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J. E. WILLIAMS, EDITOR.

THE SOUTHERN PLANTER.



DEVOTED TO

AGRICULTURE, HORTICULTURE,

AND THE

HOUSEHOLD ARTS.

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J. E. WILLIAMS, EDITOR.

AUGUST & WILLIAMS, PROP'RS.

VOL. XVIII.

RICHMOND, VA., DECEMBER, 1858.

NO. 12.

[From the Transactions of the Virginia State Agricultural Society.]

The Economy of Farm-made Putrescent Manures—In reference to their Preparation, Preservation, and best Application.

BY EDMUND RUFFIN, ESQ.

[Concluded from page 649.]

Top-dressing with straw and corn-stalks.

There is another mode of top-dressing clover or pasture land, with dry wheat straw, which is an excellent and economical application, whenever the quantity of straw is greater than needed for food or litter, as is generally the case on all good wheat farms. When the threshing machine is in operation, and the carts are bringing in wheat from the field for its supply, it requires much labor to remove and to stack the threshed straw, as well as to supply the sheaves for threshing. When the rick has been built so high, that the labor of bringing straw upon it is the heaviest, then it will be even less labor to send the straw back to the field, in return loads, not full enough to require much trouble to be put into the carts. The loads should be dropped on the poorer parts of the field upon which the wheat grew, and which I suppose to be set with clover, sown the same year. The hands, kept in the field to load the carts with wheat, may have enough spare time to spread the heaps of straw.

But if not, the spreading should be done soon, and evenly and thinly enough, not to smother any of the young clover. The improvement will be manifest before winter. And if a spot so covered was an old *gall*, with scarcely any soil left, and of course very poor, the clover thereon will show to the line of the covering a decided superiority over the better though still poor land surrounding. Before August of the next succeeding year, the straw will be so well rotted under the shade of the covering clover, that it will offer not the least obstruction to the plough, in breaking up the land for wheat.*

Straw, taken from the ricks, may be carried out and spread as manure at any time of winter, and in such times of extreme wetness of the earth, or hard freezing, when more profitable work of teams cannot be done. The loads being necessarily light, may be drawn when the earth would be too soft for full loads. Straw should be spread very thin and evenly, or it will smother or check the growth of clover beneath; and if much too thick, will kill all vegetation, and also offer obstruction to the plough even a year later. By very thin and even covering, all these evils are avoided, and according to my views, all the strength or richness of the straw as a fertilizer, whatever

* The last preceding section, headed "The application and action of putrescent manures," beginning on page 17, and the above commencing paragraph only of the next section, (to the mark of reference to this note,) nearly as they here appear, were before published in 1844. E. R.

that may be, is given to the land, and to its growth of plants.

It is also an advantage, as before stated, that the manure from the cattle-pens may, like straw, be hauled out (in part) at early leisure times, and even when heavy rains has lately fallen, and would prevent other team-work. But this facility should be availed of very moderately, and cautiously. If the litter is taken from the pen early in winter, it has not then acted its full part as litter, and is little more than unrotted wet straw—requiring to be spread as thinly on clover to avoid injuring the growth, and having very little manuring or quicker action than dry straw. Again—if to save time and labor, whether early or late, we haul out manure immediately after a heavy rain, there are two other evil effects. First, the manure is much heavier, (with water,) and the ground is wet and soft, so that two mules may be necessary to haul as much manure as one could draw well in dry weather. Secondly—when using manure as top-dressing, it is important to have a rain as soon as possible after the spreading, so as to stop the waste of volatile parts, and to convey them, and also all soluble parts, into the earth, and enable them to act immediately in feeding the roots of the clover. Now at whatever time the manure is carried out and spread, it may be a long and is always an uncertain time before the rain will fall. But nevertheless, it is not the less certain, that the longer after the last rain that manure is carried out, the less will be the time before the next rain will come. For these reasons, if we may choose the time for beginning to carry out manure, the dryer its then condition, and the longer after the last rain has fallen, the better for the performance of the operation, and also for its effect.

Believing that to clover is the best and cheapest application of ordinary manure, that application has been in view generally, in my remarks. That manner of application is however available, though for a very extensive, still a limited agricultural region—and of which the present southern limit has scarcely been carried out of Virginia. Even in the region of clover and wheat culture, this application of manure may not be always the most profitable, even if not impracticable. The clover crop may have failed—or the clover field for the year may be too far distant from the manure to bear the expense of the transportation. Tobacco may be an important crop, and of course will demand all the farmer's manure. And, more generally, and especially farther southward, there may be little or none of either clover or wheat culture. In any of all such cases, when my preferred application cannot or ought not to be made, the proper change of direction, and also the necessary other changes of procedure should be made, and for which every judicious farmer will judge best for his own particular circumstances. Still,

even when making, and properly making, the most considerable changes of procedure, the farmer may not the less recognize the correctness of the principles here maintained, and profit by such recognition. It is unnecessary, (and would make this writing of tedious length,) for me to state examples, or offer particular advice, on the various changes of procedure which may be made necessary by different circumstances.

So far, almost nothing has been said of the stalks of corn, which on all farms make so large a proportion of the materials for manure, and on many farms, amount to more than three-fourths of all the offal of crops. Of course, when brought to the winter cow-yard, as food and litter, they add enormously to the bulk of the prepared manure. Many of even careless and bad farmers, scrupulously use thus all their corn-stalks, cut off just above the ground. In past time, when the stalks were dug up with the roots, (for the earliest wheat-sowing,) under the idle notion that the grain would be injured, if the stalks were cut so soon, I have known the stalks with their roots thus full of earth, to be hauled to the cow-yard. All this enormous amount of hauling, in any usual mode, of stalks from the field to the barn-yard, is merely to haul them out again to some other field as manure, and when made five or six times heavier by being full of water. So far as these stalks were needed for food or for sufficient littering of the animals, this double hauling is proper for these purposes and is well remunerated. But so far as being superfluous in both these respects—the whole labor of their double transportation is thrown away. It would be far more profitable as well as cheaper, to leave the stalks where they grew, to act as manure, either ploughed under, or as top-dressing spread over the surface. Whatever manuring properties and value they possessed would (as it seems reasonable) be made use of in this way as well as any other. If the stalks gained any addition of richness in the cow-yard by absorbing animal matter, that portion was abstracted from the other litter which would otherwise as well have absorbed and retained all the animal matters. If the stalks are left on the land, and the ground is sown in wheat, as is most usual, the stalks may be spread over the same space on which they grew, after the corn has been gathered, and the wheat is sown, or even growing. Their spreading will be very small labor. If done early, and followed by a dry state of the land, it will be a good practice to let cattle browse on the stalks and at the same time trample the land just sown in wheat, which will be beneficial to that crop, and especially on sandy soils. This top-dressing of corn-stalks is indeed a poor manuring. But it is presumed that they thus give to the crop and land all their own fertilizing value, whatever that may be, and at no cost of carting. In the usual

mode, of double hauling, the cost is enormous, and the final application of no increased value as manure.

With the succession of crops which belongs to my own (six-field) rotation, and my plan of corn culture, it is still more easy to use the corn-stalks as manure for the same field. Wheat does not follow corn; and no other crop immediately. The field which bore corn lies until the following May, when it is ploughed to sow peas for a green manuring crop. The corn stubble was generally cut off at two or three feet high, and this lower and heaviest part of the stalk is then easily ploughed under by two-mule ploughs. Of some parts of the field, the tops, above the ears, were only cut off, and removed for provender. And the remaining high stalks, in the following spring, having roots then much weakened by decay, are borne down by the weight of a trailing heavy chain attached to the plough, and are mostly covered by the furrow-slice which follows after. A considerable proportion of both the high stubble and the taller stalks escape being so covered, and remain on the surface, and somewhat impede the harrows when covering the sown peas. Also, other stalks, either buried but partially or very slightly covered by the ploughing, are drawn up by the subsequent cross harrowing. But both these are but trivial difficulties; and the stalks so left on the surface are soon rotted by the aid of the shade and moisture of the ensuing cover of green pea-vines, and are so brought to the condition fit for manure.

Some of the many persons who would deem wasteful and altogether improper, any omission to bring so much of the manuring materials, generally so used, to the barn-yard, may infer that I would also fail to use all other poorer and less accessible materials. But such is not the case. I make large use of pine leaves, from the woods, as litter for cattle, though for summer use only. The reasons for using this poor material are these: 1st. The leaves are brought from wood-land not designed for future tillage, and therefore there is no robbing of one part of the arable land to manure another part. 2d. The raking up of the leaves, and hauling them, are jobs done mostly when the earth is so wet that no other team labor can be performed, and therefore the cost is very small. 3d. This material, the most difficult to reduce by fermentation, is therefore used as a litter for summer cow-pens, (and might be as well for stables,) in which fermentation is always too rapid, and straw so used would be mostly wasted. These remarks bring me to the consideration of the making of manure in summer, which, under any other and usual circumstances and modes of procedure, is almost a total waste.

Summer-made manure.

The usual time for making the mixed ma-

nure in cattle-pens, which constitutes much the larger proportion of all kinds secured during the whole year, is rarely more than four months. With better care and economy, or when most extended, it does not much exceed five months—from early in November to some time in April. There remain nearly or quite two-thirds of the year, during all of which time the cattle are better fed, on green food, and are in much better condition, if not gradually approaching to fatness as will be the case on good land, not over-stocked. Under these circumstances, the excrements of the animals, in equal times, are much more abundant, and also much richer, than in winter. And considering the longer time for producing these richer animal excretions, the summer supply, in quantity and quality, must be of at least three times as much value as that of winter—and if combined with as much litter in proportion, and preserved from waste as well, ought to supply three times as much of total bulk and richness of manure. Yet, in universal practice, however varied, our summer manuring by cattle does not cover one-fourth, (and more usually not one-tenth,) of as much land as would the winter cattle-pen, with but the restricted supplies of litter which I provide, and have advised above. If using the like litter, (straw, or corn-stalks,) and whether abundantly or scantily, for a standing summer cow-pen, the then high temperature, acting on the moist litter, would induce rapid fermentation and speedy and wasteful decomposition of the mixed mass. Most of the substance and value of the materials would be wasted in the air. The cattle also, confined all night, and some hours of the day, on this putrifying and wasting bed, which makes a soft mire of filth in all wet weather, would be tormented by the myriads of stable flies which the filth would serve for breeding—and would suffer otherwise in health and condition by being kept on so foul a bed. These evil effects have soon stopped nearly all the attempts that have been made at various past times, and by many farmers, to make manure in summer, by penning cattle on ordinary litter.

Compared to this plan, (which probably few farmers have tried longer than one summer,) the ordinary procedure is far preferable, though still very wasteful of manure. This is to pen cattle, without any litter, or with very little, on the ground designed to be manured, and removing the enclosing fence to the next adjacent ground, as soon as each enclosed space is successively and sufficiently manured. In ordinary careful practice, the pens are thus shifted once a week. Reference to this usage was made in a foregoing page, and in another connexion, and some of the causes of waste stated. Besides the waste by decomposition, in any mode of treatment, of the more solid excrements, and the still more complete loss of the urine of the cattle, dung-beetles (*scarabæus*)

cat and so carry off, or deeply bury, nearly all of the ordure. Probably full three-fourths of all the animal manure is thus wasted in different ways. Then, for the benefit of the small remainder, there is all the labor, and greater inconvenience, of the frequent moving of the enclosures. So little manuring and benefit have I gained from this plan of movable pens on naked ground, and with so much labor and inconvenience, and so much injury to the confined cattle, (and still more if to sheep,) that it was questionable whether there was any remaining balance of clear profit. Under this impression, when my cattle could be kept at night in a separately enclosed field, I have preferred, and have so ordered for several years in former time, that the cattle should be there left at large, rather than confine them at night in a pen. In the former case, the excrements were dropped at wide intervals and irregularly over the field, and so left as top-dressing, instead of being collected in the small space of a pen. The loss by the eating and working of beetles was the same, and very great, in both cases. But the comfort and condition of the cattle, when thus not confined, are so much better, that it is more than compensation for the irregular dispersion, and loss on that score, of manure. If the progress of decomposition, and loss by insect consumers, were equal, in both cases, the benefit to the land would certainly be greater, by the cattle not being penned. Where pens are used, there are no plants left alive to take up the fugitive products of decomposition. But when the excrements are dropped on a field, or pasture, however closely grazed, the close adjacent grass or weeds take up these gaseous or soluble products of decomposition, and are thus nourished and increased for future vegetable manure. Further, the early rank growths of these highly manured small spots are not palatable to animals, and so are left. In regard to sheep, the reasons against penning them have increased force. They are still more injured than cattle by being penned at night, in summer, as that is their best time for grazing; and when left at large, there is much less loss in their excrement from wasteful decomposition, none from insects, and it is much more separated and diffused over the ground. Acting upon these views, and notwithstanding my wish and efforts to increase my quantity of manure as much as can be done with profit or advantage, I rarely permit my sheep to be penned in summer, and never, when they can be allowed to be left unconfined, without their doing injury to the crops.

But in regard to cattle, there is a better course than either the use of ordinary naked pens, or straw-littered pens, though perhaps not better than the omitting to pen them. This is the plan that I have pursued for the few last years, and which will now be described.

In winter and spring, at such times of very

wet state of the earth that all tillage or manuring operations must be suspended, the woodland is raked, and the dead leaves heaped. Wooden rakes, with six or at most eight teeth, are used, so that some of the most reduced vegetable matter is left by hasty and imperfect raking. I always avoid the use of broad hoes, or any scraping off and removal of the surface of the ground, which very injurious abstraction is usually made by farmers who use this material for manure. If the leaves only are removed, and say once in two years, and that from land not to be soon brought under tillage, it may be doubted whether any injury is done to the fertility of the raked wood-land. For such land has already received (from the superabounding source of supply,) and taken up, as much of vegetable manure as the constitution of the soil will enable the soil to combine with, retain, or use for the growing trees. If more is left, in the fallen leaves, after their very slow rotting on poor land, the results of their decomposition will go to waste, without benefit to the land or to its growth. To produce all the benefit actually received, one-tenth of the crops of leaves probably would serve as well as the whole; and the other nine-tenths might as well be removed for manure, to wherever wanting, as to be left to rot and waste on the land which produces them.

Pine leaves are much the best, to rake, to load, and to be applied to the fields. Land formerly worn out under exhausting tillage, and "turned out," and now under a second growth of pines entirely, is the best by far for this operation. To such land, my labors of this kind have been mostly confined—and therefore I do not extend my statements to oak growth, or other than such as is mostly if not altogether of pine.

However much valuing leaves for manure, still they make a very poor material, and also very slow to decompose. Therefore, unless ordinary farm litter could not be had in quantity sufficient for the comfortable bedding of the animals, I would never use leaves for winter littering of cow-pens or stables, or in any case where speedy decomposition of the manure is most desirable. But this quality of being slow to change and decompose gives to leaves, and especially pine leaves, a peculiar value for the littering of stables and stock-pens in summer, as there will be much less waste of fertilizing parts from all the different materials of the manure, and less inconvenience or injury to the animals thereon confined.

As my present practice is but a few years old, and there has not been as yet sufficient opportunities for observing and estimating results, I will merely describe the principal operation, the making of manure in summer in cow-pens littered with pine leaves.

A strong and coarse fence is put around a square quarter acre. When a very wet state of the land, or remaining thin snow, or hard

freezing, forbids other more profitable team labors, all the hauling force is put to bringing leaves from the small piles in the woods to the designed cow-pen. The loads are dropped as close to each other as may be—and equalized by some fork-work when required. If convenient to continue so long at this work, the covering of leaves is made four or five feet thick, by the carts. The cattle (about 50 in number) are brought on in April, when taken from their winter pen and dry food, and are kept in the summer pen every night, and some hours of the day, at morning and evening. Their treading brings the litter to a compact bedding of twelve or fifteen inches thick. This bedding absorbs the urine, and while retaining it and securing it from loss, resists speedy decomposition from the rich and very putrescent admixture. This very valuable material is almost all lost, by rapid decomposition, in other ordinary and as rude modes of accumulating summer manure, whether with straw as litter, or in naked pens. The semi-fluid and the more solid excrements are soon dried, on this very open and dry surface of leaves—(although moist lower in the mass)—and in a few days more, the dried material is scattered and well mixed, by the treading of the cattle, with the upper leaves, which also are cut up fine, by the same treading. The surface is a dry and firm bed, except immediately after considerable rain, when the upper and reduced layer only, may become soft. As such wet spells usually permit other farm work; they offer convenient times for removal of the so far prepared manure. At any rate, such removals should be made once or twice during the time of penning the cattle, and at the close. The upper layer of leaves, of a few inches deep, reduced both by the treading of the cattle, and by the partial decomposition, and holding intermixed nearly all the solid animal excrements, is easily separated from the unrotted lower mass, and presents a rich manure, in the best state of reduction for use and speedy action. This should be applied immediately to any growing crop, the most convenient in locality, or the most suitable in its state of growth or culture—and making the application, as much as circumstances permit, in accordance with the principles stated and maintained in the preceding pages. Each successive removal of this upper and well reduced layer of manure, exposes a new surface of the unrotted and firm bed of leaves remaining wet below, on which the cattle then find a clean and comfortable bed; and the same process goes on of converting another layer of the bedding to prepared manure, and next applying it. A whole season will probably not serve to get to the bottom of the still firm and unrotted leaves. Any remnant, so left, will make so much of the supply of litter for the next summer's penning, in the same enclosure.

Besides the advantages of this plan already

stated, another was found, and which was as much unlooked for, as it is important to the object. Where the layer of pine leaves is as thick as it ought to be, say not less than six inches when well compacted by treading, the dung is not touched by the beetles, which so quickly attack and so nearly remove or consume all that is dropped on the earth in summer. They cannot bore through the bed of leaves, to bury the dung in which their eggs are enclosed. And perhaps their instinct directs these insects not to go for feeding, where they cannot at the same time deposit their eggs.

What is the cost of this plan of accumulating summer-made manure, it is impossible for me to estimate. But the labor is mostly done when little else could be done of profitable farm operations. What is the measure of fertilizing effects, I know as little of as yet, having had no full opportunity for observing, and estimating the separate results. But of this I am perfectly assured—that the poor vegetable material is as cheaply and better prepared for use, and the rich animal matters are better preserved from waste, than in any other known modes of using them. Therefore, as the labors are cheaply and conveniently supplied, if the vegetable material has any manuring value, it is unquestionable that the thus putting to use so much of otherwise useless vegetable matter, and the saving from waste of so much highly putrescent and rich animal matter, must be not only an improving, but a highly profitable operation.*

* On my farm, Marlbourne, of 6 fields, about 125 acres each, (besides some 80 acres of other and poor land recently brought in,) the manure carried out latterly has been as follows:

1853, prepared manure, 1910 loads, (of two-mule carts,) estimated at 24 bushels (heaped) to the load. A large quantity of straw also carried out from the stacks, not counted in the above.

1854, 1887 loads to October 1st, (there will be some 100 more by end of year,) of which only 315 were from the summer cow-pen, littered with pine leaves. Much more summer manure had been made in 1853, on pen so littered, and more abundantly, and the cattle kept there longer. No woods' litter used elsewhere, and no other except the corn-stalks, &c., (leaving lower part,) and wheat-straw, &c. All the straw of 1853 used for litter for this year's manuring.

As stated above, the cattle kept latterly, are about 60 of all kinds. Horses and mules, 18 for last year. The sheep add nothing to the prepared manure, and the hogs (few in number) only while fattening for slaughter. Then according to the slight and partial use made (as recommended above) of collected stalks and straw, (or parts of corn and wheat offal only,) these years' manuring, (at a half load for each 11 yards square, or 20 loads to the acre,) covered—for 1853, at 12 bushels, 11×11 yards, 95 acres—1854, to October 1st, 94 acres. The offal of stalks, straw, &c., is obtained from about 125 acres of land yielding (now) 35 to 38 bushels of corn—

Natural manuring, with green or dry vegetable materials.

The manuring labors which I have recommended, and with the omission of much that is done by other practical farmers—and omitting very much more that is directed by closet farmers, or writers who are not farmers—will (according to the productiveness of the farm in supplying materials) serve to cover as thickly as is proper and safe to the then growing vegetation, from one-half to more than the whole of one field of a five or six field rotation. But all this amount of manuring, though much exceeding what is usually done on most farms, is much less than another kind of manuring, and which I have as yet touched only incidentally, and as necessarily connected with the collection or avoidance of materials for prepared manures. I speak of what may be correctly designated as *natural manuring*—which is manuring land by its own growth of plants, left on it for this purpose—and either turned under by the plough, green or dry, or left as top-dressing to decay on the surface of the ground, until the next covering of tillage. But vast as is this resource and supply of manure, and great as its value—and important and interesting as would be the proper treatment of the subject—I must pass it by with but a few slight and hasty remarks. For though this is truly a branch, and, in our usual circumstances, the most important branch of putrescent manuring, it is not so understood in common parlance—in which the term “putrescent manures” is restricted to matters collected and prepared for use, or otherwise obtained by purchase, already prepared, from without the limits of the farm. While deferring to, and being much restrained in the range of my remarks by this popular understanding, still I have included as a manure unmixed and dry straw, and would as much include not only the richer clover and pea-vines, sown for manuring crops, but also all grass and weeds grown and left ungrazed, and either ploughed under, or left to decompose on the surface among other growing plants.

The leguminous or pod-bearing family of plants are the most valuable for manuring crops. Of these, red clover is the best, wherever soil, climate, and other circumstances, concur to

and 250 acres of wheat, yielding nearly 20 bushels, average. One field (125 acres) of broad-cast peas, turned under, and one field of clover (or weeds, where clover fails to grow,) for wheat—and one field of weeds (partially grazed) for corn.

From midsummer, 1854, to October 3d, the cattle had not been penned, at all, when grazing on a separately enclosed pasture. I now deem their remaining at large, in summer, in benefit to their health and condition, of more value than that of collecting their manure in pens, whether naked or littered, for the same time.

render its growth certain and abundant in proportion to the fertility of the land. But so precarious is the growth of this plant in the tide-water region of Virginia, even on good or calcareous soils, (and it is almost hopeless on any other lands,) that its value is equalled by the Southern pea, and more and more exceeded by it, as proceeding southward. But whatever may be the respective values of these two most valuable of manuring crops, neither of them can be a substitute for the other. Clover requires to be sown on wheat, or oats, and on land cleansed of other grasses and weeds by preceding tillage; and at least eighteen months will be required to obtain the first useful products. Peas, sown broad-cast for a manure-crop, demand a distinct ploughing of the land preparatory to the seeding; and the crop reaches full maturity and commences decay in four months. Therefore, the choice between these two manuring crops, in each particular case, on soil and in climate suitable for both, must be directed by the conditions of the place in the rotation of crops, and the order of their succession. Whenever a heavy cover of either of these leguminous crops can be grown, (red clover, or any of the numerous varieties of the Southern field pea,) and ploughed under, the vegetable cover makes a good manuring to the field.

But it is not only in these or any other sown or tilled crops, that we may find green or dry vegetable manuring. Every plant, whether grass or weed, shrub or tree, which grows, dies and rots in or upon the soil, according to its texture and constitution, gives more or less of fertilizing manure to the soil, and to its subsequent growth. However poor and scant may be the natural growth of weeds on arable land, when left untilled for a time, it is so far a manure, and the most abundant and cheapest putrescent manure that could be furnished on any farm, to a broad extent, of poor land. And if, by preventing the grazing of live-stock, this natural growth is allowed all to act as manure, and for sufficient intervals of rest to the fields between exhausting crops, the land, if before impoverished, will gradually rise in fertility to such higher grade as its earthy and chemical constitution will admit. This poor but cheap manuring is best suited for the commencement and earlier progress of improvement of much impoverished lands. After some length of time, the entire omission of the grazing and trampling of the fields by animals would become a disadvantage to the subsequent tilled crops. Besides, on lands become productive, it will be more profitable to substitute for the manuring with weeds, other manuring by peas, clover, and stock-yard and stable manures.

The rude system of manuring with putrescent matters, here described and recommended, I readily admit would be unsuitable to a highly advanced condition of agriculture, and of high-priced lands and low-priced labor—as in Eng-

land and Belgium. The elaborate methods of manure-making approved in these countries, even when most proper there, would be not less unsuitable and unprofitable for our country, under its present circumstances of cheap land and products, and costly labor.

General remarks on compost manures.

It being my purpose in this writing to treat exclusively of putrescent (or organic) manures, and those of farm production, it was proper that I should avoid the other great and important classes of mineral manures, and of purchased manures, whether mineral or putrescent. There is another important class, which is of intermediate origin and composition, of which it may be doubted whether the treatment should be included, or not, in an essay on putrescent manures. But in my case, there is another and sufficient reason for omitting any particular account of this subject of *compost manures*, in my admitted want of all practical experience, and even very limited personal observation of the practices of others, in this manner of manuring.

The preparing of compost or mixed manures, compounded of different and various ingredients, has long been approved and extensively practiced in Europe; and latterly, has been carried on with zeal and profit in different and far separated parts of the United States. The most extensive practices in the Northern States, (where peat is the main material,) I know of only through published accounts. In Talbot county, Maryland, and in Edgewcombe county, North Carolina, I have lately seen other operations of composting, and heard of effects, which left on my mind no doubt of great improvements and profits being thereby obtained. As proper, in my admitted want of practical knowledge on this subject, I will offer merely a few general remarks, to direct attention to a practice which is almost unknown in Virginia, and invite experiment—and not to presume to offer instruction from a source confessedly so void of information.

There have been opposers of composting as long as approving practisers. The great difficulty and objection is the great labor of mixing the different materials, with the incidental repeated handlings and transportations of the manure or the heavier materials. Every merely practical man would be at once impressed with this difficulty; and even some theoretical or scientific writers have thus been arrayed against the expediency of composting. All such objectors have assumed the ground that any manuring substance, which would be useful as a material and ingredient of a compost heap, would be as beneficial if applied to the land separately; and by each one being applied separately or alone, all the double handlings and transportations, would be avoided, and more than half the labors of composting saved. Such were the views of Arthur Young, for-

merly respected as one of the highest agricultural authorities. Perhaps forty years ago, the reading of this opinion in one of his works, confirmed my prejudices against the system of making of compost manures. It was not until very lately that my personal observation, and reports to me of practical results, on the places where obtained, led me to doubt the truth of my long maintained grounds of objection. There is no denying that practical (and many merely practical) farmers who use composts largely, are convinced that they profit greatly thereby. One, or a few farmers, of easy faith and sanguine temperament, might for a few years deceive themselves in regard to the results and the profits of this practice. But that would be impossible in regard to whole communities, embracing farmers of every grade, and acting for long time. Such has been the case in Talbot, and more recently in Edgewcombe. The labors so directed are of enormous amount in both these localities; and it is impossible that they could have been so long persevered in, unless the operations produced profitable returns, on the general average. This inference as to general and usual results, is not opposed to the very probable facts of many particular misapplications of labor on materials being of more cost than value.

