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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.

C. T. BOTTS, Editor.

VOL. II.

RICHMOND, MAY, 1842.

No. 5.

CORN STALK SUGAR.

We are indebted to H. L. Ellsworth, Esq., the most excellent commissioner of patents, for a very interesting pamphlet published under the superintendence of the National Agricultural Society. It contains two articles; one, on the subject of making sugar from the stalks of Indian corn, and the other, upon the separation of the solid constituent of fatty substances for candles and other purposes.

Some time during the last year, Mr. William Webb, of Wilmington, Delaware, exhibited in Philadelphia some specimens of sugar obtained from the stalks of Indian corn, that attracted considerable attention, and were much admired for their superior quality. All vegetables contain more or less of saccharine matter, and there are few substances in nature out of which sugar may not be made. We had thought, however, that there was nothing yet discovered that could compete with the sugar cane. We, therefore, looked upon Mr. Webb's operations rather as curious, than likely to lead to any very practical results, and paid very little attention to the subject. We confess that this pamphlet, which is neither more nor less than the publication of an address delivered by Mr. Webb upon the subject, places the matter in a new light, and renders the subject one of the deepest interest to our readers.

Mr. Webb claims to have discovered a new and practical use for our great crop of Indian corn. If he is correct in his estimates, we are destined to become the sugar growers of the world. Maize or Indian corn is our peculiar product, and Mr. Webb thinks that sugar can be obtained from it at less expense than from any other article known to the world.

The many temptations offered by our prosperous and happy government to the enslaved population of Europe, has already produced a tide of emigration that has filled the channels of industry at present open. In almost every branch we are producing to excess, and nothing is more wanting than new resources for the surplus labor that we have already collected. This

desideratum, if his estimates are correct, Mr. Webb has obtained, and he deserves to be ranked amongst the benefactors who have added to the variety, and consequently, to the extent of the products of his country.

We have said, that the fact, that sugar could be extracted from Indian corn, was not new; but Mr. Webb, by dint of sound reasoning and untiring experiment, has discovered the mode of management, by which the business may be made profitable. The corn should not be permitted to ear, nor the stalk to grow large. For this purpose, the corn is sowed in drills, and the ear nipped off in the embryo state, whereby the saccharine juice of the sap is retained in the stalk. By the bye, it seems, that M. Pallas, a citizen of that nation, which robs all others of the merit of discovery, had, as early as 1839, demonstrated to the Polytechnic Society of Paris, the great saccharine properties of Indian corn, and the method of increasing them by separating the ear from the plant immediately after the tasselling. This essay Mr. Webb had never seen, and although he arrived at the same results, he went far beyond the *speculations* of the Frenchman; he has actually made the sugar, of a quality pronounced to be far superior to any thing obtained from the beet with so imperfect an apparatus. He has found that the raw juice of maize is, in saccharine matter, to the juice of Louisiana cane, as 10 to 8, and to beet juice, as 10 to 3. He feels assured from calculations founded on experiments, that from 800 to 1,000 lbs. of sugar can be obtained from an acre properly cultivated in Indian corn. Mr. Webb endeavors to demonstrate, in the first place, that sugar must be made elsewhere than in the tropics. Statistics, he says, prove that a greater quantity of labor is annually required in the West Indies for the production of the same amount of sugar; that emancipation in some of the Islands, and the unpopularity of the slave trade, are daily lessening the only labor that has been hitherto found for this laborious and toilsome production. So that whilst the demand is

hourly increasing, causes are daily operating to lessen the supply from the tropics. Out of the tropics, the cane seldom matures, and he, therefore, compares the corn with the cane in Louisiana. The cost of seed is, as one to thirteen; the expense of planting, one to fifty; the cultivation about the same, the manufacture infinitely less, and the product per acre equal.

The beet, especially in this country, he thinks, will bear no comparison with it. The greater facility of cultivation, the peculiar adaptation of soil and climate, the greater freedom from foreign admixture in the juice, all combine to render the corn cheaper and more profitable than the beet sugar.

In the manufacture of the sugar from corn, one of the greatest advantages seems to be derived from the softness of the stalk, compared with cane, whereby, the power and machinery required to express the juice, are so much lighter and cheaper.

Whilst we have endeavored to condense Mr. Webb's general views upon this important subject, we have purposely omitted the detailed directions he gives for the manufacture of sugar; for, although we hope much from his ingenious labors, we do not consider the profits of the business fully established, or that the day has come, or will perhaps ever come, when, as he infers, the process will be so simplified, as to render every man his own sugar maker.

For the Southern Planter.

DRAINING AND MANURING.

Mr. Editor,—It may be safely affirmed that the two most prominent remedies for the improvement of land consist in *draining* and *manuring*. To have a good understanding of these will go far to the speedy restoration of our worn out lands. I know a piece of land on which a friend of mine has put hundreds of loads of manure, and yet the land looks very poor, arising from the too great abundance of water retained in the soil. As I often see in your useful paper, communications on both these subjects differing somewhat from my own views, I beg leave through the Planter to state a few things in reference to both.

1st. As it regards draining. There are many, who, although convinced that water retained in the soil neutralizes the fertilizing qualities of it, yet, are deterred from draining on account of the labor and expense, especially if wood is scarce with them. Now, the plan I pursue is certainly the cheapest of any I have yet seen recommended. It is as follows: I dig my drain, if

possible, three feet deep, but so narrow at the bottom as just to let two pine poles lie side by side. Within four inches of the bottom, I lay pieces of pine of the same size with the poles across the drain, about four feet apart, on which the pine poles are to rest. These cross pieces are to keep the long poles from falling down on the bottom of the drain, and being four inches from it, give abundance of vent to the water. When I put down the long poles, it is necessary to reverse them, laying the thick end of one with the small end of the other; then, on the top of the poles put the pine brush thick enough to prevent the loose dirt from falling under the poles. I know some have been in the practice of laying down three poles in the bottom, but it does not answer a good purpose long, and in a short time, it is seen that the labor and poles are thrown away; but as long as poles will last under ground, you have a good drain; one, that will last longer than a box drain of plank. Moreover, in many places, the ground, through which you cut a ditch, is so soft that no box drain will be of any service, on account of its sinking; this you will see is remedied by the cross pieces, which can be made to stretch far enough across on both sides of the drain, as to resist the pressure; or if you choose, drive a stop down on each side of the drain for the cross piece to rest upon, as I have done many times. If I were near a saw mill, and had plenty of outside plank offered to me for nothing, I would make use of them to lay on the cross pieces; but as every body has pine poles, it is poorly worth while to be hauling slab plank from a distance. I have only to add, that I have made drains of stone, of plank, and of poles, and prefer the latter, for expedition and cheapness. I could say much on the importance of draining land, but as I fear I would be troublesome to you, I shall proceed to the next article.*

2d. On the most judicious method of using manure. I take it for granted that a majority of farmers admit that manure ought not to be deeply covered, but kept near the surface of the earth, and shall not, therefore, give the why or wherefore, only observing, that it is one thing to put manure *near* the surface, and another, to put it on the top, and leave it exposed to the wasting influence of exhalation. If, for example, it be hauled out and spread on the crop of wheat in the spring, or laid on the top of corn, so much of it is wasted by the influence of the sun and wind. Now, I am not saying that no good will be done to the wheat and corn by the above plan of surface dressing; what we are in pursuit of, is the most judicious method of using manure. Let a piece of land be taken which

* We will "trouble" Mr. F. if he pleases, for all he has to say upon the subject of Draining; but would suggest to him the advantage of using his full name instead of his initials.

has been in corn the previous year, plough it up well—haul out all the manure that can be spared—let it be scattered on this land, and, after oats has been sown, harrow it over with a large harrow, then sow clover and run a heavy roller over it, and when the clover and oats are above the ground, sow a bushel of plaster to the acre, and you have, in my judgment, the best way manure can be used, both as it regards saving it from waste and improving land. The harrow incorporates it with the earth sufficiently to prevent the ammonia from escaping, while every clod is pulverized by the roller, and manure and earth together brought directly in contact with the seed sown.

J. F.

SOUTHERN MANUFACTURES.

We see that the Charleston Transcript is engaged in a very able demonstration of the capability of the South to manufacture her own products. We have been long satisfied of the fact, and it would be just as reasonable for Virginia to send her wheat and tobacco to be manufactured in New England, or in Europe, as it is in South Carolina to transport her cotton thousands of miles, to have it returned to her in manufactured goods. The perfect command of her laboring population, the subordination and system to which they may be subjected, the very low price at which their labor is obtained, being nothing more than the mere price of the plainest food and clothing, all combine to enable the South to compete with any portion of the globe, especially in the manufacture of her own products.

Whence originates the idea that the North can manufacture cheaper than the South? We answer, from the fact, that the price of northern *white* labor has been compared with the price of southern *white* labor. Habits of southern luxury infect even the mechanics within their influence, and render them unable to compete with their more economical brethren of the North. Consequently, in all of those articles, in which the cost of transportation is not too great, they have been driven from the market by northern importations. Where there is any thing like equality in natural advantages, the southern artificer can never compete with the northern workman, until he learns to reduce his expenses to the same standard. This he will not do, whilst nature invites him to a more generous living in the cultivation of the earth.

Here, we see, that the North manufactures cheaper, simply because she is less blessed by

nature; because her people are poorer, and because the low prices, which the operative receives after all the expenses of getting his products to a southern market are paid, are still more than he can make at another calling, although infinitely less than would satisfy the *farmer of the South*. But we have another great class of operatives in our negro population, that are accustomed to no such expensive habits; whose labor is obtained for their victuals and clothes, the very lowest price at which it can be afforded any where. This labor, we maintain, can be made to compete successfully with any other upon the face of the earth. The only question is, how can it be most advantageously employed, and the answer heretofore has been, in the cultivation of the earth. But now that an over-production has reduced the prices of our great southern staples, of cotton, wheat and tobacco, we believe it may be most advantageously diverted to manufactures. If thus, the increase of our population drives a portion of our people to encroach upon what has been heretofore the peculiar business of our northern allies, and they are injured by it, we most heartily sympathise with their afflictions, and wish to God we could continue to follow one branch of the business, leaving the other to them. But charity begins at home, and we believe that the only means of employing a large portion of southern labor advantageously, hereafter, will be to appropriate it to manufactures.

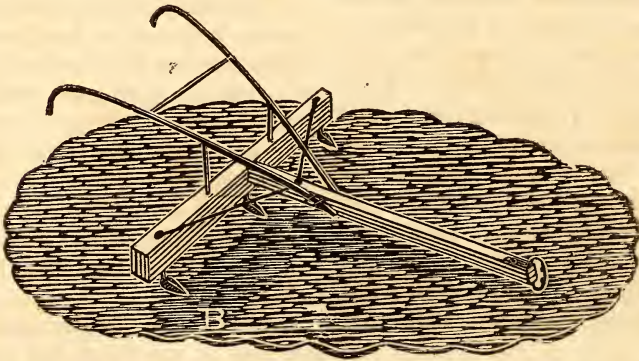
But we will be told that manufactures have been tried at the South, and have universally failed. Manufactures have been established, generally, at the South by joint stock companies, and such, we believe, will fail wherever they are tried, either at the South or the North. The old proverb is, "if you want your business done, get some body to do it for you, if you want it well done, do it yourself." Joint stock companies always "get somebody to do it for them," and they, if not the business, are in the end pretty sure to get *done*. Another great mistake, we think, that is generally made in the establishment of southern manufactories, is in the inordinate and unnecessary erection of expensive buildings, extra finish about machinery, a great deal of which is intended more for ornament than use. We have sometimes been surprised in visiting a northern manufactory, the reputation of which had created the imagination of a splendid and extensive establishment, to find the whole works probably under a wooden

cover, presenting an unpleasing contrast with some of the expensive factories we had left behind us. But when we got inside, we found cheerful, active, regularly paid workmen, instead of neglected machinery and abandoned implements, and this, because the capital of the proprietors was engaged in conducting their business, instead of being locked up in brick walls, with elegant fronts, and finely ornamented windows.

