upwards of two thousand dollars. This is the product of thirty acres of land, the greater part of which land is already planted in a second crop, (corn,) and the balance will be planted in a few days in Irish potatoes and rutabaga turnips.

The prospect for a corn crop, provided we can have it seasonable, is very good. There is some complaint about the oat crop, which is now being cut, mine, however, is a magnificent crop, and will be fully equal to any I have ever raised.

I regret exceedingly that my own affairs have so engrossed my time as to prevent my doing much for the State Agricultural Society. I hope, however, to be able to do much more than I have done. You may rest assured of one fact however, and that is, that agriculture lies near my heart, and will always command my best exertions.

In great haste,

Your obedient servant,

EDWARD H. HERBERT.

Level Green, July 14, 1853.

USE OF TOBACCO IN ENGLAND.

In 1851, 23,052,978 pounds of this nauseous weed was consumed in Great Britain. The revenue on this was 3s. per pound, or £1,485,758! nearly \$2,500,000! It seems that the use of tobacco in the United Kingdom is greatly on the increase, being in the last ten years more than twenty-five per cent. over the increase of population. The entire tax of England, Wales and Scotland for the year 1851 was about £3,225,000. Hence the revenue accruing from tobacco places in the coffers of Queen Victoria a sum nearly equal to half the taxes of the

kingdom. King James I. wrote a book against the use of tobacco, in which he describes smoking as a "custom loathsome to the eye, hateful to the nose, harmful to the brain, dangerous to the lungs, and in the black stinking fumes thereof, nearest resembling the horrible stygian smoke of the pit that is bottomless."—*Indiana Farmer.*

From the Farmer and Planter.

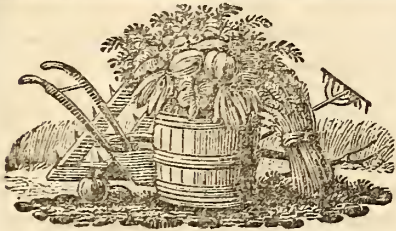
STRAW AS FEED FOR MULES.

In the fall of 1845, whilst engaged in seeding wheat, I had the racks in my mule stables filled with good wheat straw at night, in addition to their full feed of corn fodder, thinking they would partake of it slightly, but, to my surprise, the straw was consumed almost entirely every morning. By degrees I had the feed of corn fodder diminished every night, and the feed of straw increased. After the wheat crop was seeded, the feed of corn fodder was stopped entirely, and wheat straw given three times a day with a regular feed of corn or hominy. I expected my mules to decline at first, but in this I was happily disappointed, for they continued in good order, although engaged in hauling marl and ploughing, during the entire winter. They were kept on wheat straw until the middle of March, and then the corn fodder was again given. I could perceive no alteration in their condition after the straw was discontinued and the feeding with fodder commenced. It has been my practice since that winter to commence the feeding of wheat straw to my work mules about the first of November, and discontinue its use about the first or middle of March—and after using it for seven winters, I can honestly recommend it as a winter feed for mules. Do not lessen the feed of corn and blame the wheat straw, but continue the usual feed of corn, and give the wheat straw in place of corn fodder: it will be cheaper even to increase the feed of corn a little. Should your mules refuse it at first, do not be discouraged, but give a little fodder and little wheat straw at first, and diminish the amount of fodder gradually. The best mode of feeding wheat straw is to run it through a good straw cutter, then to moisten it with a *very weak brine*, and mix the feed of hominy with it. In stacking or housing wheat straw, it should be sprinkled with strong brine as it is put up. Farmers of the south—especially you who have to buy

northern hay, try this plan, you can but discard it if you dislike it. I sincerely hope, Messrs. Editors, that none of your subscribers are in the habit of buying northern hay.

THOMAS E. BLOUNT.

Sussex, Va.



THE SOUTHERN PLANTER.

RICHMOND, SEPTEMBER, 1853.

TERMS.

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VIRGINIA STATE AGRICULTURAL SOCIETY.

The State Agricultural Society is making very good headway in its preparations for an Exhibition. We learn, for we have not been able to go to the ground, that the grading, buildings and fixtures are in a very forward state of progress, and that every thing will be ready in time. With the public-spirited gentlemen who have charge of the work, Mr. Giles and Col. Tompkins, our Chief Marshal, we could not anticipate any thing else. Richmond has been liberal, her citizens generous, (one of them, Mr. Ballard of the Exchange Hotel, has given *five hundred dollars*—will not the farmers encourage his house?) and the Executive Committee have worked like horses to have every thing of the right sort and ready. Shall all this money and work be thrown away; or will it meet with a response from our farmers? They have the stock to show, the crops to report, the sense to write essays. Will they have the spirit to move? will they have pride enough to rival their neighbors on both sides, North and South? or shall this be cited as another instance of the apathy and indolence of Virginia? We trust not. We will not believe it. We shall expect the farmers to take some trouble to exhibit themselves, their talents, their wives, their stock and their crops. Now, if ever, they must do it. Now or never, we may say, for if this effort fails, who will make the next?

NOTICE TO EXHIBITORS.

We would call the attention of persons designing to exhibit *live stock* at the Fair of the *Virginia State Agricultural Society* in November, to the 6th Article of the Rules and Regulations published in the June number of this Journal, which is in the following words:

"All persons who intend to exhibit horses, cattle, sheep or swine; or who intend to offer stock for sale, should notify the Secretary of such intention at least ten days before the commencement of the Exhibition, and furnish a list and description of such stock, in order that suitable arrangements may be made for their accommodation."

The accommodations for this department will be extensive and commodious, but as there

is reason to expect a large number of animals, it may become necessary to enlarge them, and hence the importance of a timely communication from exhibitors, such as the above regulation proposes, that in the event of such a necessity, the materials may be procured and the additional accommodations erected before the opening of the Exhibition:

The Police, under the charge of the Chief Marshal and his aids, will be so regulated as to relieve persons, arriving with their stock or other articles, from all trouble or embarrassment. An Assistant Marshal, with a competent force of select men, will be stationed at each of the depots and public landings, to take them in charge and conduct them to their proper destination.

The Secretary will register them, and issue cards to be attached, bearing the number and description as entered in his office. A pamphlet copy of the Rules and Regulations, Premium List, with the Judges, &c., is now ready for distribution, and will be sent by the Recording Secretary to persons who may apply to him for them. The premium list has also been published in hand-bill form for general circulation.

REAPERS.

On another page will be found the practical and judicious remarks of Mr. Booth of Nottingham on reaping machines. They prove alike his candor, his skill, and his good temper.

In the March No. of the Planter for 1852, Vol. XII, p. 85, we stated an opinion which we have since repeated, that the price of reapers was a great deal too high, either for the work they did, or the materials their structure required.

Having had no opportunity of inspecting any of these machines, and having but little knowledge of mechanical principles, in fact, constructiveness, to borrow a friend's phrase, is a hollow, not a bump with us, we arrived at our conclusion in a roundabout way. Taking the threshing machine as a datum of comparison, and arguing from the axiom that a labor saving machine, that is a machine to save human labor, should do for each horse the work of five men, and estimating the common price of threshing machines as having by competition and the cost of making, been graded to

the proper price in each community, we concluded that a good reaper could be afforded, at a handsome profit to the manufacturer, for \$75. We have now the best means at hand for establishing the exact correctness of our conclusion. Mr. M'Cormick, not long since, made application to Congress for a renewal of the letters patent granted to him on the 21st day of June, 1834. Against that application certain citizens of New York presented a remonstrance. In that remonstrance the question of profit to the inventor was argued; and it was shewn pp. 14, 15, 16, that Mr. M'Cormick had received on his machines a profit of \$302,275. As to cost of construction, Harvey A. Blakesley, Mr. M'Cormick's book-keeper, testified under oath, that "the cost of the manufacture of reapers is thirty-six dollars;" and Mr. Dorman, Mr. M'Cormick's partner, testified that the cost of their machines, including rent of establishment, was about \$37 each, so that \$75 would have left upon each machine a profit of one hundred per cent.