But besides this, the best proof of the profit of any system of manuring, furnished in the long continued practice and satisfactory returns of the practical farmers—there are theoretical views and sound reasons for supposing new values to be created, or the old much increased, by the mere intermixture of some different substances, and the new chemical changes and combinations thus favored and induced. Also, (and this is a very important matter of economy,) materials the most putrescent and therefore, the most liable to waste and destruction, when alone, by being intermingled with a great mass of other inert material, may have the otherwise fleeting products of decomposition arrested, fixed, and saved for fertilizing action. Again—organic matter, in some conditions, is not liable to decomposition—or is extremely slow to decompose—as peat earth, marsh muck, pine and other leaves from acid soils, saw-dust, used as tanner's bark, &c. Yet all such matters are almost entirely organic, and also putrescent under other conditions, and wholly unfit for alimentary manures. When such substances are mixed with much smaller proportions of others the most putrescent, as flesh, of carcasses, fish garbage, blood from slaughtered animals, human excrements, and those of fowls, rich stable manure, &c., the latter act as quickening leaven to the great mass, and decompose it, or render it decomposable, and at the same time, by the mass of the great materials, the most putrescent are mechanically enclosed and preserved. Further—if mild lime be added and diffused throughout the mass, chemical action, altogether conserva-

tive, will be added, and in far greater power to the above mechanical action.* Any other fertilizing minerals, or neutral salts, added in small quantities and thoroughly diffused, will be thus extended, and in equal diffusion, over broad surfaces of land. Such will be the beneficial use, if no other, of additions of gypsum, bones, common salt, and ashes or other substances supplying potash, nitre, &c. Compost heaps, made of these and of any other materials capable of supplying manuring principles, are once or oftener cut down, and intermixed more thoroughly. Those containing lime and also animal or other rich organic matters, are in fact *artificial nitre beds*—in which the production of nitre, obtained mostly from the atmosphere, is continually in progress.† In this way, of use, (and even without the addition of any animal matter,) lime in compost (as supposed) has been found very beneficial in France, in quantities less than twelve bushels (of lime) to our acre. With all my exalted opinion of the value of lime as manure, these effects, in such smaller quantities, were incomprehensible to me, until viewing the effects in connexion with the nitre-producing action of lime in composts.

Many of (us and I for one) have used as manure, and alone, marsh mud, or other earth largely composed of inert vegetable matter, and in almost every case without remunerating returns. Yet the same, or much poorer earthy material, is used after being prepared in composts, with unquestionable good effect and profit. This material has been largely used in compost in Talbot, Maryland; and there and also in Edgecombe, North Carolina, the principal proportion of most compost heaps, is the much poorer earth of ditch-banks, head-lands, and other scrapings of margins of fields, and corners of worm-fences. Indeed, I have seen in large use earthy materials apparently so poor in fertilizing matter, that nothing but the reported practical good effects of like manures could convince a stranger that such labors would not result in absolute loss.

To Pickle Green Tomatoes.

Chop the tomatoes fine, adding a few green peppers, (and onions if you like them,) add one tea cup of fine salt to a gallon of tomatoes; let it stand twenty-four hours; then drain it through a cullender, adding two table-spoons of black pepper, three of fine mustard, two of cloves, and one of cinnamon. Put in a jar and cover with vinegar.

* This principal agency of calcareous earth (or carbonate of lime) in aiding fertilization, is maintained and established in *Essay on Calcareous Manures*, pages 92-7, of 5th Edition.

† See full view of this particular action, in *Essay on Calcareous Manures*, pp. 263-7 of 5th Edition.

*From the Transactions of the Va. St. Agr. So.
for 1858.*

[PUBLISHED BY ORDER OF THE EXECUTIVE COMMITTEE.]

On the Occurrence of the Phosphates in some of the Tertiary Deposits of Virginia.

To the Executive Committee of the Virginia State Agricultural Society:

GENTLEMEN.—Some years since, I had the honour to submit to your body a report upon the composition of some of the marls and other deposits belonging to the tertiary region of Virginia. (*Transactions of Va. S. Agr. So.*, pages 62 and 179, Vol. I.) Under the head of "Olive and other Earths," several analyses were given, in which I report the presence of phosphoric acid in appreciable quantity, and in one instance, I found 1.18 per cent., equivalent to 2.55 per cent. of bone phosphate of lime. In every case a solution of the earth in dilute hydrochloric acid was made, and filtered; the phosphoric acid was subsequently precipitated as the phosphate of iron, by means of the acetate of soda. Knowing that all of these earths contained iron, no compound of iron was added to the solution, because I believed the quantity of iron present sufficient for the separation of the whole of the phosphoric acid. Subsequent experience in the analysis of manures containing the phosphates, in which the chloride of iron had to be added in order that the phosphoric acid might be separated from the other constituents, led me to think that in the analysis of the earths above referred to, the proportion of iron might have been too small for the object desired, and that in consequence of my not observing the re-actions as carefully as after experience proved to be necessary, I might not have separated the whole of the phosphoric acid from these earths, and that therefore the percentage reported was probably too low.

Having several samples of these earths still in my possession, some of which I never had examined, I subjected them to analysis, adding the chloride of iron to the solution in each case until I was certain that I had precipitated all the phosphoric acid. I soon found that nearly all of them contained appreciable quantities of the phosphate of lime, while some of them contained from 5 to 7 per cent. This fact having been communicated to Mr. E. Ruffin, the President of the Society, he very kindly undertook to procure other specimens for me from the various localities within his reach. A number of these specimens have been analyzed for the phosphates, with varying results, all of which will be found below.

Whilst engaged (in 1853) upon the analysis of the marls, Mr. Ruffin sent me one or more samples of "olive earth," containing nu-

merous smooth black pebbles, some of which were casts of shells, &c., he remarked that wherever they had been applied, they seemed to have produced good effect, and suggested the idea that perhaps they were rich in *phosphate of lime*. Their appearance, however, led me to think that they were nothing but impure carbonate of lime, and when a strong acid was dropped upon them, the effervescence which took place was so marked, that I was confirmed in my belief, and thought that I should be wasting my time to subject them to analysis. After completing the analysis of the "olive earths," I had occasion to throw a few of these pebbles into muriatic acid; finding that complete solution soon took place, and that the effervescence was not so vigorous as I had a right to expect on the assumption that the whole, or nearly the whole, was carbonate of lime, I determined to subject them to analysis for the phosphates. I find them all to contain the phosphate of lime in large proportions.

The numbers which follow are simply given for convenience in reference.

No. i.—"Olive earth," from Retreat, (from Dr. C. C. Coker's,) reported upon, and referred to at No. 19 of my first report, (page 69.) This specimen contains 6.86 per cent. of phosphate of lime.

No. ii.—"Olive earth," same locality, and reported upon in former report as No. 18, (page 69.) This contains 3.92 per cent. of the phosphate.

No. iii.—"Olive earth," Marlbourne Farm, (No. 17, on pages 69, 70, first report,) from eight and a half to nine feet below top of blue clay, (No. 16,) contains 5.012 per cent.

No. iv.—"Olive earth" containing black gravel,—Marlbourne, (No. 17, pages 69, 70,)—contains, after the removal of the gravel, 5.15 per cent. of phosphate of lime.

No. v.—Blue clay overlying the "olive earth," Marlbourne, (No. 16, page 69,) obtained by Mr. Ruffin by boring. The first five feet contained only traces of phosphate of lime; the sixth foot contained 4.80 per cent.

No. vi.—"Olive earth," Marlbourne Farm, (No. 17, pages 69, 70,) also obtained by boring,—specimen at the depth of eight feet below top of blue clay, (No. 16, pages 69, 70,) contained 5.97 per cent.

No. vii.—Same as No. vi., (No. 16, pages 69, 70,) but at the depth of nine feet below top of blue clay, (No. 16,) contains 7.27 per cent.

No. viii.—Same as No. vi. and vii., but at the depth of nine and a half feet below top of blue clay, (No. 16, pages 69, 70;) this contains 7.41 per cent. of the phosphate.

No. ix.—Black pebbles taken from "olive earth," No. iv. After being crushed and thoroughly mixed, they were found to contain 56 per cent. of phosphate of lime!

Nos. x., xi., xii., xiii. and xiv. were procured by Mr. Ruffin from T. G. Turner, Springfield,

Hanover county, and all from the same exposed section on the Pamunky river.

No. x.—"Olive earth," at the depth of four feet below its top, contains traces only of phosphoric acid.

No. xi.—"Olive earth," at a depth of eight feet, a very little black gravel mixed with it, contains 1.58 per cent. of phosphate of lime.

No. xii.—"Olive earth," at a depth of ten feet, six inches above gravel bed No. xiii., contains 3.23 per cent. of the phosphate.

No. xiii.—"Olive earth," containing black gravel—stratum from three to five inches thick. This, after the gravel was crushed, and thoroughly mixed with the earth, gave me 24 per cent. of phosphate of lime!

No. xiv.—*Marl*, two and a half feet below No. xiii., contains more or less black gravel. The gravel was crushed and mixed with the marl; the mixture, on analysis, gave 7.89 per cent. of phosphate of lime.

No. xv., xvi. and xvii.—"Olive earths," from the same section, on the farm of W. A. Braxton, Hybla, King William county.

No. xv. contains 1.37 per cent., No. xvi., 1.58 per cent., and No. xvii. 0.93 per cent. of the phosphate.

Nos. xviii. and xix.—"Olive earths," from Chericoke, King William county, selected by Dr. Tomlin Braxton.

No. xviii. is ten or twelve feet thick, overlaid by nine or ten feet of earth, and contains 7.41 per cent. of phosphate of lime.

No. xix., about four feet in thickness, and overlaid by four feet of earth, contains 2.54 per cent.

No. xx.—"Olive earth," from Bassetterre, King William county, selected by G. W. Bassett, contains 3.77 per cent. of phosphate of lime.

No. xxi.—"Olive earth," from same locality, contains 3.64 per cent.

No. xxii.—"Olive earth," from G. W. Bassett's, Farmington, Hanover county, contains 6.38 per cent.

I may remark that the "olive earth," No. xiii., and marl, No. xiv., owe their large percentage of phosphate of lime to the presence of black gravel. Mr. Ruffin informs me that numerous beds of Eocene marl contain, in thin bands, or layers of the marl, more or less of this gravel, but always in small quantities. In all such cases, we should expect the marls to contain very considerable amounts of phosphates of lime, in proportion to the quantity of the black gravel.

Up to within a very short time of my making my first examination of the "olive earths," they had all been regarded as worthless. Mr. Ruffin, however, having heard that a very successful experiment had been made by the use of some, called my attention to them, and sent me some samples for analysis. Since the publication of my report, various trials of these earths have been made, and some of them have

been very successful. Mr. Ruffin, who has taken a very lively interest in the matter from the first, informs me that he will make further inquiries in relation to their effects as manures, and has kindly offered to communicate to the Society the results of these inquiries, as an appendix to this report.

Respectfully, your obedient servant,

WILLIAM GILHAM.

Va. Mil. Institute, Sept. 29th, 1858.

APPENDIX.

The discovery made by Prof. Gilham, and announced in the foregoing report, of the presence of considerable proportions of phosphate of lime in the "olive earth," is a very interesting fact in scientific agriculture, and likely to be also of great practical value to all farmers who may have access to earth of this kind, and know its quality and value. The "olive earth" is the usual overlying layer on the *eoecene* marl of the Pamunkey, and also of the peculiar *miocene* marl of Hampstead, in Kent, described at pp. 491, 2 and 3 of 5th edition of *Essay on Calcareous Manures*; and which marl is also found at Chericoke, and at Hybla, in King William—from the overlying olive earth of which two farms some of the specimens were obtained and analyzed. What I knew, and supposed, of the olive earth, was stated at some length in the work just named, (pp. 479, 480, 481,) and my reasons, formed in advance of any analysis, for supposing that phosphate of lime was contained therein. Prof. Gilham's earlier examinations (in 1853) showed the presence of a small per centage of phosphate of lime in most of the specimens of olive earth I had then selected for him. (See his earlier communications, pp. 62 and 179, *Trans. V. S. A. S.*, 1853.) Even this was of practical importance, in conjunction with the sulphate of lime, potash and soda, which he also found. But his recent analyses, cleared of the cause of error, which, as Prof. Gilham states, before concealed much the larger portion of the substance present, have served to show much larger proportions in some of these olive earths, and in most of the specimens which, at his request, I had sent to him. It appears, however, that the proportions vary very much in different specimens and places—from less than 1 to more than 7 per cent. of phosphate of lime—and that important differences, in this respect, are not only found in different remote exposures and localities, and different beds, but at different heights in the same bed and section, and where there is no difference of appearance to the eye.

Previous to the trials made of olive earth as manure, by two of my neighbours, Messrs. John Beale and Henry Jones, and their remarkable results, (to which Prof. Gilham refers as being stated to him by me, and which I had

reported in the nature of "olive earth," just referred to,) this earth had been deemed of no value. Almost every marler in this neighbourhood had to dig through more or less of this earth to uncover his marl, and with much labour, and it was thrown aside as worthless. In later years, the olive earth has been carried out and spread as manure, like the marl, and generally on the same surfaces. Since I learned the remarkable results of the more recent analyses, (above stated,) I have sought to learn more of the experienced practical effects. But there have been no accurate experiments made, of the effects, either of olive earth alone, or in any certain mixtures with marl—except the one I formerly saw and reported, of Mr. Henry Jones. His experiment was made with Dr. C. C. Cocke's olive earth, (above designated as Nos. i. and ii. in the present report.) Mr. John Beale has made much greater use from the same bed—and he only (except Mr. Jones) had then used the olive earth alone, without marl previously having been applied on the same surface. Mr. Beale informs me that he has always found great benefit from his applications. He, and four others of my neighbours, who have since used this manure largely, but on land also marled, (and without any accurate observation of the different effects,) all are well satisfied with their results. But it is true that there is nothing more definite than mere general opinions as to the degrees of benefit. Also, the olive earths that contain the smallest proportions of phosphate of lime, seem (to these loose observations) to have been as satisfactory in supposed effects on the farm on which they were used, as the richest in that ingredient elsewhere.

My own use of this earth, (of the Marl-bourne bed,) marked 17 in Prof. Gilham's first report (*Trans.*, Vol. I., p. 69, 70,) was very large—but it was applied before I knew its value, on land also marled, and without the care necessary to have accurate comparative results. I can only say that from general observation of products, I believe that considerable benefit has been produced, over and above all that is due to the marl. But I made nothing that deserves to be called a proper experiment, and therefore have no accurate or reliable results.

Still, on the whole, after learning the large proportion of phosphate of lime in our olive earth, I am surprised and disappointed that the benefit the land and crops, from this very valuable and fertilizing ingredient, should not have been greater and more striking, even from such irregular applications. The very great value of phosphate of lime as manure has been well and long established. Bones, which contain only about 56 per cent. of phosphate of lime, have, for this ingredient, been used very extensively, and with great effects, in England, and bought for manure at three shillings sterling the bushel. The usual

quantity of olive earth applied here was 400 bushels to the acre, which would give (of the Marlbourne bed) from 20 to 25 bushels of phosphate of lime. Perhaps our soils in this neighbourhood may naturally contain nearly enough of this essential ingredient, so that an additional quantity would not produce very marked early benefit. I formerly supposed that our peculiar eocene marl (judging from its effects) contained phosphate of lime—which, if true, would explain the small effect of olive earth on land previously and heavily marled from such beds. But I am compelled to give up this former and long cherished belief, inasmuch as Prof. Gilham, in sundry trials, has not found more than a trace of phosphate of lime in the Marlbourne marl, or in any other of this neighbourhood.

All the specimens of olive earth of which the analyses are reported above, were overlying eocene marl, except those from Hybla and Cheroke.

Several different circumstances concurred to cause me to suspect, previous to 1853, that the black gravel of the olive earth and marl was rich in phosphate of lime. I had seen such gravel, though in small quantities, in all eocene beds; and this marl I had found much more fertilizing than the miocene, when equal in their carbonate of lime, the main fertilizing ingredient, and usually the only one in miocene marls. The same gravel is still more abundant in some parts of the olive earth. I had heard it remarked by users of this earth, that it seemed to be the better as manure where the black gravel was most abundant. I had evidences (in some specimens which I forwarded to Prof. Gilham) that this gravel, though now extremely hard, had once been quite soft, so as to fill the interior of spiral shells, like the softest clay. I had also read that coprolites, the petrified excrements of extinct marine animals, had been found in such quantities in certain beds of green-sand in England, that they were separated, and ground to powder to be sold for manure—as these coprolites consisted mostly of phosphate of lime. Also, in Prof. Emmons' first report of his geological survey of North Carolina, he stated having found coprolites in the eocene marl on Cape Fear river near Wilmington. Putting all these things together, I thought it more than probable that the small black gravel in our olive earth, and in eocene marl, was coprolites, and therefore mainly of phosphate of lime, and indicating more, invisible, diffused through the bed. This has been proved to be correct, by Prof. Gilham's recent analysis of this gravel. So far as the quantity of these coprolites may go, they contain as much phosphate of lime as bones, and add more than half of their weight of phosphate of lime to the olive earth or marl in which they are imbedded—and so much in addition to whatever there is in a finely divided state, and reported in sundry specimens

from which the black gravel had been separated. But though this gravel in some rare cases lies thickly through very thin layers of the earth, it is never abundant enough to be separated for grinding—and its extreme hardness, and very slow disintegration in the soil, as well as the small quantity of all yet observed, will prevent its presence adding much to the value of the whole quantity of the finely divided portion in phosphate of lime in the olive earth.

EDMUND RUFFIN.

Marlbourne, Oct. 7th, 1858.

For the Planter

A Plea for Innocence.

There is a large class of innocent sufferers in our country, which deserves more of human sympathy than it is accustomed to receive. This is the class of girls, growing up to womanhood, in the midst of that strange process, called education. Large and costly establishments are constantly being erected all over the country, devoted to this purpose, and the girls of thousands of families, are sedulously congregated within them, to undergo, for about ten months in the year, the discipline of the boarding school. Many of these girls become proficient in learning to such an extent as to excite the admiration of friends; and evidences of their success are furnished us in long, newspaper columns, of exquisite specimens of composition, and in the ample pages of annual reports. Truly, we must be in a fair way to become a learned people. Our admiration is challenged of so great a good, and while the daily press resounds with its praises, we are scarcely at liberty to withhold it. But to the intelligent admirer of female excellence, this admiration is not unmingled with commiseration. He sees and admires mental cultivation, and the requisition of knowledge, but he becomes fully aware, at every glance into these institutions, of the inutility of mental improvement without its necessary adjuncts, bodily health and vigour. While the former appears to be boastingly secured, the want of the latter inspires him with the deepest compassion.

It requires only a modicum of physiological knowledge—indeed it requires only a little observation and common sense—to enable us to place a proper estimate upon the importance of health, and to calculate upon the absolute certainty of

enfeebled constitutions, resulting from overworked minds in immature bodies. Look at the routine of duty in our best model boarding schools. From early morn till close of day, and many times until bed-hours, the constant requirement is study, study, study. In profound silence, seated like statues upon hard benches or chairs, which obstruct the free circulation of fluids in the lower limbs, with benumbed and often cold feet, with an aching breast and back, and with throbbing temples, girls in these schools are expected to carry on six or eight branches of study at the same time, to be perfect in every lesson, and to send home weekly, or monthly, satisfying evidences of the success of this tread-mill work of an excited brain. Sleep sufficient for the health of growing bodies is often denied them; unpalatable, and therefore unwholesome food is thrust into the stomach in a given number of minutes; the calls of nature are disregarded, and no effort, no intellectual machinery is untried to excite a spirit of emulation, which will impose the heaviest labors upon the mind, while the body is all the while suffering the most marked neglect.

Notwithstanding the long established maxim which teaches that sound minds can exist only in sound bodies, no parent asks what is done for health, no teacher thinks of bodily invigoration. In addition to all this, there are many of these schools in the middle and Southern States, in which girls contract and practise the habit of *dipping*, or the use of tobacco in its most injurious and revolting form—a habit which affords them assistance in their mental labors, but which inevitably destroys the tone of the nervous system, and invites attacks of the most painful diseases to which the female constitution is liable. The results of such vicious school-training are appalling. The victims enter upon the career of adult life, without a single qualification for healthful and vigorous womanhood. Their children suffer with enfeebled constitutions, large, nervous development, and excessive bodily and mental irritability. Generation succeeds generation with constantly increasing inferiority, hereditary diseases appear and make sad havoc with human life, and the sturdy couple who begin the married life in great bodily prowess, lose

their name and lineage in the extinction of their great grand-children childless.

It behooves parents to seek a remedy for such evils. It should be required that all schools of this kind devote an equal time to physical and to mental training. If they would have their daughters to enjoy the health, and exercise all the functions of womanhood, they must secure for them the advantages of exercise, fresh air, wholesome food, and enlivening and cheerful amusements. These are essential, and it will be found that when one-half their working hours are devoted to these objects, they will learn more, and learn it better than under the vicious system which I have described. One hour is full long for any youth to be engaged in uninterrupted study, and longer, indeed, than any one can apply the mind closely. Relaxation should follow with bodily exercise, in the open air when the weather will permit, and at other times in rooms or halls separate from the school-room. Besides walking and running, various forms of celesthenic exercises may be used, among the best of which are dancing and marching with music. Nothing tends to cultivate graceful movements so much as those exercises which keep time to music, while the muscles of locomotion are brought into more harmonious and healthful action than by any other plan of exercise.

• A. P. MERRILL, M. D.

For the Planter,

Tobacco

The bane of Virginia husbandry—as will be shown under the three following heads, viz: First, because it requires more labor than any other crop. Secondly, it is the most exhausting of all crops; and, Thirdly, it is a demoralizer in the broadest sense of the term.

Under the first head it will be seen at a glance, that it must require more labor than any other crop, because it is a full year and a half on hand. From seed-time till harvest the wheat crop, in this climate, requires eight months and a half—and but ten months, including six weeks, enough for every enterprising farmer to get his crop to market. From corn planting to the end of housing-time—eight months. Oats little more than half this time—in short, all other crops except tobacco, are

made and gathered in within the year—but as it takes 18 months from the sowing of tobacco-seed to getting the crop to market, it is evident that for six months of the year the planter must suffer the embarrassment of having upon his hands at the same time, the old crop and the new. Every practical man will see the trouble incident to such a state of things as this, and especially of a crop of the uncompromising demand for all the labour it requires, like the tobacco crop, and which, by an invariable rule of every plantation, so long as anything is required to be done for the tobacco, everything else gives way.”

The history of the agriculture of the world may be challenged for a crop more elaborately tended from beginning to end than the tobacco crop on a Virginia plantation—and thus it is, that while full justice is done to it under the rule already mentioned, as fixed and unchangeable as the laws of the Medes and Persians, every thing else is starved. And when we have adverted to some of the prominent details of the culture of this all-absorbing-labor crop, it will be manifest it will be justly liable to the charge of being the bane of all good husbandry; and here may be super-added an insuperable barrier against the attainment of the higher degrees of rural economy in any community where it is a staple crop.

To begin aright, we must commence with sowing the seed. “Plant patch-ground,” are household words with tobacco planters—and mean the richest virgin soil; some rich hollow, or piece of branch-bottom being selected,—the deeper in the forest the better, because less liable to the fly or tobacco flea—other things being equal, branch-land is preferred, as in dry seasons the branch-water may be used to irrigate the young plants—a work required more or less every season—and, under the tobacco rule, never omitted at any expense of time or labor. Hickory, walnut, pawpaw and redbud are known to be the growths indicating the richest mould—and upon some spot where these most abound, the work of making plant-beds is usually commenced, the first week in the new year—though many begin before the Christmas holidays—and thus increasing by so much this all-absorbing crop. Such spots, in the depths of the forest, as are

most densely covered with the heaviest growth are preferred, because they afford the large quantity of fuel required “to burn the plant-beds,” a process deemed absolutely necessary to success.* The size of the plant-patch being determined, the timber is not only cut off from its surface, and mauled into suitable lengths for burning, but a large margin around is also cleared, experience having proved that the heaviest forest growth does not afford fuel enough to burn its own surface sufficiently for plants; and besides, it is necessary to remove the adjacent forest to let in the sun in order to encourage the early growth of the young plants.

It may safely be assumed, that for every given number of superficial yards of land sown in tobacco seed, at least three times more is cleared of its timber, to answer the demands of burning, fencing and letting in the sun. This will afford some idea of the consumption of the finest forest timber annually for this item in tobacco-making districts. Although in former times this waste of the material for lumber, by reason of its abundance, was thought nothing of—now, in the altered circumstances of the country, leaves tobacco fairly chargeable with ruinous consumption of one of the essential articles of rural economy, and by the nature of things growing annually of more importance, the material of fuel and lumber.

The wood being cut into proper lengths, and mauled into convenient sizes, with the brush of the limbs chopped and mixed with it, is laid in a ridge along one side of the proposed plant-patch, 4 feet wide, and about 2 or 2½ feet thick, with the intermixture of brush—this being green wood, must be set on fire at first with light-wood or seasoned fuel, its whole length and breadth; and when well fired, adding from time to time fresh supplies of fuel, and keeping the fire up until the surface of the earth is sufficiently burnt, indicated by a reddish appearance or calcined state of the soil. The fire is then moved to the next space of four or five feet—this is

* The consumption of large quantities of the finest fuel—for none other will answer, together with the hauling and careful management of the process, composes a large item against the all-devouring staple of labor, time and precious material.

done by long poles with iron hooks at the ends; so that two or three strong hands can take hold of the burning logs and roll them: from the ridge of fire to the next place to be burnt; in the meantime the weaker hands have brought brush to intermix with the burning logs, and fresh supply of fuel being added to the mass, the fire is kept up until the process of thorough burning is again completed—and thus by another and another removal and replenishing the fires, the whole surface of the plant-patch is burnt, and is ready to be hoed up for sowing the seed.

This applies chiefly to the plantations of rich, virgin soils, when first brought into cultivation, but since the new impulse given to the tobacco culture by the high prices and the use of guano—many expedients are resorted to to raise plants where the best soil has been long ago used up; but in any circumstances, the time and labor necessary for the plant-patches must be given—and although the recent use of guano has saved something in both—still this plant-patch work must be a large item in the tobacco culture.

The ground being ready for seeding, is carefully broken up by hand-hoes about four inches deep, taking out every root-fibre, and mixing the covering of ashes left by the fires with the soil—raked, levelled and marked off into rows three feet wide, and one-half the proper quantity of seed for the whole patch sown, and afterwards the other sown between lines across the first, in order to insure an equal distribution of the seed. Then after treading over the whole surface, it is ready for covering. The straightest brush, free from leaves is preferred for this purpose, and is compactly laid from 18 inches to 2 feet thick upon the ground. This straight and leafless brush is not often found near, and is sometimes a mile off, but be it far or near, it must be had, for no pains are ever spared in whatever concerns the tobacco. All this done, the whole is inclosed with an ample fence—which makes another draft upon the adjacent timber for the necessary fence rails.