If instead of forming a joint stock company, any three men will unite their capital, one of them, at least, thoroughly understanding the mechanical part of the business they propose to conduct, purchase a parcel of sprightly negro boys, and take care to keep enough of their capital in *money*, to conduct the business, we believe they may engage in almost any branch of manufactures, with the certainty of success.

For the Southern Planter.

SIDE WIPER.



C. T. BOTTS, Esq.

Dear Sir,—Some of your readers desire a plan throughout, for making a crop of corn; as I have usually had good success on *good land*, with *good seasons* you shall have my mode. The preparation for, and mode of working the corn crop, differ frequently on adjoining farms; in some instances from want of skill, or industry, but in many, from a marked difference in soil; stiff clay land should be broken in the fall; all other soils with which I am acquainted in this section of the State, will yield by far a better return for the labor spent from spring ploughing; first you save (after planting) near half the work; secondly, your land is not so liable to wash, and will be in a better state for a wheat crop. Col. Isbel has written a very sensible article for your paper on this subject; he and I agree as to the time of breaking most soils, but we differ widely as to the manner of planting, and working the crop.

My plan is to plough with a three-horse plough and cutter; turn the sod or soil perfectly; harrow until the land is in nice order; sometimes on turf I use a heavy roller to expedite the preparation—lay off with a three-horse plough, on *high land*, 5 feet—drop the corn from $1\frac{1}{2}$ to 2 and $2\frac{1}{2}$ feet, according to the strength of soil—cover with the coultter where it will answer, and follow with the hoe, chopping, and putting in nice order. Where the coultter will not answer, we cover with the hoe. When the corn is about four inches above ground, we run a two-horse harrow plump over it—follow with hoes and thin to two stalks in each hill; then, after a time, (the length of which depends on circumstances) the sooner the better, we run what is called a side wiper, the best tool for corn I have seen, (used no where that I have heard of but in Albemarle.) It is made with a beam 4 feet 8 inches in length, morticed into one 2 feet 8 inches, at an angle of about 45 degrees; the

handles are fixed as to a shovel or coulter, one tooth rather larger than the common cultivator fastened at top with a screw, is placed near each end, and one passes through both the beam and end piece. Follow with the hoes, and thin to one stalk per hill, chopping nicely; after a *time* we run the side wiper again, three times in each row, which leaves the land level, the three-horse furrow having by the various workings been levelled also. After harvest, if convenient, we walk over, hoe in hand, and chop out the large weeds, briars or bushes, which may have sprung up. The last of August and first of September, we cut and haul our corn to a lot near the barn, stack half a barrel at first, afterwards more—start two-horse ploughs to fallow the land for wheat. What corn we are unable to haul so far, is stacked round the fences, and in roads left for oats, twenty feet wide. We frequently haul home more than two-thirds the crop. Thus, when we begin sowing wheat, our fallow and corn land are all ready to sow down and harrow in. The amount of food thus saved, and its quality would amaze you, and many of your low land subscribers; when you visit Albeuarle you shall see it.

Mr. Dicken's plan is good for flat, slash, or wet land, but the listing is needless with us; I have not a neighbor who does it. We begin usually in March to plough for corn—prepare and plant one-third or half, 15th of April, as nearly as may be—last April, one-third, or near it—and about the 10th May, the balance; thus we are rarely hard pressed in working corn. We make large crops of tobacco, and used to make good wheat crops, but have failed for years; the making corn is looked on by some of us as a light job, but in soils which run together, hold water, and have but little strength, it is a serious business.

Every section of country has its peculiar mode of farming and planting; could you find the best manager in each county, and prevail on them one and all to give you his plan for making one crop, or all crops, you would have just so many different schemes!! Corn may be cut and shocked without injury earlier than the fodder will be ripe, if put up well with an oak split, or grape vine near the top to prevent its falling. Over the Ridge, many graziers prefer this food to hay. After the harrow is run over the corn, is the best time for plastering.

COLLONUS.

Leigh, March 6, 1842.

At the head of this article will be found an engraving of the implement which our correspondent calls a "Side Wiper," and of which he sent us a drawing.

In the last "Southern Planter," a writer gives us a remedy for the mange in dogs. Although

in common life things which are considered valueless are compared to a dog, yet the fidelity and affection of that valuable domestic animal have always made him an object of gratitude and care with man. If we should disregard his comforts, or neglect to alleviate his maladies, we should be wanting in those noble qualities in which he has set us the example.

Some years ago, when residing in the upper country, I had a very beautiful and favorite pointer. He became mangy over his whole body, and very much reduced, so that I expected to lose him. I had a friend residing in the neighborhood who owned a tan-yard. He was kind enough to take my dog for a week or ten days, and dip him in the tan-vat several times each day. He was then rubbed well with a mixture of tanner's oil and tar, and sent home. In the course of a short time the scales began to peel off, and new hair to grow out. He soon became the sleekest and prettiest animal I ever saw, and was never again affected with the disease, or even visited by vermin for a year or two. I often thought, by his playful antics that he was conscious of his obligations, and wished to express with kindness a gratitude which he felt; but the obligations were transferred to me, for he lived to afford me many an hour of sport and many a nice dish of game.

The disease is evidently infectious, and those that are subjects of it should not be permitted to consort with those that are not.

I hope the brief remarks above, may lead to the relief of many a valuable animal for the mutual protection and enjoyment of himself and owner.

W. J. DUPUY.

P. S.—In the case above related, I first resorted to the usual remedies, such as sulphur, &c. without effect.—*Farmers' Register.*

PIGGERY.

In the *Western Farmer* we find a description of Mr. H. S. Kellogg's piggery, which is very much lauded by the Editor.

Like many others, it has stalls with a division for straw for bedding, and a passage in the rear. Its great peculiarity is a swinging board, hanging perpendicularly over the centre of the trough. This may be bolted to either side of the trough, at pleasure, throwing the trough in the passage, or in the stall, as it is fastened to the front, or the back. This is a simple, ingenious, and useful arrangement. The hanging board being fastened to the front of the trough, the feeder in the passage may fill the troughs without molestation or hindrance from the impatient grunners. When this is done, he brings the board towards

him, and fastens it on the side next the passage, which, like the magic uncovering at the "Exchange Hotel," brings the repast within the reach of the hungry expectants.

BENEFITS OF DEEP PLOUGHING.

A gentleman some days since, while conversing with us upon the subject of agriculture, related the following instance in favor of deep ploughing. He said that his father, some twenty-five years ago, bought a farm which had been nearly worn out; that the surface soil was almost a bed of floating sand with a clay subsoil; that after cultivating it in the usual way, of shallow ploughing, for two or three years, he became vexed at the smallness of product, and determined to try the virtue of deep ploughing: that to effect this, he procured two double-horse ploughs, and made one plough follow in the track of the other, so that he penetrated the earth fully twelve inches, and threw up half that number of inches in depth, of the subsoil upon the top of the sand thrown down by the operation of the plough. This experiment was first tried upon a field of twenty acres, late in the fall, intended for corn the ensuing spring. The ground after being thus ploughed was harrowed and suffered to remain until sufficiently frozen to bear teams, when fifty bushels of lime to the acre was spread thereon. In the spring, the usual quantity of barn-yard manure was carted out, spread and ploughed in to the depth of four inches; after which the ground was harrowed, and an additional quantity of lime, at the rate of fifty bushels to the acre, was spread thereon, and harrowed in.

Our informant assured us, that while this operation of deep ploughing was going on, his father's neighbors admonished him of the danger of *poisoning* his land; but that when the corn crop came to be gathered, they changed their tunes, as instead of getting, as formerly, three or four barrels to the acre, there were housed 143 barrels of good corn and upwards of seven barrels of nubbins, and that the fourth year thereafter, after the field had been in wheat and clover, it brought rising of ten barrels of good corn to the acre, besides six of refuse corn.

As the above facts will speak for themselves, we shall omit all comment.

The above is extracted from the American Farmer, and is only another added to the thousand testimonials of the advantages of a deep soil. Every large growth, corn especially, requires it. It affords the surest protection against a drought, because the deeper strata, into which the roots will penetrate, are preserved free from the parching influence to which the shallower

ones are exposed. The roots of some vegetables are known to penetrate several feet, and wherever the roots of a plant are inclined to go, there, if possible, it should find its food. Still the cost must be remembered. Deep ploughing is in itself more expensive than shallow, and the subsoil turned up can only be converted into a good soil, sometimes, at very heavy expense. We must remember, too, that the new theory is, that much the largest portion of the food of plants is obtained from the atmosphere, through their leaves.

If this be true, and the great Liebig says it is, it may be questioned whether, under certain circumstances, the expense of deepening the soil for the roots, might not be better bestowed in originating gaseous products for the leaves.

We only desire to awaken attention to the whole matter, so that the operator may duly consider, and expend his means to the greatest advantage.

POWDERED MILK.

Kirchoff, a Russian chemist, who discovered the process of converting starch into sugar, has recently made, it is said, several experiments on milk, by which it appears that fluid may be preserved for use for an indefinite time. Fresh milk is slowly evaporated by a very gentle heat, till it is reduced to dry powder, which is to be kept perfectly dry in a bottle, well stopped, for use. When required, it need only be diluted with a sufficient quantity of water, the mixture will then have all the taste and properties of new milk.

For the Southern Planter.

MAKING, PRESERVING AND APPLYING MANURE.

1. Making. The making manure is like the making of other things; every one has his own way, and thinks it best. A great deal may be made by using the proper means, collecting every thing that would otherwise be lost, and depositing it in a particular place. For instance, have a pen made near the kitchen—put into it from time to time all the ashes, trash, weeds growing on places where they are in the way. In this way I have seen a considerable quantity of manure made. Then to the stable, farm-pen, and hog-pen, all which should be kept well littered with straw, leaves, or other coarse material that you may have. My own opinion is that more leaves may be put into a farm-pen than is advisable. I would keep all these places well littered, and if more leaves were collected than was required for that purpose—pile them up in

the woods, apply lime or plaster, and in the spring spread and plough them in. By that means, one hauling is saved, and I think, equal benefit secured.

In cleaning out stables, cattle-sheds, and hogsties, I would spread the manure over the farmyard—by which means the whole is more rapidly decomposed, and is of equal strength, besides that it prevents what is called fire fang in the horse manure. By so arranging the farm-pen that no water can get into it but what falls from the clouds, and none can pass out—all the liquid portion of the manure is absorbed by the litter and the whole mass made rich.

In my travels, last year, I observed at a gentleman's house a plan that pleased me much. A pit was dug near to his stable, and when that required cleaning out, the manure was thrown into the pit with alternate layers of sand until filled, a covering of sand being the last, and a small trench connecting the pit with several smaller ones filled with litter, to absorb the liquid which escaped from the larger pit, by which means all was saved.

2. Preserving. The great secret of preserving is to prevent the escape of the liquid portion of manure. It will not do to rely upon its being absorbed by litter—if it can pass off, it will go.

Under the first head, "making," I have included necessarily the other means of preserving. After it is made, if it cannot be immediately applied, put it into a situation to prevent its heating, and cover it to prevent evaporation.

3. Applying. Manure is like money; any body can make it, but few take care of it, and apply it properly. I consider the last of most importance.