We take the following article in regard to rape from the Farm Journal, that our *joint worm* readers may decide if they will make trial of it as a substitute for wheat. As many of us have lands on which wheat will lodge when it has a fair chance, we do not see why it should not be grown upon such soils—a trial on a small scale can, at all events, do no harm, and may be the means of introducing among us a crop which has a threefold advantage as a seed bearer, a sheep feeder, and a manurer.

RAPE OR COLZA.—BRASSICA CAMPESTRIS.

Rape Seed is not only an object of the greatest importance and value, wherever it is raised for the sake of the seed, but it is likewise extremely valuable as green food for cattle and sheep, in the fall or spring, or cured for hay for winter.

The Colza or Rape is a plant which requires by preference, a strong soil, although it will come well on good sand or gravelly loams, besides careful cultivation.

In Belgium, and the Northern parts of France, where it is raised in great abundance, it enters into the regular rotation on all good heavy loams, and is thought to be one of the best preparations for wheat, owing to the tillage of the soil, the manure applied for it, and the care taken to keep it clear of weeds.

The ground should be ploughed in the fall and in the spring, and again a short time before sowing, and well manured. Then the seed should be sown very thin in drills, and harrowed in in *June* or *July*. As the plants come up, they should be weeded and thinned out, a foot apart. A superior mode is to sow the seed broadcast, on a good rich seed bed, prepared on purpose. When the stubble of any grain crop has been cleared off by the harrow, the land well manured and ploughed to a good depth, the plants are brought out, and set out as cabbage plants are. This can be done the latter end of September, or in October, either by the dibble and by hand, setting them out in every respect like the plants of cabbage, in rows two to two and a half feet wide, and one foot in the row; or to save much time, labor and trouble, they can be put in furrows one foot apart, after the plough, taking care to put them upright in the furrow, and to cover them by the return of the plough, leaving the leaves above ground, and after the piece is finished, going over it to dress all plants that might be covered too deep, which can be done by a man walking along the furrows and pressing his foot against the plant, or with the hoe. The intervals between the rows should get a hoeing, or the cultivator run in, or a small plough sent through, to give them an earthing up, killing the weeds at the same time, which should be done as late in the fall as the weather will permit, in November or December. Thus they will remain all winter without injury from the frost.

In spring, they should have the cultivator run between them again, and weeded, or another slight earthing given them, which will greatly strengthen the plants.

The quantity of seed to be sown, should be from five to eight pounds per acre; and this should be sown in the bed or in the row evenly. It is a great advantage, that the cost of the seed is so trifling in proportion to the value of the crop.

It is ready to cut and reap when the upper branches turn brown, which will be in June or July. Be sure not to let it be too ripe, for if the pods be too dry at reaping, they will shed the seed in the field, and cause much loss.

It can be reaped in the same manner as wheat, but the handfuls should be laid singly and light upon the stubble, behind the reapers, and thus it should lie without stirring, until it is ready to thresh out, which will be in a short time, particularly as generally at that time, the weather is dry and warm.

When it is ready and perfectly dry, prepare a floor in the middle of the field, by levelling the ground, on which should be spread a large muslin cloth, twenty to thirty feet square; spread the rows round, and thresh round. One man or a boy to spread before the thresher, and another to turn; or it can be threshed by a threshing machine, in this case taking care, if the seed is intended to be threshed on the barn floor, to remove the plants on a large

sheet spread on the wagon, to prevent loss of seed, by the jolting and shaking of the wagon.

The seed can then be stored in a dry and airy granary until it is sent to be sold, or crushed.

The Rape in good ground, well treated, does not fail to make strong stems and succulent leaves, so that by the middle or latter end of November, it will be strong enough to bear pasturing; then turn in the sheep, but take care they do not eat but just the leaves, which they will crop first, not suffering them to touch the stalks, as that would be injurious to the plants. This will form one of the best pastures for your sheep, if you keep any, and will make them fat and in good condition; or the leaves can be gathered for hogs or cattle, but I do not advise by any means to turn in horned cattle or hogs, for the damage they will do to the stalks. The only safe stock to turn into Rape, in my opinion, being sheep.

The produce of an acre of Rape, will be according to the condition of the land, management and care, from twenty bushels upwards to fifty, which will command from three and a half to four dollars a bushel, in Philadelphia, New York, Boston, or Baltimore. The yield will be materially affected by the care given to it in threshing it properly. A very full crop will be from fifty to sixty bushels, and upwards of eighty bushels have been and are raised frequently in Flanders.

Great advantage may be derived from cultivating it in the following manner:

Take half an acre of good land, or make it so by manuring, and work it a little better than ordinary land, or as you should your garden. At mid-summer, (June or July) sow on this half acre, thirty pounds, or two pecks of Rape seed—this will produce a plentiful crop, as few grains will miss; let them grow until the middle of September; take eight or ten acres of wheat or oats, or early corn; plough the stubble, and let it lie a month or six weeks to rot, then plough it again; if the land has been manured previously, it will thus be in good condition.

Begin at one side, plough a furrow, set the plants in the furrow, at the distance of a foot, leaning against the side of the furrow; set the plough and make another furrow, at two feet distant from the first, and in returning it will cover the first furrow planted, and continue so until the whole field is set.

If the land, as I suppose it is, is good, i. e. has been properly manured for the previous crops, wheat, oats, &c. there will be no occasion to manure it now, but if not, have your manure laid in heaps, and throw a little at the root of every plant, a handful will be sufficient; or, which is preferable, by throwing a handful of guano, previously well mixed with four times its bulk of earth or a good handful of any good chemical fertilizer, at the foot of every plant, the produce will be large, and the seed of good quality; in transplanting it will tell all the better in the crop, to roll the roots

of the plants in plaster of Paris, or ashes, or both mixed.

When the Rape is reaped, then sow turnips; thus three profitable crops can be got out in two years from the same piece of land, and the two last will improve your land.

As observed above, Rape on land makes one of the best preparations for wheat, but in this latter instance, I prescribe a crop of turnips after it, if following probably wheat, or at least a grain crop.

The above is the management of *Winter Rape*; there is another variety, called *Spring* or *March Rape*—this is cultivated and handled in every respect as the former, with this difference, that it is sown early in the spring, March or April; hence its name, *Spring* or *March Rape* or *Colza*.

It does not yield quite so large a produce as the *Winter Rape*, but as it can be sown in spring, and harvested at the latter end of the summer, or early fall of the same year, it thus has great claims to our attention and care. It requires the same quantity of seed as the *Winter Rape*.

The *Rape* plant is not only of great value in the economy of the farm, as one of the best plants for fodder, as after threshing the seeds out, the plant is valuable, and yields a large quantity of nutritious fodder, relished by all kinds of stock, but it is as invaluable as a plant yielding one of the best and most prolific of all oleaginous seeds, that is to be considered and employed, and must attract our most earnest and diligent attention, besides the cultivation of it being, as observed above, a good preparation of the land for cereal or grain crops.

The *Rape* is likewise extremely valuable for the residue or cake left after expressing oil from the seed, which is used extensively for feeding and fattening cattle. It forms likewise one of the most powerful manures, being extensively used in England and other countries, and the effects of it are as immediate and powerful as the best and most concentrated manures hitherto known. It is as immediate and powerful as guano, with this difference, that it benefits after crops more than guano does. As a feed for cattle, it cannot be surpassed in its fattening qualities; pound for pound it has a greater effect than the fresh seed itself.