Thus the choicest spots of virgin soil in the tobacco districts are cleared for making plants, and afterwards left as useless wastes, that but mark the expenditure of sturdy labor, and vast consumption of the finest timber in this first stage

of the process of producing this staple of Virginia agriculture. This business of plant-patch making takes up usually from three to four weeks of every winter. The rule is to provide a thousand superficial yards in plant-patches for every 100,000 hills in the crop—but three or four times this proportion of plant-land is usually prepared in order to insure success—and after all, we often hear of scarcity and failure in plants. In a favorable season, there are always four times as many plants raised as are necessary to plant the crop—and of course three fourths of the labor and consumption of the timber in raising plants, being thus surplusage, is a dead loss to the planter, to say nothing of the diminished value of his estate by these depredations upon the forest lands, a degree of reckless wastefulness incident to no other crop. In an unfavorable season the loss is still greater—for when it is too dry the plants are watered, and when they grow slowly they are stimulated by top-dressing, and when the fly assails them they must be driven off or destroyed by promptly resorting to some of the innumerable expedients invented by this class of cultivators of unequal vigilance in all the other departments of agriculture in this country or in any other. For, as has been already said, whenever anything can be conceived or imagined likely to affect the plant-patch unfavorably, or the tobacco crop in any of its stages—it never escapes the tobacco-maker, and heaven and earth are moved forthwith on that plantation, until the needful or imaginary remedy is provided—cost what it may in labor—in teams, in vehicles, in manures both liquid and pulverized. If the plant-patch wants watering, it is irrigated, although the water, as is often the case, must be fetched in tubs or pails on the negroes' heads from a considerable distance. Some of the remedies against the fly, a regular pest more or less, are sweeping the surface with soft brooms, covering the plants with various powders of supposed offensiveness to the insects—shaking a sheet with the lower side covered with some glutinous sizing to catch the hopping insects which stick to its surface, &c., &c., consuming an amount of labor and time hardly to be conceived but by one unacquainted with the details of tobacco-making. In short, the tobacco is the idol

God of the plantation, before which every thing else is thrown down and trodden underfoot: hence everything else getting only the leavings of this insatiable consumer of labor, manure and time, is starved literally, and the fatal consequences are every where discoverable through the land—as will be further seen in the sequel.

Having disposed of the plant-patches for a time, except the unceasing watch against the fly, and to promote early growth by watering and manure, an interval is presented for clearing new ground for the next crop, and when the weather is unfavorable for out-door work, for carrying on the stripping process of the last year's crop. Here we are brought into full collision with both crops on hand at the same time—the new crop in the plant-patch and the old crop in the houses. But to proceed in order, we must account for the presence of this old crop now in the houses; this, of course, the product of last year's plants, after the elaborate cultivation by which it has been raised, (the details of which shall be given when we go back to the plant-patches now on hand) has been cut when fully ripe, a state which requires* a shrewd judge to decide, partially cured on scaffolds, and finished by firing in the houses. It is then struck down from the tiers on which it is hung in the houses on sticks rived for the purpose, during some damp and warm day in autumn or early winter, in proper order for handling, or technically in "case"—taken from the sticks, packed down carefully and straight, in close bulk, and covered thickly with wheat-straw, to exclude the air, and keep it "in case."

For the Planter.

Mr. Winston's Wheat Crop.

WESTWOOD, Oct. 22d, 1858.

ED. SOUTHERN PLANTER :

Dear Sir.—I herewith send you a statement of my crop of wheat for the present year. From it, interesting information

* It is often threatened, and sometimes lost by early frost, which, from the earliest history of its culture, has been known to lead to the cutting of the crop on the Sabbath when deemed necessary to save it from a threatened frost before Monday morning.

may be derived respecting the utility of guano as a manure for wheat. The land on which the wheat was grown, was surveyed with great care by an accomplished surveyor.

Number of acres in wheat,	11 $\frac{3}{4}$
Wheat used for seed,	21 bus.
Quantity of guano (Peruvian) used, 3000 lbs.	
" " per acre, 255 "	
Product of wheat per 11 $\frac{3}{4}$ acres, 226 bus.	
" " per one acre, 19 $\frac{1}{4}$ "	

Cost of Production.

Preparation of land, sowing and reaping, @ \$5 per acre,	\$58 75
Threshing and hauling 226 bushels,	12 00
Cost of seed wheat @ \$1 40 per bu.,	29 40
Cost of guano @ \$60 per ton,	90 00
<hr/>	
Total cost,	\$190 15
Proceeds of 226 bus. @ \$1 40 per bu.,	316 40
<hr/>	
Net proceeds,	\$125 25

It is estimated that the same land, without guano, would have produced 10 bushels per acre, or 114 bushels for the whole field.

Cost of production same as before, except as to threshing, hauling, and the guano. Thus :

Cost of production,	\$ 94 15
Proceeds of 114 bus. @ \$1 40 per bu.,	159 60
<hr/>	
Net proceeds,	\$65 45

Now \$125 25—\$65 45=59 70,—the amount of profit due to the \$90 outlay for the guano. This is an enormous profit, being about 65 per cent.

Mode of Cultivation.

Corn land deeply plowed with a two-horse plow; the wheat and guano being sown broadcast by hand, and put in with a two-horse cultivator.

I have taken more than usual pains to test, during a series of years, the value of guano as a manure for wheat. I have used about two hundred pounds to the acre. I am satisfied, that on land that will bring 15 bushels of wheat to the acre, it does not ordinarily pay a profit; especially at its present price. The question is often asked, "Is guano an improver of the soil?" To that question, two answers may be given. Under the clover-fallow system of farming, it is undoubtedly a

rapid improver. It improves by promoting a larger and more luxuriant growth of clover.

The introduction of guano, however, has given rise to a system of farming, which deserves the reprobation of every intelligent and dutiful son of Mother Earth. This is the practice of cultivating the same land in wheat, or oats, every year, guano being relied on as a fertilizer. The soil is thus soon exhausted of its proper proportion of vegetable mould, or humus, on which its productive capacity mainly depends; and sterility must eventually ensue. And, verily, the last state of such land is worse than the first. I can point to fields that have been cultivated in this way. From once being rich, they do now show unmistakable signs of deterioration. They produced well for the first two years—then there was a gradual declension, and the crop of the present year was almost a total failure! No soil can retain its fertility long, if it is subjected to a system of cultivation that exhausts it of its proper supply of either mineral or vegetable matter. The *one* will not take the place of the *other*. Viewed, then, in this aspect, I unhesitatingly give a most decided negative to the question under consideration.

In conclusion, we would ask attention to the following question: Was not the failure in the wheat crop this year most signal on land deficient in vegetable mould, or that have been in wheat and guano several years in succession? To this question my own observations would give a negative answer. The question is considered important in its bearing on the use of guano, and it is hoped that it will elicit answers of such a kind as to justify the establishment of a general principle.

Very respectfully,

JOHN H. WINSTON.

For the Planter.

Sorghum Molasses.

SYLVAN VILLA, Oct. 19th, 1858.

TO ED. SOUTHERN PLANTER :

Dear Sir.—Having experimented to some extent this fall with the Chinese Sugar Cane, I feel disposed to give some account thereof to my brother farmers, through your excellent journal, hoping thereby, if

not to impart, at best to gain information, by drawing out others upon the subject.

Last spring I planted some five or six acres of rich alluvial land in Sorghum, expecting to feed it to stock: but this fall, believing I could contrive an apparatus for crushing it, more effectual than the common apple-mill fixtures used, I had a machine built on the old cotton-gin principle, at a cost of some ten or twelve dollars, which acted so admirably, that I have gone on to make several hundred gallons of the richest, finest syrup I ever tasted. If you or any of your readers doubt it, come up and taste for yourselves,—and if Dame Nature has developed in you the gusto sense, and connected it with a good judgment, I fear not your verdict.

I am convinced that, properly managed, Sorghum may be made one of our most profitable crops.

Corn, you know, in the hands of the aborigines, and our forefathers, was comparatively valueless for bread, when the meal had to be grated on a tin, or pounded in a mortar. Wheat was reluctantly adopted as a staple when it had to be trod out with horses, and wagoned several hundred miles to market. So I fear Sorghum has been decried when it has had to be crushed and re-crushed through an old apple-mill, and then taken to a tobacco prize or cidar press to get its stores of sweet things ready for the kettle, and indeed I am inclined to believe that it has been too often taken before its time, while yet in an immature state,—the result of which has been the production of an imperfect, ill-flavoured syrup. Nearly all in this region had finished making up their cane before I commenced; and though I have been making about three weeks, I find the ripest cane produces the richest, clearest and best flavoured syrup. It, however, does no yield quite as much.

I find on an average about six gallons of the juice will make one of syrup, of proper keeping consistence.

After the cane is cut and stripped of its fodder, two hands can crush and boil down about twenty-five or thirty gallons of molasses per day. A sixty gallon kettle, fixed in a brick furnace, will boil down in about twelve or fourteen hours, and yield about ten gallons; and it is nearly as easy to attend to three or four kettles as to one. I prefer greatly cast ket-

tles to copper, as they boil after becoming hot much more steadily, and are not half so apt to scorch.

Sorghum requires about the same amount of tillage as corn, and one hand could easily till ten acres in addition to ordinary farming crops. On good land, I believe the cane will yield about one hundred gallons of syrup,—which, at 50 cts. per gallon, would amount to \$500. Deduct \$100 for expenses, and allowing the seed and fodder to pay for tillage, we have left \$400 nett proceeds for ten acres, or \$40 per acre.

Tobacco, at 4500 hills per acre, and seven plants to the pound at six dollars per hundred, would yield \$38 58, and require three or four times the labour of the cane, and give no pay above that for its tillage. So if we were to reduce the cane to fifty gallons per acre, it would still "pay better" than tobacco. There may be none of the Sorghum lost, for even the stalk, after it is pressed, if dried and stored away, I have no doubt would make a fine winter feed for horses and milch cows, by cutting and soaking them, and rolling them in meal or chop. Much saccharine matter is left in them, even after the most effectual pressure, which, I doubt not, would be fine for horses, cattle or hogs. I run them under a pressure of about three or four thousand pounds, and yet my hogs thrive rapidly on them.

I have no doubt that the finest quality of vinegar may be made from the juice, and if so, one acre that would make 100 gallons of molasses, would make from 800 to 900 gallons of vinegar equal to the best apple vinegar;—say 800 gallons, at 12½ cents an acre, would give \$100. This, however, is conjecture, for I know not the loss in making vinegar. But reduce this one half, and the ten acres (a hand's crop) would yield \$500; and the expense of making the vinegar would not be half that of molasses.

I have no doubt it might be distilled into spirits profitably; but that I shall never try.

Pardon prolixity, &c.

J. F. E.

GOOD FRITTERS.—To a pint of good butter-milk, add a little salt and a tea-spoonful of soda; stir in flour enough to make a thick batter. Fry in hot lard.

For the Southern Planter.

How to Keep Sweet Potatoes.

MR. EDITOR:

Having noticed a call for information about the "safe keeping of sweet potatoes," not in yours but in other agricultural papers, I comply at once with the promise made some weeks ago, and which you have perhaps forgotten.

From repeated observations, made some fifteen years since, it appeared that *weight* and *moisture* were the *only causes* of rot among root crops, provided they are *sound* when stored, and the *frost excluded*.

Roots put away in rainy, damp, or foggy weather, have a poor chance of wintering well; if bulked under such unfavorable conditions, they should be afterwards dried by the sun and wind, or by the fire.

No damp situation will answer for the safe keeping of root crops. The digging should be effected, if possible, in dry weather; if you must dig them in a moist condition, be sure and dry them before finally storing them away. All sources of moisture being guarded against, half the battle is gained, but in the next place excessive *weight* must be avoided.

The best depth for a *heap* of sweet potatoes is about 18 to 20 inches, and the liability to rot will increase in direct proportion to the increase of depth over that limit. So after laying that depth of roots, have boards laid over, supported strongly at each end, *not touching* the mass below, but allowing two or three inches for ventilation; this process of *shelving*, or flooring, at every 22 or 23 inches, may be continued to the joists.

In very cold localities additional precautions become necessary; the frost is there the main enemy, and sawdust, dry chaff, pine leaves, or other *thoroughly dry* material must be *laid under* and over the roots to the depth of five or six inches, which will require that the shelves, or floors, be placed 10 or 12 inches farther apart.

I have used a structure resembling an old-fashioned cup-board, made of refuse plank, with shelves about 20 inches apart, and found it to answer well, except that a *good lock* and *key* would have been a valuable improvement.

In constructing a potatoe barn, I find it well to pave with brick, on account of rats; and to exclude cold, the walls are stuffed with dry chaff, slats being nailed on the inside of the studs, or posts, for that purpose; between the interstices of the slats, or narrow boards, and at intervals of about 20 inches, the *shelves*, as above described, find support.

Other modes of storing roots may answer as well, with regard to frost, but few plans will afford equal security against thieves as the above, which have never failed in fifteen years trial.

Respectfully,

J. LUCIUS DAVIS.

N. B.—The above hints will be found useful

and to some extent applicable to the winter storage of every variety of root crop, as well as apples or other fruit.

Decay begins at the bottom of the mass, where *weight* and *moisture* are greatest. J. L. D.

We regret that Col. D.'s letter was received too late for insertion in our November number; but thinking it probable that other engagements had caused him to forget to furnish us with an account of his plan, we wrote a short and imperfect sketch of it for that number, *which we will now retract*, and give our readers the Col.'s own directions instead of our hasty note.

This method of storing sweet potatoes has been thoroughly tested, and is no mere item of "book farming"—but may be relied on.—
EDITOR.

The Wonderful Nature of the Human Mind, Exhibited in the Power of Mind over Matter.

No stress will here be laid upon the mysterious connection between the mind and the body, by which the former controuls the voluntary movements of the latter, because this, wonderful as it is, does not distinguish man from the brutes. I refer to that power, by which man subjects the whole material world, animate and inanimate, organized and unorganized, to his personal use and convenience. There is not a substance in all the earth's constituents or productions, which he does not somehow employ for himself; not an animal or an insect which he does not convert in some way into a minister to his real or imaginary good; not a principle or law of Nature, which he does not make subservient to some personal purpose, as soon as it is discovered.

What are the varied and nameless comforts that belong to civilized society, as distinguished from savage, but so many different instances of the mind of man, turning the powers and susceptibilities of matter to accommodate his own wishes? Some of these powers are of terrific energy. But, the mind of man fearlessly puts them in bonds to do him service; and with an obedience, as amazing for its submissiveness as for its efficiency, they act at his bidding. Fire and wind, the mighty ocean, steam and the lightning itself, wait, as it were, upon the will of man. The astonishing facilities for intercourse between distant places which now exist, and are daily becoming more numerous, and the extreme ease and the prodigious rapidity with which all the utensils and fabrics and multitudinous articles of utility, pleasure and luxury are now furnished to the world, are merely the results of the power of mind over matter. It is by this controul over the most wonderful energies and capabilities

of Nature, that man is rendered emphatically, "lord of this lower creation."

Thus—

* * "Man is one world, and hath
Another to attend him."

And here, one cannot help thinking of the folly and atheism of that philosophy of ancient times, which represented matter as the fatal enemy of man; which loved to discourse of body and spirit as antagonist principles. If they have indeed been foes from eternity as such philosophy imagined, it is now obvious enough, that the spirit has gained the mastery, and is likely to hold it, and the more the gross things of sense shall resist the supremacy, the more strength for command will the mind gather from the very resistance; since all the resistance that matter can make is, by disclosing its own properties and laws, and every new property or law thus disclosed, is instantly converted by the mind into a new servant and minister to itself. But it is a more ennobling view as it is the only rational view, which christian philosophy—the only true philosophy—now gives us of the case. This points out to us a most striking manifestation of the power, wisdom and goodness of God the Creator, in so accommodating to each other the nature of mind and the nature of matter. The adaptation is truly wonderful, and shows demonstratively, that "God, in constructing the vast mechanism of Nature, overlooked not the humblest of its parts, but incorporated the good of our species with the wider generalities and laws of a universal system." The properties and laws of matter are all fitted to subserv the purposes of the intelligent mind. Every new triumph over external Nature, every new instance of a mastery acquired by man over the elements which surround him, is a new development of this interesting truth; showing more fully how mind and matter have been adapted to each other; "the first endowed by the Creator with those powers which qualify it to command; the second no less evidently endowed with those corresponding susceptibilities which cause it to obey."

Now here is the argument: the material world is indeed wonderfully made, and appears especially so in its adapted subserviency to mind; but the mind appears thereby still more wonderfully made, as it is by its own nature fitted for such command.

And we must not overlook a peculiar consideration, that gives great force to the argument, viz: the fact, that the material world is thus made to contribute to the interests of man, only by his applying to matter the results of long processes of abstruse calculation, the principles of the most abstract sciences, the pure inventions of the mind itself. As for example, the position of the north star, the inclination of the earth's axis, and the polarity of the magnetic needle, are material facts seized

by the mind of man and made subservient to the business of navigation; and who can describe the blessings which are secured to the human race, by this one instance of adaptation? And yet, of what service would it be without the science of mathematics? The expansive force of steam is now contributing immeasurably to the comfort of man; and yet, of what use could it be without the intricate science of mechanics? Thus it is by the help of its own pure abstractions, that the mind holds its sway over the powers of Nature, and makes all the bodies in space, and space itself, to minister to his wishes.—*Memoir of Fiske.*

A Table,

To show at a glance the number of hills or plants contained in an acre of land, at any given distance from each other, from 40 feet by 40, to 1 foot by 1, omitting fractions.

feet.	feet.	per acre.	feet.	feet.	per acre
40 by 40	27	13 by 13	257		
39 .. 39	28	— .. 10	335		
38 .. 38	30	— .. 5	670		
37 .. 37	31	12 .. 12	302		
36 .. 36	33	— .. 10	363		
35 .. 35	35	— .. 5	720		
34 .. 34	37	11 .. 11	360		
33 .. 33	40	— .. 10	396		
32 .. 32	42	— .. 5	792		
31 .. 31	45	10 .. 10	435		
30 .. 30	48	— .. 9	484		
29 .. 29	51	— .. 8	544		
28 .. 28	55	— .. 7	622		
27 .. 27	59	— .. 6	726		
26 .. 26	64	— .. 5	871		
25 .. 25	69	— .. 4	1089		
24 .. 24	75	— .. 3	1452		
23 .. 23	82	— .. 2	2178		
22 .. 22	90	— .. 1	4356		
21 .. 21	98	9 .. 9	537		
20 .. 20	108	— .. 8	605		
— .. 15	145	— .. 7	691		
— .. 10	217	— .. 6	806		
— .. 5	435	— .. 5	968		
19 .. 19	120	— .. 4	1210		
— .. 15	152	— .. 3	1613		
— .. 10	229	— .. 2	2420		
— .. 5	458	— .. 1	4840		
18 .. 18	134	8 .. 8	680		
— .. 15	161	— .. 7	777		
— .. 10	242	— .. 6	905		
— .. 5	484	— .. 5	1089		
17 .. 17	150	— .. 4	1361		
— .. 15	170	— .. 3	1815		
— .. 10	256	— .. 2	2722		
— .. 5	512	— .. 1	5445		
16 .. 16	170	7 .. 7	888		
— .. 15	175	— .. 6	957		
— .. 10	272	— .. 6	1037		
— .. 5	544	— .. 5	1131		
15 .. 15	193	— .. 5	1244		
— .. 10	290	— .. 4	1382		
— .. 5	580	— .. 4	1555		
14 .. 14	222	— .. 3	1777		
— .. 10	311	— .. 3	2074		
— .. 5	622	— .. 2	2489		

feet.	feet.	per acre.	feet.	feet.	per acre
7 by 2 0	3111	3 6 by 3 6	2555		
.. .. 1 6	4148 3 3	3829		
.. .. 1 7	6222 3 0	4148		
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.. .. 4 6	1613 2 0	6222		
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.. .. 1 6	4840 3 0	4818		
.. .. 1 0	7260 2 9	4873		
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.. .. 5 0	1584 2 3	5956		
.. .. 4 6	1760 2 0	6701		
.. .. 4 0	1980 1 9	7658		
.. .. 3 6	2272 1 6	8935		
.. .. 3 0	2640 1 3	10722		
.. .. 2 6	3168 1 0	13403		
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.. .. 1 6	5280 2 9	5289		
.. .. 1 0	7920 2 6	5808		
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.. .. 3 6	2489 1 6	9680		
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.. .. 1 6	5808 2 6	6336		
.. .. 1 0	8712 2 3	7040		
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.. .. 4 0	2420 1 9	9051		
.. .. 3 6	2765 1 6	10560		
.. .. 3 0	3226 1 3	12672		
.. .. 2 6	3872 1 0	15840		
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.. .. 2 3	4840 1 6	12906		
.. .. 2 0	5445 1 3	15488		
.. .. 1 9	6222 1 0	19360		
.. .. 1 6	7260	2 0 .. 2 0	10890		
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From Hunt's Merchants' Magazine.

TEA.

Character of the Plant—How Cultivated—Times of Gathering—Varieties of Tea—Progresses of Preparation—Scenting—Character of the Chief Varieties—Varieties of Green and Black—Uses and Constitutional Effects—National Use—Universal Influence of Tea—Chemical Constituents—Physiological Effects—Nutritive Properties—Theine—Climatic Adaptation—Suited to the United States—Counterfeits and Adulterations—Poisons, and how to Detect Them.

Tea consists of the dried leaves of the *Thea Sinensis*, an evergreen shrub, belonging to the family of Cameliaceae, which are native to China, Japan, Cochin China, and the southeastern part of Asia. It is a hardy plant, and, in the uncultivated state, grows to the height of fifteen or twenty feet, but, as cultivated in the tea-fields, rarely ever grows higher than six or eight, and generally not more than four or five feet.

The leaves are alternate, elliptical, pointed, toothed and firm, smooth, shiney, and deep green; from one-and-a-half to four inches long, and from half an inch to an inch-and-a-half wide. The flowers are white and large, borne on short peduncles, single or united in small clusters at the axils of the superior leaves.

It is generally propagated from seed, and arrives at maturity in from two to three years, when it is capable of yielding two or three crops of leaves, and sometimes four, annually. The first gathering takes place in early spring, the second about the 1st of May, the third in June, and a fourth in August. The first gathering produces the finest variety of tea. It chiefly consists of the young leaf-buds and small leaves, from which the best *Pekoe* and the finest varieties of black are made.

The later gatherings consists of the larger and older leaves, which, by long exposure on the plants, have lost part of their flavor, and become less valuable. Hence, it is found that the finest teas usually consist of the smallest leaves. At the first gathering the leaves are slender, smooth and even-edged, twisted, and downy. Second gathering takes place just as the leaves begin to have veins, and their edges delicately notched. At the third gathering the veination is fully developed, the edges coarsely notched and wavy.

Until late years botanists designated several species of the tea plant, but now it is generally conceded that all the varieties of teas are obtained from one and the same plant, the differences in the tea from which depending wholly upon the soil, climate, weather, age of the leaves, and mode of preparation.

Varieties.—*Black* teas are mostly produced from plants growing on the slopes of hills and mountain sides, a range of which, called *Bohea* mountains, being the origin of the variety of tea known as such. On the other hand, *green* teas are generally produced from plants grown on cultivated and manured plains. Other qualities depend upon the processes of preparation, in drying, rolling, etc.

Bohea is usually prepared from the full-grown leaves of the third gathering, and is, therefore, the commonest and cheapest variety. *Souchong*, *Congou*, *Padre-Souchong*, *Caper-Souchong* and *Pekoe*—which consists of the first gathering, and hence called "flowery"—are gathered early and of finest quality.

The principle varieties of *green* teas are *Young Hyson*, *Hyson*, *Hyson-skin*, *Twan-kay*, *Imperial* and *Gunpowder*. This last, in green tea, corresponds to *Pekoe*, in black. *Imperial*, *Hyson*, and *Young Hyson* are of the second and third gatherings. *Hyson-skin* chiefly consists of the refuse of other varieties, or is produced by a fourth gathering.

Processes of Preparation.—Tea leaves in their green state contain an acrid principle, which may be dispersed by heat.—This is accomplished by the process of roasting, and for this purpose a large iron dish, called a *kuo*, is used. The leaves are first dipped into hot water, and after drainage they are spread upon the *kuo*, which is at first only raised to a moderate degree of heat, and only has the effect of rendering the leaves soft and pliable. They are then removed and first submitted to the first rolling. For the very finest quality, each leaf is rolled separately, but more commonly the leaves are spread upon large tables covered with straw mats, and rolled by rubbing them with the hands, or between the palms.

This operation is continued until the leaves become cold, when they are again submitted to the *kuo*, and the process repeated. The best kinds are heated on the

kuo, and rolled three or four times before they are deemed of maximum quality. For green teas, this completes the preparation of the finest varieties. Inferior qualities are subsequently flavored.

Black teas require an additional process, viz: to be heated in sieves over a hot charcoal fire. This has the effect of more perfectly driving off the acrid principle, and rendering the leaves drier and more brittle.

As thus prepared, the finest early gathering are, when last from the *kuo* and sieves, before getting cold, packed for exportation. But the quantity of this is very small.

Scenting.—By far the larger quantity of tea known in commerce has been aromatized or scented. A knowledge of this process, and the materials used in it, was, until very recently, kept secret from foreign nations. But it is now generally known that the Chinese employ for this purpose certain rare vegetable productions, which have the effect of imparting desirable flavours to tea, without in any way affecting its natural properties. And some of the teas thus treated are known to be among the most eagerly sought after.

The only substances known to foreigners, with which the Chinese flavour tea, are the flowers of the following plants—a species of *chloranthus*, call by the Chinese *Chu-Lan*; the *Gardenia florida*, or *Pac Sheem*; the *Olea fragrans*, or *Ruy-fa*; and *Jasminum Sambac*, or *Mos-Sy-Hoa*. As already remarked, these plants are all scarce, even in China, where they are native; their use, therefore, is in every way calculated to enhance the value of the tea in which they are used, notwithstanding the Chinese themselves, as well as all other persons who have had the opportunities of judging, agree in the opinion that only common teas require scenting, and that, however exquisitely this process may be accomplished, the very ultimatum of success is only, after all, a faint imitation of the finest Souchong, the natural flavour of which being far more delicious than it is possible to communicate to an inferior variety.