In the application of manure we all have some leading object in view; one to make a large crop of corn, another a large crop of tobacco, and another a large crop of something else. It should be so applied, that whilst it secures us good crops, it also secures the *permanent* improvement of our lands. This cannot be effected by those who have to rely upon their own resources, without giving back to the land in some form, a portion of its product. As the most effective means of rapid and extensive improvement, I would so apply manure as to produce good crops of clover, using for that purpose the finest, and applying the coarse manure to the corn crop. When a good crop of clover is once secured, I should rely upon that for keeping up the improvement on the land which produced it. Corn is an exhausting crop—I have known one crop of it to consume the fruits of six years' improvement. But as we cannot do without it, the cultivator should be careful not to tax his land, either by too much crowding or by a careless or injudicious mode of culture. Land may be kept in a state of improvement, and even be

benefitted by a corn crop once in four or five years, if not grazed, or badly cultivated.

To return to manure. My opinion is that land, like the stomach, may be over-loaded with food—and as it is best to err on the safe side, I prefer to apply my manure in "broken doses," so that none shall be wasted. I have known persons to fail in making a good crop by applying too much manure—and with the loss of half that, and half the crop, few persons can afford to improve under such circumstances. It is, I think, bad policy to use any thing for the purpose of increasing the quantity of manure, that can of itself be applied as a top-dressing or otherwise—which takes off the produce of the land to add to the stock of manure. I contend that it is best to let it return to the land which produced it, by the natural course of decay.

As already stated, manure should not be applied in larger quantities than may be necessary to secure a good crop, and leave the land improved—otherwise if the season be a pushing one, the extra crop will take too much from the land—if it be a dry one, there will be a loss of crop and manure. It is, therefore, my opinion that it is best to apply so much manure only as may be necessary to secure a good crop and leave the land in a condition to produce a good crop of clover, by the aid of which the improvement may be continued and perpetuated. This appears to me to be the cheapest, and the surest, as it is the only way of effecting a general system of improvement, where the farmer has to rely upon the resources of the farm alone. I have tried it and my own experience has satisfied me that by these means a rapid and effective system of improvement can be kept up.

WILLIAM MILLER.

BREEDING.

The duration of life in the swine, is said by naturalists, to extend to twenty or thirty years, who report that the boar continues to grow to the end of the term. Swine are ready for procreation at the age of seven months, but the male is unprofitable for that purpose until twelve months old, and is in his prime at two years. In other respects, the age of swine is matter of small concern, since they are never kept until they are old; and it is the custom with many breeders to slaughter even their most prolific sows in the second year. The young sows to be preserved for breeding, should be chosen with deep and capacious bellies, the full number of teats, and of the most extensive or widest general form. The term of gestation in swine is four months, or one hundred and fifteen days, with a very few days variation, producing three litters of from five to twelve pigs each, in about eighteen months, supposing the pigs to be weaned; but in two or three months less time, the pigs

being suckled for roasters. I have, however, found, and more especially in the large breeds, that a litter of a moderate number is most profitable, since in the most numerous litters there are generally several undersized and weak individuals.

Thus a litter of nine or ten good pigs may bring more profit than a litter of thirteen or fourteen.—*Western Farmer.*

POTATOES.

Mr. Daniel I. Curtis, in a letter to the Editors of the *Cultivator*, expresses the opinion that too much seed is generally used in planting Irish potatoes. The consequence is a great many small potatoes, instead of a lesser number and greater weight of good ones. This opinion, long entertained, has been, he says, confirmed by experiments made during the last season, which he presents in the following tabular form:

"No. 1—All large potatoes, had in number, 368, weight 40 1-4 lbs.

"No. 2—Six eyes in hill, cut from large potatoes, 292, weight 39 1-4 lbs.

"No. 3—Four eyes in hill, cut from large potatoes, 220, weight 44 3-4 lbs.

"No. 4—Two eyes in hill, cut from large potatoes, 230, weight 45 lbs.

"No. 5—All small whole potatoes, 260, weight 45 1-4 lbs.

"No. 6—Six eyes, cut from small potatoes, 262, weight 41 1-4 lbs.

"No. 7—Four eyes, cut from small potatoes, 270, weight 49 1-4 lbs."

The season he says was a very dry one, but thinks that would not affect the relative results. The rows were all subjected to exactly the same treatment, there being no difference, except in the seed, which were all of the same variety. We infer, although it is not expressly stated, that the kind known as *Pink Eye* was the one used on this occasion.

IMPORTANCE OF THE QUALITY OF THE SALT USED IN MAKING BUTTER.

At a late agricultural meeting in Augusta, Maine, Dr. Bates stated that the Quakers in Fairfield were in the habit of buying the best description of coarse salt and cleansing it, and having it ground, and this salt they used in the manufacture of butter. The consequence was, the butter made by the Quakers of Fairfield, had a better reputation and bore a higher price than the butter made in other towns. He held them up as worthy of imitation. He stated that the loss of the butter manufactured in this

State was greater in amount every year than the sum raised for the State tax—more than two hundred thousand dollars. He believed that, if this fact was generally understood, if the people could be made aware of the loss incurred by bad manufacture, we should at once see an improvement in this article of which so much is produced and which enters into our daily consumption.—*Maine Farmer.*

CHOKED CATTLE.

Mr. Josiah D. Smith, of the county of Henrico, desires us to say to his brother farmers, that after an ineffectual resort to the usual remedies, he relieved a choked ox, a few days since, by holding up his head, and pouring into his mouth a strong solution of soap in water. The relief was instantaneous, the turnip with which he was choked passing down immediately into the stomach.

Mr. "Whalen," in the *Cultivator*, says, that for animals that have good teeth, there is no occasion for slicing *Ruta Baga*, that sheep eat them decidedly better when fed whole, and cattle never choke on them.

From the *Farmers' Gazette.*

LUCERNE.

Mr. Editor,—I presume you have not forgotten my promise of the last year, to advise you of the result of my experiment on lucerne. I do this the more readily as I am informed several neighboring planters intend making the like experiment. You will recollect that my communication stated, that I sowed on the 25th of April, and that I thought it a month too late, at least. Of this I am now convinced, though my experiment is far from being full, it has been entirely satisfactory in one particular, that is, we can cultivate to profit.

I will first state the errors I committed, for the purpose of enabling others to avoid similar ones. My rows were twenty-two inches apart, they should not have been more than fifteen at the utmost, perhaps twelve, would be better. The land that I sowed upon was not dry enough, though it was pine land, it should be a very dry soil, one that quickly absorbs water. It should be trenched (as recommended by Arthur Young) to at least the depth of twelve inches, and filled with the best undecomposed manure for two-thirds of the distance from the bottom, the seeds should be sown thick, the most regular and expeditious way is, to put them in a bottle with a quill through its cork. These are some of the errors that I committed—having the rows too wide apart; not having a sufficiently rich and dry soil; and sowing the seeds too thin. It is

a waste of time and money to attempt cultivating lucerne without a very rich and dry soil, kept entirely clean of every thing that might obstruct its growth, though when once firmly rooted it would be difficult to eradicate it, yet in its earliest stages it is a very delicate plant. I pulled up about the 1st of January a sprig that had a root more than twelve inches in length, the lateral roots were very short, and few, and hence my conclusion that it will admit of being planted very close, and should be made very rich to a considerable depth.

In looking over some old papers sometime since, I found a very small pamphlet, entitled "A Treatise on the Culture of Lucerne in and about Richmond, Va., by Jacqueline Ambler, Esq." which is at your disposal, to make any extracts from that you may think interesting to your readers.

Yours,

A PLANTER.

HIGH CULTIVATION MOST PROFITABLE.

The following is an extract from a letter of E. Phinney, Esq. published in the transactions of the Essex Agricultural Society. Thousands of acres in this country are in annual cultivation, the fertility of which has been so exhausted, that the product will not pay for the first ploughing. To continue to work without improving them, is the height of folly. By reducing the quantity, and concentrating the manure, the same yield might be obtained with half the force, and a good profit made, where labor is now thrown away. But how far is this system to be carried? How much money should a farmer lay out upon one acre before he begins to improve another? This will of course depend upon situation and circumstances. In the neighborhood of a city, where land is high, and a ready market afforded for vegetables, many of which can be crowded into a small space, it may be advisable to spend a hundred dollars upon the improvement of an acre. But to a farmer in the interior, whose land costs him eight or ten dollars an acre, we should say, divide it between two or three. It is more likely that thirty barrels of corn will be obtained from three acres, than twenty from one. The difference will more than pay for the extra work.

An ounce of fact is worth a pound of theory, and notwithstanding all we have seen and read of "extraordinary yields," we have observed, that your steady, prosperous farmer, was generally your six or eight barrel man. When you hear of one who has made "at the rate" of fif-

teen or twenty barrels to the acre, it is generally done upon the tenth of an acre; if effected upon a larger scale, and the cost is counted, the experimenter is ready to exclaim with Pyrrhus, "one such achievement more, and I am undone."

We of course refer to those products obtained by imparting artificial fertility to worn-out land.

There is certainly a stopping point of expenditure per acre, and we believe, in a greater part even of our poor land, that it is a long way this side of a hundred dollars. Nevertheless, we shall be glad if Mr. Phinney's observations shall have the effect of stimulating our farmers to the true point; there is no great danger, yet awhile, of their going beyond it.

The question is often asked, How can farming be made profitable? I answer, by liberal manuring, deep and thorough ploughing, and clean culture. I will venture to affirm, without fear of contradiction, that no instance can be cited, where a farmer who has manured his grounds highly, made a judicious use of the plough, and cultivated with care, has failed to receive an ample remuneration for the amount invested—nay more, that has not received a greater advance upon his outlay than the average profit derived from any other business. One great difficulty is, that most farmers seem not to be aware of the fact, that the greater the outlay, to a reasonable extent, when skilfully applied, the greater will be the profit; they, therefore, manure sparingly, plough shallow, and the consequence is, get poorly paid for their labor. This has raised a prejudice and given a disrelish to the business of farming, especially among those who are in the habit and are desirous of realizing something more from their occupation than a naked return of the amount expended.

The farmer who is so sparing of his manure that he can get but thirty bushels of corn from an acre, gets barely enough to pay him for the expense of cultivation; and in addition to this, by the ordinary method of ploughing, his field, at each successive rotation, is deteriorating, his crops becoming less, and in a few years he finds he must abandon his exhausted and worn-out fields, to seek a subsistence for himself and family in some other business, or in some other region, where the hand of man has been less wasteful of the bounties of nature.

Instead then of his scanty manuring of ten cart-loads to the acre, which will give him but thirty bushels of corn, let him apply thirty loads. This additional twenty loads, at the usual price of manure in this part of the country, will cost him thirty dollars. But he now, instead of thirty bushels of corn, gets sixty bushels, and the increased quantity of stover will more than pay for the excess of labor required in cultivating

and harvesting the large crop over that of the small one. He has then added thirty bushels of corn to his crop by means of twenty loads of manure, which at the usual price of one dollar per bushel, pays him in the first crop for his extra outlay. His acre of land is laid to grass after taking off the corn, and the effect of his twenty loads of additional manuring, will be to give him, at the lowest estimate, three additional tons of hay in the three first years of mowing it, worth fifteen dollars a ton standing in the field. Now look at the result. His thirty dollars expended for extra manuring was paid for in the first year's crop, and at the end of three years more he will have received forty-five dollars profit on his outlay of thirty dollars: and in addition to this, his land is improved, and in much better condition for a second rotation. There is no delusion in this. It is a practical result, of the reality of which any farmer may satisfy himself, who will take the trouble to try the experiment.