It is in the manufacture of oil from its seeds, that it deserves to have a distinguished place among the profitable crops, profitable not only from the pecuniary advantages derived directly from its cultivation, for in supposing that only a minimum crop of twenty bushels should be raised, still, as the price is generally nearer and sometimes over \$1, than \$3; such a low crop even at \$70 gross per acre, is certainly no despicable figure; when taken into account that the value of this fodder will go nearly to pay the expense of its cultivation, but the manufacture of its seeds into one of the best and most valuable oils, gives it claim to great pre-

eminence, by the great services it thus renders to agriculture, and to manufactures.

The *Rape Oil* is one of the most valuable oils known in the arts of manufactures; at once serviceable for burning, eating, fulling, for the tanner, for the soap boiler, for machinery, &c. &c.

This oil used for machinery, properly prepared, does not gum as other oils do.

Already has the attention of government been directed to it, to supply our light-houses on the coast, with a good burning oil, as fish oil is constantly raising in price, and whale and sperm fish getting scarcer every year, and particularly should it happen, in the natural course of events, that the price of fish oils gets affected by the political changes which occur often (against all calculations) of such a nature as very materially to affect and enhance the price of all articles and produce which we derive through our navigation, and which would particularly affect the price of oils, and raise them.

In the article of oils, the prices would rise immeasurably, not having as yet established the cultivation of plants, to supply us with this, an article of the first necessity.

We may then, and that at a profit of manifest advantage, establish among us the cultivation of a most valuable plant, for which the soil and climate of this country are favorable.

Any one desirous to make a trial with one acre or more, can obtain the seeds, either of the *Spring* or *Winter Rape*, from me, either of D. Landreth, 65, Chestnut street; C. B. Rogers, 29, Market street; or Paschall Morris & Co., 380, Market street, Philadelphia, at twenty-five cents per pound; at either of which places I may be addressed.

Any other information as regards the manipulation, the produce in gallons, or bushels, the fitting up an oil mill, and process of manufacturing the oil from the seeds, I will impart to applicants for a moderate and reasonable compensation.

As has been shown, the raising of *Rape Seed* is very profitable when carefully attended to; the manufacturing the seed into oil is not less so, so that to a certain degree, combining the two together, can not fail to be highly remunerative, and as worthy the attention of the capitalist as any agricultural product with which we are acquainted.

F. A. NANTS.

P. S.—I will in a short time prepare a short treatise on *MADDER*, of which I will have seed for sale next fall.

F. A. N.

SUPER-PHOSPHATE OF LIME.

We invite attention to the advertisement of C. B. De Burg's Super-Phosphate of Lime, which can be had of R. W. Allen, at 189 and 191, Water street, New York City.

AN EXCUSE.

To those who think that an editor should write an essay for each number of his paper, and prefer, as some do, what he can write to something better of another's which he can select, the Editor begs leave to say that he has been very busy in another agricultural capacity, working as hard, and doing, he hopes, as much good, as if he had penned every line in the Planter.

DE BOW'S REVIEW FOR JULY.

This number introduces the XV volume. It is printed in an entirely new style, in large type and on superior paper. It is published at New Orleans, at \$5 per annum. Embracing two volumes of about seven hundred pages each. The present address of the editor is Washington city.

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The first fourteen volumes of this Review, are condensed into three, entitled "Industrial Resources of the South and West," price ten dollars—postage free. Every Southern man ought to take a copy.

PROGRESS OF RAILROADS.

At the commencement of the present year there were completed in the United States 13,227 miles of railroad—13,000 more were under construction, and 7,000 under survey—making a total of 33,000 miles. The cost, calling the average cost per mile, \$30,000, would be \$990,000,000. This is a sum greater than the value of all the live stock in the Union, by the last census, thirteen times greater than the total expenses of the United States government for the last year, and equal to about one-fifth part of the cash value of all the farms in the United States according to the last census.

The Erie railroad, with its furniture, is officially stated to have cost \$30,000,000. It is 416 miles long, and including double tracks, side tracks, &c., has 701 miles of rails. There are engaged upon it 140 locomotives, 131 passenger and baggage cars, and 1,885 freight cars. The annual wear and tear of locomotives alone is stated by the President to be no less than \$311,311 16.

RAILROADS IN VIRGINIA.—The roads now completed in this State amount to about 600 miles; and 610 miles more are in progress. When all are completed, we venture to say that every acre of arable land along their whole extent will be doubled in value; and thus, so far as the State is concerned, be practically paid for before the starting of the first locomotive.—*Richmond Dispatch.*

WARWICK & BARKSDALE'S MILLS.

The brands of flour manufactured in Richmond have long been celebrated in our domestic and foreign wheat markets for their purity and superiority. They are but little affected by changes of climate, and readily command the highest market prices. One of these brands, termed the Gallego, is manufactured by Messrs. Warwick & Barksdale, in their immense mills, fronting on the lower side of the basin.

The present main wheat mill was erected in 1847, immediately after the burning of the old mill, and is 164 feet long by 94 feet deep. Height from the basement facing the canal, 90, and from the lower pavement, 118 feet. It contains seven distinct stories. To the left of the mill is a large store-house, and to the right, still connected with it, is the corn mill. This main mill contains 20 pair of Burr millstones for grinding, and 4 pair for cleaning and smutting wheat. They are turned by a volume of water from the basin, equal to 225 horse power. From 1,000 to 1,200 barrels of flour can be turned out in 24 hours; and, through the medium of some improvements now being made in the mill during the present slack time, it is expected that when work commences again upon the new crop, say in a couple of weeks, that a still larger quantity of flour will

"Chide not severely, nor punish hastily."

be ground out and barrelled daily. During the year, ending the 1st of July, 1853, between 700,000 and 800,000 bushels of wheat were ground, making about 140,000 barrels of No. 1 quality of Gallego flour. Estimating the value of the flour at the average market prices, \$6, \$6 50 and \$7, the total value of the flour would amount to nearly a million of dollars. Nearly one hundred men, including draymen, are employed during the business season about the mill.

Last season Messrs. W. & B. purchased a building located about a mile and a half up the canal, and set to work seven pair of Burr mill-stones, upon wheat, turning out about 250 barrels on a good working day. Some 20,000 barrels was the result of the labor at this mill up to the 1st of July. New improvements are also being made to this mill for future use. This would augment the amount of the finest quality of flour milled last year to 160,000 barrels.—*Richmond Dispatch.*

WASHING BY STEAM.

Many of the mechanical inventions and improvements of the present day are of practical utility in the every-day business of life, so that the labor of individuals or of families is materially diminished. One of this character is that denoted by our title.

The following account is a description of the wash-room of the St. Nicholas Hotel of this city, from a personal examination by the editor of the *Tribune*:

"A strong wooden cylinder, four feet diameter and four and a half feet long, is mounted on a frame, so as to be driven by a band on one end of the shaft. This shaft is hollow, with pipes so connected with it that hot or cold water, or steam, can be introduced at the option of the person in charge. The cylinder being half full of water, a door at one end is opened, and three hundred to five hundred pieces of clothing are thrown in, with a suitable quantity of soap, and an alkaline fluid which assists in dissolving the dirt and bleaching the fabric, so that clothes after being washed in this manner increase in whiteness without having the texture injured.