When tea is about to be scented, it is taken hot from the roasters and put into a chest in a layer of two or three inches deep; upon this a handful of freshly gathered *Chu-Lan* flowers are strewn. Then another layer of tea, and

so on until the chest is full. It is then tightly closed and so kept for twenty-four hours, on the expiration of which time the chest is opened, and the tea and flowers thoroughly mixed and submitted to the drying process in sieves, over a charcoal fire, until the flowers become crisp, when the whole is removed and the flowers sifted out. If the tea is found to be sufficiently flavoured the process is now closed; if not, the operation is again repeated.

The tea thus prepared is mixed with others, in the proportion of about one part of the scented to twenty of the plain, when the mixture is moderately treated in the *kuo*, and immediately afterwards while warm packed for use or exportation, and is known as *Cowslip Hyson*.

Black teas are also scented with *Chu-Lan* flowers, but in a different and more expensive manner, as it takes a larger quantity of the flowers. The flowers are first carefully roasted, so as not to burn them, and then reduced to a fine powder. This is sprinkled over the tea during the process of the last roastings, previous to packing. Some of this constitutes choice varieties of Souchong or Caper teas, and the Tet Siong. The Pac Sheem flowers are used for senting a still more exquisitely fine Souchong, which is chiefly used for diplomatic presents, and rarely found in commerce. Ruy-fa and Mos-Sy-Hoa are also exclusively used for scenting black teas, of Souchong flavours.

Character of the Chief Varieties.—**BLACK TEAS**.—*Pekoe*.—This is the finest and has most aroma. The leaves are slender, of a dark silvery colour, covered with a light silky dust; ends speckled with gray, black and white spots. Odour agreeably aromatic; infusion of golden-yellow colour; taste somewhat similar to the flavour of fresh and hazel-nuts.

Congou.—Leaves thin and short, of a grayish-black colour; infusion clear, strong and agreeable.

Pouchong.—Leaves large, long, and tightly rolled, mixed with a large quantity of leaf-stocks; odour sweet; infusion green.

Souchong.—Leaves larger than Congou, but not so large and long as Pouchong, thin and rather broken; infusion clear, yellowish, and sweet. It is the strongest of black teas.

Bohea.—Leaves of all size, with frag-

ments and leaf-stocks; of a grayish-green colour, rolled longitudinally and crosswise; very dry and easily broken; infusion reddish, of a somewhat smoky taste. If let stand, deposits a blackish sediment.

GREEN TEAS.—*Hyson*.—Leaves long, straight, spirally twisted, and firmly rolled, but dry and easily broken; odour sweetly aromatic; infusion of clear, citron-yellow colour. It is the most esteemed of all green teas.

Gunpowder.—This is distinguished from *Hyson* by being in smaller particles, still more tightly rolled, but less easily broken; of dark green colour; infusion clear, golden green.

Imperial.—Much like *Gunpowder*, only in larger grains, and very hard; of silver-green colour, and some of its grains resemble pearls.

Hyson Shoulong.—Resembles *Hyson*, but more fragrant.

Hyson-junior, or *Yu-tseen*.—Is composed of some small delicate leaves, nicely rolled, and very crisp; of yellowish-green colour; odour agreeable, resembling violets.

Twankay.—Large yellowish leaves, badly rolled, and strong odour; infusion limpid, bright yellow; sweet, rough taste.

Hyson Skin.—Leaves yellowish brown, irregularly rolled; odour nearly null, and of ferruginous taste; infusion bright yellow, and turbid. It is the *Bohea* of green teas.

Uses and Constitutional Effects.—Tea was first known in Europe by being taken there from India by the Dutch in 1610. It was introduced into England by Lords Ossory and Arlington, from Holland, in 1666; and being much admired by the nobility, it was imported from thence, and generally sold for about 60 shillings per pound, and until the trade was taken up by the East India Company. *Green* tea was first used in England in 1715. Our colonial ancestors brought their tastes with them, and finding the conditions of the American climate such as to promote the use of a beverage which imparted hygienial benefits, tea appeared to them as one of the first necessities of comfortable digestion, which the lordly tea-lovers of England thought colonials had no right to enjoy; therefore they were taxed for venturing to indulge in the Celestial drink! Whereupon, the issue is well known.

The great Atlantic, which was first set

simmering on the shores of Boston and New York, was converted into a foaming and fuming tea-kettle, that at last boiled over, and so dreadfully scalded the *importers*, as to require the use of the most potent revulsive known in the healing art of national discords. The burn has never perfectly healed, and it is doubtful whether it ever will; for, admitting the well-known properties of tea to promote nervous excitement, it is a homeopathical fact that from the year 1773, that most potent and powerful drug, *theine*, has been diffused through the oceans and seas of the world, and by the flowing and ebbing of tides and rivers, and by the infinitesimal division of the particles of watery vapour which have been distilled and redistilled in the mists and clouds of the universe, all nature is now under the influence of tea; which, my dear reader, accounts for the go-a-headative propensities of Young America.

Tea chemically consists of mucilage, extractive, resin, gallic and tannic acids, and an alkaloid called *theine*. It has, from the time it was first made known to civilized nations, been considered by some a powerful poison, which, though irregular, slow, and uncertain, is nevertheless likely to break out—as above demonstrated. The poisonous property is attributed to the alkaloid *theine*, which, in the strongest tea reduced to the nicest chemical analysis, is found to exist in the proportion of forty-six-one-hundredths of a part in a hundred. It is said to possess exhilarant properties. Physiologically, tea, coffee, and tobacco possess the remarkable quality of retarding the waste of the system, and so diminish the demand for food, and make a limited amount go further. To the majority of people, the habitual use of tea is of incontestible advantage. It is decidedly favorable to digestion for healthy persons, and frequently remediable to dyspeptics. It develops a slight degree of excitation, and if taken in large quantity tells particularly on the nervous system; hence, it is apparent that persons of excitable temperament, at least, do not need tea, and may be injured by it. To the oppositely constituted, however, it makes the blood circulate more smoothly, promotes digestion and cutaneous exhalation, and stimulates the intellectual faculties, while, as already

tity of food smaller which Liebig and other distinguished chemists attribute to its possessing positively nutritious properties.

The common way of taking tea everybody is familiar with; but in Japan, among the wealthy, a more ancient mode is followed. The leaves being first ground to powder, it is infused in hot water for awhile, and afterwards whipped with a split bamboo till it creams, when they drink both the infusion and powder, as coffee is used in many parts of Asia; when it is said "to temper the spirits, harmonize the mind, dispel lassitude, and relieve fatigue; it awakens thought, and prevents drowsiness; lightens or refreshes the body, and clears the perceptive faculties."

Chemists look for the properties of tea according to its elementary constitution; but the fact is, that however active the ingredients might be under other circumstances, they are so nicely balanced in tea that, when taken in their combination, the effects of no one of its constituents are particularly pre-eminent. Tea can never be employed for its tannin, nor injurious on account of the amount it contains. The same may be said of theine in a still lighter degree. Theine is a feeble base, precipitated by tannin alone from its solutions, and does not, in reality, concentrate any of the active qualities of tea, it being only an isolation.

The prevalent discrepancies regarding the effects of tea on the constitution are wholly due to the different temperaments of individuals, whenever such temperaments are specially marked; and the same may be said, too, as regards the differences between black and green. When employed in moderation, the particular variety may safely depend upon the taste and experience of the consumer.

Climatic Adaptation.—The tea plant flourishes over a wide range of latitude and degree of elevation. It grows luxuriantly in the climate of Peking, in the latitude of 40°, and equally well in the vicinity of Canton, on the verge of the tropics. The best tea, however, is produced in a mild, temperate climate, the country about Nankin producing better tea than either Peking or Canton. But in any case, the tea plant is found to require a rich sandy loam, in order to bring it to perfection. Japan appears to be even

more favorable to the growth of tea than China. In Japan it is planted around the borders of fields, without much regard to situation or soil, while in China chiefly middle grounds have to be selected, and much order observed in distance and cultivation—the plants standing about four feet apart.

By experiments which have been made of late years in South Carolina, tending to prove the perfect climatic adaptation of parts of that State to the growth of tea, and considering that the time cannot be long before the Chinese will form a much more considerable proportion of our immigrants than heretofore, there is just reason to believe that ere long tea will become an important agricultural product of the United States. In respect to latitude, elevation above the level of the sea, and other circumstances which modify the climate, our Southern States singularly correspond to those regions of China and Japan which are known to produce the best tea.

Counterfeits and Adulterations.—It is proper in this connection to state, that in order for tea to retain well its properties, it should be kept as free as possible from all moisture. Besides which, sea or ship air exercise a particular influence on the quality of tea, which ultimately destroys its aroma. The writer has frequently observed the result of this on the very best qualities of tea that could be obtained; no matter how tightly sealed, if kept at sea for a twelve month, it is scarcely better than so much of the dried debris of any other plant. It is well known that the shorter the voyage from China, other things being equal, the better the quality of tea.

The frauds in tea seem to have kept pace with the extent of its consumption. These chiefly consist in the employment of artificial coloring matter, and in the substitution of foreign leaves.

Green tea is more frequently adulterated than black, and of the latter, *Congou* and *Souchong* are the most pure; while those qualities having the strongest aroma, such as *Pekoe*, *Caper*, *Chu Lau*, and black *Gunpowder*, are more likely to be adulterated than those apparently weaker. The leaves of the *plum*, *ash*, *elder*, *hawthorn*, *willow*, *poplar*, *horse-chestnut*, *laurel*, *sweet brier*, *elm*, and divers other leaves colored

with the *salts of copper* for green teas, and with logwood for *black*, have frequently been found by those who have taken the pains to examine the various qualities of tea always in market. Millions of pounds of these and similar leaves are dried annually by the Chinese, by whom they are mixed with, and sold as tea. These mixtures, and the several varieties of tea, constitute many *sub-sorts*, which are colored, dusted, and packed in "original" boxes and papers, to suit the caliber of every purchaser.

Catechu, kino, gum, starch, sulphate of iron or copperas, rose-pink, logwood, black-lead, soap-stone, indigo, and turmeric, have all been isolated from *black tea* of "exquisite" appearance and "laudable" quality. In addition to these, *green tea* is treated with *Prussian blue, mineral green, verdigris, arsenite of copper, Dutch-pink, chromate of potash, bichromate of potash, chrome yellow, chalk, gypsum, carbonate of magnesia*, and many other substances which cannot be separated.

For the detection of these frauds it is absolutely necessary that the person examining be familiar with the appearances and structure of the tea-leaf, and to have the aid of the microscope.

The properties of *pure tea* are known to vary, yet there are certain properties in common with which one may become so familiar as to be able to mark a departure from them. *The infusion* of tea varies in color between light yellow and dark brown. Concentrated and warm, it is limpid, but on cooling, it is found to hold in suspense a fine, grayish powder, which renders the liquid somewhat milky. When this powder is separated by filtration it is found to consist of a combination of tannin and theine, perfectly soluble in hot water, and insoluble in cold; it is insipid, although formed of two very sapid matters—*tannin*, which has a rough, astringent taste; and *theine*, which is intensely bitter.

The infusion, filtered, gives, with a solution of subacetate of lead, an abundant yellowish-brown precipitate, which contains, in combination with the oxide of lead, all of the coloring matter, all the tannin, and a peculiar acid.

The infusion of green tea contains less coloring matter than black, but furnishing a more abundant precipitate, when treated with the subacetate of lead solution, than

black tea does. Finally, the principles contained in the infusion of the two sorts are precisely the same, only they differ a little in their proportions, black tea being a little less marked than green.

With a little care most of the matters above named may be removed from tea by simply agitating the samples containing them briskly in a vial of distilled water for a few minutes, and then filtering. Insoluble powders may be thus collected, while the soluble substances may be detected by chemical tests already pointed out in previous papers, to which reference may also be made for the poisonous properties of the substances herein named.

From the American Farmer.

Fat Pork as Human Food.

"A fat hog is the very quintessence of scrofula and carbonic acid gas, and he who eats it must not expect thereby to build up a sound physical organism. While it contributes heat, not the twentieth part of it is nitrogen, the base of muscle." *The Scientific American* cordially endorses the above sentiment as being sound practical truth, and says—"Fat pork was never designed for human food. It is material for breath, and nothing more. See Liebig and other organic chemists and physiologists. It makes no real meat or muscle. The prize fighter is not allowed to eat it. All that is not consumed by the lungs, remains to clog the body with fat."

To the Editors of the Courier, Zanesville.

The short article in yesterday's Courier, thus entitled, is calculated to mislead, and therefore I would offer the following remarks in reference to our great Ohio staple:

A fat hog is truly the quintessence of scrofula, for scrofa in Greek is *hog*, and the derivative scrofulous means *hoggish*. The disease scrofula, was so called when medical science was in its infancy, from its *supposed* resemblance to some diseases of the hog, and then the inference was easy, that eating the hog (scrofa) produced the hog disease (scrofula). It is well known, however, that our American Indians and the Hindoos, who never use pork, are liable to this disease; that in Europe it prevails chiefly among the ill-fed poor, who hardly taste meat of any kind.

On the other hand the Chinaman and our own pioneers, who hardly eat any other flesh, are remarkably healthy and exempt from scrofula—a disease we have much more reason to suspect as originating long ago from the hereditary taint of an unmentionable disease favored by irregular living and poor diet.

In the South, from their sleek appearance and exemption from scrofula, you can at once distinguish the bacon-fed negro.

These examples may suffice on that head.

Fat pork is not in any sense carbonic acid, but hydro-carbon, a combination of hydrogen and carbon. It becomes carbonic acid and water by combining with oxygen in the act of being burned or digested, which is much the same thing—giving off during those processes large amounts of heat and light.

It is true the *fat* of fat pork does not make blood or red flesh, though the lean which is always eaten alone *does*. It is as your article says truly, material for breath. Well, that is a good deal. It is supposed that if the writer's breath had stopped five minutes before he took his pen, we should never see his article on fat pork.

But it does more. All the fat that goes into the stomach and thence into the blood does not undergo slow burning in the lungs by the process of burning, but is deposited in the body as *human fat*. Now a certain amount of fat is so necessary for the proper play of all the parts, muscles included, that without it, the body, like an ungreased engine, wears itself out by its own friction. In consumption, the waste of fat is one alarming and most dangerous symptom, and the far-famed cod-liver oil acts perhaps chiefly by supplying the blood with fat.

I am satisfied by experience that fat pork—when the stomach will receive it—does just as well. Moreover, few of those delicate persons that have so great an aversion to pork or other fat, ever live to see 40 years. They die young of consumption. Butter, sugar, starch, vegetable oils act, to some extent as animal fat, and in tropical climates are used as substitutes.

But go to the arctic regions and see the refined Dr. Kane and his men devour raw walrus blubber with a gusto, as we would take a dish of ice cream, and you will conclude that "fat pork," particularly in our arctic winters, is not so bad an institution.

We could not live on fat pork *alone*—nor on sugar and starch—though we could on bread. Bread, the *staff of life*, contains the materials both for breathing and making blood and red flesh (muscle) in a supereminent degree, greater even than lean beef or any other single article of food, and this, or some substitute, such as beans, peas, potatoes, etc. is always eaten with fat pork, so that there is a sufficient supply of blood and flesh-making material. However, excess is bad, and the fat pork must not constitute the bulk of a meal.

Chemical analysis is a poor substitute for the observation of facts in the living body, nor can we even base very much on experiments made on Mr. Martin, the man with the hole in his stomach, by which food can be introduced and digestion observed, for that is not nature's way of getting it there, and a stomach with such an unnatural opening is much like a leaky dinner pot with a hole in the bottom stuffed with a rag. Extended experience alone can settle such a question.

The Greeks and Romans esteem pork as a luxury, and a most wholesome diet; their athletic and gladiators (prize-fighters) were fed on pork, our own Saxon (Teutonic Scandinavian) ancestors esteemed it so highly that they, even in their heaven, provided a great hog with golden bristles, called Gulliborstli, of whose bacon the heroes of Walhalla dined every day, when at night the picked bones again united and became covered with a fresh supply of fat pork. In this estimate of the hog, the mass of mankind, not of the Shemite race, (Jews, Turks, Arabs, etc.,) who follow Moses' law, that had spiritual and representative meaning, have, in all ages, agreed, and will agree, as long as man has canine teeth, and lives by *drawing his breath*. Whenever the Scientific American or Prof. Liebig will discover a new process of living, without breathing, we may be guided by their opinion; till then, I opine, "good *corn-fed* (and no other is good) pork" will rule the roast, of which themselves they will not be slow to partake.

My remarks are, of course, only applicable to men, women and children, with comparatively healthy stomachs, who have sufficient exercise, with pure air and pure water.

Yours, with respect,

JOHN G. F. HOLSTON, A.M., M.D.

From the American Veterinary Journal.

Hog Cholera.

GEORGETOWN, OHIO, Sept. 1858.

Mr. Editor :—Much has been said in relation to the disease known as "hog cholera," and many items published in regard to its cause, and the proper plan of cure, and having paid some attention to it for the last two seasons, with a hope of being some benefit to the many raisers and consumers of one of the products of our common country; believing I may be of some benefit to others, I send you a short article upon the subject.

I shall not enter into a lengthy detail for two reasons. In the first place, I have not the necessary time to spare; and secondly, for the kind of paper I design writing—being mostly for the use of stock-raisers—it is unnecessary.

"Hog cholera" is a misnomer. The disease is not cholera, nor does it assimilate to that disease.

When I first applied to for some remedy for hogs affected with the disease, it was by a personal friend, whose stock was suffering from its attacks, and I had to rely upon the symptoms given by him, and after the action of the remedy, from the large number of worms voided by the animals, I believed those parasites to be the cause; but having afterwards noticed animals affected by the disease, I thought the diagnosis incorrect, and then obtained results from the most minute examinations of many that were suffering from the disease, as well as those that had died from it, that changed my opinion.

The disease is a low, or typhoid inflammation of the lungs. Many of the animals die without suppuration occurring; and in those cases, the lungs are found in a hepatized condition. Others pass from the hepatized to the suppurative stage, and show abscesses, large or small, in some instances, almost an entire loss of one or both lungs, while the intestinal canal of the small intestines, is studded with a milliary eruption, which, in some instances, had undergone the suppurative process; in either stage, no doubt, helping to produce, if not producing, the Diarrhœa is, however, not always present. Sometimes constipation is an accompaniment, and in such cases the disease usually ter-

minates fatally, much sooner than when the animal is affected with diarrhœa.

High febrile action is usually present, and very frequently the skin of the affected animal becomes dark colored, showing a purplish, or lead-colored hue upon the back, legs, ears, or snout, or in all those parts, caused, no doubt, by the arterialization of the blood.

Some hogs have recovered after the circulation had become so languid that their ears dropped from their heads.

I have no doubt but some of the cases attacked, would be benefitted by a dissimilar course of treatment from that pursued in other cases; for, as mentioned above, all are not attacked precisely the same way, or, at least, the symptoms first noticed are not exactly the same. A few die immediately after they are attacked, or at most, very soon after they appear sufficiently unwell to attract attention—probably from intense or very great congestion of the lungs, that being the only appearance of diseased action noticeable after death. Very fat hogs are more apt to die thus than ordinary stock hogs.

A most thorough trial has been made, under my direction for two seasons, of the following remedial agents, and although the medicine has been used for several hundred animals, but five or six of the number have died, as far as I have been able to learn.

In some instances very many of a lot had died, and the rest nearly, or all sick, when the medicine was administered, and no more died. In another instance, when a part were sick and others well, the sick ones recovered, and the well ones did not take the disease. In other instances, some of a lot took the disease after the remedy had been given, but whether those that were afterward attacked, had partaken of the remedy, is a little doubtful, as the whole stock fed together, and among those persons who have fed the remedy to their stock, are those who most confidently believe an animal will not take the disease if he has taken the medicine for two or three days.

It has unquestionably been the means of saving very many hogs in this section of country, but I do not suppose it or any other remedy, will save all that are affected; yet others who have fed this medicine to their stock believe it will do it.

emarked, it renders the necessary quantity. The remedy I ordered is not precisely *er se* chemically; but I am not certain that the decomposition occurring (in the animal's stomach,) when the different ingredients unite, may not be more beneficial, or of some service; at all events, it has apparently answered an excellent purpose. I herewith annex the formula I have used, hoping it may be as beneficial to the many, as it has been to the few:—

RECIPE.—Ferri Sulph. lb. j. (Copperas, pound.)
Potassæ Nitrates, lb. j. (Saltpetre, 1 pound.)
Zingiber Pulv. lb. ss. (Ginger ½ pound.)

Grind, or otherwise finely pulverize the iron and potash, then add the ginger. Give to each animal a teaspoonful every day when bad, or once in two or three days, if used as a preventative.

I think it is rather better to give the medicine in dry meal or bran, than to give it in slop, although many have thus fed it. It will be of little or no service to small pigs, and probably of little benefit to rearing sows, *enciente*, and possibly an injury.

While speaking of the benefits derived from Sulph. Ferri and Nit. Potassæ to hogs, it may be of service to some of our readers to know that equal parts of those two substances, given in table-spoonful doses, once per day, or once every second day, to cattle afflicted with the disease known as "hollow horn," are of very great service in restoring them to health.

The disease is readily detected by opening the animal's mouth and examining the condition of the teeth. If the front teeth are found to be loose, so as to be readily moved back and forward—the outer end of the teeth only—there need be no dispute about the disease being that generally known as "hollow horn," and the above remedy will ordinarily restore the animal's appetite in three, four, or five days, and put it in a good condition for rapidly improving.

Yours respectfully,

THOS. W. GORDON, M. D.

P. S.—We have men among us who think paying any attention to the lower animals, decidedly out of taste, and perhaps out of caste, for a physician. Those men are usually called physicians, al-

though, in many instances, they have not studied long enough to scarcely yet know the names of the bones composing the human skeleton. It is far beneath their dignity to prescribe for any animal whose capacity for knowledge is not fully equal to their own; and I am inclined to the belief that the hogs, horses, and cattle, are really gainers by the self-incumbent dignity of such gentlemen, though bipeds may suffer. They laugh at a prescription for a hog; but my motive in life has been, and is, to do all I can to ameliorate the condition of my fellow men, and when I can save their property, never to neglect what to me is a duty.

Yours,
GORDON.

Mr. Everett's Remarks on the Horse at the late Springfield Fair.

Mr. President, Ladies and Gentlemen:— I believe one of the exploits of the distinguished person to whom my friend Ashmun has alluded, is to make the animals that are submitted to him lie down and go to sleep. [Applause and laughter.] I hope, sir, that my speaking, whatever other effect it might have, will not produce that. * * * * *

Sir, it is perplexing, it is almost painful to consider what high degrees of intellectual and moral power are evinced by animals whom we profanely call brute beasts. I suppose it was a reflection on these noble qualities of the horse, intellectual and moral, that led the wittiest, the bitterest, and, I am sorry to say, the filthiest of the satirists of our language—I mean Dean Swift—in that remarkable romance of his, the most fascinating as the most revolting of books, to represent the horse, under that unpronounceable name which he gives him, as the wiser, the more sagacious, the nobler animal, and to describe the human race, under the disgusting character of Yahoo, as an inferior order of beings. I don't know, sir, but you will rather think it beneath the dignity of the occasion to allude to such a book as *Gulliver's Travels*, and yet it does contain, among many most instructive remarks, one of those passages into which the wisdom of ages is condensed in a single sentence, and which is more often quoted, at least part of it, at all agricultural and rural shows, than perhaps any other in the

whole compass of literature. "The man," says Gulliver, "who can make two years of corn or two blades of grass to grow on the spot where only one grew before, would deserve better of mankind and render a more essential service to the country than the whole race of politicians put together." [Laughter and applause.] When this is quoted at agricultural meetings by patriotic candidates for office, this last part of the sentence is generally omitted. [Renewed laughter.]

The noble qualities of the horse seem, indeed, to have made an impression upon the most brutalized of our own species. I suppose it is this, if it were worth while to account for the freaks of a madman, which led the Emperor Caligula to erect a marble stable for his horse, Incitatus, to provide him with an ivory manger, with housings of imperial purple, a breast-plate studded with diamonds and pearls, and then to elevate him to the dignity of the Consulship. This seems, to be sure, a mere freak of madness, and yet I am inclined to think that at that time it was a better choice than could have been made out of the venal courtiers and factious prætorians of the imperial court; and I believe, sir, had it been put to the vote throughout the Roman Empire, then co-extensive with the civilized world, they would have decided that they had a better consul in the horse than in the Emperor. [Laughter and applause.] Sir, they had been too familiar with the rapacity of the tyrants who chased each other over the stage, dagger in hand, not to be pleased with the elevation of a ruler who took nothing but oats out of the public crib [laughter]—a ruler, sir, who, while the reins were with him, would at least have given them a "stable" administration. [Renewed laughter.]

I trust, sir, that the beautiful performance of Mr. Rarey, to which my friend Ashmun has alluded, may be the means of diffusing some useful ideas in this respect throughout the community. Whether there is yet some unexplained means of influence in the possession of this gentleman not shared by the rest of the community, I know not: but one thing, I think, sir, is certain, that one great portion consists in gaining and keeping the affections of the animal by gentle and kind treatment. For this, if for no other

reason, he deserves the greatest credit for what he has done in this respect, although I believe he is not the first who has succeeded by this same treatment in subduing the wildness, changing even the native instincts of what are commonly called the almost untamable animals. I often saw in the streets of London—and I believe the same thing may be seen at Barnum's Museum in New York—what was called "The Happy Family" a collection of animals, in a large wire cage, most hostile in their nature—cats and rats, hawks and mice, owls and wrens, living together in these close quarters, in the utmost amity and friendship. I asked the showman what was the secret of the operation by which he brought about those astonishing results. He told me it was persevering kindness. He did not say, sir, in what particular way that kindness was to be manifested. I believe part of it consisted in always keeping them supplied with plenty of the food they were fond of; but it was persevering kindness. My experience led me to think that the amicable relations thus established among the animals did not extend to outsiders; for I rather inadvertently put my finger through the bars of the cage, when a large rat sprang at it with such rapidity that I drew it back a great deal quicker than I put it in. [Laughter and applause.] I assure you that my bosom was overflowing with kindness toward every member of that "Happy Family," not excepting the rat; but after that demonstration on the part of the rat, I did not think it expedient to persevere. [Laughter.]