From no item of outlays can the farmer derive so ample and so certain a profit, as from his expenditures for manure to a certain extent. This has been most strikingly verified by some of our West Cambridge farmers. It is not uncommon among some of the farmers in that town, to put on their grounds one hundred dollars' worth of manure to the acre, and in more instances than one, the gross sales of produce from ten acres under the plough, have amounted to five thousand dollars in one season. This is the result of high manuring and judicious cultivation of a soil too which is exceedingly poor and sandy.

BUTTER.

We have frequently urged the necessity of keeping milk or cream at a moderate temperature for churning. By artificial means, it must be kept cool in summer, and warm in winter. The following is an extract from a letter of Mr. C. N. BEMENT to the "Northern Light," upon the Management of Winter Butter:

"The process of extracting cream from milk, adopted in the county of Devonshire, England, by which a superior richness is produced in the cream had long been known by the name of 'clotted' or 'clouded cream.' They use a four-sided vessel formed of zinc plates twelve inches long, eight inches wide, and six inches deep, with a false bottom one half the depth. The only communication to the lower part is by a lip, through which it may be filled or emptied. A plate of perforated zinc, is placed in the bottom, which is equal in size to that of the false bottom, with ringed handles, by which means the whole of the cream can be lifted off in a sheet without remixing with the milk. The milk, fresh drawn from the cow, is strained into

the pan, and remains at rest for twelve hours, when an equal quantity of boiling water is poured into the lower compartment, through the lip; it is then permitted to stand twelve hours more, when the cream will be found perfect, and of such consistence that it may be lifted off with the finger and thumb. In a trial of twelve successive experiments with the above apparatus, the following results were obtained: from four gallons of milk treated as above, produced in twenty-four hours, four and a half pints of cream, which after churning only fifteen minutes, gave forty ounces butter. The same quantity of milk treated in the common mode, in earthen ware pans, and standing forty-eight hours, produced four pints of cream, which after churning ninety minutes gave thirty-six ounces butter. The increase of cream was twelve and a half per cent. and of butter eleven per cent.

From the above suggestions, I caused a pan to be made six inches deep, to receive one of one-half the depth, which was set into the other, resting on the edge of the lower one, and carefully soldered together; near the top of the outer pan, a tube one inch in diameter was inserted, to admit the hot water, and on the opposite side a small hole was made to let the air escape when pouring in the water. With this double pan I tried several experiments, and the results, though varied, were very satisfactory.

In one instance, eleven pounds milk, fresh drawn from the cow, and after standing twelve hours boiling water was introduced into the lower pan, and stood thirty-six hours more, when it was skimmed and twelve hours after the cream was converted into butter, with a spoon and bowl, in seven minutes, and produced five ounces.

In another trial, eleven and a half pounds of milk, subject to the same process, except it stood only twelve hours after the hot water was put in; skimmed and churned immediately, which took only *one minute* to convert into butter—produce seven ounces.

In the next case eleven pounds of milk was conducted in the same manner as before, except standing twenty-four hours after the hot water was put in; skimmed and churned in eleven minutes, and produced six ounces of butter.

Several other trials were made, with a view of ascertaining the best time to let it stand after the introduction of the hot water and the result was that in some cases it took four, seven, ten and a half, eleven and fourteen minutes to churn, and the quantity varied from eight to twelve ounces, and in no instance did the quantity of milk exceed twelve and a half pounds, which was the most successful as to quantity, giving one ounce of butter for every pound of milk, which rates at one pound of butter from six quarts of milk, which is equal to the celebrated 'Haskin's cow,' the reputed mother of Colonel

Jaques's 'Cream Pot' breed as noticed in Mr. Colman's Fourth Report. The milk with which the above experiments were made, was taken from a two year old heifer, a cross of the Durham and Ayrshire, seventeen days after calving, and a heifer's milk is never considered as rich as when more advanced in years.

Allowing that we get, as we did in the last trial, one ounce of butter for every pound of milk, which will average twenty-three pounds daily, would be over ten pounds of butter per week.

From the foregoing experiments I have arrived at the following conclusions: that the most profitable method is to let the milk stand twelve hours—then add the boiling water, then stand twelve hours more, then skim, and churn the cream from the evening and morning's milk at the same time.

An improvement may be made in having the pans separate, but fitted tight where they come together, by which means they can be much easier cleaned and dried; as in the above method it would be more difficult to dry them when together.

I am inclined to think too, that the same pans may be made useful in the summer when the weather is very hot, and the quantity and quality of the cream much increased by filling the under pan with cold well or spring water, previous to putting in the milk."

The Editor adds, that Mr. Bement had sent him a sample of butter, made in thirty seconds, equal in quality to any he ever saw.

ASHES.

In answer to our correspondent's inquiry as to the operation of ashes on grass or on hoed crops, we would state they operate well on all dry and light soils, but they always have much more effect when the soil is full of vegetable matter which we wish to decompose than when it is destitute of it. Hence a handful of ashes—a gill—on a hill of corn, in green sward land, has four times as much effect as on land destitute of such matter.

Leached ashes, in large quantity, improve the texture of light soils, render them more cohesive and more capable of retaining moisture. For this reason they should never be applied to heavy soils—the low, clayey grounds. At five or six cents per bushel they will prove as cheap as manure at one dollar for a load, (thirty bushels); they operate for a longer term.

On grass lands we think dry ashes not suitable, alone, for a top dressing—there is nothing on which they can operate to advantage—but they may be mixed advantageously with any kind of vegetable matter. If mixed in large quantities with stable manures they may cause

a more rapid decomposition than is desirable—but with peat muck they operate admirably. On corn lands one gill of ashes is enough for one hill, and this gill should be dropped on the surface *as soon as the corn is planted*—it then operates quicker and keeps away the worms.

Massachusetts Ploughman.

From the Northern Light.

THE WOODLAND.

BY W. BACON.

In a climate like ours, where wintry winds hold such unlimited control over the seasons; where, in the intensity of cold, the mercury sleeps so many nights below zero; in a country like ours, where cities are springing up on every hand, and populous villages, dressed in the freshness of yesterday, greet the eye at almost every corner; in our own country, where enterprise, smiling at the mockery of restraint, throws its curling smoke from every mountain and valley, rill and secluded dell; in such a country and in such an age, where every thing moves by steam, economy in fuel, and the protection of woodlands is a subject of universal interest, and may well call forth the attention of the philanthropist and the economist in its behalf.

In remarking upon this subject, we shall present the results of our own observation, and if they are wrong, we hope some one more skilled in these matters will have the goodness to correct them.

First, then, too much indifference towards woodlands is manifested by the general practice of allowing them to lie in common with highways or pasture lands, where cattle without restraint range over them, destroying all young shoots which are starting up to supply a new generation of trees, when the present crop shall have been removed. If this practice were universal, fifty years hence, and we believe a much less period, would find our country as destitute of trees as the deserts of Africa. Where then would the supply for fuel and for building be found? Our coal mines might, in some measure, remedy the evil; but it would be in a very slight degree. The quarry might furnish materials for fences and for buildings; but there are innumerable purposes to which even the treasures of the quarry cannot apply. There is, in fact, no substitute for wood, no getting along without it, unless an individual would go through the world by a mere *get along* impulse. How, then, can the present course of wastefulness, which so generally exists, be tolerated, even by owners of lands kept in this sad predicament of commonalty? Surely, it cannot be because the profits will not pay the expense of fencing, for no lands yield a greater profit in proportion to expenditure than forest lands. The present prices of fuel and timber warrant this assertion.

The second consideration we offer in regard to economy in timber land, is the time of felling. Here public opinion is at variance. So far as durability in the timber taken off is concerned, some suppose that winter is the best season, as in common phrase, the sap is down; others prefer midsummer. As regards the two seasons for the operation, we do not imagine that any material difference can exist where favorable circumstances are brought to bear upon the object. There must be a circulation of sap in winter, else how can the buds retain their vitality? Indeed, we know there is, unless it is impeded by frost, for we see it exude from the fallen tree. And in evergreens, which are cut down in December, the leaves usually dry and fall from the branches before spring. That sap flows more freely in spring and autumn we do not doubt, for every observer knows it does. But we consider the argument vain, and contrary to nature, that supposes that the vital fluid of trees does not, like that of animals, flow through the system at all times, unless impeded by counter-acting causes. Yet, as the flow of sap is most abundant in spring, when the freezing and thawing of the earth, are the consequence of day and night; and in autumn, when like causes are in operation, we should give it as our unscrupulous opinion, that these are the two worst seasons of the year for felling timber, either to insure its durability or a new crop from the roots of the trees fallen.

Timber fallen in midsummer is rendered very firm and durable by immediately divesting it of the bark; or if it is designed for fuel, splitting is immediately necessary, in order that the liquid matter it contains may pass off. Unless these processes are performed, as every farmer may well know, decay soon sets itself to work. Two chestnut rails, taken from the same tree, will give an example: the one, if of a proper size, with the bark immediately stripped, will last thirty, forty, perhaps fifty years; while one, with the bark on, will do well if it lasts a dozen years. Thus we see, that durability in timber depends somewhat on precautionary measures to make it so.

For fire wood, if only the present profit is to be consulted, September is undoubtedly the best month for chopping, as by this the growth of the present year may be gained, and yet the wood, if properly prepared, have sufficient time for seasoning before winter, and will make a livelier, better fire than that prepared a year previous. Yet this is only a temporary advantage, one for the present few days, while the many future ones have a claim upon operations.—Where timber is cut at this season, the land is slow to produce a new growth. The roots, exhausted by the labors of summer, send up feeble shoots, if they send up any; and these, for the most part, sicken and die before reaching maturity.

On the whole, all things considered, we think the weight of evidence goes strongly in favor of winter chopping. It is the season of leisure from other employments to the farmer: hence the appropriate one for this; and timber cut at this season possesses every desirable quality, if means to establish those qualities are employed, for the wood cut now must be split and housed in order to make it excellent; and the timber, whether for fences, buildings, or any other purpose, must pass through a seasoning process (unless employed under water) with the bark off, which may be divested in spring, in order to substantiate its full value; and where reproduction is desired, it is, of all "times and seasons," decidedly the best.

When it is expected that a new growth will ensue, particular attention must be paid to the manner of felling the trees. Economy requires that the tree should be cut as near the ground as possible, as thereby wood will be saved. And where trees are so cut, they much more readily throw up shoots, than when a high, unsightly stump remains. And these shoots will be of a healthier and more vigorous character. Care should also be taken, in chopping, that the stump be not left hollowing inward, like a dish; for in this case it would become a reservoir for the rains, and the water collected there would become a fountain of mischief, working through the stump to the roots, which sustain the new plant, and inducing diseases which would defy remedy.

Another error in regard to the management of woodlands, and which has no claim to approbation, save its popularity, is the prevailing practice of chopping only the old trees and such as are beginning to decay. By this process, much valuable young timber must necessarily be destroyed; the woodland becomes thin; the winds pass through it with fury, twisting the remaining trees greatly to their injury, and in the event making them a sickly, short lived affair. Cut clean as you go, is a motto which cannot be too clearly adhered to with regard to woodlands; then there will be no lodging trees; no regrets at breaking down young timber; no necessity for paths here and there, which, in many woodlots occupy almost as much space as the wood itself. A new and even growth will spring up, which will protect itself from the violence of winds, and shield the earth and roots from scorching sunbeams. As it advances in growth, the sickly plants will die out, and nature, by a process of her own, will prune such as remain to her own advantage. Where shoots start from stumps, however, it may be well to thin them with an axe the second year, for such shoots are liable to start in so great abundance as to exhaust, to a great extent, the source of nourishment. This is especially the case with the chestnut. But let it be remembered, that from

woodlands so managed, cattle and sheep must be kept at a respectful distance, else the bump of destructiveness will manifest itself very seriously to the injury of the owner of the lands.