"When the cylinder is charged, it is put in motion by a small steam engine, and made to revolve slowly, first one way a few revolutions and then the other, by which the clothes are thrown from side to side, in and out and through the water. During this operation the steam is let through a double-mouthed pipe, which has one

mouth in and one mouth out of water; the steam entering the water through the immersed end and escaping through the other, by which means it is made to pass through the clothes, completely cleansing them in fifteen or twenty minutes. The steam is now cut off, and the hot water drawn through the waste pipe, and then cold water introduced, which rinses the articles in a few more turns of the cylinder. They are now suffered to drain until the operator is ready to take them out, when they are put into the drying machine, which runs like a millstone; and its operation may be understood by supposing that millstone to be a shallow tub, with wire network sides, against which the clothes being placed, it is put in rapid motion; the air passing in a strong current into the top and bottom of the tub and out of the sides, carries all the moisture with it into the outside case, from whence it runs away. The length of time requisite to dry the clothes depends upon the rapidity of the revolving tub. If it should run three thousand revolutions in a minute, five to seven minutes would be quite sufficient. When there is not sufficient steam to run the dryer with that speed, it requires double that. In washing and drying, there is nothing to injure the fabric. Ladies' caps and laces are put up in netting bags, and are not rubbed by hand or machine to chafe or tear them in the least, but are cleansed most perfectly.

"It can readily be imagined what a long line of wash-tubs would be required to wash five thousand pieces a day, and what a big clothes-yard to dry them in; while here the work is done by four persons, who only occupy part of a basement room, the other part being occupied by the mangle and ironing and folding tables. Adjoining are the airing frames, which are hung with clothes, and then shoved into a room, steam pipe heated, when they are completely dried in a few minutes.

"*Small Family Machines.*—Almost the first thought, after witnessing the operation of this machine, was, can washing be done upon the same principle in small families? To our inquiries upon this point, we have received the following satisfactory information:

"For common family use, hand machines are made to cost from forty dollars to fifty dollars, with which a woman can wash fifty pieces at a time, and complete five hundred in a day without laboring severely. For the purpose of washing, without driv-

ing the machinery by steam, a very small boiler will be sufficient. It is not necessary to have a head of water, as that can be found in the cylinder, which can be turned by horse or any other convenient power. The plan of cleansing clothes by steam is not a new one, but it is contended by the inventor that his process is an improvement upon all heretofore applied to that purpose."

The washing of this hotel varies in amount from three thousand to five thousand pieces a day. It is all done by one man and three women, with less work for each than two dozen pieces in the ordinary mode of hand-rubbing or by washing-boards.

CHLOROFORM FOR BEES.

Mr. D. Smith, in a letter to the Edinburgh Courant, thus describes his discovery of "Chloroforming Bees:"—"The quantity of Chloroform required for an ordinary hive is the sixth part of an ounce; a very large hive may take nearly a quarter of an ounce. My mode of operation is as follows: I set down a table opposite to, and about four feet distant from, the hive; on the table I spread a thick linen cloth; in the centre of the table I place a small shallow breakfast plate, which I cover with a piece of wire gauze, to prevent the bees coming in immediate contact with the chloroform. I now quietly and cautiously lift the hive from the board on which it is standing, set it down on the top of the table, keeping the plate in the centre; cover the hive closely up with cloths, and in twenty minutes or so the bees are not only sound asleep, but, contrary to what I have seen when they are suffocated with sulphur, not one is left among the combs; the whole of them are lying helpless on the table. You now remove what honey you think fit, replace the hive in its old stand, and the bees, as they recover, will return to their domicile. A bright, calm, sunny day is the best, and you should commence your operations in the morning, before many of them are abroad."

TO DESTROY UNDER-BRUSH.

"What is the best time to cut under-brush, &c.?" In the June number of the Farmer the above question is proposed by "A Subscriber," to which I propose to give

an answer, combining both a little experience and a little theory. Having been brought up on a farm, I used to hear much said by farmers in regard to the "best time" for cutting bushes, &c., and remember well the many uncertainties that existed, and the various opinions given on the subject. Some recommend to cut them at one season, some at another. Some regard the "moon," others the "signs," &c. I also remember that the same kind of under-brush, if cut at one season, would start again and grow luxuriantly; but, if cut at another, would be completely "used up." I have also within the last few years, had opportunity to notice the same facts; and the conclusion to which I have arrived is, that different shrubs or bushes, trees, &c., may be cut at different seasons of the year. Some are killed by cutting as early as the first of July; others by the first of August; and so on till October or even November. The rule is this: "Cut any plant, or shrub, about the time that it has done growing for the season, and its destruction is almost certain." If cut before this time, it will generally start again the next year. The exceptions are few. So much for the facts, now for the theory.

1st. In the spring of the year, all roots are vigorous. Hence, if a tree or shrub be cut at this time, or while in full growth, the root will send forth a new set of shoots. The exceptions are—1st, Evergreens generally, as pine, hemlock, spruce, &c. 2d. Those that have a copious flow of sap in the spring, as the maple, birch, &c. Yet, even some of these will start again if cut soon after the buds have opened; *i. e.* after the spring flow of sap has ceased; except in the case of old or large trees, in which the root appears not sufficiently vigorous, or the evaporation from the new stump too rapid to allow of the formation of new shoots.

2d. In autumn, when a shrub or tree has done growing for the season; the active energies of the root cease, being, perhaps, somewhat exhausted by its summer action. If then, the bush or tree be cut after it has done growing, but while the stem and leaves are fresh and full of sap, the vital force of the root will rarely be sufficient to cause a new growth; but if left till the foliage is dead or dying, the energies of the root are restored by the return of the sap, and are ready for action again as soon as the season of growth shall return. Hence, too early or too late cutting will be equally unsuccessful.

Cut your under-brush, then, at the time above specified and it will rarely start again. If it does, the growth will appear stunted or sickly, and soon die of its own accord, or a second cutting at the proper time will insure success. The same rule applies to all other plants, as Canada thistles, milk-weeds, &c., &c., with greater or less certainty, according to the greater or less vital force, or tenacity of life, peculiar to the root of each kind of vegetable.

The "proper time" can easily be determined by observing whether new leaves continue to appear at the end of the prominent branches. When the end leaves are of full size, and a bud is seen at the end of the branch, then (or soon after) is your time to cut. If deferred long beyond this time, or till the leaves begin to turn yellow, or fall, cutting will be of little use, as the root will be "strong" for a new start on the opening of a new spring.—*Genesee Furmer.*

SOILING CATTLE.

In an extract from a sketch of the life of Josiah Quincy, written for the Massachusetts Ploughman.

"Between the years 1813 and 1821," says Mr. Quincy, "I managed my farm, according to my own judgment, with satisfactory success." From the nature of his farm, he was early led to practice the soiling of his cattle. By "soiling," he says, I understand "the keeping cattle in the barn and feeding them with green food during the summer months, allowing them, daily, only a few hours' liberty of a yard, instead of feeding them in pastures." His farm being smooth and free from stone, he could easily practice this system, which is European in its origin. European writers maintained that six distinct advantages were to be attained by such practice, over pasturing cattle in the summer, viz: "it saved land, it saved fencing, it economized fuel, it kept the cattle in better condition and greater comfort, it produced more milk, it increased immensely the quantity and quality of the manure." Mr. Quincy thinks that the great profit of the system is the abundance of the manure which it insures, of the best quality at the cheapest rate.

Mr. Quincy wrote and published two essays on the subject of soiling, which appeared in the "Repository," Vol. VI, at the request of the Trustees of the Massa-

chusetts Agricultural Society. A later essay on the same subject he published last year, which was communicated to the Trustees of the Norfolk Agricultural Society. In these essays he develops the system of the soiling of cattle, and gives his own experience and success in his practice of it for many years. Under this system, he has kept from thirty to thirty-five milch cows since 1847, when he resumed the management of his farm, after submitting it from necessary public labors, to the superintendence of others for about twenty-five years.