However this may be, sir, if there is any one who doubts that the horse—the animal that most concerns us on this occasion—is susceptible of the kindest feelings of our nature, I think he would be convinced of his error by a most interesting anecdote of Edmund Burke. In the decline of Mr. Burke's life when he was living in retirement on his farm at Baconsfield, the rumor went up to London that he had gone mad; and the fact that was stated in support of this rumor was that he went round his park kissing his cows and horses. A friend, a man of rank and influence, hearing the story, and deeming it of too much importance to be left uncorrected, hastened to Baconsfield, and sought an interview with the view of as-

entertaining the truth of the rumor. Entering into conversation with him, Mr. Burke read to him some chapters from his "Letters on Regicide." His friend immediately saw that though the earthly tenement was verging back to its native dust, the lamp of genius and reason shone with undiminished lustre. He was accordingly more than satisfied as to the object of his coming down, and in a private interview with Mrs. Burke told her what he had come for, and received from her this pathetic explanation. Mr. Burke's only child, a beloved son, had not long before died, leaving behind him a favorite horse, the companion of his excursions of business and pleasure, when both were young and vigorous. This favorite animal was of course turned out by Mr. Burke, the father, into the park, with directions to all his servants that he should in every respect be treated as a privileged favorite. Mr. Burke himself, of course, in his morning walks, would often stop to address the favorite animal. On one occasion, as he was taking his morning walk through the park, he perceived the poor old animal at a distance, and noticed that he was recognized by him. The horse drew nearer and nearer to Mr. Burke, stopped, eyed him with the most pleasing look of recognition, which said, as plainly as words could have said: "I have lost you, too;" and then the poor dumb beast deliberately laid his head upon Mr. Burke's bosom! Struck by the singularity of the occurrence; struck by the recollection of his son, whom he had never ceased to mourn with a grief that would not be comforted; overwhelmed by the tenderness of the animal, expressed in the mute eloquence of holy Nature's universal language, the illustrious statesman for a moment lost his self-possession, and clasping his arms around the neck of his son's favorite animal, lifted up that voice which had caused the arches of Westminster Hall to echo the noblest strains that ever sounded within them, and wept aloud! Sir, this was seen, this was heard by the passers by, and the enemies of Burke, unappeased by his advancing years, by his failing health, by his domestic sorrows, made it the ground of a charge of insanity. Burke is gone; but, sir, so help me Heaven! if I were called upon to designate the event or the

period in Burke's life that would best sustain the charge of insanity, it would not be when, in a gush of the holiest and purest feeling that ever stirred the human heart, he wept aloud on the neck of a dead son's favorite horse.

The Preservation of Wine.

Wine is sometimes sulphurized as a preservative, and often so excessively as quite to taint it. The sulphur is burnt in the casks and bottles, and then the wine is poured in. If, by chance, the sulphur is arsenical, then a slight dose of arsenic is administered to the public, far too innocent to understand whence comes the side-wind which blows them illness and disease. Cloves, cinnamon, lavender, thyme, and other aromatic substances, are used to weaken the influence of the sulphur, and the combination gives a peculiar taste and odour.

They are burnt in the casks together with the strips of linen dipped in sulphur, and the whole horrible medley of taste and smell passes for "bouquet" by the multitude, who believe what their wine merchants tell them, and praise according to price. In France, one-thousandth part of pulverized mustard seed is put in to prevent any after fermentation; but the greatest secret seems to be, to preserve the wine from any contact with the outside air.

Some Malaga wine, which had been buried during the great fire of London—that is to say, in sixteen hundred and sixty-six—was dug up twenty years ago, and though nearly two hundred years old, was found perfectly good, well-flavoured, and full-bodied. Exclusion of air alone would not have preserved it; sweet and alcoholic, it bore in itself the elements of longevity; had it not been poor in sugar and rich in acids, it would have been dug up a vinous skeleton. Wine kept in wood loses much of its water by evaporation; the same may be said of that kept in leather and skins. By this diminution of water, the alcohol remaining is concentrated and strengthened; but only originally strong wines can be so treated. With weak and acid wines, the very concentration increases the formation of tartaric acid, and that, without the proper counterbalance of alcohol, spoils all. This

evaporation does not go on in glass bottles, and Saint Vincent therefore recommended that all bottles should be secured by bladders, not corks, so that evaporation might not be carried on in them. His advice has not been followed.

Hunt's Merchants' Magazine.

An Item in Neat Farming.

There is a slovenly practice among farmers, and some pretty good ones, of putting logs, brush, stumps, &c., &c., into the nearest branch or gully in the field. Sometimes they are put into the fence corners. Now I protest against anything of the kind. They are an abomination to a real neat farmer. If you cannot find time to burn them as they should be, then you had better make them into piles or heaps in the field, and plow round them; for after awhile you will get tired of going around them so often, and will set them on fire. Better dig pits, like the Florida man, and bury them.

Some men suffer bushes, briars and weeds to grow along the branches and thus form a crooked, horrible looking hedge, a fit harbour for snakes, frogs, minks, and other *varmints*. Clean out those places when you are tending your crops or after harvest.

Instead of letting the bushes grow up along the branches, a good plan is to have a strip of meadow on each side. Along the margin of a branch the grass grows most luxuriantly. A strip of meadow will catch the rich soil that washes from the adjacent fields and prevent it from being lost to the rightful owner. This is much better than to try to raise corn in the bends or crooks of the branches, where it is so difficult to plow, and infinitely better than to have those ugly, crooked hedges. Brother farmer, I move that we repudiate such hedges. Who'll second the motion?—*Valley Farmer.*

A Chinese Garden.

Mr. Fortune gives a curious description of a Chinese Garden in a recent letter, from which we make the following extracts :

"The plants consist of good specimens of Southern Chinese things, all well known in England, such, for example, as Cym-

bidium sinense. Olea fragrans, Oranges, Camellias, Magnolias, etc., and, of course multitudes of dwarf trees, without which no Chinese garden would be considered complete. In the above alluded to there are some nice stone seats, which look cool in a climate like that of Southern China. The floor of this building is raised a few feet above the ground level, so that the visitor gets a good view of the water and other objects of interest in the garden. That this is a favourite lounging and smoking place with the Chinese, the following Chinese notice, which we found on one of the pillars, will testify:—'*A careful and earnest notice*: This garden earnestly requests that visitors will spit betel outside the railing, and knock the ashes of pipes also outside.' Several fine fruit-trees and others are growing near the walks, and afford shade from the rays of the sun. On one of these we read the following: 'Ramblers here *will be excused* plucking the fruit on this tree.' How exceedingly polite!

"Near the centre of the garden stands a substantial summer-house, or hall, named the 'Hall of Fragrant Plants.' The same notice to smokers and chewers of betel-nut is also put up here, and there is another and a longer one which I must not forget to quote. It is this: 'In this garden the plants are intended to delight the eyes of all visitors; a great deal has been expended in planting and in keeping in order, and the garden is now beginning to yield some return. Those who come here to saunter about are earnestly prayed not to pluck the fruit or flowers, in order that the beauty of the place may be preserved.' And then follows a piece of true Chinese politeness: "We beg persons who understand this notice to excuse it!" Passing through the Hall of Fragrant Plants, we approached, between two rows of Olea fragrans, a fine ornamental suite of rooms tastefully furnished and decorated, in which visitors are received and entertained. An inscription informs us that this is called the 'Fragrant Hall of the Wooche tree.' Leaving this place by a narrow door, we observe the following notice: 'Saunterers here will be excused entering.' This apparently leads to the private apartments of the family. In this side of the garden there is some artificial rockwork, which the Chinese

know well how to construct, and various summer-houses tastefully decorated, one of which is called the 'Library of Verdant Purity.' Between this part of the garden and the straight walk already noticed there is a small pond or lake for fish and water lilies. This is crossed by a zigzag wooden bridge of many arches, which looked rather dilapidated.'

Maine Farmer.

The Anthracite Coal Trade.

Thirty-one years ago the first coal went to Philadelphia, being ten wagon loads hauled over the mountains by George Shoemaker of Pottsville. Very few persons could be induced to purchase it, and most of these were wholly unsuccessful in their attempt to make it burn. Everybody considered it a mere stone. Mr. Shoemaker was denounced in all quarters as a cheat, and measures were being taken to arrest him for swindling; but he escaped arrest by leaving the city by a circuitous road, and did not stop until he had got thirty miles on his homeward journey. The most remarkable feature in this extraordinary speculation was, that Mr. Shoemaker did not himself know how to make the coal burn. He was therefore unable to convince the public that it really would ignite. Had he experimented at home, and brought with him a grate stove in which to kindle a successful fire, the exhibition would have, no doubt, hastened full ten years the development of the coal business. He reached home disgusted at the belligerent temper of the citizens, and heart-sick at the ill success of his adventure. His reputation as an honest man was rescued, however, by an iron master in Delaware county, into whose hands some of the repudiated mineral accidentally fell. He tried coal, caused it to burn freely with an intense heat, and was so pleased with it that he proclaimed the fact in the newspapers. This led others to try, and they also succeeded; the prejudice was removed, and consumption went on from this disastrous beginning, until it last year reached the enormous quantity of 3,476,862 tons. But up to this date the depression of manufacturing has caused a reduction of \$300,000 tons to be sent to market, and the whole year undoubtedly shows a falling off of full 600,000 tons.—*Miner's Journal.*

The Best Wealth.

The great struggle with civilized men in this world is for wealth. This is called the prime good, the one thing needful, the great desideratum of life. So men toil for it; sacrifice ease, comfort, health for it; give time, strength, and too often good character for it. The truth is, the estimate put upon wealth is too high. Its value, its good is over-rated. It is not the great good. It is not the pearl of great price. It is not the best thing man can have. It does not confer peace of mind, nor purity of heart, heartfelt happiness, nor contentment, nor home-joy, nor social blessedness, nor any of the solid and enduring enjoyments.

Wealthy homes are not often happier than those of the poor and comfortable livers. Poverty is always an evil; but a fair supply of the necessaries and comforts of life is quite as apt to confer real peace, as great wealth. It is not gold nor goods, therefore, that make men really wealthy. The best wealth is of the heart, an enlightened mind, a loyal conscience, pure affections. He is wealthiest who has the largest stock of wisdom, virtue and love—whose heart beats with warm sympathies for his fellow men, who finds good in all seasons, all providences, and all men. The generous man who pities the unfortunate; the pure man who resists temptation; the wise man who orders well his life; the loving man who clings closely to his family and friends; the studious man who seeks instruction in all things, are the truly wealthy men.

Valley Farmer.

To make Pure Apple Wine.

Take pure cider made from sound ripe apples, as it runs from the press; put sixty pounds of common brown sugar into fifteen gallons of the cider, and let it dissolve; then put the mixture into a clean barrel, and fill the barrel up to within two gallons of being full of clean cider, put the cask in a cool place, leaving the bung out for forty-eight hours; then put in the bung, with a small vent, until fermentation wholly ceases, and bung up tight, and in one year the wine will be fit for use. This wine requires no racking; the longer it stands upon the lees, the better.—*Maine Farmer.*

For the Planter.

Humbuggery the Order of the Day.

MR. EDITOR:

In glancing over the contents of your November number my attention was arrested by a notice of "a miraculous corn;" that being a favorite plant of mine, with which I have been experimenting for upwards of forty years, with as many varieties as years. I turned to the page containing its description, when lo, and behold! I met with an old acquaintance, (from whom I am seeking a divorce,) the "Wyandotte prolific corn." Some three years since I was presented by a gentleman with an ear of that variety, the most beautiful I had ever seen, and in my judgment promised to rival wheat in the manufacture of flour, with a product *promised* equal to the one certified in the above number. I then considered a desideratum obtained, in quest of which I had made so many experiments, and my labors ended in them. A favorable spot in my garden was selected for the reception of the grain, and that prepared in the best manner my judgment sanctioned. The corn came up, grew apace, and threw out the sprouts as advertized. I awaited anxiously the presentation of ears promised without the fulfilment of my expectation; at gathering time I received something like a peck very badly matured, with a promise on the stalk of a better yield, should the maturing season continue several months longer; but the season did not delay, hence I was minus the yield. The corn continued to be puffed in the agricultural and political papers, and being loth to abandon it on the above experiment, and finding the "pure seed" advertised in Baltimore by its agent, I procured a quart of it, which cost at the rate of \$240 per barrel, planted it as in the first instance, with a corresponding result. During the present year I have planted the Peabody corn, and from present appearances I shall gather rather more than the seed planted, of the most unpromising appearance. This is not the extent of my being victimized to humbuggery. A few years since I was presented with the Oregon pea, a beautiful one in appearance, with a promise of an unprecedented yield, on rich or poor land, and an unparalleled fertilizer, in all of which I was wofully disappointed. The pea was advertized at \$80 per bushel,

(and I advised my farming brethren not to make a large outlay in that article, at 40 cents per bushel, for which I received a castigation from a correspondent of the "*American Farmer*," upon the ground that his experiment had been more successful than mine, and that *he* had not seen the pea as early as I had made the experiment. Supposing from his premises that it was necessary for *him* to inspect the article and pronounce it pure or spurious, I yielded him the field, since which time I have heard no more of the Oregon pea or its advocate, as a bearer or fertilizer. Next in course came the Japan pea, beautiful in appearance, and highly recommended as a fertilizer, but its yield was no better than the Oregon. In its train followed the Chinese prolific, with a worse return than those above named. In view of the above, I am inclined to think I have contributed to humbuggery my full portion, and shall surrender the ground to such as may be as credulous as I have been.

RICHARD ROUZEE.

Oakland, Essex County, Va. }
November 2nd, 1858. }

A Hard and Durable Soap.

A patent has been granted in England for an improvement in the manufacture of soap, by the addition of sulphate of lime to the usual ingredients employed in its manufacture. The sulphate may be added with any of the usual ingredients employed in the manufacture of soap. The proportions of the sulphate which it is best to employ, vary according to the article manipulated upon, and the quality of the soap to be produced. Thus about twelve ounces of dry sulphate is sufficient for one ton of best soap, whereas, in common or highly liquored soap, six or eight pounds may be used with advantage. Soap, made with the addition of sulphate of lime becomes hardened, keeps dry, and is not liable to shrink while in water, its durability is increased, and it does not wear or waste away before its cleansing properties are brought into action.—*Scientific American*.

The Early Dead.

Some one has said of those who die young, that they are like the lambs which Alpine shepherds bear in their arms to greener pastures, that the flocks may follow.—*Maine Farmer*.

For the Planter.

On the Stimulating Properties of Guano— A Reply to "X."

MR. EDITOR:

It has not been B.'s purpose to even seem to disregard so formidable an antagonist as "X." of the Republican, nor to allow him to take to himself "the flattering unction" of having driven his antagonist from the field. Various circumstances have conspired to preclude an earlier reply.

At the outset "X." will be pleased to call on B. to assure him, that he has written nought with ill will—that he has had no design to "pitch into him." No, he would not hurt a hair of his head. B.'s aim has been higher than this; it has been, so far as his feeble powers might enable him, to expose what he regarded as error, both practically and scientifically, and thereby contribute a mite to the advancement of practical and scientific agriculture. If "X." has in any way suffered, it has fallen out to him by having placed himself in a vulnerable position. The taunting charge of "great cry and no wool," and "empty phrase," B. does not suffer to disturb his equanimity—aware that such things not only contain no argument, but indicate the want of it. Ridicule is the weapon ordinarily appealed to when facts and arguments have been exhausted and failed to secure victory.

If the readers of the S. Planter are such gumps as "X." makes them to be, it might well be regarded as time and labour thrown away to write or print anything for them. Says "X.": "If Mr. B. can prove his assertions to the satisfaction of the numerous readers of the S. Planter, they will necessarily infer that I ('X.') am right, and always will be right, and that Mr. B. had no substantial ground for an attack on me. But if he (B.) cannot prove his assertions, then our readers must infer that I am right and Mr. B. is wrong again." Now, it is certainly exceedingly disingenuous in "X." to require of B. proof of any assertion, knowing, as he here declares, that the cards are so stocked against him, that the result will be the same whether his assertions are proven or not. To have the "*rara avis in terra*" of a man, that "always will be right," B. is willing to attempt the proof of any assertion he has made. But, apart from this consideration, there is but one that he cares much to prove, and that is, that Guano does not merely stimulate and impoverish the soil, furnishes no pabulum for the plant, but does furnish *nutriment* to the plant and *fertility* to the soil. "X." ought to know that this is the paramount question at issue between him and B. If he has forgotten let him refer to the June No. of the Planter, page 379; he will there find written: "Herein consists the very gist of the question in

dispute. If Guano stimulates and impoverishes the soil, and Rhode's Superphosphate furnishes nutritious materials and enriches, then "X." is right, and B. wrong. But, on the other hand, if Guano applied to the soil will greatly increase the crop, and leave the land greatly improved in fertility, then B. is right, and "X." wrong. "X." takes no notice of this, but mounts his favourite hobby and cries, "I still contend that Guano stimulates the soil." This calls to mind an anecdote heard in years gone by, of two bull dogs and a monkey, kept by a gentleman for his amusement. The dogs were one day observed in hot pursuit of the monkey, who escaped capture by running up a pole standing near by. Pug, though out of present danger, yet, seemingly, desiring more comfortable quarters, began to clap his hands, (fore feet,) and thereby got the dogs into a fight; and while the dogs were fighting, he made good a safe retreat. "X." well knows it matters but little whether "Guano stimulates the soil or the plant," if, indeed, it *impoverishes* the soil, and Rhode's Superphosphate furnishes *solid food* for the plant, and *substantial fertility* to the soil.

Says "X.": "That Guano stimulates the soil, I could have said to the farming community of the whole globe. Why, then, should I not thus address the leading journal in the 'Great West?' Will Mr. B. face to the music and answer?" B. faces to the music and answers, that a spade should be called a spade because it is a *spade* and not a *broad-axe*; so "X." should have written, "stimulate the *plant*, (if indeed he must have 'stimulate,') and not stimulate the *soil*, because the soil is not and cannot be *stimulated*." If, indeed, "X." could have said to the farming community of the whole globe that "Guano stimulates the soil," this gives no right to thus address leading journals in the "Great West," any more than having *humbugged* ten men gives the right to *humbug* the eleventh.

B. bids a kindly adieu to "X.," wishing him a pleasant airing upon his gallant hobby. And in conclusion, takes leave to say, that he would not willingly *prejudice* any one against Rhode's Superphosphate. Let it command all its due, but let it not, nor any of its kindred, usurp the throne and reign king over Peruvian Guano. J. D. S.

For the Planter.

Staunton Nurseries.

Staunton, Va., Oct. 16th, 1858.

EDITOR SOUTHERN PLANTER:

Dear Sir—I have this day forwarded to your office a box containing 34 varieties of apple and 1 of pear. They are not generally over medium sized specimens, and some are imperfect, the latter part of

the season having been so dry as to effect the crop very materially; in ordinary seasons all these varieties do well with us. You will see by the specimens sent that some of the Northern sorts are much larger and better here than when grown at the North—a fact that goes to prove the adaptedness of our soil and climate to the growth and perfection of that fruit.

I would speak more particularly of some varieties, but time forbids at present.

Hoping the box will reach you safely, I remain,
Yours, Respectfully,
FRANKLIN DAVIS.

We return our thanks to Mr. Davis for the box of delicious apples, which reached us safely. Among the specimens, we admired greatly the Bellflower, Gloria Mundi, Colbreath's Russett Rambo, Tallawater, Pennsylvania Pippin, Spitzenberg, &c.

They were all much to our taste.

[Ed. So. Pl.

A CARD.

ROYAL OAK, TALBOT Co., MD., }
October 21, 1858. }

To the Editor of the "Southern Planter,"
Richmond, Va.

SIR—I am directed to request the publication, in the Southern Planter, of the following proceedings of our Society, viz:

At a meeting of the Board of Trustees of the Maryland Agricultural Society for the Eastern Shore, held at "Wye Cottage," the 30th September, the following resolutions were adopted:

Resolved, As the opinion of this Board, that the operation of the Grain Inspection Law of the State is beneficial to the interest of the Farmer, and we therefore advise the said law to be sustained.

Resolved further, As the judgment of the Board that, if the said law be generally sustained by those who sell grain in the Baltimore market, our next State Legislature will be justified in greatly reducing the present costs of grain inspection.

(Signed) M. T. GOLDSBOROUGH,
President.

EDM'D L. F. HARDCASTLE, Sec'y.

I am, very respectfully, yours,
EDM'D L. F. HARDCASTLE,
Secretary.

Wool and Woolens.

The supply of wool promises to be inadequate to the wants of the manufacturers. The demand for the clip this year was quite animated, and prices soon rose, so as to check purchases. It was found, however, that the supply of wool was really less than there had been reason to expect, since the high prices of the last few years have not induced any increase in production. The high prices last year had, however, induced imports to some extent from England. This year prices have been less here, but they have risen abroad under the same influences that have improved the prospects of the cotton market, viz: abundance of cheap food. The prices here have been comparatively as follows:

October,	1858.	50@53
		43@45
		32@34
		30@32
		36@40
		34@35
		30@32
		18@21
		23@28
		10@11
		10@13
		12@20
		11@16

July,	1858.	42@46
		37@41
		30@35
		27@32
		34@38
		29@32
		25@27
		18@21
		23@28
		10@11
		10@13
		12@20
		11@16

July,	1857.	50@55
		45@48
		40@43
		36@38
		44@47
		38@40
		33@36
		28@32
		30@36
		14@16
		13@15
		28@—
		14@20

per lb.	Saxony fleece,
	Full blood merino,
	$\frac{3}{4}$ and $\frac{1}{2}$ merino,
	Native and $\frac{1}{4}$ merino,
	Extra pulled,
	Superfine pulled,
	No. 1 pulled,
	California, fine, unwashed,
	Peruvian, washed,
	Valparaiso, unwashed,
	S. American, common washed,
	East India, washed,
	Smyrna, washed,

The prices of American have nearly recovered, but those of foreign descriptions have not. In England and on the continent, on the other hand, prices are rising rapidly. It follows, as a matter of course, that the imports of foreign wools decline. For the nine months to October 1st, they have been at Boston only 7,171,468 lbs. against 11,270,727 lbs. same time last year, which was a quantity nearly double that of the preceding year. Under the supposition that the quantity of the wool used in the country is, as estimated, 100,000,-

000 lbs., a decline of 4,000,000 in the import is a serious matter, being no less than four per cent. of the supply, and the home supply does not increase as the high prices would naturally lead to expect. The low prices which have ruled in the past year will, on the other hand, discourage the receipt of foreign wool, although a sale of nearly 1,000,000 lbs. Chinese wool, held in New York, last week brought very good prices, higher than the quality (which was low) would warrant for the present state of the market for carpets. The stoppage of many of the large factories has greatly reduced the consumption of wool in the past year; probably 30,000,000 lbs. less has been taken by the factories, but certain qualities of wool are yet very scarce. The production of delaines has been large by the three great companies engaged in that description of goods, and their wares were never more attractive. They have produced nearly as follows for the year:

		Yards.
Manchester—Delaines,	-	7,000,000
Pacific “	-	7,200,000
Hamilton “	-	6,900,000
Total three companies,	-	21,100,000

This is equal to 2,000,000 dresses for ladies, certainly not a very large supply, since there were in the country in 1850, 9,526,666 females, which would give one delaine dress among four, and if we deduct females under five years, one dress among three in a year, exclusive of the imported delaines, which hold their ground with much difficulty against the improved production of the three mills named. The rise in wool and the recovery of the markets abroad for these styles of dress goods makes the American markets far less important this year to the English and French producers. The prospect here, therefore, is certainly favorable to the expectation of a rise in the goods equal to the improved value of the raw material. The sale of coarse wools alluded to above went at an advance of some 2a3c. per lb., being in demand for carpets and such descriptions of goods as the fine American wools are hardly adapted to. The quantity of carpeting imported into the country seems to be very small, as compared with the wants of the country. Thus in 1857 the whole quantity of all descriptions—Wilton, Saxony, Brussels, Ingrain, &c.—was 1,714,

393 yards. In the city of New York alone, according to the census of 1855, the number of dwellings is as follows:

		No.	Cost.
Stone,	-	1,617	\$32,267,819
Brick,	-	29,977	211,531,806
Frame,	-	10,395	28,900,745
Other,	-	333	781,920
Total,	-	42,668	\$273,481,811

If we take stone and brick houses only the number is 31,594, which would average an area on one floor only of 20x50 feet, to carpet which would require in this city alone 4,271,300 yards of cloth. The stairs, hall, basement, and upper rooms, are, however, always carpeted, as are most of the frame houses. The quantity really required is not under 12,000,000 yards for the city of New York. In the supposition that the carpets last seven years, the annual demand is 1,750,000 yards, or the quantity of carpets imported last year, to supply the city of New York alone. All the carpet demand for the interior of this State, and of all the other States and cities, therefore falls upon the home production. The carpets are, however, imported in the following proportion:

	Yards.	Price.
Into Boston,	276,849	\$238,136.
Portland,	6,215	4,939.
New York,	1,072,307	1,242,338.
Philadelphia,	239,172	202,316.
Baltimore,	25,607	23,285.
Charleston,	14,806	12,755.
Mobile,	130	191.
New Orleans,	37,690	38,187.
San Francisco,	41,296	21,990.
	1,714,093	\$1,784,196.

The imports at New York averaged a cost of about \$1.20 per yard. At Boston under 90c., and at the other ports about the same low prices, except an importation, which seems to have been a special one, at Mobile, at \$1.50 per yard. The figures here presented show how small is the import trade in carpets as compared with the wants of the country, and reciprocally how large is the interest of carpet makers, who heretofore have suffered under a tax upon the wools they use, while American agriculture supplies them with none of the necessary quality. For the coarse wools necessary for the making of carpets, the manufacturers are dependent upon the im-

porters for a supply of the proper material, which has heretofore been charged with an onerous duty.—*U. S. Economist.*

Manuring in the Hill.

A SAUSAGE STORY.—An old friend of ours—one sick and tired of the care and bustle of a city life, has retired into the country, and “gone to farming,” as the saying is. His land, albeit well situated and commanding sundry fine prospects, is not so particularly fertile as some we have seen—requiring scientific culture and a liberal system of manuring to induce an abundant yield. So far by way of explanation.

Once upon a time our friend being upon a short visit to New Orleans, was attending an auction sale down town, and as it so happened, they were selling damaged sausages at the time. There were some eight or ten barrels of them, and they were “just going at 50 cents a barrel,” when the auctioneer, with all apparent seriousness, remarked that they were worth more than that to manure land with. Here was an idea. “Sixty-two and a half cents—third and last call—gone!” retorted the auctioneer. “Cash takes them at sixty-two and a half cents per barrel!”

To have them shipped to his country seat was the immediate work of our friend, and as it was then planting time, and the sausages, to use a common phrase, “were getting no better very fast,” to have them safe underground and out of the way was his next movement. He was about to plant a field of several acres of corn—the soil of the piny woods species—so here was just the spot for this new experiment in agriculture, this new wrinkle in the science of geonics. One “link” of sausage being deemed amply sufficient, that amount was placed in each hill, accompanied by the usual number of kernels of corn and an occasional pumpkin seed, and all were nicely covered over in the usual style. Now, after premising that several days have occurred since the corn was planted, the sequel of the story shall be told in a dialogue between our friend and one of his neighbours.

Neighbour.—Well, friend, have you planted your corn?

Friend.—Yes, several days since.