Where timber lands are cut off with a view of renewing their growth, then the winter months are the preferable time for performing the operation. When trees are cut in spring or summer, shoots will start; but they are less vigorous than those which spring from winter clearings, and more liable to decay.

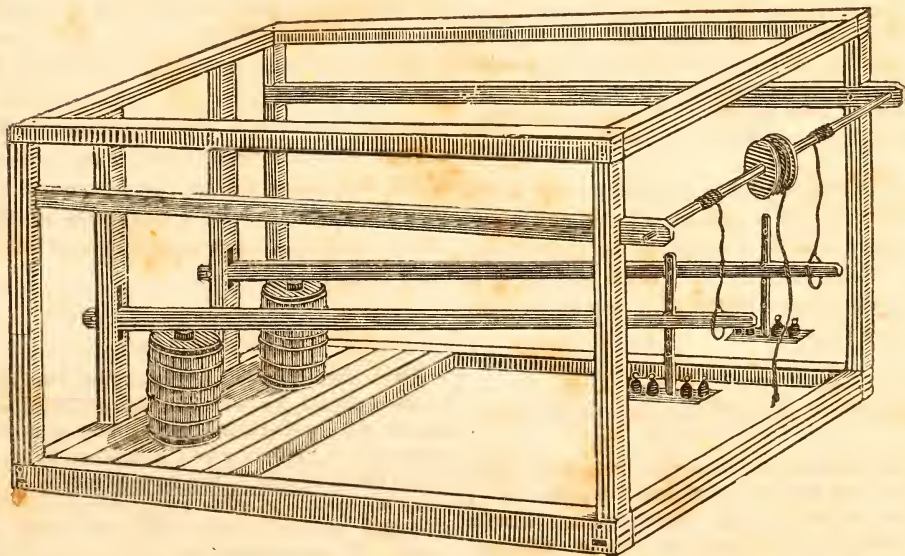
The period necessary for a forest to renew itself varies with the soil and location to from twenty to thirty years. We have seen very pretty woodlots, of tall, handsome trees, which

were said to have been entirely cut off twenty years before; and there are instances mentioned in which, by cutting off well covered woodlands, a new crop has appeared in that time, more valuable than the one taken off.

A new variety of trees is usually introduced to the soil. Evergreens never start from the stump or root of old trees, but are succeeded by birch, beech and maple. Beech, though a reproductive tree, is usually succeeded by maple and white ash. Thus nature gives a rotation of crops, which may, to some extent, account for the rapid growth of trees on lands which have been cut over.

Mount Osceola, January, 1842.

TOBACCO PRIZE.



The above engraving is taken from a model of a tobacco prize, furnished us by Dr. R. H. Nelson, of Hanover. He thinks it superior to any other in use, both in simplicity and cheapness. The Doctor's tobacco-house consists of two log-pens, twenty feet square, with a twelve foot passage between. In this passage the prizes are placed, the sides of the pens answering to the frame work represented in the engraving. Consequently, all that is wanted is two uprights securely fastened to a cross piece above and another below. They can be so se-

cured as to be immovable except at the expense of the house. The levers are moticed into the uprights in the usual manner, and the sword passing through the other end, with the stand for the weights, is after the common mode. The wheel and axle, by which the levers are raised, is peculiar, and we think an excellent contrivance. The power here depends upon the difference between the size of the wheel and the axle, and may be increased at pleasure. By pulling the rope which is coiled around the wheel, a lad may raise both levers at once, and

enable a man to prepare the hogsheads for another prize.

If it be desirable to raise or lower the sword to which the weights are attached, the power of the wheel and axle can be applied to this purpose also, by simply slipping the loop from the end of the lever, and hooking it over a pin in the sword.

CHINESE METHOD OF PROPAGATING FRUIT TREES.

Take about two quarts of moist earth and tie it around the limb, which you wish to make a new tree of, by means of a piece of old cloth, or any thing else that will keep in place. Let it remain several months, till the earth becomes full of small roots. Then cut off the limb just below the parcel of earth, and set it in the ground. The small roots soon become large ones, and the limb speedily forms a productive tree. If the earth be put on a good limb in April it would probably be fit to plant in November; though I cannot say it would not require another year. This method may, in many cases, be better than grafting, cutting off roots and planting the sprouts that run up from them, or any other method in use among us for multiplying the number of trees bearing choice kinds of apples, or other fruits.—*Vermont Chronicle*.

Care should be taken to include a bud or eye in the earth, and it will be better if one or two incisions are made through the bark, about one-third of the way round. With shrubs, it is more convenient to peg down a twig in the earth in which it grows.

METHOD OF DETERMINING THE WEIGHT OF CATTLE.

The following rules are given in an English agricultural work of established reputation. I cannot vouch for their exactness; but should they upon trial be found of use, the table, calculated upon these principles, might be easily published in a convenient form for general use, like an interest table:

"The following method of ascertaining the dead weight of cattle by measurement when alive, has been adopted to a considerable extent. It is found to be an expeditious mode; and if not to be implicitly depended upon, at least furnishes a very important assistance to the judgment of the dealer.

"**RULE.**—Take the *girth* of the beast by measuring round with a string or tape close behind the shoulder-blade, and the length by measuring from the fore part of the shoulder-blade, along the back, to that bone of the tail which is in a

perpendicular line with the hind part of the buttock. Multiply the girth (in feet) by itself, and that product by the length, and then again by 42; the last product, divided by 100, will give the weight in Smithfield stones of 8 lbs. each. If stones of 14 lbs. are required, the multiplier will be 24 instead of 42."—*Baxter's Library of Agricultural Knowledge*, p. 364.

BONE DUST.

An anonymous correspondent of the Albany Cultivator states that, he put twenty loads of long manure on an acre of good sward land in May, turned it under, and harrowed well. He then mixed twenty bushels of bone dust and twenty bushels of loam, and, when fermented well, put this compost in each hill, dropped his corn upon it, and covered in the usual manner. The experiment was a total failure. The Editors think that the want of success in this case is to be attributed to the state of fermentation in the compost; the heat produced being so long continued as seriously to affect the germinating powers of the corn. They say they have known a precisely similar result from the use of hog and horse manure applied to corn in the hill, or the seed planted on it, while the manure was in a high state of fermentation. They, however, admit that many failures have occurred with bone dust, notwithstanding its general beneficial effects, upon root crops especially, that are entirely inexplicable.

SALT FOR HOGS.

Swine that are kept mostly on fresh food such as roots, apples, &c. with but little seasoned food, require salt as often, and are as fond of it in its simple state, and as much benefited by it too, as the sheep or cow. We have found, by recent experience, that a store hog, confined to fresh food, will eat an average one pint of salt per week. Farmers would do well to attend to this propensity, as by the free use of salt many of those fearful diseases to which hogs are subject during their confinement would be ameliorated.

Yankee Farmer.

BONE MANURE.

Professor Coleman says, "The most successful application, which I have known, of bone manure, was, where it was mixed at the rate of about one part to eight with leached ashes or mould, and a fermentation brought on before they were applied. It was then spread lightly in the furrows where carrots were sown."

Care should be taken, that the bones used have not been subjected to heat, as the gelatine, which is separated by this process, is known to be the most valuable part of the bone.

SCARE-CROWS.

The best *scare-crows* we have ever used, were bright sheets of tin suspended from poles, by wires; the poles of sufficient height, and in sufficient numbers, to be seen all over the field. Four or six, if judiciously placed, will effectually answer for a field of fifty acres. Our mode of fixing them was this; we cut a pole of sufficient height, trimmed off all the limbs but the upper one; to the end of this limb, we attached, by a strong flexible wire, a sheet of tin, and planted the pole thus provided firmly in the ground on the destined spot. The limb left at the top, should project horizontally far enough to allow full play to the tin. Thus attached, the slightest breeze gives motion to the tin, and consequently causes a reflection, so sudden as to effectually frighten off crows, or other birds addicted to picking up the corn. Three years successful use of such *scare-crows*, justify us in recommending them to our brethren.

American Farmer.

A writer in a South Carolina paper recommends the use of newspapers instead of sheets of tin, and thinks that there is great choice amongst them, in respect to the noise they make.

We have received the following communication from our friend Mr. PEDDER, of the Farmers' Cabinet, in relation to the article "The Level," p. 69, and our comments, in the last number, upon his "Boilers."

We felt a little curious to see how he would extricate himself from the difficulty about *that level*, and congratulate him upon the ingenuity of his explanation.

We most cordially reciprocate Mr. Pedder's kind wishes, and shall prize highly the present alluded to in his postscript. We shall avail ourselves of the earliest opportunity to reduce it into possession.

THE SPAN LEVEL, &c.

Philadelphia, April 10, 1842.

My Dear Sir,—I cry 'cave—but if confession of a fault makes *one* half amends, the comeliness of the bantling is a very fair apology for the *other*. You must know, I have always entertained a strong *penchant* for other people's children, especially if their parents are amiable and commanding the respect of good society;

so, meeting with a child of your's, I took him by the hand without examining his proportions, as I hold to the axiom in breeding, "like produces like;" nor was I sensible of the lad's deficiency, until our lynx-eyed correspondent, J. Lewis, by a glance at his lower extremities, directed my attention thitherward, when I found that he was short of one leg! a sad defect certainly, and one that must needs ruin his standing in society; but as all was sound about the head, our Pottsville friend found it not difficult to set him upright, and now he will be able to pursue the even tenor of his way without further trouble or assistance.

You do me honor by the notice which you take of my boilers, but I am very desirous of knowing what are the difficulties which you suspect in the way of their working. There were sixteen of these fire-places erected at Mr. Lovering's Sugar Refinery, large enough to admit cord-wood at full length, namely, four feet; and at each burning, the quantity of wood consumed was not less than four or five cords, yet, for the space of four years no difficulty has ever occurred, or any escape of smoke from the top of the chimney, after the fires are once lighted, although the fires are kept up for eighteen hours; the heat being augmented—merely by opening the iron covers—to such a degree as to liquefy the iron pots in the kilns in a very short space of time, if exposed to its violence, operating expressly on the principle of the blow-pipe; all which, however, can be regulated in an instant, and to any degree, by partially or wholly closing the covers, or putting in the slides; all further operations being stopped as effectually and suddenly as the turning off steam. Indeed I am anxious to hear what are the difficulties which you feel in *prospect*.

Since writing the above, I have received your very interesting number for April, and can now proceed to relieve your mind from farther doubt respecting the working of the fires from the top, by assuring you that the draught of air from above, appears about as natural as for the "sparks to fly upward." The pressure of the atmosphere on the fire being cut off by way of the chimney, the air finds a quicker passage to it from immediately above, than it could by descending down it, and this determines the draught downwards through the pit so soon as the cold air is driven out of the chimney, which it very soon is, after the fire is lighted; and then the operation goes on as naturally and rationally as though the air were to ascend by means of draught from below. The only way of clearing the ashes from the pit, is from above, but it is done most easily by a small scoop with a crooked handle; and it will be a matter of astonishment to find how small a portion of ashes will remain, after the consumption of even a cord of wood, the combustion being so complete as to reduce all to

mere dust, so light as to be driven away before the blast. It may, however, be desirable to leave a loose brick at the bottom of the boiler for the introduction of a small scraper, by which the light dust, which might accumulate after a time, may be easily removed remembering, however, to close all tight before lighting the fire, for the least air entering that way, would effectually mar all proceedings. The brick-work around the boilers need only be four and a half inches; the sides of the ash-pit will be stronger if nine inches, but very little impression will be made upon the sides or bottom by the fire, the rush of air from above, keeping all comparatively cool. The chimney need not be higher than customary, nor is there any art required in the construction of any part of the apparatus.

I am, dear sir, very truly your's,
JAMES PEDDER.