Among the advantages of this system, he has found that *one* acre "soiled from," will produce as much as *three* acres pastured, that it renders all interior fences useless—that cattle will eat in the stall what they reject in the field, that they have a more regular supply of food, and a shade and greater protection from flies, dogs, etc., while eating it, and that he has a full equivalent for all the labor and expense of raising, cutting and bringing in the food, feeding, currying and other care of the cattle, from the increased quantity and value of the manure.

It has been objected to this mode of keeping milch cows, that want of exercise must affect injuriously the health of the animal. To this, European writers, some of whom have kept in this way large herds, reply, that they "never had one sick, or one die, or one miscarry," in consequence of it. "After more than eight years' pursuance of the same practice," says Mr. Quincy, "my experience justifies me in uniting my testimony to theirs on this point."

To the objection that the milk will not be as good through want of exercise on the part of the cows, the subject of this sketch replies as follows:

"Nothing can have less foundation in fact. Cows, in the pasture, unless under some temporary excitement, use very little, comparatively no exercise. They usually walk a short time slowly, collect their food and lie down to ruminate. The difference between this habit of theirs and the exercise obtained by walking about an hour or two hours in the day in a yard, and being employed in rubbing themselves against walls or posts, is little if any less than they get in the pasture. This exercise (a daily, thorough currying being added in their stalls,) is quite as efficient to produce a healthful action of the system as any exercise, as it is called, in the pasture."

As to the quantity of land to be cultivated, he says, according to my experience, *one square rod of land*, of rich loam in high tilth, in grass, oats, barley or Indian corn, is enough for the support of a cow a day, if cut and delivered to her in the barn. To provide for all emergencies of drought, etc., it is safe to cultivate one and a half square rods for each cow. From these data it can be easily estimated how much land should be cultivated to support a cow, or a herd of cows for a season.

To produce a sufficient quantity or succession of succulent foods, he gives the following directions.

"Sow as early in April as the state of the land will permit, oats, at the rate of four bushels to the acre. About the 20th of the same month, sow in like manner either oats or barley; proceed in the same mode early in May. Between the 10th and 15th of May, sow Indian corn in drills; about the 25th of May, sow corn again; and again, the 5th of June. After this date, sow barley.

"The oats sowed in April will be ready to cut for 'soiling' between the 1st and 5th of July, and will usually remain succulent until the 12th or 15th of this month. The other crops will ripen and be ready at such times that the cattle will have a supply of food until early in November, at which time, and often before, the tops of roots, carrots, beets, or turnips, are a never failing resource." This system of soiling that seems to have been a favorite one with Mr. Quincy, a sort of pet, he regards as worthy the attention of those farmers who have but a small quantity of land, say ten, fifteen or twenty acres. He says: "a practical knowledge of the productive power of the soil, and of the mode of making its yield the most, will not only create in them content, but will prevent them from running into debt for more land, a practice of all others, the most embarrassing and ruinous to that class of farmers. That this class may obtain distinct and practical knowledge of the mode of operating on a small scale, on this system, I state that I have known *two* head of milch cows kept in full milk and high condition through the summer on *one* acre of land, and some food left from it for winter use."

Of course, the system of "soiling," of which a sketch has been given, cannot be equally well introduced upon all farms. Mr. Quincy's farm being nearly all adapted to cultivation, and being of a rich loam and free from stone, as well as smooth, is

peculiarly adapted to this mode of cultivation. But many farms have land that is good for nothing else but pasturage, and others have much land that is too stony or too rough for successful "soiling." A little study and a reasonable share of common sense will enable the farmer to judge whether the system may be successfully introduced upon his farm, be it large or be it small.

RED-WINGED BLACKBIRD.

We are now about to notice one of our most mischievous birds, the Red-Winged Blackbird. He has long been known to the farmers as a sad thief, and was regarded by the Indians as a troublesome fellow, long before he was known to us. And here, with the permission of the reader, we will step aside, and turn back for the purpose of relating the past history of the blackbird, as found in Roger Williams' Key to the Indian Language, published in 1643, and to furnish an account of the method pursued by the Indians, to protect their corn from the depredations of these birds. Mr. Williams says, "of the black-birds, there be millions, which are great devourers of the Indian corn, as soon as it appears out of the ground; unto this sort of birds, especially, may the mysticall Fowles, the *Dicells*, be well remembered, [and so it pleaseth the Lord Jesus himselfe, to observe, Matthew 13.] which mysticall Fowle follow the sowing of the word, and pick it up from loose and careless hearers as these black-birds follow the material seed. Against these birds, the Indians are very carefull, both to set their corne deep enough, that it may have a strong root, not so apt to be pluckt up [not too deep, lest they bury it, and it never comes up:] as also they put up little watch-houses in the middle of their fields, in which they, or their biggest children lodge, and early in the morning prevent the birds," &c. The red-winged blackbird is a summer resident in the whole of North America, and is found in the greatest abundance. It is probably one of our most mischievous birds, and many suppose that very little can be said in its favor to recommend it to the protection of the farmer. But we shall find when we are better acquainted with the habits of the red-wings, that the benefits derived from them much more than counterbalance the mischief they occasion. Mr. Wilson, the ornithologist, who appears to have noticed with care the habits of the bird under consideration, as they appeared to him in the Middle States, says, "they arrive in Pennsylvania late in March. Their general food at this season, as well as during the early part of summer, consists of grub-worms, caterpillars, and various other larva—the silent, but deadly enemies of all vegetation, and whose secret and insidious attacks are more to be dreaded

by the husbandman than the combined forces of the whole feathered tribes together. For these vermin, the red-winged blackbirds search with diligence; in the ground, at the roots of plants, in orchards and meadows, as well as among buds, leaves and blossoms, and from their known voracity, the multitudes of these insects which they destroy must be immense. Let me illustrate this by a short computation.

"If we suppose each bird on an average to devour fifty of these larva in a day [a very moderate allowance,] a single pair in four months, the usual time such food is sought after, will consume upwards of twelve thousand. It is believed that not less than a million pair of these birds are distributed over the whole extent of the United States in summer, whose food being nearly the same, would swell the amount of vermin destroyed to twelve thousand millions. But the number of young birds may be fairly estimated at double that of their parents; and as these are constantly fed on larva for at least three weeks, making only the same allowance for them as for the old ones, their share would amount to four thousand two hundred millions; making a grand total of sixteen thousand two hundred millions of noxious insects destroyed in the space of four months by this single species! The combined ravages of such a hideous host of vermin would be sufficient to spread famine and desolation over a wide extent of the richest and best cultivated country on earth."

All this, it may be said, is mere supposition. It is, however, supposition founded on known and acknowledged facts. "I have," continued Mr. Wilson, "never dissected any of these birds in spring, without receiving the most striking and satisfactory proofs of these facts; and though in a matter of this kind it is impossible to ascertain precisely the amount of the benefits derived by agriculture from this and many other species of our birds, yet in the present case, I cannot resist the belief that the services of this species, in spring, are far more important and beneficial than the value of all that portion of corn which a careful and active farmer permits himself to lose by it. Mr. Audubon, who was perhaps better acquainted with the habits of our birds than any other person, says the red-winged blackbird is so well known as being a bird of the most nefarious propensities, that in "the United States one can hardly mention its name without hearing such an account of its pilferings as might induce the young student in nature to conceive that it had been created for the purpose of annoying the farmer. That it destroys an astonishing quantity of corn, rice and other kinds of grain cannot be denied; but that before it commences its ravages, it has proved highly serviceable to the crops, is equally certain. The million of insects which the red-wings destroy at this early season, are, in my opinion, a full equivalent for the corn which they eat at another period."