N. Is it up yet?

F. Up! yes; and gone; the most of it.

N. How is that?

F. Well, you see, I bought a lot of damaged sausages the other day in New Orleans, a smooth tongue of an auctioneer saying they would make excellent manure if nothing else. I brought the lot over, commenced planting my corn at once, as it was time, planted a sausage in each hill, and—

N. Well, and what?

F. And felt satisfied that I had made a good job of it. Some days afterwards I went out to see how the corn was coming on, and a pretty piece of business I have made of trying agricultural experiments.

N. Why, what was the matter?

F. Matter! The first thing I saw before reaching the field was the greatest lot of dogs digging and scratching all over it! There were my dogs, and your dogs, and all the neighbours' dogs, besides about three hundred strange dogs I never set my eyes on before, and every one was hard at it mining after the buried sausages. Somehow or other, the rascally whelps had scented out the business, and they have dug up every hill by this time. If I could set every dog of them on that auctioneer, I'd be satisfied. [Writer unknown.]

From the Boston Cultivator.

Sociability.

It is not enough for us to be wise, but social and friendly also. We have no faculty lavished upon us without design; even instinct itself is enough to demonstrate this, without the assistance of philosophy. A cold heart, a morose countenance, an indifferent or unbenevolent disposition, though stuffed with all the treasures of erudition, are but a slur upon human nature and a burthen to existence. Happiness can only inhabit the cheerful mind; peevishness embitters resolution. It is the sunshine of a benevolent heart which scatters the clouds of uneasiness and electrifies every human principle. Rational mirth and seasonable diversion give life and spring to every enjoyment. Let the austere stoic frown on sociability and every amusement, yet he will at times lose his morose temper and mingle with the social circle. Nature, when circumscribed by austerity, breaks over those bounds

at times, to enjoy social gratification. I do not speak against this most excellent of all the human faculties, but encourage it in every one with as much ardor as does any divine, nor confine it to so narrow limits as to debar it of the proper influence in society.

Virtue neither honors nor needs any limitation. Vice only minds restraint. No generous affection is in the least danger of harming any one, its latitude being never so large. The farther it extends the more universally benevolence pervades every grade of society. No one will ever think of restraining any humane desire but he who never harbors a sympathetic emotion in his own breast. It is only the surly child of envy which makes any one doubt the sincerity of another's friendship. Angels are the exercisers of friendly affections. Deity, himself, is love! Shall man then who bears his holy image, shrink from the exercise of it, chill every social affection and freeze every sympathetic emotion with moroseness? Happiness is the great desire of every being. We were all made and designed for that end; and society being the only way in which civilized beings can hope to enjoy it, let any one who cherishes the inclination, cheerfully contribute his genial spark to kindle and enliven the social flame, which shall light us all to everlasting felicity!

PHILO.

Governor Banks on the Farmer.

Gov. Banks delivered the address before the Agricultural Society at Amherst, Mass. After speaking of the great general progress of America, and the part which farmers have taken therein, especially during the past year, when their products amounted in value to sixteen hundred millions of dollars, he said:—

This is what agricultural industry contributes to the wealth of the country! A yearly contribution; a contribution in dollars and dimes merely, and not embracing an estimate of its physical strength, capacity for endurance, the love of labour and the moral power, with which agricultural industry invests communities wherever it prevails. In this view we confine our consideration strictly to those who make field culture the business of life. Beyond this, how wide the influence which it exerts upon other pursuits? Whence do we de-

rive the vigorous intellect of professional life that adorns society with its varied accomplishments, and protects individuals in the enjoyment of life, health, and their moral and personal rights? Whence comes that vigorous and exhaustless intellect that revels in new channels of thought, and by new conceptions of power, creates the marvels—miracles almost—that fill the world of invention from day to day? Who supplies the successive races of men that, occupying for a brief hour an obscure spot upon the merchant's exchanges of Boston, New York, Philadelphia, Paris and London, give to the world of finance and politics its law? Does professional society reproduce itself? Can inventive spirits call up their own successors? Have the mercantile centres of the world ever reproduced their own financial giants? Never! The farm supplies all. It is the sale of the earth, and if this earth's salt lost its savor, wherewith shall the earth be salted?—*Maine Farmer.*

Height of Economy.

Old Deacon Briggs is as remarkable for his closeness as Dicken's man Barkis. His name has come to be a proverb in our region for such an economy as ever makes the man the subject of ridicule and contempt. One bitter cold morning, a few falls ago, he bade the boys drive together all the pigs that were to be fattened for market, into the little yard just at the corner of the house. A pig was caught by one of the youngsters—the Deacon with a pair of pincers in one hand, a sharp knife in the other, seized the unfortunate by the tail and cut it off close up. So, through the whole herd, leaving not a pig with even a stump of a tail. Cort, who worked for his grandfather, stood by in amazement—his hands in his pockets, his body wrapped into a crescent by the cold, and his teeth jawing against the outrage with a prodigious chatter. At last he stuttered out:

"Grandpa! what are you cutting off those tails for?"

Sober and solemn was Deacon Briggs, as he replied:

"You will never be a rich man, for you do not know what it is to be savin'. You ought to know, my child, that it takes a *bushel of corn to fatten an inch of tail.*"—*Maine Farmer.*

The Chinese.

Who are the Chinese? What have they done for mankind? Their empire is believed to be the most ancient in the world; and setting aside all mythical and marvellous accounts that go back into dim and unrecorded ages, good authorities name Tohee as their first sovereign, 2247 B. C. Passing over historic annals, as well as geography, ethnology, population, religions and philosophies of the Chinese, all well known to the world, we take leave to say, that many of the arts and manufactures peculiar to refined life, are here carried to a very high degree of perfection, especially in silks, nankeens, and other cottons, and a porcelain that is quite matchless for its peculiarities. The interrogatory as to what the Chinese have accomplished for mankind, may be answered in a manner alike favorable and honorable to that people—for there can be little doubt that the mariner's compass, printing, gunpowder and paper-making, and many other useful inventions and manufactures have been known to them, probably for thousands of years, whereas in Europe they were all either adopted or comparatively modern discoveries.

The revenue of China is \$200,000,000 annually, showing her vast resources for wealth—while her foreign exports give a yearly average of about \$40,000,000 in value—soon we hope to be largely increased, as well as the imports. The trade between the U. States and China in 1856 footed up:

Imports into U. S. from China,	\$10,454,430
Exports from “ “ “	2,558,220

Teas, silks, a few cotton goods, porcelain, fire-works, toys, and minor articles, are shipped from China, while she produces in great abundance silk, rice, cotton gold and precious stones. Surely, then, great results will follow, for a wide field is opened by the breaking down of the Chinese wall, by which we symbolize the abolition of national exclusiveness. And if, under her old system, she could construct that wall, and her grand canal, two of the most wonderful of the works of by-gone days, what may not be expected from the ingenuity of the Celestials, when their prejudices shall be dispelled by a free interchange of opinion with the other nations and people of the earth?—*Phila. Enq.*

Hope—Work—Wait.

It is Hope which inspires to exertion and springs to action. Without it but little would be attempted and less accomplished. It buoys us up in adversity, and impels us forward to further achievement if successful. It sustains us when all is dark and gloomy, and when, to all human appearances, all our exertion is labor lost. When care and trouble weigh us down in the *present*, it comes and whispers of

the *future*, and overcomes the spirit of despondency.

But without *work*,—effort—hope is of little worth. Sitting still and *hoping* will accomplish nothing. Hope excites to effort, and when attended by it accomplishes wonders. Work is lightened and toil is sweetened by the luring results promised by Hope.

Hope and work in union are invincible, and before them, under heaven, all opposition will be overcome. Inspired by one, and in the untiring exercise of the other, we may confidently wait for the sunshine and showers which insure the harvest. Wait patiently and uncomplainingly, because, God has promised blessings to those who but use the means to secure them.—*Port Tobacco Times.*

Falling Apples.

Already the apples, pears and plums are beginning to drop abundantly from the trees. If you examine these you will discover not a single sound specimen among them. They have fallen, not by the winds, but quite likely, prematurely from disease. Cut them open, and you find either eggs or grubs already at work upon the substance of the fruit. Every one of these fruit is a pest-house, to be immediately destroyed. It is good work for the boys to pick them up and throw them into the pig-stye, where they will be devoured or rot among the fermenting manures. We are persuaded that the destruction caused by the curculio, and by the grubs that prey upon the apples and pears, is caused mainly by the neglect of this simple precaution. The fallen fruit is suffered to lie upon the ground and mature its progeny of insects. The next year they swarm in increasing numbers, and the farmer complains that there is something peculiar in his soil and climate; he cannot grow good fruit. The difficulty is in the man and not his soil. Pick up the fruit. And this reminds us of an apple orchard we visited last season. The proprietor had been accustomed for years to turn in his store pigs, and to keep them through the season, until the apples were sufficiently mature for making cider. Not an apple escaped the pigs from July to September. The consequence of this policy was, that he had fair, handsome apples to sell, while his neighbors were complaining that their crop was nearly all perforated with worms. Shall the pigs have a chance at the fallen fruit? [Ex.

REPORTS OF JUDGES

AND

AWARDS OF PREMIUMS,

AT THE

SIXTH ANNUAL EXHIBITION

OF THE

Virginia State Agricultural Society,

HELD IN

PETERSBURG, VA.,

ON THE

2nd, 3rd, 4th, and 5th November, 1858.

BRANCH I.

Premiums for Experiments.

The Judges, on the subject of Experiments, regret to have to report that only one paper has been handed in—that of Mr. Norvell, of Lunenburg—on the subject of Continuous Cropping.

While Mr. Norvell's report is an interesting one, and on an important subject, yet they do not deem his experiment conclusive, not having been carried through a sufficient number of years to entitle it to a premium under the regulations of the Society.

BRANCH II.

Premiums for Written Communications.

Several Essays have been submitted to the Committee on this Branch, upon which—for want of sufficient time for the due consideration of them—no report has been rendered. They withhold to a future time the rendering of a report, when their awards will be made known.

BRANCH III.

CLASS 1st.

Best Crops of Different Farms.

86. To Wm. D. West, of Elizabeth City, for the best product of Sweet Potatoes on five acres of land in a body, being an aggregate yield of 1987½ bushels, producing \$1,412 86, a premium of \$30 00

88. To Leonard Chamberlain, of Henrico, for the best product of Irish Potatoes on two acres of land, in a body, yielding 236 bushels per acre, a premium of 20 00

Several Bales of Cotton, very neatly put up, were exhibited by Messrs. Needham Price, John R. Dunn, and Wells Draughan, of N. C.

CLASS 2nd.

92. To Tilghman Foster, for the best Sample of English Shipping Leaf Tobacco, 20 00

93. To A. S. Clarke, for the second best, 10 00

BRANCH IV.

CLASS 1st.

Thoroughbred Horses.

98. To John Minor Botts, for his tho-

roughbred Stallion, "Revenue," a Certificate of Continued Superiority in lieu of the first premium, that honor having been twice awarded him at previous Exhibitions of the Society.

99. To John L. White, for his thoroughbred Imported Stallion, "Fly-by-Night," as the second best, a premium of \$20 00

100. To T. D. Watson, for his thoroughbred horse "Mohegan," a CERTIFICATE OF MERIT.

101. To Wm. C. Scott, for the best Brood Mare, (Pauline,) 20 00

102. To Paschal Buford, for the second best, 10 00

103. To J. D. Watson, for the third best, (Mary,) a CERTIFICATE OF MERIT.

104. To Wm. O. Goode, for "Phantom," the best entire Colt foaled since 1st January, 1855, 10 00

106. To O. P. Hare, for the best entire Colt foaled since 1st January, 1857, 7 50

107. To R. N. Neblett, for the best Filly foaled since 1st January, 1855, 10 00

108. To J. Eubank, for the best Filly foaled since 1st January, 1856, 10 00

109. To J. Eubank, for the best Filly foaled since 1st January, 1857, 7 50

CLASS 2nd.

Horse of General Utility.

111. To Philip St. George Cocke, for the best Stallion for useful and elegant purposes combined, "Cleveland," 40 00

112. To Leonard Mongan, for the second best, "Orphan Boy," 20 00

113. To John C. Griffin, for the third best, "Young Madison," a CERTIFICATE OF MERIT.

114. To W. C. Archer, for the best Brood Mare, "Molley," 20 00

115. To J. W. Dyer, for the second best, "Sally," 10 00

116. To G. S. Ayrc, for the third best, "Fannie," a CERTIFICATE OF MERIT.

117. To G. W. Mowry, for the best entire Colt foaled since 1st January, 1855, "Jim Wiley," 10 00

118. To R. A. Willis, for the best entire Colt foaled since 1st January, 1856, "Young America," 10 00

119. To Baker Mann, for the best entire Colt foaled since 1st January, 1857, "Ticonderoga," 7 50

120. To John P. Branch, for the best Filly foaled since 1st January, 1855, "Alice Wood," 10 00

121. To J. Eubank, for the best Filly foaled since 1st January, 1856, "Ellen Carter," 10 00

122. To W. C. Archer, for the best Filly foaled since 1st January, 1857, "Lady of the Lake," 7 50

124. To Isaac Stone, for the best pair matched Horses, "Clipper and Jim," 25 00

125. To John P. Branch, for the second best, 10 00

126. W. P. Cullen, for the best single Harness Horse, Mare or Gelding, "Gray Eagle," 15 00

127. To T. A. Smith, for the second best, "Bald Eagle," \$10 00

—
CLASS 3rd.

Quick Draught Horses.

128. To Norman Dayton, for the best Stallion, "Kit Carson," 40 00

129. To F. Felton, for the second best, "Paul Clifford," 20 00

130. To E. G. Booth, for the third best, "Young Sherman," CERTIFICATE OF MERIT.

131. To A. M. Aiken, for the best Brood Mare, "Mary Fairbank," 20 00

134. To Wm. P. Braxton, for the best entire Colt foaled since 1st January, 1855, "Virginus," 10 00

135. To W. B. Irby, for the best entire Colt foaled since 1st Jan., 1856, "Floyd," 10 00

136. To C. E. White, for the best entire Colt foaled since 1st January, 1857, "Red Eagle," 7 50

138. To J. C. Baugh, for the best Filly foaled since 1st January, 1856, "Play-Flower," 10 00

139. To Robert Berry, for the best Filly foaled since 1st January, 1857, "Nina," 7 50

141. To Chas. H. Rhodes, for the best pair matched Horses, CERTIFICATE OF MERIT. Being debarred from the premium on account of having been "run in a regular race."

143. To Mr. Harvie, for the best single Harness Horse, Mare or Gelding, "Brown Bill," 15 00

144. To S. C. Ludington, for the second best, "Mountain Hare," 10 00

—
CLASS 4th.

Heavy Draught Horses.

145. To G. W. Mowry, for the best Stallion, "John Bennett," 40 00

146. To G. W. Ayre, for the second best "Jefferson Roan," 20 00

147. To Wm. B. Sowers, for the third best, "Morgan Frederick," CERTIFICATE OF MERIT.

148. To John M. Davenport, for the best Brood Mare, (Bay,) 20 00

149. To John S. Ayre, for the second best, "Bay Roane," 10 00

151. To G. W. Mowry, for best entire Colt foaled since 1st January, 1855, "Jim Wiley," debarred from this premium under the 6th Standing Rule. See Horse Gen'l Utility, No. 117.

158. To Robert Bowman, for best pair Heavy Draught Horses, (Iron Greys,) 20 00

—
CLASS 5th.

Saddle Horses.

160. To N. Berkeley, for the best Stallion, "Telegraph-Bay," 40 00

166. To John P. Goodwin, for the best entire Colt foaled since 1st January, 1855, "Ingomar," 10 00

173. To John Dyson, for the best Saddle Horse, Mare or Gelding, "John Bay," \$20 00

174. To A. M. Aikin, for the second best, (Grey,) 10 00

175. To Wm. T. Joynes, for the best Pony, 5 00

—
CLASS 6th.

Mules and Jacks.

178. To Wm. W. Baugh, for the best Jennet, 6 years old, (Mouse Color,) 20 00

179. To Wm. H. Griffiths, second best, 6 years old, (Grey,) 10 00

183. To Thomas R. Cox, for best two year old Mule foaled in Virginia, 10 00

—
BRANCH V.

CLASS 1st.

Durham and Hereford Cattle.

186. To S. C. Ludington, for best Durham Bull, three years old and upwards, "Degalma," 40 00

187. To S. C. Ludington, for the second best, "Scipio," 20 00

188. To S. W. Ficklin, for the third best, "Jonathan," CERTIFICATE OF MERIT.

189. To S. C. Ludington, for the best Cow, "Chance," 40 00

190. To S. C. Ludington, for the second best, "Red Rose," 20 00

195. To S. C. Ludington, for the best Bull between two and three years old, "Triumph," 20 00

197. To S. C. Ludington, for the best Heifer between two and three years old, "Bethia," 20 00

198. To S. W. Ficklin, for the second best, "Tulip," 10 00

199. To S. W. Ficklin, for best Heifer between one and two years old, "Butter Cnp," 20 00

200. To S. W. Ficklin, for second best, "Orba 6th," 10 00

201. To S. W. Ficklin, for best Calf or Heifer, one year old, "Melody," 10 00

192½. To Thomas Betts, for best Imported Durham Bull between one and two years old, "Langley," 30 00

189½. To Thomas Betts, for best Imported Cow, three years old and upwards, "Susan," 40 00

197½. To Thomas Betts, for best Imported Heifer, between two and three years old "Matchless," 20 00

186½. To Thomas Aston, for best Imported Hereford Bull, three years old and upwards, "Fair Boy," 40 00

195½. To Thomas Aston, for best Imported Hereford Bull, between one and two years old, "Grand Duke," 20 00

189½. To Thomas Aston, for best Imported Hereford Cow, three years old and upwards, "Dutchess," 40 00

197½. To Thomas Aston, for best Imported Heifer, between two and three years old, "Beauty," 20 00

201½. To Thomas Aston, for best Hereford Calf, one year old, \$10 00

CLASS 2nd.

Devon Cattle.

202. To H. J. Standberg, for the best Bull, three years old and upwards, "Norfolk," 40 00

203. To Silvester Smith, for the second best, "Romeo," 20 00

204. To Alexander Garrett, for the third best, "Herod," CERTIFICATE OF MERIT.

205. To H. J. Standberg, for the best Cow, three years old and upwards, "Matilda," 40 00

206. To Alexander G. Davis, for the second best, "Beauty," 20 00

207. To Martin Goldsborough, for third best "Rhoda," CERTIFICATE OF MERIT.

208. To H. J. Standberg, for the best Bull, between two and three years old, "Richmond," 30 00

211. To Alexander G. Davis, for the best Bull, between one and two years old, "Thom," 20 00

212. To H. J. Standberg, for the second best, "Victor," 10 00

213. To H. J. Standberg, for the best Heifer, between two and three years old, "Pink," 20 00

214. To H. J. Standberg, for the second best, "Cora," 10 00

215. To H. J. Standberg, for the best Heifer, between one and two years old, "Dahlia," 20 00

216. To Alexander Garrett, for the second best, "Aggy," 10 00

217. To H. J. Standberg, for the best Calf or Heifer, one year old, "Beauty," 10 00

CLASS 3rd.

Ayrshire and Alderney Cattle.

218. To David Dunlop, for the best Ayrshire Bull, three years old and upwards, "John Bull," 30 00

219. To M. Goldsborough, for second best, "Monmouth," 15 00

222. To John G. Turpin, for second best Alderney Cow, 15 00

223. To M. Goldsborough, for second best Imported Alderney Cow, 15 00

225. To M. Goldsborough, for second best Alderney Bull, between two and three years old, 8 00

227. To John G. Turpin, for the best Ayrshire Heifer, between two and three years old, 15 00

218½. To John G. Turpin, for second best Imported Ayrshire Bull, three years old and upwards, 15 00

231½. To David Dunlop, for best Imported Ayrshire Calf, between one and two years old, 15 00

233½. To M. Goldsborough, for best Imported Alderney Calf, 10 00

CLASS 4th.

Grade Cattle.

234. To Paschal Buford, for best Cow, three years old and upwards, "Mary Luck," \$30 00

235. To S. C. Ludington, for second best, "Lady Roane," 15 00

236. To S. C. Ludington, for third best, (Brown Cow,) CERTIFICATE OF MERIT.

237. To S. W. Ficklin, for best Heifer, between two and three years old, "Anna," 10 00

238. To S. W. Ficklin, for the second best, "Lizza," 5 00

239. To S. C. Ludington, for third best, (Brown Cow,) CERTIFICATE OF MERIT.

240. To S. W. Ficklin, for best Heifer, between one and two years old, "Hope," 10 00

241. To S. W. Ficklin, for the second best, "Faith," 5 00

242. To Pascal Buford, for best Heifer, one year old, "Polly Ransom," 5 00

Mr. H. Williams and H. C. Britton exhibited fine specimens of native Heifers, "Mary" and "Fanny;" and Messrs. S. C. Ludington and P. Buford, exhibited fine Bull Calves; for all of which the Committee recommended Certificates of Merit.

CLASS 5th.

Dairy Cows.

243. To H. J. Standberg, for best Cow for the Dairy, awarded to "Matilda," but debarred by the 6th Standing Rule from receiving the premium.

244. To Paschal Buford, for second best, awarded to "Mary Luck," but also debarred from receiving the premium by the above Rule.

CLASS 6th.

Working Oxen.

245. To Sam'l C. Ludington, for best Yoke of Oxen, over four years old, 30 00

246. To P. Buford, for second best, 15 00

247. To Alexander G. Davis, for best Yoke of Oxen, under four years old, 30 00

CLASS 7th.

Fat Cattle.

249. To James Walker, for best pair aged Fat Steers, 50 00

250. To S. C. Ludington, for second best, 30 00

251. To S. C. Ludington, for best pair Fat Steers, under four years old, 50 00

253. To S. C. Ludington, for best pair Fat Cows or Heifers, 50 00

254. To Crouse & Irving, for second best, 30 00

255. To S. C. Ludington, for best Fat Cow over four years old, 25 00

259. To Crouse & Irving, for best single Fat Steer, 25 00

260. To S. C. Ludington, for second best, 15 00

CLASS 8th.

Fat Hogs.

262. To Dan'l Dyson, for best Pen of Fat Hogs, 10 00

CLASS 1st.			
<i>Fine Wool Sheep.</i>			
264. To S. S. Bradford, for the best Ram, Silesian,	\$20 00		
265. To S. S. Bradford, for 2d best Ram, Silesian,	10 00		
266. To Paschal Buford, for 3d best Sax-on,			
CERTIFICATE OF MERIT.			
267. To S. S. Bradford, for best pen of Ewes, 3 in number,	20 00		
268. To J. G. Turpin, for 2d best,	10 00		
269. To S. S. Bradford, for 3d best,			
CERTIFICATE OF MERIT.			
270. To S. S. Bradford, for best pen Ewe Lambs 4 in number,	10 00		
271. To S. S. Bradford, for best pen Ram Lambs,	10 00		
312. To S. S. Bradford, for best imported Merino Ram,	20 00		
313. To S. S. Bradford, for 2d best	10 00		
314. To S. S. Bradford, for best imported Merino Ewe,	20 00		
315. To S. S. Bradford, for 2d best,	10 00		
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CLASSES 3, 4, 5, 6 and 9.			
<i>Middle Wool Sheep.</i>			
276. To M. Goldsborough, best South Down Ram,	20 00		
277. To M. Goldsborough, 2d best,	10 00		
278. To M. Goldsborough for 3d best,			
CERTIFICATE OF MERIT.			
279. To M. Goldsborough, for best pen of Ewes,	20 00		
280. To M. Goldsborough, for 2d best,	10 00		
281. To M. Goldsborough for 3d best,			
CERTIFICATE OF MERIT.			
282. To M. Goldsborough, for best pen of Ewe Lambs.	10 00		
283. To M. Goldsborough, for best pen of Ram Lambs,	10 00		
316. To Thomas Betts, for best imported South Down Ram,	20 00		
317. To Thomas Betts, for 2d best,	10 00		
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CLASS 6th.			
<i>Middle Wool Grades.</i>			
284. To John R. Woods, best pen Ewes South Down Grades,	20 00		
287. To E. Ruffin, Jr., best pen Ewe Lambs, 4 in number,	10 00		
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CLASS 7th.			
<i>Long Wools.</i>			
300. To J. W. Ware, for best Cotswold Ram,	20 00		
301. To John R. Woods, for 2d best,	10 00		
302. To J. W. Ware, for 3d best,			
CERTIFICATE OF MERIT.			
303. To J. W. Ware, for best pen Ewes, (Cotswold) 3 in number,	20 00		
304. To J. W. Ware, for 2d best,	10 00		
305. To J. W. Ware, for third best,			
CERTIFICATE OF MERIT.			
306. To J. W. Ware, for best pen Ram Lambs,	\$10 00		
307. To J. W. Ware, for best pen Ewe Lambs,	10 00		
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CLASS 8th.			
<i>Long Wool Grades.</i>			
308. To H. M. Fowlkes, for best pen Ewes, 3 in number,	20 00		
309. To John R. Woods, for 2d best,	10 00		
310. To John R. Woods, for 3d best,			
CERTIFICATE OF MERIT.			
311. To H. M. Fowlkes, for best pen of Ewe Lambs, 4 in number,	10 00		
328. To J. W. Ware, for best imported Cotswold Ram,	20 00		
329. To J. W. Ware, for 2d best,	10 00		
330. To J. W.-Ware, for best imported Cotswold Ewe,	20 00		
331. To J. W. Ware, for 2d best,	10 00		
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<i>Swine.</i>			
334. To S. W. Ficklin, for best large Breed Chester Boar, 3 years old,	20 00		
335. To William Turnbull, for 2d best Chester,	10 00		
336. To S. W. Ficklin, for best Boar, 1 year old Chester,	15 00		
337. To R. M. Poole, for 2d best,	8 00		
338. To Thomas Wood for best Breeding Sow over 2 years old, Chester,	20 00		
339. To John R. Woods, for 2d best,	10 00		
340. To Peyton Johnston, for best Sow under 18 months old, Virginia Grazier,	15 00		
341. To Daniel Dyson, for 2d best, Native,	8 00		
342. To William H. Griffiths, for best lot of 9 Chester Pigs,	10 00		
343. To John R. Woods, for 2d best 9 Albemarle and Chester,	5 00		
344. To Paschal Buford, for best Boar, Small Breed, 2 years old Berkshire,	20 00		
345. To Peyton Johnston for 2d best Hampshire "Duke,"	10 00		
346. To Peyton Johnston, for best Boar 1 year old, Hampshire "Frank,"	15 00		
347. To Daniel Dyson, for 2d best, Essex,	8 00		
348. To Peyton Johnston, for best Breeding Sow over 2 years old, Hampshire "Princess,"	20 00		
349. To Lewis G. Simonson, for 2d best Essex grade,	10 00		
350. To John G. Turpin, for best Sow under 18 months old, Suffolk "Sallie,"	15 00		
351. To John W. Hobbs, for 2d best Berkshire grade,	8 00		
352. To John G. Turpin, for best lot of Berkshire and Essex Pigs,	10 00		
353. To Peyton Johnston, for 2d best lot of Virginia Grazier Pigs 8 weeks old,	5 00		
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<i>Additional Premiums on Premium Animals.</i>			
The Committee on Premium Animals beg leave to report that they have awarded Certificates of Merit—the additional			

Premiums offered by the Society, as follows:

354. To S. C. Ludington, for the best Bull of any breed on Exhibition, for his Short Horn Bull D' Jalma.

355. To S. C. Ludington, for the best Cow, for Short Horn Cow, Chance 2d.

356. To John M. Botts, for thorough bred Horse Revenue.

357. To William C. Scott, for his thorough bred Brood Mare Pauline, by Glencoe.

358. To J. W. Ware, for his Cotswold Ram.

359. To J. W. Ware, for his Cotswold Ewe.

360. To S. W. Ficklin, for his Chester County Boar, Harvey.

361. To Thos. Wood, of Pennsylvania, for his Chester County Sow, Fanny.

In making the examination and decision, the undersigned, S. W. Ficklin, the Chairman, retired from the Committee when the hogs were examined and decided on, as he had some for exhibition, and Wm. C. Scott for the same reason retired, when the Mares were examined and decided on.