P. S.—It would oblige me if you could, by the hand of some friend visiting Philadelphia, obtain a copy of my little book, "The Farmer's Land Measurer," which is left at the office to your address. Pray accept it, with the best wishes for your health, and the success of your highly valuable work.

RICHMOND MANUFACTURE.

We have been presented by the author with a copy of a work, entitled *BOLTON ON STRABISMUS*, which, we are informed was written, printed, illustrated, and bound in this city, and which certainly does great credit to our artificers. We understand it to be a dissertation upon the defect of *squinting*, and although we are not qualified to speak of the scientific merits of the work, if we might be permitted to form an opinion from the talents, industry, and success of the youthful author, we should expect it to form a valuable acquisition to the medical profession.

We wonder if the operation and remedies proposed would be applicable to the obliquity of vision that distinguishes some of our public characters. If the Doctor will guarantee that all who are brought to him shall be made to *see straight*, we think we could pick him out a lot of patients, upon whom he might operate at the public expense.

For the Southern Planter.

STOCK.

Albemarle, April 10, 1842.

I am well pleased, Mr. Editor, at the independence you exhibit in the discussion of the merits of different kinds of stock. We are often

egregiously imposed on in the purchase of crack animals, puffed in newspapers. A systematic plan is adopted, I believe, to defraud southern men, and I rejoice to find that some one dares to speak out upon what has long been a private grievance. With respect to this very "Cream Pot" cattle, referred to in your last, I am credibly informed, that a gentleman of this State, who had read a great deal about this stock in the northern papers, applied to Col. Jaques, to know for what sum he could obtain two yearlings of his stock; the answer was, that, as he, Colonel Jaques, was anxious to extend the merits of his stock amongst the Southern people, and as the applicant was understood to be a good farmer, who would pay them all proper attention, &c. &c. why, as a great favor, he might have the pair for the sum of \$1,000. That, mark you, was the *Southern* price; when subjected to the hammer of the Northern auctioneer, they bring \$32 per head.

My advice to the farmers of the South would be, in the first place reform your system of keeping stock, then select and cross judiciously with the best individuals of your neighborhood, and never purchase an animal, unless you can have an opportunity of seeing him yourself, or can have him selected by some one, on whose judgment and integrity you can rely.

A SUFFERER.

We are amused at the skill displayed by our correspondent; he lauds us for coming forward to expose impositions, whilst he backs us, himself, under a mask. We do not believe that any concert for cheating Southern men exists at the North; impositions have been practised both there and here, we doubt not, to a considerable extent; but as honest men as breathe are, we know, engaged, both here and there, in the useful and honorable occupation of raising stock for market. We will not knowingly lend ourselves to subvert the interest of any individual by saying more of his stock than it deserves, but any direct charge of imposition, or a statement of facts calculated to deteriorate the value of a popular stock, must always be accompanied by the name of the author, to find its way into the columns of the planter. The statement made by "A Sufferer," with respect to the price required for a pair of his cattle by Col. Jaques, we know to be true, from a responsible source, and although it seems strange that he should so over-estimate his stock, still, the difference between the price asked by him and that at which they were sold, may be accounted for in a hundred different ways, without tarnishing the honor of that gentleman, who, we believe,

stands much higher than his cattle in the estimation of his neighbors.

The *advice* of "A Sufferer" we think good.

For the Southern Planter.

In the last (April) number of the Southern Planter is a communication, signed William H. Richardson, in which the writer undertakes to define "the best farm hog of the several breeds, with which he is acquainted." This communication, it appears (page 82,) "was written in consequence of a request on the part" of the Editor; and is so much in accordance with the Editor's sentiments, that he seems disposed to endorse every word of it. The Editor also seems to anticipate a "rating from some deeply interested in Berkshire stock for seeking the publication of any article to their disparagement."

This communication, with the approving remarks of the Editor, I think, requires some comment. At the same time, I do hereby distinctly state, that I am not *deeply* interested in this or any other stock of hogs; and even if I were, I have not the slightest disposition to give the Editor a "rating" on this or any other score. But the Editor will allow me to say, that in my opinion he has somewhat departed from his usual prudence, in making the admission, that he sought an article to the *disparagement* of any stock whatever. We were not precisely prepared to expect, that that same Editor, who has for a year or more, devoted his time, his talents, and his whole energies to the improvement of the various branches of agriculture, should now undertake to *disparage* an important appendage to the same. But if the Editor must have a "rating" for this, I will not give it to him. I will let this rating come from another quarter—from the Southern Planter number for March, 1842, page 56—in which I find this strong language—"We have seen some Berkshires certainly superior to any other hogs we ever saw." Now, there is no name signed to the above, but judging from the editorial word "*we*," which occurs twice, and from other characteristic circumstances, I strongly suspect it was written by the Editor himself. If, however, this should not be "rating" enough, I refer him again to number for May, 1841, page 70, where, in a note appended to Mr. Shelton's communication, he will find all the "rating" that I have it in my heart to give him.

With these few remarks, I will—for the present at least—take my leave of the worthy Editor. But the communication must not be passed over in quite so summary a way.

And here, if it be necessary to tell him so, I will state that I have the highest respect for General Richardson, and for Mr. Dicken, whose hogs he seems so anxious to recommend. Both

these gentlemen are my near neighbors, and my intercourse with them, has uniformly been so pleasant, that I wish they were still nearer to me. But notwithstanding my great respect, and even partiality for these neighbors, I cannot suffer some things in the General's communication to pass unnoticed.

I beg leave, also, to make another remark—that in the comments which I am about to submit, I shall have no special allusion to Mr. Dicken's or any other breed of hogs. My object is not to *disparage* any man's hogs, but simply to vindicate a breed which, at the request of the Editor, has already suffered "disparagement." My object is not, therefore, to *attack*, but simply *defend*. Indeed I am very sorry that Mr. Dicken's name appears at all in the communication. This circumstance hampers me no little. Mr. Dicken, I am sure, will believe me, when I say that I do not wish to decry his hogs, or to prevent the sale of his pigs. I care not how much his hogs are praised; but I do care when I see a better hog *disparaged*.

The points of difference between the General and myself, I am happy to say, are very few. If, for instance, he had contented himself to state that there are a great many inferior hogs among the reputed Berkshires, so much so, that many of Mr. Dicken's white hogs—or the white or black or any other colored hogs of many other persons—are superior to them, he would have had my hearty concurrence. But when he seeks to make the impression that the white hog is in fact the *best*, and that when mixed with the Berkshire, a deterioration takes place, and that this deterioration is in proportion to the amount of admixture; then I am constrained to join issue with him. Now, that this is the General's meaning, I think I cannot be mistaken. Witness what he says about his own sow, page 81—and of her two litters of pigs. The first time she had seven pigs—"four white like herself—the other three tawny or reddish color, spotted with black"—which it seems "was the distinctive color of the Berkshires thirty-five years ago." One he sold to the writer of this. "That purchased by Mr. Turner though a very fine, is not near so large a hog as the white ones have proved to be, and both the spotted ones that I kept, turned out small hogs." Here it is distinctly stated that the four white ones which resembled the sow, were much larger than the three spotted ones which showed the Berkshire cross. But, as if not satisfied with the above, the General continues in a still more decisive strain. "The same sow has now a litter of ten pigs by another Berkshire boar, of which seven are white like herself, and three spotted, as before described. The *white* are decidedly the finest pigs." Thus, it seems, that this sow, breeding from two Berkshire boars, produced pigs which in both instances were fine

and promising in proportion as they resembled her, and that they were small and inferior in proportion as they resembled the boar.

Now, I do not call in question one iota of the General's statement; and it would constitute so knotty a case, that I know not how I could dispose of it, were it not that the General has disposed of it himself—the *little, inferior tawny pig* brought twenty dollars—whilst it took the *four large superior pigs* to bring thirty dollars? The Berkshires are then the fellows to fill the pocket after all. If the General succeed in disposing of the present litter as he did of the former, the three *little Berkshires* will produce more money, than the seven fine white pigs; and this, in my opinion, is just about the relative value of the different breeds—three *good Berkshires* against seven of any other breed.

But the General or Editor—it does not appear which—says that “Mr. Wm. Miller, Mr. Wm. Hill, Mr. W. W. Guy, Mr. William D. Sims, and Dr. Hopkins have all tried and prefer these (white) hogs.” Now here would be another tough case to solve, were it not for some stubborn facts, which again come in to my relief. These gentlemen have tried the white hog, it seems, and most of them have manifested their preference for him, by sending their sows to my Berkshire boar, and this they did when their favorite hog was more convenient, than the inferior Berkshire.

Mr. Sims, also, though in possession of the white hog, has also manifested his preference, by *buying* the half Berkshires; and this he did, when he could have got the *preferred white hog*, for one-fourth of the money. How Mr. Guy and the Doctor manage their crosses, I am not informed, but presume that they stick to the *superior hog*. All the others, with Mr. Dicken himself, are backing out.

But the General continues—“You remember, no doubt, the white boar exhibited by him (Mr. Dicken) at our first fair, last May, which was purchased by Dr. Lewis, of Lawrenceville. If I am correctly informed, the Committee on Swine had no little difficulty in deciding the premium between him and the boar President.” Now I am sorry that my friend the General penned the above sentence. As it stands, I must notice it; but I would greatly prefer that it had never seen the light. A compliment is here evidently intended somewhere—if to the boar, (and I suppose this must be the case,) then it must be at the expense of the Committee. The truth is, I never intended that my boar President should be put in competition with *that white boar* or any other *white boar*. I intended that the conflict should be confined between him and other *fine hogs*. If he obtained the victory, I intended it should be under circumstances that would do him some credit. But to get the premium over the hog alluded to, I never considered as any

victory at all. But what were the facts in the case? The Committee on Hogs consisted of three persons—Mr. C. T. Botts, Mr. Sims, and Mr. Corbin Warwick. The arrangement was for the Committee to meet at nine o'clock, so as to make up their decision and hand in their report at eleven o'clock, at which time the exhibition was to commence. At the appointed hour, the two first named gentlemen were present, but Mr. Warwick was absent. After waiting for him until they could wait no longer, it was determined to appoint another in his place; and as Mr. W. B. Sydnor happened to make his appearance at the time, he was appointed to fill the place of the absent member. The Committee then went to work, and as *I was informed*, two of them—Mr. Botts and Mr. Sydnor—had no difficulty at all in making up their decision. The only difficulty was with Mr. Sims, the third member. Mr. Warwick made his appearance *before* the business was concluded, and as I was again informed, had no difficulty in concurring with the majority of the Committee. I tell this thing just as it was told to me. If I am incorrect, I call on the above gentlemen to state wherein I am wrong, and then I will most cheerfully correct it. This is all, that at present I choose to say about this transaction—if urged to it, I will state more.

One other thing, in the General's communication, I feel it my duty to notice. He says, (page 82) “it is but just to say of *his* (Mr. Turner's) stock, that *it* cannot be surpassed by all New York and New England together.” I certainly thank the General for the commendation he has thus given to my hogs; but at the same time, must in candor say, that in my opinion, they do not merit it in the *unqualified* terms he is pleased to employ. If his remark is intended to be confined to my sow Virginia and her progeny, then I can with the same candor say, that I believe he is correct. But I have other hogs called Berkshires, and I believe they are Berkshires, but compared with Virginia, I consider them as almost worthless. If Messrs. Allen & Bement, from whom I bought them, will give me one-half the money, that they cost me, they may have them and my hearty thanks to boot.—Whilst, therefore, I cannot take, and never have taken, even when I might have done it, ten dollars for the pigs of the latter, it requires no stretch of conscience whatever to receive ten dollars for all of Virginia's pigs that I can spare. I consider them as good and profitable stock even at this high price.