Mr. Nuttall, our own New England ornithologist,

fully endorses the opinions of Wilson, in regard to the utility of the red-wings in destroying insects, and adds, Kalm remarked, that after a great destruction made among these and the crow blackbirds, for the legal reward of three pence a dozen, the Northern States, in 1749, experienced a complete loss of the grass and grain crops, which were now devoured by insects. In a former communication upon the value of the Indian corn, we alluded to a tradition among the Indians that the red-winged blackbirds first brought the maize or corn into New England from Mexico. This belief induced them to spare the lives of these birds, although they undoubtedly caused them much trouble in their little corn fields. Now we are not disposed at this late period, and with nothing but the shadowy evidence of an Indian tradition, to attempt to establish the claims of the red-wing, in introducing that most valuable plant, the Indian corn, and perhaps thereby obtain a silver whistle, from the Massachusetts Horticultural Society, lest a rival from some unexpected quarter should arise, and contest the prize with our bird. And judging from the blackbird's love of Indian corn, and their boldness at all times, and in all places, in appropriating it to their own use, we should suppose the birds themselves believed the tradition, and that they were but honestly taking what in part belonged to them. Finally, in view of all that has been said in favor of the red-wing, we may justly claim for them exemption from the cruel assaults of idle gunners, truant school-boys, and from the necessity of witnessing the vain attempts of honest farmers to frighten them with scare-crows.

EDUCATED WHEAT.

A singular discovery has been made in France, by a M. Fabre, an humble gardener of Ayde, but of some local note as a botanist. The herb *agilops*, heretofore considered as worse than useless, grows abundantly on the shores of the Mediterranean. It produces a species of grain resembling wheat in form, but much smaller. In the year 1839, M. Fabre sowed a quantity of this grain, and he was struck by observing that the produce of it seemed to bear a close affinity to wheat. That produce he sowed the next year, and the yield was still more like wheat. He went on sowing the yield in this way year after year, and each year found a marked improvement in the produce, until at last he had the satisfaction of getting as fine a crop of wheat, and of as good quality, as could wish to be seen. At first he produced his crops in a garden, but his later sowings were made broadcast in an open field.

Thus, then, a wild and mischievous herb, which is particularly destructive to barley crops, can be educated into excellent wheat.—*Literary Gazette.*

PAYMENTS TO THE SOUTHERN PLANTER,

From 1st to 26th August, 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:

W. W. Brickell to January 1854	\$1 00
F. Foote to January 1850	1 00
Dr. J. B. Grayson to May 1854	1 00
Edmund Berkeley to January 1854	2 00
S. A. Buckner to July 1854	1 00
T. D. Edmunds to January 1854	1 00
F. B. Scruggs to January 1854	8 00
Dr. Henry Hunt to July 1854	1 00
Capt. S. D. Tucker to July 1856	5 00
Dr. W. A. Fuqua to July 1854	1 00
A. R. Spencer to January 1855	2 00
Col. R. W. Wyatt to January 1854	5 00
John D. Rawlins to January 1854	1 00
Wm. M. Sowers to July 1854	1 00
J. M. Jeffries to October 1854	2 00
John Motley to July 1854	1 00
Col. W. Cardwell to January 1854	2 00
John B. Spencer to April 1854	1 00
Robert S. Ellis to January 1854	1 00
S. Hansbarger to January 1854	1 00
G. W. Kemper to January 1854	1 00
Enos Sillings to September 1854	1 00
J. R. Depriest to January 1854	1 25
Murat Willis to January 1854	1 00
G. W. F. Smith to July 1854	1 00
Wm. D. Shepherd to June 1854	1 00
Gen. H. T. Washington to Jan. 1855	4 00
S. B. Atwill to July 1854	1 00
Dr. T. Nelson to July 1854	1 00
R. & L. W. Carter to July 1853	2 50
Jas. T. Alexander to January 1854	1 00
Col. L. B. Seward to January 1853	2 00
Walter Healy to January 1853	2 00
W. C. Eustace to January 1854	2 50
James Hiter to July 1854	1 00
Dr. W. T. Maclin to January 1854	4 00
Hezekiah Potts to July 1855	2 00
Jacob Sanger to January 1854	1 00
Wm. T. Wright to January 1854	1 00
Wm. F. Pogue to June 1854	1 00
Robert Wilson to July 1854	1 00
George H. Toler to April 1854	1 00
S. D. Fisher to July 1854	1 00
Dr. J. B. Anderson to January 1854	8 00
Geo. P. Keese to January 1854	1 00
P. H. Hurt to July 1854	1 00
Jacob Michaux to July 1854	1 00
Moses Fuqua to July 1854	1 00
David Wells to July 1854	1 00
James Newbold to January 1852	1 00

Cbas. R. Slaughter to July 1854	\$3 00
A. R. Venable to January 1854	1 00
John J. Grantham to April 1854	1 00
Tbomas Henderson to July 1854	1 00
Dr. A. T. B. Merritt to April 1854	1 00
R. A. Farenholt to July 1854	1 00
W. H. E. Merritt to July 1854	1 00
John Foster to July 1854	1 00
John C. Baugh to August 1854	1 00
Williams & Fulton to July 1854	1 00
T. N. Gee to January 1854	2 00
Dr. William Cain to July 1854	1 00
L. H. Knight to July 1854	1 00
E. Y. Hamlin to January 1854	1 00
James Collins to June 1854	1 00
Col. G. H. Young to July 1854	1 00
W. J. Young to April 1854	1 00
Wm. Hocker to September 1853	1 00
A. H. H. Bernard to March 1854	1 00
F. W. Brown to June 1854	1 00
P. L. Derby to July 1854	1 00
George R. Rogers to July 1854	1 00
George Whitmore to July 1854	1 00
George D. Saunders to September 1853	1 00
Robert Anderson to January 1855	2 00
John W. Haskins to September 1854	2 00
Mrs. J. A. Holladay to July 1855	3 00
William H. Robinson to September 1853	1 00
Dr. G. A. Garth to July 1853	1 00
George W. Macon to July 1854	1 00
B. H. Magruder to July 1855	3 00
William Catterton to January 1854	1 00
N. Bramham to July 1853	1 00
Colin Catterton to July 1854	1 00
David Hancock to January 1854	1 00
James H. Burnley to January 1854	1 00
Robert W. Bragg to January 1854	2 00
R. B. Moon to July 1853	1 00
Dr. John W. Rice to July 1854	1 00
Z. Shirley to July 1854	1 00
Edmund Rosenberger to July 1854	1 00
Benjamin Hoover to July 1854	1 00
David B. Stiegel to July 1854	1 00
Martin F. Miley to July 1854	1 00
Jacob Kagy to July 1854	1 00
Chiswell Winston to July 1854	1 00
G. R. Gibbons to July 1854	1 00
Robert Beverly to July 1854	1 00
H. St. George Harris to July 1853	1 00
Robert Snapp to July 1855	2 00
G. Breat to January 1854	1 00
Wilsey P. Fogg to January 1855	3 00
Robert P. Taylor to January 1854	1 00
William E. Green to September 1854	1 00
Col. John W. Belfield to January 1854	1 00
John Hodges to January 1854	1 00
Dr. Frederick Perkins to August 1854	1 00
John Jeter to January 1854	1 00
John O. Harris to January 1854	1 00
Dr. B. M. Jones to January 1853	1 00
J. B. Lucas to January 1854	1 00
Rev. J. H. C. Leach to January 1854	2 00
James M. Carter to July 1854	1 00
Robert M. Wright to January 1854	3 00
Benj. Henson to January 1854	1 00
W. T. Parrott to January 1854	1 00
Richard Irby to July 1854	1 00

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THE subscriber offers for sale fine Ground and Calcined Plaster, both of the best and purest quality; he has also a Bone Mill attached, and intends to keep a supply of Ground Bones, fine and pure. Farmers and others are invited to call and examine for themselves. His prices shall be as low as the same quality articles can be bought for, North or South. The highest cash price will be paid for dry bones, delivered at his Mill adjoining the Paper Mill.

oc—if

R. R. DUVAL.

DR. VALENTINE'S RECIPE FOR MAKING ARTIFICIAL GUANO.