[Signed.]

S. W. FICKLIN.
W. C. SCOTT,
ALEX. S. MATHEWS,
M. GOLDSBOROUGH,
W. S. WOOD.

CLASS 1st.

Poultry—Chickens

- 362. To Master A. Turpin, for best pair of Cochín China, \$2 00
- 363. To Master A. Turpin, for best pair of Imperial China, 2 00
- 364. To Master A. Turpin, for best pair of White Dorkings, 2 00
- 367. To W. Rowlett, for best pair of Black Poland, 2 00
- 369. To Master A. Turpin, for best pair of Silver Pheasants, 2 00
- 372. To W. A. Pearson, for best pair of White or Red Game, 2 00
- 373. To Andrew Boisseau for best pair of Brahma Pootra, 2 00
- 374. To R. M. Poole, for best pair of Virginia Game, 2 00
- 375. To Master A. Turpin, for best pair of Black Spanish, 2 00
- 376. To Master A. Turpin, for best pair of Indian Mountain, 2 00
- 377. To Andrew Boisseau, for best pair of Wild Indian Game, 2 00
- 378. To Andrew Boisseau for best pair of Sumatra Game, 2 00
- 379. To Master A. Turpin, for best pair of Ostrich Game, 2 00
- 381. To W. A. Branch for best pair of Sea Bright Bantams, 2 00
- 382. To Andrew Boisseau for best pair of Java Bantams, 2 00

- 383. To Andrew Boisseau for best pair of Great Malay, \$2 00
- 384. To W. Rowlett, for best pair of Jersey Blues, 2 00

CLASS 2d.

Turkeys.

- 385. To Master A. Turpin, for best pair of Common Turkeys, 2 00
- 386. To Mrs. J. C. Baugh, for best pair of Wild Turkeys, 2 00
- 387. To Master A. Turpin, for best pair of Crested Turkeys, 2 00

CLASS 3rd.

Geese.

- 389. Andrew Boisseau, for best pair of Wild Geese, 2 00
- 390. To Master A. Turpin, for best pair of China Geese, 2 00
- 391. To S. Jones Cralle, for best pair of Bremen Geese, 2 00
- 392. To Master A. Turpin, for best pair of Poland Geese, 2 00

CLASS 4th.

Ducks.

- 394. To Mrs. J. C. Baugh, for best pair of White Poland Ducks, 2 00
- 395. To Andrew Boisseau, for best pair of Mnscovy Ducks, 2 00
- 397. To Andrew Boisseau, for best pair of Common Ducks, 2 00

CLASS 5th.

- 399. To Andrew Boisseau, for the greatest variety of Poultry by one exhibitor, 10 00

BRANCH VI.

AGRICULTURAL IMPLEMENTS.

CLASS 1st.

Plows, Cultivators, &c.

- 400. To Uriah Wells, for the best three or four horse Plow (Livingston,) 10 00
- 401. To Wm. Alston, N. C., for the best two horse Plow, No. 23, 8 00
- 402. To George Watt for the best single Plow, Watt's No. 1, 5 00
- 403. To Uriah Wells, for the best shovel Plow, 5 00
- 404. To E. Whitman, for the best Subsoil Plow, 5 00
- 405. To George Watt, for the best new-ground Coalter Plow, 5 00
- 406. To E. Whitman, for the best Hill-side Plow, 5 00
- 407. To Wm. Alston, for the best Cultivator for corn, 5 00
- 408. To J. R. Wood, for the best Cultivator for Tobacco, 5 00
- 409. To Sayre & Reimington, for the best Cultivator for two horses, 5 00

410. To Uriah Wells, for the best wood-frame Harrow, \$ 6 00
 411. To ——— Ramsey, for the best iron-frame Harrow, 6 00
 412. To A. P. Routt, for the best Drain and furrow Plow, 10 00

CLASS 2nd.

Drills, Broadcasters, &c.

414. To Willoughby & Black, for the best Wheat Drill, 20 00

CLASS 3rd.

Wagons, Carts, Harness, &c.

421. To P. & J. Van Pett, for the best Wagon for farm use, 10 00

CLASS 4th.

Rollers, Clod-crushers, &c.

429. To Warren & Billups, for the best Smooth Roller, 10 00

CLASS 5th.

Horse Powers, Threshers, Separators, &c.

433. To E. Whitman, for the best Sweep Horse Power, 25 00
 434. To H. M. Smith, for the second best, 10 00
 435. To E. Whitman, for the best Threshing Machine, 20 00
 436. To E. Whitman, for the best Machine for threshing, cleaning, and separating Wheat at one operation, 30 00

CLASS 6th.

Straw and Root Cutters, Corn Shellers, &c.

439. To G. B. Griffin, for best Straw Cutter for horse power, 10 00
 440. To G. B. Griffin, for best Straw Cutter for hand power, 5 00
 441. To G. B. Griffin, for best horse power Cutter for cutting Corn-stalks for fodder, 15 00
 442. To Uriah Wells, for best Corn Sheller for horse power, 10 00
 443. To Uriah Wells for best Corn Sheller for hand power, 5 00
 444. To John Moore, for best Grist-mill for horse power, 10 00
 445. To W. H. Tappey, for best Saw-mill for farm use, 10 00
 447. To E. Whitman, for the best Root Cutter, 2 50

CLASS 7th.

Fanning Mills, Hay Press, &c.

449. To J. Montgomery & Brother, for the best Fan-mill, Certificate of continued superiority in lieu of the first Premium being debarred by having twice before received the first Premium.

450. To E. Whitman, for the best Hay Press, \$15 00
 454. To E. Whitman, for the best steel Spade Fork, 2 00
 455. To G. B. Griffin, for best Horse Rake, (Pratt's,) 5 00
 456. To G. B. Griffin, for the best Gleaner, (Pratt's,) 3 00

CLASS 8th.

458. To E. Whitman, for the most extensive and valuable collection of useful Machines and Implements, 25 00

CLASS 9th.

Miscellaneous.

459. To R. Brittingham Mitchell, for the best Pump adapted to deep wells, 10 00
 460. To Wm. Bowden, Jr., for the best Water Ram in operation, 10 00
 461. To E. Whitman, for the best Scoop or Scraper, 10 00
 464. To J. Wm. Vincent, R. J., for the best Sausage Cutter, 2 00
 466. To Wheeler & Wilson, for the best Sewing Machine, 10 00

CLASS 13th.

Reaping and Mowing Machines.

477. To C. Aultman & Co., Ohio, for the best Reaping Machine, 25 00
 478. To C. Aultman & Co., for the best Mowing Machine, 20 00

BRANCH VI.

CLASS 1st.

Fruits and Fruit Trees.

480. To Joseph Sinton & Son, for the largest variety of Apples suitable for Southern raising, labelled, 10 00
 483. To Franklin Davis, for the best and largest collection of Apple Trees suitable for Southern raising, 10 00
 484. To Franklin Davis for the best Pear Trees, &c., 10 00
 485. To Franklin Davis, for the best Peach Trees, &c., 10 00
 487. To Franklin Davis, for the best Grape Vines, 5 00
 488. To J. Standbury, for the best Strawberry Vines, 3 00
 489. To Franklin Davis, for the best Raspberry Plants, 3 00
 490. To D. E. Watkins, for the best bushel of Dried Apples, 3 00
 491. To D. E. Watkins, for the best bushel of Dried Peaches, 3 00

CLASS 2nd.

Flowers.

493. To James Ayres, of Petersburg, for the largest and choicest collection of Plants, 10 00

499. To James Ayres, of Petersburg, for the best and largest collection of chrysanthemums, \$3 00
 500. To Mrs. J. B. Varnum, of Petersburg, for the best Floral Ornament, 5 00
 501. To Miss Anna Joynes, of Petersburg, for the best hand Bouquet, 2 00
 503. To Franklin Davis, of Staunton, for the best and largest collection of Evergreens, 5 00
 504. To Franklin Davis, of Staunton, for the best and largest collection of hardy Flowering Shrubs, 5 00
 The Judges also find in this Department an Orange Tree, exhibited by Joseph W. Hobbs, of Petersburg, in a healthy and flourishing condition, and exhibiting proofs of skilful and successful culture, for which no premium is offered, and which they therefore recommend for a discretionary premium of \$3.

CLASS 3rd.
Vegetables.

505. To L. Chamberlain, for the largest and best assortment of Vegetables, 10 00
 506. To B. K. White, for the best dozen long Blood Beets, 2 00
 507. To L. Chamberlain, for the best dozen heads of Cabbage, 2 00
 510. To L. Chamberlain, for the best dozen Carrots, 2 00
 511. To L. Chamberlain, for the best dozen Egg Plants, 2 00
 512. To L. Chamberlain, for the best peck of Onions, 2 00
 513. To L. Chamberlain, for the best dozen Parsnips, 2 00
 514. To L. Pcebles, for the best bushel of Irish Potatoes, 2 00
 515. To L. G. Simonson, for the best bushel of Sweet Potatoes, 2 00
 Mrs. Robert Dunlop exhibited some very fine Egg Plants, but not in sufficient quantity to entitle her to the premium.

BRANCH VII.

CLASS 1st.

Butter and Cheese.

516. To E. Cummings, for the best specimen of Fresh Butter, 10 lbs., 10 00
 517. To Mrs. McCaw, of Powhatan, for best specimen of 5 lbs., 5 00
 Mrs. E. O. Watkins and Mrs. Barksdale exhibited fine specimens, but little inferior to those for which the premiums were awarded.

CLASS 2nd.

Honey, Bee-Hives, and Bacon Hams.

521. To B. K. White, for the best specimen of Honey, not less than 10 lbs., 5 00
 522. To A. S. Maddox, for the best Bee-Hive, (Phelps' Patent), 10 00
 523. To Mrs. James Ayres, for the best Ham cured by exhibitor, 8 00

524. To Mrs J. C. Howlett, for Second best, \$4 00

CLASS 1st.

Household Manufactures.

525 To Miss Emma R. Seay, for the best Bed Quilt, 5 00
 526. To Miss C. R. Turner, for the second best, 4 00
 527. To Mrs. Van Pelt, for the best Counterpane, 5 00
 528. To Mrs. Wm. T. Joynes, for the second best, 4 00
 529. To Mrs. W. M. Bush, (Augusta,) for the best pair home-made Blankets, 5 00
 530. To Mrs. Wm. Gregory, for the best home-made Carpet, 5 00
 536. To Mrs. A. A. Rowlett, for the best 10 yards heavy woolen Jeans, 5 00
 537. To Mrs. Henry Jarratt, for the second best, 3 00
 538. To Mrs. R. H. Allen, for the best 7 yards Linsey, 5 00
 539. To Miss Eliza Trotter, for the second best, 3 00

CLASS 2nd

541. To Mrs. J. C. Burton, for the best fine long yarn Hose, 3 00
 544. To Mrs. H. A. Morton, for the best specimen of home-made wine, 5 00
 545. To Mrs. D. W. Paul for the best specimen of home-made Bread, 5 00
 546. To Mrs. Wm. T. Joynes, for the best home-made Pound Cake, 3 00
 547. To Mrs. James Ayres, for the best home-made Sponge Cake, 3 00
 548. To Mrs. James Ayres, for the best home-made Pickles, 3 00
 549. To Mrs. James Ayres, for the best home-made Preserves, 3 00
 550. To Mrs. James Ayres, for the best variety of home-made Fruit Jelly, 3 00
 551. To Joel Sturdivant, for the best home-made Soap, 5 00
 The Committee recommended the award of a discretionary Premium to Mrs. H. A. Morton, for her successful cultivation of the Cranberry.

CLASS 3rd.

552. To Mrs. Maria Gilliam, and Miss A. Du Pre, for best Specimen of Embroidery, 8 00
 553. To Miss Sue Harrison, and Miss S. E. Grigg, for second best, 6 00
 556. To Mrs. J. N. Gordon, for best Specimen of Crotcheted Work, 8 00
 557. To Miss Maria E. Cook, for second best, 6 00
 558. To Mrs. Mary A. Morton, for best Specimen of Wax Work, 8 00
 559. To Mrs. James L. Howlett, for 2nd best, 6 00
 562. To Mrs. Judith Brown, aged 69, and Miss Cecilia Houze, for best Specimen of Feather Work, 8 00

563. To Mrs. Howell, (Sussex) and Mrs. M. M. Goodwin, for second best,	\$6 00
564. To Mrs. Toole, (Petersburg,) for best Specimen of Block Work,	8 00
565. To Mrs. Stephen Watkins, for second best,	6 00
566. To Mrs. D'Arcy Paul, and Mrs. Mildred Campbell, for best Specimen of Knitting,	8 00
567. To Mrs. Gilliam, (Prince George,) for second best,	6 00
568. To Mrs. P. Woolfolk, and Mrs. J. E. Williams, for best Specimen of Netting,	8 00
569. To Mrs. S. A. T. Clay, (Chesterfield,) for second best,	6 00

The Committee recommended in their Report the following as worthy of Discretionary Premiums, but failing to give to the exhibitors the necessary Certificate in the form prescribed by the Rules of the Society, the subjects were not brought to the notice of, nor were they considered by that Committee.

Mrs. Joseph C. Burton, for a skilfully and elegantly made Gentleman's Shirt.

Miss Sarah W. Parsons, ditto, ditto.

Miss Susan Maxwell, for a handsome Embroidered Bonnet.

Miss A. Harrison, for a beautiful Shawl, made by her.

Miss Mary B. Roberts, of Petersburg, for a handsome Bonnet and Flowers, made by her.

Mrs. A. Cairns, of Petersburg, for a Case of elegant Millinery.

Mrs. Shakespeare Caldwell, of Cincinnati, for a beautiful Specimen of Embroidery, which was entered after the Premiums had been awarded.

Domestic Manufactures.

CLASS 1st.

571. To J. O. Dickinson, for the best Flour, made of White Wheat, a	CERTIFICATE OF MERIT.
572. To Messrs. Kevan & Brother, for the best Flour, made of Red and White Wheat mixed,	CERTIFICATE OF MERIT.

CLASS 2nd.

573. Gilman, Lyon & Broadnax, for best Specimen of Manufactured Tobacco. (Julia Carroll brand,) a	CERTIFICATE OF MERIT.
587. To Dr. Alfred Whitehead, for Establishing and Maintaining in Virginia, for six months, in successful operation, a Factory for Tubular Draining Tiles,	\$50 00
588. To Dr. Alfred Powell, for best Sample of Tubular Draining Tiles,	5 00
591. To Augustus H. Drewry, for the best Drained Farm, &c.,	50 00

The Special Committee appointed to examine and pass on sundry articles not specified in the Premium List, and some of which were not on exhibition in time to be examined by other Committees on the first day, submitted the following Report:

To Wm. E. Stewart, (Petersburg,) one set Single and Buggy Harness, first Premium.

To Wm. E. Stewart, one set Carriage Harness, first Premium.

To Dawson & Wilkins. (Lynchburg,) 1 Ladies' Saddle and one Man's Saddle, No. 1 and 2, first Premium.

To T. A. St. Clair, of Petersburg, one Buggy exhibited by him, first Premium.

To John Camp, for superior Carriage, made in Petersburg and exhibited by him, first Premium.

To Spears & Cole, for a lot of Leather, exhibited by them, first Premium.

Discretionary Premiums.

The Committee on Discretionary Premiums have awarded the following:

Thomas Betts, of England, for his Imported Short-Horn Cow, "Blush Rose,"	\$40 00
For his Imported Short-Horn Cow, "Jemima,"	20 00
For his best Imported Hampshire Ram,	20 00
For second best do.,	20 00
For his best Imported Ram, a cross of Southdown and Hampshire,	20 00
Second best do.,	10 00
Col. Lilly, of Augusta, for his instrument for Surveying and Calculating Areas,	20 00
J. W. Hobbs, for his Orange Tree,	3 00
Samuel C. Ludington, for his two year Steer,	20 00
Paschal Buford, yearling Bull,	10 00
Theodore Baily, Dumping Wagon,	10 00
Mrs. A. C. Morton, Asparagus,	2 00
W. H. Tappey, Tobacco Press,	10 00
C. Fisher, three year old yellow Mule,	10 00
E. D. Tannahill, collection of Game Chickens,	2 00
To S. Shell, for collection of Roach Traps,	2 00
Geo. A. Ayres, of Loudoun, a Certificate of Merit, an extraordinary yield of Rye on 13 acres,	
For Saddle Cloths and Trapping, Miss Cogbill, Petersburg,	2 00
Frame of Raised Embroidery, Mrs. J. C. Walsh, of Lynchburg,	2 00
A worked Piano Cover, Mrs. S. A. Finney,	2 00
Pair of Ottomans, Miss Rowlett,	2 00
do. Mrs. Jarratt,	2 00
B. F. Thompson, slaughtered Mutton,	CERTIFICATE OF MERIT
Mr. Burton, for Carpet Sweeper,	"
North Chase, improved Self-Ventilating Refrigerators,	"
Mr. Burton's Old Dominion Coffee Pot,	"
Wm. H. Rodgerson, specimen of home made Starch,	"
Mr. Burton, for his invention of a Carpet Holder,	"
Jabez Smith, for his production Hungarian Grass,	"
T. J. Clarkson, Shingle Machine,	"
Bayer & Boyle, for Circular Saw,	"
John Viles, specimens of Roofing,	"
Mr. Burton, for his invention of a Milk Pan,	"
Samuel Sutherland, for collection of Guns,	"

Lundie Ingersoll, for his invention for producing Rotary Motion, CERTIFICATE OF MERIT.

Yardly Taylor, for his Plan and Description of a House for Drying Fruit, " " " " " "

To Paschal Buford, for Basket, " " " " " "

For want of sufficient time to properly investigate all of the very many subjects referred to the Committee, it is thought not improbable that some one may have been overlooked, and this explanation is made with the hope of satisfying any reasonable person who may have been neglected.

From the Lynchburg Virginian.

Agriculture as a Profession.

At the present time, when we have so many among us who are engaged in agricultural pursuits, a few reflections upon Agriculture as a profession will not be considered inappropriate or out of place. Poets have sung of the beauties, advantages and pleasures of this glorious life. Statesmen, after the turmoil and labor of political life, and the contentions of the Legislative Hall, have gladly sought repose and retirement on the farm. Merchants, when the vexations and toils and uncertainties of their calling have worn out their health and energy, longingly hope to spend the remnant of their days in the tillage of the soil. Professional men, harassed with their cares and responsibilities, and their rough contests with their fellow-men, fondly indulge in the same expectation—and who have tried it have found their fullest expectations realised.

Agriculture, of course, has its cares and annoyances. Every profession has these to encounter. It is fore-ordained that man must live by the sweat of his brow—and industry and care and labor are requisite for success in every employment. We speak by comparison when we say that the culture of the soil combines more positive pleasures, with fewer disagreeable incidents, than any other calling. In the first place, it is the most *independent* life which any man can follow. While the politician, and the merchant, and the professional man, and the editor must have daily intercourse with men, and must exercise prudence and forbearance, and must humor this one, and consult the prejudices of the other, and must bear with ill-temper, and ignorance, and unreasonable requirements of those with whom they have dealings, the Farmer, on the contrary, is independent of them all. When his crop is ready for the market, he has only to sell at the highest price he can get, and here his necessary intercourse with all others ends. He may pursue the even tenor of his way, regardless of the opinions of the world.

In the next place, it is the most *healthful* of all pursuits. The statistics of mortality prove the farmer to be longer-lived, in the general, than any other class. While he has principally

physical labor to perform, other professions have mental labors in addition, which harass the mind and wear down the constitution.—Farming, it is true, is a laborious life—but this very labor strengthens the frame, conduces to health, promotes longevity, and gives zest to the planter's life.

Take it all in all, farming is about as remunerative as any other profession. Ten merchants fail in business where one farmer does. Professions men rarely grow rich from their professional alone, and politicians notoriously die poor, unless they accumulate wealth by stealing.

If the farmer, at the end of the year, has been able only to "make both ends meet," he has done well—for his property is increasing and accumulating all the time. In fact, it is a much more profitable business than many of those engaged in it are themselves aware of.—True, the farmer has to encounter occasionally bad seasons and short crops, and low prices—but, in the long run, the general average is favorable to him. And what he falls short in one year, he is very apt to make up in another.

The farmers and planters of the South, in a political point of view, constitute the great conservative class of the country. They are not so subject to violent excitement, and are not so easily carried away by passion, as the commercial and manufacturing classes of the large cities. Where they are educated and intelligent, as most of them are, they are averse to everything like mob-law and insubordination. "*O, fortunatos Agricolas, si sua bona norint,*" was the exclamation of the Latin poet nearly two thousand years ago, and the remark may be made with still greater truth at the present day.

Co-Operation of the Wife.

There is much good sense and truth in the remark of a modern author, that no man ever prospered in the world without the co-operation of his wife. If she unites in mutual endeavors, or rewards his labor with an endearing smile, with what confidence will he resort to his merchandise or his farm, fly over lands, sail upon the seas, meet difficulty or encounter danger, if he knows he is not spending his strength in vain, but that his labor will be rewarded by the sweets of home.

Valley Farmer.

To Preserve Cut Flowers.

Procure a flat dish of porcelain, into which pour water sufficient to nearly fill it; in the water place a vase of flowers, and over the vase place a bell glass with its rim in the water.



THE SOUTHERN PLANTER.

RICHMOND, VIRGINIA.

MR. FITZHUGH CATLETT is our authorized agent (at Guiney's Depot, Caroline County,) to receive money for us, and to give receipts. New subscribers are requested to leave their names with him, *daily, if not oftener.*

MR. GEO. C. REID is our Agent in Norfolk, Virginia.

F. N. WATKINS, Esq'r., at the office of the Farmers Bank of Va., at Farmville, is our authorized Agent to receive money due for subscriptions to this paper and to grant receipts therefor. Our subscribers in Prince Edward and the counties adjacent will please call on him.

Major PHILIP WILLIAMS is our authorized agent to receive subscriptions, and give receipts for us. See his card in our advertising sheet. Our subscribers in Washington City, and Georgetown, D. C., will confer a favor on us by settling their bills with him.

AUGUST & WILLIAMS.

Perseverance.

So various are the vicissitudes of life—so many the disappointments that await alike the sanguine and gloomy—so true is it that “man is born unto trouble”—so easy is it for riches to “make unto themselves wings and fly away,” that perseverance is not only a quality to be admired in the character of a man, but it is an essential prerequisite to success in all our undertakings. What a life of ennui and satiety we should lead, did we not have occasion, more or less frequent, for arousing all our faculties of both body and mind, to overthrow some obstacle in our pathway, and to cause us to hope. A life with nothing left to hope *for*, would not be worth the having—trackless as the sea, its voyager would have no goal ahead—leave no mark behind.

We should not be contented to fill up our whole volume of life with the ever-present *now*, but making sure of the right way, “go

ahead,” leaving *behind* us a record of industry, probity, and charity—carrying with us a heart full of “good will to men,”—*hoping* for the future to abound still more in every good work. Alas! this is easier said than done. We are surrounded by every sort of temptation to lead a life of selfishness, and ease, and to forget our duty; but so much the greater is the necessity for effort, which, being made, brings its reward of renewed vigour to mind and body—the ability and strength for still greater undertakings, and the enjoyment of larger intellectual capacities.

How often in our every-day experience do we see what is and can be effected by perseverance. At school the dull boy who attends to his books, and labours to discharge the duties of his position, attains, and retains, a much more respectable rank as a scholar, than the “smart fellow” who lacks perseverance, and easily succumbs to difficulty. So it is in all classes—in every one of man's various pursuits, the steady, persevering, and industrious win life's prizes.

Try again; if failure attends one effort in a good cause, make another. A persevering, determined “*I will*,” has helped many a man over difficulties which at first view seemed insurmountable, and *can* help many others over as many more.

It is as much a duty to *work* on, even amidst great discouragements, as it is natural to *hope* when the *present* is a disappointment of all our brightest anticipations. There is a necessity that we should accept the trials, discouragements, discomforts and disappointments which pertain ordinarily to our stations in life—many of which seem to us to be the fruit of fortuitous circumstances, since our places are marked out for us by the wisdom of Providence, and there is no such thing as chance.

It remains for us, then, if we would secure as much happiness as is presented by the things of the world, to keep in view an object worthy of pursuit, and to persevere in our efforts to win success. If it be the acquisition of wealth, let it not be for the sake of wealth *alone*: but let the longings of a tender heart, keenly alive to human sympathies, and generous *principles*, (not *impulses*,) point out to us the means of employing the wealth acquired by the blessing of Providence on our own ef-

forts in such manner as to benefit the needy, and to carry comfort and succour to the afflicted and distressed. Every good man will cry, God speed to all effort made for such an object and so good a cause. But the man who toils for money to hoard, or to spend upon himself alone, must be pitied, or despised. We know not which he most deserves, to be despised for his narrowness of mind, and absence of soul—or to be pitied for his ignorance of the existence of so many sources of true happiness, which he has neglected or thrown away in failing to attach himself by bonds of compassion and benefaction to the suffering and needy of his race. He is an *outsider* of the human family; but is no connexion, and can never come within the circle of affection which surrounds the *worthy* members, and secures for each the respect and sympathetic coöperation of his fellows.

We *must not* be discouraged by the perplexities and doubts which often surround us, while pursuing the only path which we think duty allows us to follow; but perseverance in our legitimate calling, cheered on by the approving smiles of conscience, we will know no such word as fear.

"Tho' clouds hang o'er us, there's a blessing

Waiting for us, we'll not fear:

In the right path we're progressing,—

We'll trust in God and persevere."