From the above, it will be seen, that I heartily agree with the General when he says—“there are superior and inferior of this as of all other breeds.” And I think I have traced out the line of demarcation with considerable accuracy.—Some few years ago, Mr. John Lossing, of Albany, imported a very fine Berkshire boar from

Reading in England, to which he gave the name of the town from which he procured him. A Mr. Beach, of Ohio, was so pleased with this hog, that he gave two hundred dollars for him, and carried him to the West. There, also, he was regarded as so fine an animal, that a hundred and two sows were stunted to him, during the first year, at ten dollars a piece. I never saw this hog, it is true, but I have seen several of his descendants, and all of them without exception, are really superior animals. My fine sow Virginia is one of his pigs. Dr. Harrison, of Prince George, also owned one of his pigs—a fine boar called De Wit Clinton. This hog, together with some two or three of his pigs were at the general meeting of our Society last fall, and fine animals they were. Mr. Charles B. Williams also owns two fine young boars of the same breed, which fully sustain the high reputation of their sire. There may be others of the same breed in the State, or even in the neighborhood, for ought I know, but these are all I have seen, and I can truly say, that they are all superior animals. In fact, this hog Reading, seems to have arrested the rapid decline of the Berkshires, and to have restored them to their former superiority.

One more remark, and I shall, for the present at least, be done with the General and his communication. He states that his white sow, breeding from two Berkshire boars, produced at each litter a certain number of pigs, some of which strikingly resembled the sow, whilst others as strikingly resembled the boar, and that those which were like the sow, were in both instances, the best pigs; from which, he draws the conclusion, that the sow is the best breed of hogs. The case is a strong one, I will admit. But I really think there is a stronger case existing at my piggery at this very time, from which I draw directly the contrary conclusion. On the 5th day of March last, my sow Virginia produced ten pigs. Now all who have read my hog essays, or are at all acquainted with my hog management, know that I am not in favor of over-breeding my sows with their own broods, and that when I can do no better, I kill the excess until the number to a fully grown sow, is reduced to seven. But this constituted a hard case. My theory or my fine pigs must one or the other be sacrificed, and I was exceedingly unwilling to give up either. From this distressing dilemma I was happily relieved on the second day; for on that day, another sow (nearly but not quite *white*) also produced ten pigs. It then occurred to me that by killing four of the latter, I could provide for two of the former, and then each sow would have eight; and as both sows were at the time in good plight, and especially as I promised to each good treatment, I finally compounded the matter as stated above. I will also mention, that the sire of each litter

was the same hog. Here then is a case in which two full blooded Berkshires are placed with six half bloods, and these, half-brothers, to be nursed and reared by the same sow. For two or three weeks, I could perceive but little, if any difference between them. All were thrifty and grew apace. But after that time, the strong and distinctive points of the Berkshire began to develop themselves in the two strangers in the most striking manner. The six were as tall, and perhaps taller, but it was merely their *long legs* which made them appear so. The Berkshires had a firmness of hair, and a breadth on the back, a roundness and symmetry of body, to which the others, receiving their nourishment from the same source, were utter strangers.

I would not state this case with so much confidence, were it not that I have tested it by the strictest scrutiny. Among other expedients to which I have resorted, this is one. When visited by a number of my acquaintances (I will give their names if desired) I have conducted them to the pen, and merely told them that there were two full blooded Berkshires among the pigs, and asked them if they could point them out. In no instance did they fail to do so, and generally without any hesitation. Another fact I think still more striking. Two butchers came to buy some roasters. They were also taken to this pen, but not informed of the difference, and after surveying the pigs with the eye of a butcher, they offered me a dollar for the Berkshires, but would give only seventy-five cents for the others. Thus, in the judgment of the butcher, who buys merely to kill and sell, a *full* Berkshire pig is worth thirty-three and a third per cent. more than a *half* Berkshire. I need scarcely say that the butcher and I could make no bargain, for one of the pigs was already engaged at ten dollars, and the other I intended to keep for my own use. J. H. TURNER.

We said we expected a "rating;" although we could hardly divine the objection that could be made to the part we took in Gen. Richardson's attack upon Berkshires. To tell the truth, we felt, afterwards, that we deserved one for saying so, because we had no right to presume that any one would do us the injustice of finding fault with us for a manifest discharge of duty; but we founded our calculations upon the blindness of prejudice, even in the best of mankind, and the source of this attack proves that we did not err in our calculations.

We believe not only that error is powerless, when truth is left free to combat it, but that truth itself emerges from obscurity into light in the conflict. It is for this reason, that we invite free and liberal discussion. Our desire, our duty,

is, to get up a conflict and then act the part of an impartial conductor between the combatants. We afford the arena, our correspondents conduct the game, and the public keeps the score. We thought some verbal remarks of Gen. Richardson's would lead to a conflict that would redound to the benefit and amusement of the spectators; we persuaded him to enter the arena, and when we brought him on the stage, we introduced him with a few flourishes. Although, under such circumstances, we should have been justified by all the rules of courtesy, if we had indulged in a little hyperbole with respect to the *debutante*, yet, in this instance it was unnecessary, and we have not said a word in our editorial about the General that either is, or can be, denied. Indeed Mr. Turner endorses, pretty much, our remarks, but objects that we have on other occasions expressed the most favorable opinions of the Berkshire stock. Suppose we entertain them still; what then? should we, when a gentleman, who had even better opportunities of knowing than we had, expressed an opposite opinion, refuse to publish it, because it differed from our own, or should we even hesitate to *invite* the expression of opinions, because we have expressed others to the contrary; or should we withhold from such a correspondent the poor boon of stating what we know to be true with respect to the circumstances under which he writes?

Yet this is all we did, and what we have done with respect to other subjects, over and over again; what we are bound to do in every case. The fullest and freest discussion is guaranteed, limited only by our opinion of the choice and taste of our readers. We will occasionally express opinions of our own, but we do not think it necessary to reiterate them every time we give room to a correspondent, who differs with us. We have expressed opinions highly favorable to Berkshires; those opinions may have been changed by Gen. Richardson's statements, or they may be still entertained, or they may be held in abeyance awaiting the issue of this controversy. Nobody has a right to know, until we choose to inform them, and no owner of Berkshires has a right to require us, because we have once expressed an opinion in their favor, either to maintain that opinion, in spite of reason, or to express it on every occasion that the subject is mentioned.

The opinions of Messrs. Miller, Hill, &c. was contained in a postscript to General Richardson's

communication, and was published just as it was written.

Having dodged the blow that was aimed at us, we leave these knightly combatants to conduct their own contest; they are well matched, and thoroughly versed in the courtly laws of arms; a rich treat may be expected from the encounter.

For the Southern Planter.

It is astonishing how much may be made by applying odds and ends of time to collecting and spreading manure. Whenever a spare hour can be gained, independent of stated seasons, resort should be had to the woods; leaves and trash should be raked into piles, and a little earth thrown on the top. As soon as it is partially decomposed, or rendered fit to answer as a covering to the land, that is, as soon as it is in a state not liable to be carried off by the wind, it should be hauled, at any time or season, upon land designed for the next year's crop. This deposit will operate as a cover to the land, shielding it from the summer suns and the winter frosts, afford food for the growing plants, and greatly improve the land.

From the time that horses are stabled and the cows pounded or stalled in the fall, they should be provided with a plentiful supply of litter. The stables should be cleaned out twice a week, loading your cart from the stable-door, and carrying it out at once upon the field designed for corn in the spring. Thus, the manure can be spread in half the time, and more equally than it could be, if suffered to lie in a pile all the winter. Besides it will be twice as effective. The product of the stable and barn yard during the spring and summer months should be deposited in a convenient reservoir, properly prepared, and intermixed with straw and trash. In the month of August, haul it out upon the field intended for wheat, and spread it before the plough, turning it under to a moderate depth. This process is to be preferred to surface manuring, after the plough; because, when the land is stirred in seeding, the manure will be incorporated with the soil, will preserve the moisture, and greatly invigorate the plant. Whereas, the surface dressing, at such a season, exposes the manure to great loss by evaporation.

To prepare land for wheat, if the soil is deep and loamy, where you have no manure to plough in, plough very deep, mixing a portion of clay, if possible, with the surface mould; harrow level, then, with a single shovel score or furrow it off, at distances of ten inches from centre to centre. The wheat when sown will roll, principally, into the furrows; harrow in the wheat the same way, that is, with the furrows. The harrow, if the soil is light, should be light also, that the teeth

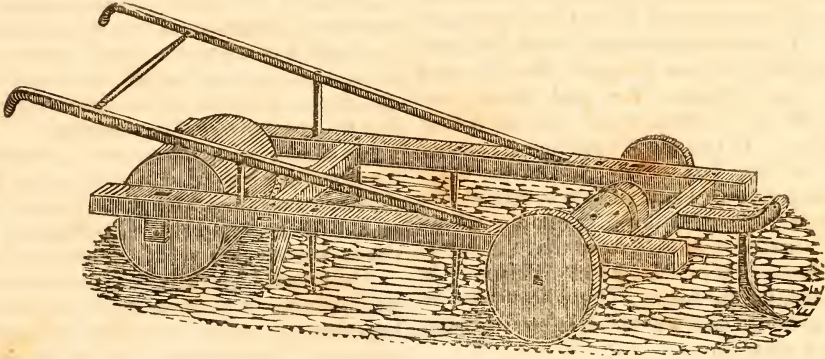
may not reach the grain, and throw it out of the furrows. The wheat will, of course, come up in drills, it will be better protected in winter, will grow off better in the spring, and will make a more productive crop.

Yours, respectfully,
Frederick, Virginia.

S. DAVIS.

We have received another communication from Mr. Davis, in which he states that he has been a farmer, man and boy, for fifty years, and offers us the benefit of his experience on several subjects. We shall always be pleased to hear from such a veteran in agriculture.

DRILL - BARROW.



The engraving is intended to afford a perspective view of a drill-barrow, claimed as the invention of Dr. Horton, of Maryland, and given to the world through the columns of the American Farmer. It is cheap, simple, and we believe well calculated for drilling beet and turnip seed. Any man who can handle a saw and hatchet may make one for himself. The frame work speaks for itself. The side pieces may be made four feet long, two by three. The wheels may be cut out of oak plank one and a half inches thick, and made ten or twelve inches in diameter. They do not revolve upon the axle, but the axle revolves in the journals which support it. To this axle is secured a seed-tight cylinder, made of tin or copper, larger in the centre, and tapering a little to either end. The centre is perforated with holes, two inches apart, large enough to pass a beet seed freely. The seed are introduced through a hole in the cylinder, to which a cork is fitted. A narrow copper hoop with small holes, large enough to pass turnip seed, two inches apart, can, at pleasure, be passed up to the centre of the cylinder and placed so that the holes in the hoop may either be, or not be, over the holes in the cylinder. In the one case, the holes will be entirely stopped, and the seeds prevented from escaping when the implement is moved from place to place. In

the other, the holes in the cylinder will be reduced to the size for turnips. Rake-teeth may be inserted, as represented in the engraving, for breaking or removing clods and stones, and the seed may be covered by paddles behind, made to shift to any required angle. The roller is very useful in pressing the earth closely to the seeds.

Our engraver is a long-armed, short-legged fellow, who has placed the handles to suit himself, rather than the generality of mankind; but these of course may be altered to suit the particular form of the operator.

We have known the principle of this machine, as exemplified in the cylinder, used in this neighborhood for some years, with great satisfaction to the owner, and have intended to give a description of it. The copper hoop is new and ingenious; it saves the necessity of having different cylinders for different kinds of seed. The implement we have seen, was divested of the teeth, paddles, and roller; the side pieces in this, constituting the handles of that, which was intended to be rolled forward by a man, for the purpose of dropping the seeds in a drill already made, to be covered by an after process. The Doctor has certainly added to the convenience, although a little, to the expense of the implement.