No. 1. Dry Peat,*	-	-	20 bushels
No. 2. Wood Ashes,	-	-	3 bushels
No. 3. Fine Bone Dust,	-	-	3 bushels
No. 4. Calcined Plaster,	-	-	3 bushels
No. 5. Nitrate of Soda,	-	-	40 pounds
No. 6. Sal Ammoniac,	-	-	22 pounds
No. 7. Carb Ammonia,	-	-	11 pounds
No. 8. Sulph: Sodæ,	-	-	20 pounds
No. 9. Sulph: Magnesia,	-	-	10 pounds
" 10. Common Salt,	-	-	10 pounds

* If peat cannot be obtained, use garden mould, or clean virgin soil instead.

DIRECTIONS FOR MIXING.—Mix Nos. 1, 2, 3, together—mix Nos. 5, 6, 7, 8, 9, 10, in four or five pails of water, or enough to dissolve the ingredients. When dissolved, add the liquid to the mixture, (1, 2, 3,) and mix as in making mortar. When thoroughly mixed, add No. 4, (the calcined plaster,) which will absorb the liquid and bring the whole to a dry state. Mix under cover in a dry place—observe the proportions in making small or large quantities. The above receipt will make one ton, which will manure seven and a half acres of land.

Having furnished the above to a number of farmers who have tested its qualities—many thinking it equal to natural guano—the subscribers have made arrangements to furnish any quantity during this season, and will sell the ingredients exclusive of the Peat, Wood Ashes, Plaster and Salt, (articles on every farm,) at the low price of \$10 per ton. One sugar hogshead will hold ingredients enough for five tons. All orders will be carefully and promptly executed, and sent to any part of the State.

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Dana's Prize Essay on Manures—25 cents.
Dana's Muck Manual—\$1.

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AGENCY FOR THE PURCHASE AND SALE OF IMPROVED STOCK.

STOCK Cattle of all the different breeds, Sheep, Swine, Poultry, &c. will be purchased to order, and carefully shipped to any part of the United States, for which a reasonable commission will be charged. Apply to

AARON CLEMENT, Philadelphia.

TO THE FARMERS AND AGRICULTURAL COMMUNITY OF VA.

THE subscriber is desirous to make known to the above, an article of manufacture of Chemical notoriety, namely, SUPER-PHOSPHATE OF LIME, allowed to be one of the most efficacious Manures ever yet adopted in this or any other country, for its well known properties of regenerating and fertilizing the barren and worn-out soil. Its first introduction was into England, some ten years since, when from its then pronounced magic effect, a patent right was granted to its inventor, the celebrated Professor Law, of London, who stands now unrivalled as one of the first Chemists of the day. Having had the honor of graduating under him, and together with some years of practical experience in the manufacturing of this article with him, gives a sufficient confidence to state that the A No. 1 of my present manufacture cannot be equalled in this vast continent, being the sole inventor and introducer of it into this country. Should there be a doubt as to its truthfulness, my Diploma, received from the New York American Institute, will fully attest of the correctness of my statement, together with a host of the highest testimonials from the Farming and Agricultural consumers of my Manure for the last twelve months while there.

I can also state with pleasure having received many kind letters from mere strangers to me, requesting of me to refer any one who may feel skeptical of the powerful influence it has over the most barren or useless land that can be found—in a great many instances, parties were dubious of buying more than some 50 or 100 pounds to make trial; the same parties now purchase in Tons, and feel proud in making it known to their surrounding farming neighbors, who seemed quite astounded at the crops produced by the application of this miraculous process, which enters into the composition of all plants, and the importance of invaluable constituent to the agriculturalist will be easily understood, when the reader is informed that no plant will grow upon a soil denuded of it. Phosphates of lime is being continually removed and abstracted from the soil, and taken up by the plants in solution for their nourishment, and unless such an equivalent be returned, diminution of fertility must naturally be the issue. I apprehend the efficacy of ground or crushed bones on the soil is well known to the American farmer.

I will presume to point out the advantage Super-phosphate of Lime has over bones. Bones are insoluble in water, and have first to be decomposed before they can be incorporated with the soil—such decomposition taking a long time. From, authenticated writers and scrupulous experimenters, it has been acknowledged that twenty bushels of Super-phosphate of Lime, will have the desired effect of 100 bushels of unprepared bones. The reason of such fact is on account of its being in a state

of solution shortly after having been applied to the soil, and taken up by the plants, which derive their strength and growth from the soil in no other form.

The subscriber offers his manufactured Super-phosphate of Lime as a chemically pure and genuine article; a perfect Super-phosphate, with the addition of guano and other fixed salts, &c., only known to himself—containing ammonia and other constituents necessary to furnish to the soil that which it has been robbed of by previous growth. It is quite as effective as GUANO, but much more durable as a manure, and less volatile than any other.

To be obtained in bags or barrels, of

C. B. DE BURG,

Agricultural Chemist, Williamsburg, L. I.

Where purchasers may rely upon obtaining a warranted, pure and genuine article, styled A No. 1.

To prevent deception being practised henceforward, all packages will be branded with the manufacturer's name.

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Affixed are the names of gentlemen of acknowledged celebrity and standing as Analytical Chemists, who have passed their judgment upon it.

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P. S.—My representative, Mr. J. P. O'NEIL, shall do himself the pleasure of visiting Virginia on a tour of business, when he shall be most happy to receive orders and impart such information as may be required of him relative to this matter—he shall also bring on with him a supply of Pamphlets, with full particulars, which will be found most essentially useful to the agricultural community.

PRICE—\$45 for 2,000 lbs. from the manufactory.

Williamsburg, L. I.

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July—3m

Agents, Richmond, Va.

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THE subscriber having removed to the large Foundry, just erected by him and fitted out with machinery of the latest and most approved style, is, in addition to the manufacture of Tobacco Flattening Mills, prepared to receive orders for Stationary Steam Engines, Saw and Grist Mills, Agricultural Machines, Tobacco Presses of every description, and all kinds of Iron and Brass Castings. He pledges himself to execute faithfully, and with dispatch, all work entrusted to him, and respectfully solicits a call from his friends and the public generally.

The highest cash prices paid for old cast iron, brass and copper.

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Cary, between Pearl and 15th sts.

ATKINS' SELF-RAKING REAPER.

THIS machine is now offered to the public and warranted to be a good self-raking reaper. It is also believed to be a good mower, but not yet having been sufficiently tested in grass, (though it soon will be) it is not warranted to be equal to a machine made mainly or wholly to mow.

The raking apparatus is of novel and very simple construction, and not liable to derangement, and every farmer who has seen it in the harvest field, says it performs the raking better than a man can possibly do it.

Price of machines at Chicago, \$175, of which, \$75 must be paid on giving the order, \$50 upon successful trial, and \$50 in note payable 1st December.

The machines are thoroughly built and warranted.

Descriptive circulars, with cuts, sent to post-paid applications.

J. S. WRIGHT,
"Prairie Farmer" Warehouse, Chicago, June,
1852. July—3t

ANALYSIS OF SOILS, &c.

THE undersigned is prepared to execute the analyses of Soils, Guano, Marls, Plaster, &c. &c. at the Laboratory of the Virginia Military Institute. Packages may be forwarded through Webb, Bacon & Co. Richmond, or Echols & Pryor, Lynchburg.