From the Maine Farmer.

PREVENTION OF SMUT BETTER THAN CURE.

Mr. Holmes,—I observed in a late number of the *Kennebec Journal* an advertisement of a smut machine, by Messrs. Pratt & Co. (if I rightly recollect the name,) and recommendation of it by Mr. Gardiner, of the town of Gardiner.—From the high respectability of that gentleman, I have no hesitation in giving full credit to his statement. But I would respectfully suggest to him and all others interested in the subject, whether it would not be preferable to prevent smut from growing among our wheat to devising methods for the removal of that foul substance from it. I have for the sixteen years last past, with complete success practised the following method, viz:—Washed the seed wheat, and drained off the imbibed water through a common basket. In this moist condition put it into a tight tub, long box, or trough, and for every bushel so prepared, dissolved two ounces of blue vitriol in warm water, turned it into the wheat, and with a shovel stirred it so that the liquid shall penetrate the whole mass. This may be ascertained by the color. The wheat will assume a greenish cast where the liquor has come in contact with it.

This method of preparing our seed has become almost universal in this neighborhood, and we hear nothing of smut except from a distance. Our most extensive manufacturer of flour, after having satisfactorily tried the experiment, was at the expense and trouble of circulating hand-bills through the whole region of his customers, three or four or five years since, and he informs us that in consequence of the use of this prevention he is not called upon to grind smutty wheat except in some rare instance, and in none where the above method has been practised. I published the foregoing in substance, in an agricultural paper printed in Bangor a number of years ago, and subsequently (if I rightly recollect) in the *Maine Farmer*, and have seen it noticed in the *New England Farmer*. Still I am so fully convinced of its importance that I venture to reiterate it. OLIVER CROSBY.

In connexion with the above, we publish the following communication from a very scientific gentleman, whom we hope to recognise as an established correspondent of the *Planter*:

For the *Southern Planter*.

In a former communication I addressed some inquiries to our farmers, for the purpose of inducing them to institute experiments to ascertain the cause and nature of the smut in wheat, as upon this information alone can an efficient remedy against the evil be based. Since then I have met with the following, published in the *London Medical Gazette* for October 8, 1841,

which goes to prove the correctness of a doctrine advanced in 1838-9, by Edwin Quekett, F. L. S. published in the same journal for those years, "that ergot," a species of fungus to which rye is peculiarly obnoxious, "was caused by the introduction of the sporules of a peculiar fungus into the circulation of the affected grains, and their final deposition in the seed." If you think the publication of them calculated to do good, they are at your service.

"Twelve grains of rye, of wheat and of barley, all grown in the neighboring fields of Surrey, were selected, and placed in a plate which contained a little water—some ergots of wheat were then immersed in the water of the plate, and with a camel's hair pencil brush the sporidia of the fungus adhering to the exterior were detached in numbers, as the microscope proved, and the ergots were then removed.

"A similar experiment was performed with the same number and variety of grains, but with the fungus obtained from the exterior of an ergot of a large grass—*Elymus Labulosus*; a glass shade covered each set of grains thus prepared.

"In a few days germination commenced and was allowed to progress until the grains were beginning to appear wrinkled, from the appropriation of the albumen; and by this time those that had perfectly germinated possessed green leaves from two to three inches in length. In this state the whole of the young plants were taken into the country and planted close together, in the third week of March last.

"The greater number of grains of both experiments, failed in becoming perfect plants, so that at the present time, when they are matured, there are but four of rye, (one infested from the fungus from the *elymus* and three from the wheat,) three of barley, and four of wheat. On every plant of the rye, there are some plants possessing ergots, (nine having been obtained from the four plants,) some containing one specimen, others as many as six; but in the barley is only one imperfect ergot, and in the wheat not any have been detected.

"It was remarked that, in the rye there was only one ear that possessed a few healthy grains and no ergot; in the others some had ergots without any healthy grains, and the rest possessed neither ergots nor grains of any kind, showing how the fungus probably influences the formation of healthy grains in this plant, whereas, in the wheat and barley the sound condition did not appear to have been departed from.

"If the cause of ergots, in this instance, had an external origin, it is singular that, as the plants grow intermixed and in a very small space, the barley and the wheat should have escaped, under the circumstances; but the reason, I imagine, that the latter two possessed no ergots, though treated as the rye, is that they are not so susceptible of infection; for it is well

known that rye is particularly liable to this disease—more so perhaps than any other grass; and that it becomes so, arises either from constitutional properties or its anatomical peculiarities.

"I conceive, from these experiments that the production of ergot from the absorption of the sporules of the previously described fungus, by the fibres of the roots of the germinating grains, will be found to be the true cause of this singular production; and that when they arrive at the grains, they convert it into the body, known as ergot; for it appears to me too much to admit, in these experiments, that the many ergots on every plant could be the result of accidental circumstances, when it is well known that their presence is very rare in this country on the same grass."

It would seem from these experiments that rye is more under the influence of the particular cause which produces the ergot; but may not wheat be more liable to be acted on by the sporules of the particular fungus which constitutes smut? Should Mr. Quekitt's views of the origin of these maladies in grain be correct, the great importance, of the agitation of seed wheat in alkaline solutions, in preventing these diseases, could at once be satisfactorily explained. These solutions possess powerful solvent properties and would more effectually remove, by proper agitation, the sporules of the fungus which might adhere to the seed, than any that could be employed.

B.

TOBACCO AND COTTON.

We are indebted to the kindness of our friends, Messrs. Cowardin & Davis, for a perusal of a letter, from which we make the following extracts. The house of Evans & Trokes is well known in this city, and their reports command the entire confidence of our merchants.

"Liverpool, April 1, 1842.

"The stock of tobacco in the country, and generally in Europe, is too considerable to allow of other than moderate prices; but when to this circumstance is to be added the still more discouraging fact of an uncommon large crop to come forward from the western country, with a full, though inferior, crop from Virginia, there can be but one opinion as to the prospects for the article, as far as its future prices are considered. In strips it is now ascertained that little can be disposed of which does not possess that absorbing substance adapted to the new mode of manufacturing.

"Our cotton market is in the most dismal state. It is most difficult to dispose of short staple, of ordinary and middling quality; and for the better descriptions there is no very lively demand.

"In consequence of the delay which the Corn Bill receives in Parliament, prices of grain and flour have advanced.

Yours, respectfully,

EVANS & TROKES."

SILK.

Mr. John Gill established a silk manufactory at Mount Pleasant, in Ohio, during the year 1838. He now employs twenty hands, and pays them exactly the English prices, at which, the women and girls, who are principally employed in the establishment, make good wages. Last year he manufactured upwards of nine thousand dollars worth of goods, and, although he sells them at less than the price of the foreign article, he managed to realize, under all the disadvantages of a new undertaking, ten per cent. upon his capital. His fabrics are said to be all excellent, and some of them uncommonly beautiful. He exhibited a piece of lustring, which, by good judges, is pronounced to be superior to the best imported.

DISTEMPER.

We find Mr. J. O. Nicholson, in the "Plough-boy," describing exactly the disease to which foreign cattle are subjected with us, and confirming, from trial, the efficacy of the remedy recommended by Col. Hampton, viz: sawing off the horns near the head. The bleeding, which was copious, says Mr. Nicholson, relieved the dulness about the eyes, and were the means of curing my cow. He advises after the bleeding is stopped, to bind cloths, plastered with tar, around the stump as a protection against the flies.

The season is approaching when many of our readers will have an opportunity of trying this remedy. We should be pleased to hear the result.

STEAM BOILER.

The Editor of the American Farmer speaks in the highest terms of "Pickard's Convoluted Steam Boiler," and seems to give it the preference over that of Mott, that has heretofore borne away the palm. The price is not mentioned. The farmer now-a-days is almost afraid to buy a new article, no matter how good, lest a few days should produce another infinitely better.

Richmond Markets, April 21, 1842.

BUTTER—Mountain butter, wholesale $12\frac{1}{2}$ a 16 cents for firkin; 20 cents for roll.

COTTON—8 a 9 cents per lb.

COTTON YARNS—Richmond and Manchester, (factory prices,) Nos. 4, 5 and 6, 19c.; 7, 8 and 9, 20c.; 10, 11 and 12, 21c.; 13 and 14, 23c.; 15 and 16, 24c.; 17, 25c.; 18, 26c.; 19, 28; and 20, 28 cents.

CATTLE—For cattle on the hoof, from \$4 to \$5 50, are the general prices. Mutton—There is great variation in the quality; indifferent sheep bring only from \$1 to \$2, while the finer qualities bring from that to \$5 per head.

CHEESE— $8\frac{1}{2}$ a 9 cents per lb.—none in market.

FEATHERS—38 a 40 cents per lb. for live geese.

FISH—Mackerel, No. 3, \$6. Herrings—No. 1, North Carolina, \$3 50; No. 2, \$3; Potomac cut, \$3 25. Shad, \$7 a \$7 50 per bbl.

FLOUR—Demand limited; sales at \$5 75—held at \$5 87 $\frac{1}{2}$.

GRAIN—Wheat \$1 a \$1 10, are prices now paid for good red and white. Corn, 55 to 60 cts. per bushel. Oats, 40 a 45 cents. Very little grain coming into market.

HIDES—Green 5 cts. per lb.; Spanish 13 a 16.

IRON—Pig, \$25 to \$35; Swedes, \$100 per ton. English, \$85 to \$90; Tredegar, (Richmond manufactory,) \$90; Up Country bar, \$75 a \$80 per ton.

LUMBER—Clear white pine \$36; refuse clear 32b. merchantable \$22; refuse last sale at \$14; flooring \$15 a \$20 per M.

LIME—Thomaston 95 cents.

MEAL—70 cents per bushel.

PROVISIONS—Bacon—Smithfield \$5 50 a 6 50; Western $4\frac{1}{2}$ a 5c—sales slow. Lard 5 a 7c.

PLASTER—On the Basin bank \$5 50; at the wharf \$3 62 $\frac{1}{2}$.

SALT—\$1 75 from the wharf.

STEEL—American blistered \$135 to \$140 per ton.

SHOT—6 cents wholesale.

TOBACCO—Receipts continue light. Prices steady. Lugs \$2 25 a \$2 50 a \$2 75. Leaf \$3 a \$4 50, general sales—better kinds \$5 a \$7 75. Fine manufacturing \$6 50 a \$9 75.

FREIGHTS.

NEW YORK—Flour, per bbl. 25 cts.—very little going. Coal, 8 a 8 $\frac{1}{2}$ cents per bushel. Tobacco, \$2 50 per hhd.; boxes 20 cts.; kegs 25 cents.

PHILADELPHIA—Flour, none going. Tobacco, \$2 50 per hhd.; 20 cts. for boxes; 25 cts. for kegs, none going. Coal, 7 cents per bushel, Richmond measure.

ON THE CANAL—To Lynchburg and intermediate places, 10 cents per 100 lbs.

EXCHANGE.

FOREIGN—On London 13 a 13 $\frac{1}{2}$ per cent. premium.

DOMESTIC—New York Checks, 7 $\frac{3}{4}$ a 8 prem:

Philadelphia, 7 $\frac{3}{4}$ a 8 premium.

Baltimore, 7 $\frac{3}{4}$ a 8 premium.

North Carolina Bank Notes, par.

South Carolina, 5 premium.

Savannah, 2 premium.

Augusta, 2 premium.

Alabama, 23 a 25 discount.

Tennessee, 15 discount.

Specie, 6 $\frac{1}{2}$ a 7 premium.

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