Persons desiring further information will please address

WILLIAM GILHAM,
Prof. Chem. and Agriculture, V. M. I.
Feb. 1, 1852. Lexington, Va.

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THE subscriber offers for sale the following varieties of *pure blooded Fowls*, viz. COCHIN CHINA or CANTON FOWLS; BLACK, WHITE, BUFF and BROWN SHANGHAIS; CHITTAGONGS or GRAY SHANGHAIS.

The above are the largest and best variety of fowls bred in this country, and are from stock originally imported by the subscriber. Gentlemen, Poultry-keepers and others, desirous of procuring choice Poultry may depend upon the above stock being purely bred and warranted true to their name. Address

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The different varieties of these beautiful fowls may be seen at my residence on First Street, between Main and Cary Streets.

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Richmond, Nov. 1, 1852—1y

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FOR SALE.—A fine farm near Marysville, Buckingham county, Virginia; well timbered, has good drinking water, fine grass, and is a desirable location for health and comfort. Farms in Talbot county, Eastern Shore of Maryland, on the salt water, in healthy sections. Also, in Baltimore county, within 12 miles of the city.

Cotswold Rams, Ewes, Ram and Ewe Lambs from the best flocks in the United States. Also, Southdown Ram Lambs from fine flocks.

Shanghai Fowls from different importations, and as grown by Professor James M'Clintock, for which, I am the only Maryland agent.

Moor's Patent Premium Wheat Drills, on more accommodating terms, with the improvements.

Letters of inquiry and orders, post paid, will receive prompt attention.

MARTIN GOLDSBOROUGH,
Agent, Harrisonville, Baltimore Co., Maryland.
July—1f

THE SUBSCRIBER has for sale yearling and two year old BUCKS, of the New Oxfordshire or Cotswold breed, which he will sell any time when called for, and has no hesitation in saying this breed of sheep are superior to all others, for large carcass, heavy fleece, early maturity, constitution, and defies all other breeds for profit. This flock has been bred from the best ever imported, the sire having clipped eighteen pounds of well washed wool; and a small amount of wethers, slaughtered in Philadelphia, in February, weighed as follows:

Live weight, 374, 309, 307, 285, 271, 254 lbs.
Dead " 269½ 213, 203, 201, 181, 160½ "

No. 1 being the heaviest sheep ever slaughtered in the United States.

Persons are invited to call and see for themselves, or communicate by mail to

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FOR SALE.—A thoroughbred Bull of the Ayrshire and Durham breed, in fine health and vigor—color rich red, with slight white spots in the flank, characteristic of the Ayrshire breed. Said Bull is immediately descended on both sides from Imported Stock. For testimonials of stock, &c. enquire of the Editor. oc—tf

THE DAILY EXPRESS, published at Petersburg, Va. is the cheapest daily paper published south of James river, Virginia. It is devoted almost entirely to news matters of every description, and eschewing politics, may be emphatically styled a "Newspaper." Three hundred and twelve copies, which embraces the whole year (Sundays only excepted,) will be furnished at the unprecedented low price of four dollars per annum. Address

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ap—tf Petersburg, Va.

TO AGRICULTURISTS.

MORRIS & BROTHER have received the following valuable Books, pertaining to Agriculture:

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Elements of Agricultural Chemistry and Geology; by Jas. F. W. Johnston.

American Agriculturist, for the Farmer, Planter, Stock Breeder, and Horticulturist; by A. B. Allen; numerous plates. The 8th and 9th volumes of this most valuable work are received, also complete sets. Every farmer should have this work.

American Farm Book, on Soils, Manures, Drainings, Irrigation, Grasses, Grain, Roots, Fruit, Cotton, Tobacco, Sugarcane, Rice, and every staple product of the United States.—This is a perfect farmer's library, with upwards of 100 engravings; by R. L. Allen.

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A Muck Manual for Farmers; by S. L. Dana.

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American Husbandry.—Series of Essays on Agriculture, with additions; by Gaylord and Tucker.

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London's Gardening, for Ladies; by A. J. Downing.

Square's Agricultural Chemistry, Bonssingault, Rural Economy, Buist's Kitchen Gardener, Landscape Gardening, and Rural Architecture; by A. J. Downing.

Fessenden's American Gardener.

American Fruit Book, with full instructions; by S. W. Cole.

Downing on Fruit Trees.

Theory of Horticulture; by Lindley.

Florist's Manual; by H. Bourne; 80 colored engravings.

Bridgman's Kitchen Gardener.

In addition to which, Morris & Brother have all of the late Works on Agriculture, Horticulture, and Raising Stock, of any celebrity.

Richmond, March 12, 1851.—1y

AN ESSAY ON CALCAREOUS MANURES,

BY EDMUND RUFFIN, a practical Farmer of Virginia from 1812; founder and sole editor of the Farmers' Register; Member and Secretary of the former State Board of Agriculture; formerly Agricultural Surveyor of the State of South Carolina, and President of the Virginia State Agricultural Society; fifth edition, amended and enlarged.

Published by J. W. Randolph, 121, Main street, Richmond, Virginia, and for sale by him and all other Booksellers; fine edition, 8vo., printed on good paper, and strongly bound, library style \$2; cheap edition, 12mo. \$1 25—copies sent by mail, post paid, to those who remit the price.

A large proportion of this publication consists of new matter not embraced in the preceding edition. The new additions or amendments serve to present all the new and important lights on the general subject of the work, derived from the author's later observation of facts, personal experience and reasoning founded on these premises. By such new additions the present edition is increased more than one-third in size, notwithstanding the exclusion of much of the least important matter of the preceding edition, and of all portions before included, that were not deemed essential to the argument and necessary to the utility of the work.

"This work is from a Virginia gentleman, whose contributions to agricultural science have already given an extensive popularity. Mr. Ruffin is a practical farmer, of great intelligence, and is eminently competent to impart information on the subject, which has for so many years engaged his attention."—*Methodist Quarterly Review*.

The Southern Planter, in speaking about the cultivation of Irish potatoes and liming, says:

"But for the details of that business, we would refer our correspondent to a book, which if he has not now, we beg for his own credit that he will get as soon as he goes to Richmond. We mean the final edition of the Essay on Calcareous Manures."

"The farmers of Virginia have just reason to thank both the author and publisher for this enlarged and improved edition of a most valuable book."—*Hon. Willoughby Newton*. je—tf

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HAVING employed a competent teacher to educate my children, I wish to get five or six boys, not more than twelve years old, as boarders. The whole number of pupils will not be allowed to exceed twelve or fourteen. The teacher is a good classical and mathematical scholar and a gentleman in whose capacity, fidelity and high character I have entire confidence. The school will commence the first of October and terminate the middle of August, with a short recess at Christmas.

TERMS—\$130 per annum for every thing.

FRANK G. RUFFIN,

July, 1853.

Shadwell, Albemarle.

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THIS valuable fertilizer has been used for several years in England and other parts of Europe, and next to Guano, holds the highest rank in popularity, and the extent to which it is used among farmers. Its introduction in this country has been more recent; but the progress it has made in the estimation of the public has not been less marked or successful than abroad. It is now extensively used throughout the Northern States, after a full trial and investigation of its merits; and it is rapidly becoming, like its predecessor, guano, a favorite manure at the South and West.

It is composed of crushed or ground bones, decomposed by the addition of about one-fifth their weight of sulphuric acid, diluted with water, to which is added a due proportion of guano and sulphate of ammonia. The latter is the active and one of the most efficient agents in the best Peruvian guano.

It is suited to any soil in which there is not already a full supply of the phosphates, which is seldom the case. All crops are benefited by its application.

For sale in large or small quantities, in bags of 150 pounds each. No charge for packages. All bags will be branded "C. B. De Burg, No. 1 Super-Phosphate of Lime."

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