Brother farmers, do we not greatly need perseverance in our own profession, at the present time of disaster to crops and herds? To our lot it most especially falls to feel the full force of the fiat, "Cursed is the ground or thy sake." Shall we despair? Nay, rather let us redouble our energies, and strive to make good our losses and want of success in most of the branches of agricultural industry. Let us improve our lands as much as possible. So we shall add to our *prospective* riches, and be laying up a hoard on which we may draw at some future day.

Our Next Volume.

With the present Number, our 18th Volume closed, and it is proper that we should at the end of the year speak of what we expect to do in return for the patronage of our friends, in our next volume.

We trust that the Southern Planter fills the

measure of expectation of all its friends; nor do we intend that any effort on our part shall be wanting, to improve its pages constantly, and to make it more and more worthy of the support of all farmers.

If we can have *their* co-operation, we know it *must* improve steadily and rapidly. In this connection, let us say to all our brother farmers, that they have it in their power to benefit themselves as well as us, by sending us as contributions to our store of facts and theories, everything worthy of observation in the circle of their own agricultural duties. What interests one must be of interest to many others, in so large a family; while the constant interchange of opinions through the medium of agricultural papers, helps the paper, helps the farmer, and the cause in which both editor and farmer should be deeply interested. We can only pledge ourselves then for an earnest and faithful performance of *our part*, in the cause of agricultural progress. May we not expect to have support of those who are co-workers with us in "tilling the soil?"

We believe it, as it has been said with truth, that when a man has done all in *his* power to discharge faithfully his own duty, he acquires "a right to expect the blessings of Providence on his honest industry?"

We have made arrangements to improve the type and paper, and our next volume will present a neater appearance to its friends. This much for the *outside*—may it prove a temptation to many farmers to find *themselves in print within*.

We shall make every honest effort to increase our circulation, and while we regret being too modest to ask a man to subscribe to our paper when we meet him, still, in the quiet solitude of our office, we do not hesitate to make this silent appeal to every man who has two dollars unappropriated, to subscribe to the So. Planter.

We would call the attention of our subscribers to the fact that our advertising sheet does not encroach upon the sixty-four pages of reading matter legitimately belonging to every number of the Southern Planter, and that every page of advertisement is printed upon an extra sheet, which while it costs subscribers nothing, is a very material aid to us.

We make this explanation, in consequence of having heard that the *enlargement* of the

Planter, was believed to be by some of our subscribers, *only an increase of its advertising business—the size being doubled by that means.*—We hope every one laboring under such misapprehension, will now understand the matter.

The Fairs.

The U. S. Agricultural Society held its annual show in Richmond, in connection with the Virginia Central Society, October 25th, 26th, 27th, 28th, 29th and 30th, and the Virginia State Agricultural Society united with the Union Society in an exhibition at Petersburg, November 2nd, 3rd, 4th, and 5th. Many of our Virginia readers, we take it for granted, witnessed these exhibitions. If they like, as well as we do, to look at fine stock, and to scrutinize their "points," we are very sure all had a look for themselves who *could* get away from the cares of home.

The show of Short-horns by Mr. Ludington, of Greenbrier, was the best *we* ever saw. Among them was a white heifer, a perfect beauty, which was said by some experienced breeders to be *the most perfect* animal of her Class (fat Cattle) they had ever looked at. Mr. Betts had some imported Short-horns at the Petersburg Fair, which were fine, but were not in our opinion equal to Mr. L.'s Kentucky heifers, which goes to prove that all England can't beat Kentucky "Blue-grass." Indeed, without professing to be much of a judge in these matters, we can't help believing that we have now in the hands of the breeders of the United States as fine stock of most kinds, as any that can be imported from England or elsewhere. The Devons were well represented in the herds of Messrs. Strandburg, McHenry, Bowie & Davis.

Mr. Aston, of Ohio, had some Herefords which were very fine—these being the first we believe ever exhibited in Virginia.

The show of horses was *good enough*. Fine specimens of every class being on the grounds.

We have seen larger collections of stock and machinery on the Richmond Grounds, than was present at the Fair of the U. S. Ag'l Society; but the *quality* of the articles exhibited was "hard to beat."

The number of sheep and hogs and cattle was greater at the Petersburg show than in Richmond, and in this respect was (we think)

the best exhibition ever made by the State Society.

As to the speeches made, we can say nothing of them, as we could not get on the grounds time enough to *hear* any of them.

We had the pleasure of making the acquaintance of some of our Editorial brethren from different States who were visitors to our city, and regret having missed *seeing* several others. We hope, however, this pleasure *is in reversion* for us.

We give insertion to the Premium List of the Virginia State Society in our present No. The Premiums awarded to particular animals will call the attention of our readers to them, and to the exhibitors' names also.

We have not space for an extended notice of the Fairs, but are glad to say that we have assurance of success from all the exhibitions held in the State this year. We are glad to see it, and from the bottom of our heart we say, let

"Old Virginia never tire."

We have been promised engravings of some of the sheep exhibited, which, when we get them in possession, will be inserted in the Planter.

To Subscribers in Arrears.

To every subscriber who shall send us *before the first day of February next*, the amount now due us, together with his subscription, we will send along with the receipt a sufficient number of P. O. stamps to pay for the postage on the volume for 1859.

We hope they will *all* avail themselves of this offer, as there are so many of them who are in arrears, that we shall be greatly benefited by their compliance.

We have the pleasure of adding to our exchange list "The Wisconsin Farmer and Northwestern Cultivator," the acquaintance of whose Editors we had the happiness to make at the late Fairs here and in Petersburg.

We hope they may long live to indulge pleasant memories of their brief sojourn in the "Old Dominion," and to reap the well-earned reward of their Editorial labours, which are so favourably represented by their neat and richly stored pages.

Several "Kossuth" colts took Premiums in Petersburg, which no doubt they well merited; viz: R. A. Willis' "Young America," W. C. Archer's "Lady of the Lake," W. P. Braxton's "Virginius."

Nottoway Club.

This association of practical farmers is one of the most useful auxiliaries in the cause of agricultural improvement and progress to be found among the many clubs existing in Eastern Virginia. They have a standing rule requiring from each of its members a report upon some one or more experiments conducted by him, or other essay of a useful and instructive character.

Some of these reports have been from time to time laid before the readers of the Planter, and we now have to acknowledge the kindness of the secretary in furnishing us with a number of the latest of them, which we shall be pleased to bring out in our next issue. Meanwhile, the report of Mr. Wm. Irby is published in advance of the rest, because if its suggestions are followed, as we doubt not to some extent they will be, no time need be lost in procuring and burying the chestnuts for planting in the spring.—[EDITOR.]

Mr. President:

As I have been disappointed in perfecting the experiment which I intended reporting as my annual contribution, I beg leave, in lieu thereof, to offer a few suggestions on the expediency and benefits of rearing chestnuts trees on farms deficient in woodland.

On my own and an adjoining farm there are several large chestnuts trees, which, I suppose, sprang from the nuts planted. Around these, as far off in some instances as a half mile, (since the land has been enclosed and thereby rendered inaccessible to hogs,) I find there are a great many young chestnuts springing up among the old field pines, from nuts dropped by crows and squirrels, I find these growing thriftily on poor land, from which I conclude that the tree will grow in our section of country on any dry land that will produce old field pine. As wood for fuel and timber is already scarce on many farms, and must become more and more so, it would be wise for the owners of such farms to make preparation for a supply for future generations. It is true the old field pine springs up spontaneously, and grows rapidly on land thrown out of cultivation, but it is very indifferent for fuel and rails, which the chestnut is not only admirably adapted for both

these purposes, but would also be a great accession for the mast for hogs. As to the mode of rearing I cannot speak from experience, but think it would be well to follow the indications of nature—i. e. to bury the nuts slightly in the fall of the year, and before they germinate in the spring plant them, or they might be planted in the fall where it is designed for them to grow, or a nursery might be made, as I find they will bear transplanting. A very decided advantage which this tree has over the old field pine is, that when cut down, the sprouts spring up very soon from the stump and grow very rapidly, which would afford a continued supply of timber on the same land. I am persuaded from my observations that it would not be difficult to have a large portion of our poor land well set in chestnut, which certainly would render it much more valuable than it is, in its present condition.

Respectfully submitted.

WM. IRBY.

P. S.—Although foreign to the subject of the above report, I will state that I am convinced from my present year's experience that a covering of wheat straw on high land plant patches is superior to brush. The patch should be covered thick enough to hide the ground, and if found too thick in the spring, a portion of the straw may readily be removed with a manure fork. I will also state that I think if our plant patches were thickly surrounded by pine bushes, they would be in a great measure, if not entirely, protected from the ravages of the fly.

W. I.

August 13, 1857.

To Subscribers.

In consequence of the change in the Proprietorship of the "Southern Planter," it is very important that our subscribers should remit the amount of their indebtedness with as little delay as possible.

The amount due from each subscriber is in itself comparatively trifling, but in the aggregate it makes up a very large sum, and if each subscriber will consider this as a direct appeal to *himself*, and promptly remit the amount of his bill, it will be of infinite service to us.

We commence sending with this number the bill to each subscriber who is in arrear, and shall continue to do so until all shall have been sent out. We ask, as a favor, a prompt response from all.

The bills are made up to 1st January next. The fractional part of a dollar can be remitted in postage stamps, or the change returned in the same.

AUGUST & WILLIAMS.

To Postmasters and Others.

We are satisfied, that with proper exertion, any person who will interest himself for us, will be able to make up a list of *new* subscribers for the "Planter," in almost any neighborhood, in this or any other of the Southern States. We offer, as an inducement to those who are disposed to aid and encourage us in our efforts to extend the circulation of this paper, the following premiums in addition to our hitherto published terms:

To any person who will send us clubs of
 3 *new* subscribers and \$6,—
 The So. Planter for 1857.
 6 *new* subscribers and \$12,—
 The So. Planter for 1857 and '58.
 9 *new* subscribers and \$18,—
 The So. Planter for 1857, '58 and '59,
 15 *new* subscribers and \$30,—
 The So. Planter for 1857, '58 and '59,
 and a copy of the Southern Literary Messenger for one year.

To single new subscribers we will send the *present* volume, (commencing with the number for January, 1858,) at the low price of \$1 50, *paid in advance*.

We call upon every one interested in promoting the progress and improvement of agriculture, to lend us his aid in contributions of original articles on practical or scientific agriculture, in order that our paper may continue to be worthy of the confidence and support of those who have hitherto so liberally sustained it, and to whose interests its pages will continue to be zealously devoted.

AUGUST & WILLIAMS.

For the Southern Planter.

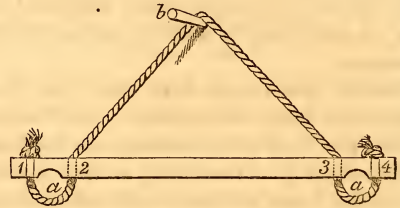
Hog Killing and Making Bacon.

Mr. Editor,—Your method of killing hogs and making bacon, is a very good one. I think so because it is very similar to one I successfully practice. But I would earnestly protest against making one of our great occasions, a mere afternoon piece of work. In this region we regard "hog killing" as a jubilee, second only to Christmas.

Having gotten every thing in perfect readiness over night, the hands turn in at an earlier hour than usual, to be called at 2 A. M. if fair—if not, the next fair day. At the appointed hour, the overseer, the foreman, or the judge of the weather, repairs to the killing ground, and if the sky indicates a favourable day, with a loud halloo applies the torch, which speedily brings all hands to the ground and the pile to a glorious big blaze. 'Tis an honour to stick the first hog, and a reproach if the half pen is not swung by breakfast; you then have time to wind up the whole business, and your hogs are in nice condition to handle if the heavens are

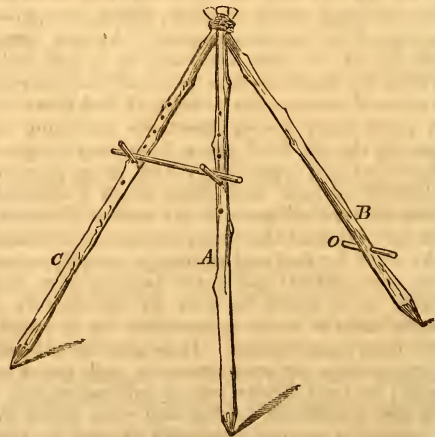
threatening, if clear they are suffered to hang all night out of doors. My bacon, although invariably excellent, was never so good as last year, when I was induced by my overseer to drop each ham, for five minutes, in a strong red pepper tea before rubbing with salt. I find that it is a popular idea in a portion of this county, that a hog should have little or no water after being put in the fattening pen, my experience is contrarywise.

I give them a liberal supply of pure fresh water. I have a gambrel, which is a great convenience to one who has much butchering to do, or who spays his shoats in the belly. It is a simple stick of wood of any size and length—say 2 feet long, and 2 inches in diameter, with 2 holes in each end, 2 inches apart. Thus,



with a rope passing through holes 2 and 3 and returned through holes 1 and 4 and knotted, the hind feet are inserted in loops *a a* which tighten when the animal is suspended on pin *b*. I first saw this simple thing used by a negro in Caroline county.

I have a better contrivance for swinging a beef, and just as simple; it consists of 3 stout poles, 13 feet long, connected just as the three legs of the sheers for hoisting threshing machines. When you are ready to hoist your beef, stretch your tripod on the ground in the shape of a Y, the outside legs on either side of the animal; pass the ends of the gambrel, (which is a plain stick, passed through the hind legs in the usual way) over 2 stout pins inserted in the outside legs of the tripod, and with a man to each leg hoist away. After



raising a few feet from the ground, one man can manage it—provided the feet of the tripod are sharp and take good hold in the ground. There should be a number of holes in the outside legs *A* and *C*—that the pins may be raised or lowered according to the size of the animal. A stout pin *o*, 2 feet long, inserted in leg *B*, will assist in hoisting. Any negro can make it of 3 stout fence rails, and pack it on his shoulder to any spot you may select to kill.

Yours, LOUDOUN.

For the Planter.

Action of Lime.

MR. EDITOR :

Before giving you the results of my experiments in regard to the action of Lime, (and which I shall always take pleasure in doing,) I must guard you against placing any confidence in them, in view of the title with which I have been complimented. My only claim to the distinction referred to, should be credited to the kind feelings of an old and much valued friend.

Some years since, I made an application of 30 bushels of Lime to a measured acre of land, by the way of experiment. This acre was similar in quality and character to the rest of the field, the whole being what is termed a clay soil. The field was put in corn and followed by oats and wheat, but no beneficial effect was discernable upon either of these crops. Indeed the effect seemed to be rather injurious than otherwise; and the same remark may be extended to the three years it remained in grass. When put in corn again, however, this acre could be readily distinguished by the greater luxuriance of the growth, and this superiority was maintained throughout the season. This singular and unlooked for result, after a lapse of six years, led me to institute a series of experiments to ascertain the precise mode of action of Lime. With this view seeds of wheat, and of other plants, were germinated upon cotton in glasses of water,—and when of sufficient size, were transferred, half of them, to glasses containing pure water, the other half to glasses containing water in which Lime in its different forms had been dissolved. From these experiments, it appeared that Lime in *any other form* than that of a *neutral salt*, rather retarded than promoted the growth of plants. This result seemed to account for the uniformly beneficial effect of Lime in those countries where it exists as a natural ingredient of the soil, and the question now presented itself, why should its action be so different upon clay and sandy soils when artificially applied?

While reflecting upon the subject, it occurred to me, that the difference might safely be referred, in the first place, to the entire change of properties occasioned by the process of burning; old combinations being thus bro-

ken up, and new affinities evolved. And in the second place, to the opposite chemical relations of these soils inviting a favourable direction of these new affinities. Thus, clay is known to exhibit a slight alkaline reaction, and hence it may be reasonably inferred, that in these soils new affinities of the Lime will be expended entirely upon the decomposing organic remains; and so long as this process continues, there must necessarily be a conflict between the vital powers of the plant, and the chemical action of Lime, both contending for the same element—carbonic acid; nor will this contest cease until the Lime has returned back to its natural, or original state,—that of a neutral salt. In the instance which has been mentioned of the application of 30 bushels to an acre of clay soil, it would seem to be a fair inference that the unfavourable direction of the new affinities continued for a period of six years.

On the other hand, siliceous, which is the base of sandy soils, exhibits an acid reaction, and hence it may be supposed that in these soils the new affinities will be, to a considerable extent at least, diverted from the organic matters, and invited to the siliceous or silica acid,—thus forming a salt of lime which is perhaps more generally useful than any other. Of this fact, the old walls of buildings furnish a striking illustration.*

Influenced by the foregoing views, it has been my practice to sow Lime upon the wheat field at the rate of six or eight bushels only per acre, the aim being to secure what I term its physiological in contradistinction to its chemical action, and I am satisfied it is the best mode on soils of which the predominant ingredient is clay. Thus applied, the effect is generally soon visible in the improved colour of the plants, and a *permanently healthful green* will always insure a yield commensurate with the fertility of the land. The remote effects are recognized in the gradual diminution of the sorrel and running brier, and a corresponding increase of the clover family.

Becoming infected with the guano fever, my experiments were suspended, much now to my regret. They have, however, been again resumed, and at a future time I may perhaps be able to report progress.

In regard to sandy soils, my endeavour would be to secure both its physiological and chemical action, and for this purpose, should think the application of fifteen or twenty bushels per acre would be an ample dressing for a rotation of five or six years. It is well known that plants can take up nothing except in the form of solution, and we have abundant evidence going to show, that the effects of fifty or one hundred bushels of Lime applied to an

* Such, at least, seems to be the conclusion deducible from the admitted chemical data involved.

acre of land have been distinctly visible for an equal number of years. Hence it would appear that the quantity of rain which falls upon an acre of land annually, is not adequate to dissolve more than a bushel or two of this substance. If more were dissolved, plants would certainly take up a larger quantity, and the effects would necessarily be less permanent.

I have thus indicated the general principles which have guided me in the use of Lime, and if they shall contribute in any degree to your benefit, I shall be truly gratified.

Very truly your friend,

Ingleside, Goochland, April 13th, 1858.

We are indebted to the courtesy of Mr. F. G. Ruffin, the former Editor of this paper, for the communication above, which would have appeared earlier in our columns, but for the fact of its having been accidentally overlooked.—EDITOR.

CIRCULAR.

BLACK ROCK, N. Y., Sept. 1858.

Editor Southern Planter:

Dear Sir—The approbation with which the previous volumes of the American Herd-Book have been received by the Short Horn breeders of this country, together with the large contribution of pedigrees to their pages, and the solicitations of many breeders to have a fourth volume in preparation, have induced me to give this notice, that sufficient time may be given for the full examination which is required by every Short Horn breeder to properly arrange their pedigrees. Since the compilation of the last volume, hundreds of young animals have been produced, and new importations made from abroad; and by the time the next volume can be ready for the press, a further natural increase to our existing herds will be added. I therefore give you this notice, that in case you choose to record your pedigrees, you can have ample time to do so. I ask your attention to the following particulars:

1st.—All pedigrees must be sent in previous to the *first day of December, 1858*, to allow me time to compile them, and issue the book by *May 1, 1859*.

2d.—Every pedigree must be made out at *full length*, after the manner of those in the volumes of the American Herd Book, as I can not encounter the labor and responsibility of making out full pedigrees from short notes, hints and memorandums. The imperfect condition of many private records required me to do that labor for my previous volumes, which it is now unnecessary to repeat, with such extensive authorities as those volumes before you will afford. I can not, therefore, accept such imperfect papers, only in cases where your animals or their ancestors have not been previously recorded, either in the English or American

Herd-books. Another reason for this is, that every breeder ought to be supposed to understand the lineage of his stock better than a stranger, and consequently he can give their pedigrees with greater accuracy.

3d.—*Let every individual pedigree be complete in itself*, like those in the published Herd Books. State by whom the animal was bred, (if you wish that fact known;) the date (by month and year) of its birth; the name and Post Office, (County and State;) residence of its present owner; its sex, (this may merely say "Bull" or "Cow," in parentheses, by the side of the animal's name;) the color, whether white, red, red and white, red roan, light roan, or roan, simply, without qualification. In roans, where white is the prevailing color, they are *light* roans; where red prevails over the white, they are *red* roans. By referring to the past volumes of the Herd-book, you cannot mistake the mode of description, or the tabling the produce of the cows. Do not send me *printed* pedigrees from newspapers, hand-bills, or catalogues, &c., unless they are in Herd-book form, and complete; nor when they are printed on both sides of the paper, as, if so, they must be copied by me for the printers. The names of bulls occurring as sires in the pedigrees, may be referred to by their numbers, when recorded in the Herd-books, either English or American. When such bulls are not recorded, let their pedigrees be written and referred to *distinctly* under the pedigree to which he is a party. Any unrecorded and unnumbered bull referred to in a pedigree must also be numbered and recorded to properly elucidate such pedigree, and a charge of fifty cents will be made for such bull or bulls. In cases where uncommon labor is necessary for me to find out the pedigree, an additional charge of fifty cents to a dollar each will be made, of which the owner of the animal will be notified at the time.

4th.—Every animal presented for record must be *well-bred*; and where evidence of the fact cannot be traced to animals recorded in an existing Herd-Book, *documentary* evidence must be furnished to sustain the fact that they are *true* Short Horns, and are descended from well authenticated Herd-Book animals.

5th.—Fifty cents will be charged for each animal recorded in a distinct pedigree by name, excepting the animals named in the tables of produce of recorded cows. The record fee, in current money at your place, to be remitted when the pedigrees are sent to me. *In all cases where a pedigree, for insufficiency, cannot be recorded, such pedigree will be sent back, if requested, and the fee returned.*

6th.—In making out your pedigrees, *write only on one side of the paper*. Write legibly, and with perfect *distinctness*, all *proper* names, as without such writing many names can only be *guessed* at, and important mistakes may occur. Let your lines be quite half an inch

apart, and between each pedigree let there be a space of at least two inches blank paper. When pedigrees are written on *both sides* of the paper, *they will be immediately returned*, as one of them must, in all cases, be copied in order to print them.

7th.—If any extraordinary quality of milking, in accurate weights or measures, and times, belong to your cows, or of dead weights of carcasses in slaughtered recorded animals, have been made, they may be noticed; as we claim that the Short Horns are the greatest milkers, and the heaviest beef, of any neat cattle whatever, and such instances carry proof of these facts to the public.

8th.—If there have been any errors or omissions in the pedigrees of your animals already recorded, by my fault, please correct them and send them to me, and I will rectify them in proper order in the fourth volume, by name and reference, without charge.

9th.—I will print any number of well-drawn, accurate portraits of animals, for the fourth volume, at five dollars each for the whole edition of the book; the portraits and cuts to be furnished by the owners. This will be done on the best of fine tinted paper. I can not print portraits without charge, as the expense is too heavy an outlay for me, and the main benefit accrues to the proprietors of such animals. In this relation, I am authorized, by Mr. John R. Page, a good artist, whose address is Sennett, Cayuga Co., N. Y., to state that he will proceed to take such portraits, whenever a sufficient number can be furnished to justify it, and that he will superintend the engraving of them by competent workmen. Many portraits in the second and third volumes are samples of his execution. All persons who contemplate giving portraits of their cattle, should lose no time in obtaining them at once, that there may be ample time to have them properly engraved.

10th.—The price of the book to contributors and subscribers, will be the same as the last—five dollars a copy—payable on ordering it for delivery. The work to be the same in style and material as the third volume.

11th.—If you have sold unrecorded animals to any breeders whose names are not in the third volume, I will thank you to send me their names, that I may send them a copy of this circular, as it is of advantage to you to let animals of your breeding, now in other hands, be recorded and known to the public.

12th.—I suggest that even in cases where you record by name the *produce* of your cows, it is still better to give all such produce a distinct record of their own. They become thus more conspicuous, as such produce merely recorded with the cow is not much looked after by inquirers,—the chief advantage in the produce tables being to show that the *cow*, whose progeny is so recorded, is a successful breeder. This separate record will add an item to the expense, but it is a trifle compared with the

value of an animal worth from one hundred to five hundred or a thousand dollars. Address me at Black Rock, N. Y.

Respectfully yours,
LEWIS F. ALLEN,
Editor American Herd Book.

Uses of a Dead Horse.

Firstly, we have the hair, which may weigh about 1½ lbs., and which sells for 8d. to 1s. Horse-hair, we know, is applied to many purposes; it is made into hair-cloth for seatings, colored hair damasks, bags for crushing seed for the use of the oil-crusher, cider-makers and others. A consumption of 800 tons of horse-hair a year, of home and foreign production, valued at about £80,000, shows the value of this one item.

Next we have the hide, weighing—say 30 lbs., and worth possibly 8s., for converting, when split, into the finest Cordova leather; or, in its full thickness, for covering the large board-room tables of officers, &c.

The tendons weigh probably 6 lbs., and are converted, like other animal tissues, into fine glue, or gelatine.

The flesh will weigh about 224 lbs. boiled, and may be used as meat for men, dogs, poultry, &c.

Smile not, gentle reader, at the banquet offered—of viands which are just now in high repute on the continent. A society of economists, naturalists and hardy gourminds in Paris, aim at the introduction of horse-flesh in the category of butcher's meat. They set the example themselves, and the example is spreading. It is argued that the horse ought to contribute to the nourishment of the human race, as well as the ox, the sheep, and the pig. That it does so already in our own metropolis to a great extent, in the shape of nominal smoked "ox-tongues" from Russia, and chopped so-called "beef" sausage meat in Westminster, Whitechapel, and other suburban localities. But the penchant for roast and boiled horse-flesh has found adherents even here, and our esteemed contemporary, the "Journal of Agriculture," of Edinburgh, has come out strong in a recent number in its favor.

M. St. Hilaire, the champion of this new addition to our food resources, reasons in this fashion:

"Horse-flesh has long been regarded as of a sweetish, disagreeable taste, very tough, and not to be eaten without difficulty. So many different facts are opposed to this prejudice, that it is impossible not to recognise its slight foundation. The free or wild horse is hunted as game in all parts of the world where it exists—Asia, Africa and America—and formerly, and perhaps even now, in Europe. The domestic horse, itself is made use of as alimentary as well as auxiliary—in some cases alto-

gether alimentary—in Africa, America, Asia, and some parts of Europe.

"Its flesh is relished by people the most different in their manner of life, and of race the most diverse—negro, Mongol, Malay, American, Caucasian. It was much esteemed up to the eighteenth century among the ancestors of some of the greatest nations of western Europe, who had it in general use, and gave it up with regret. Soldiers to whom it had been served out, and people in towns who have bought it in markets, have frequently taken it for beef. Still more often, and indeed habitually, it has been sold in restaurants, even in the best, as venison, and without the customers even suspecting the fraud or complaining of it.

"And further, if horse-flesh has been often accepted as good under a false name, it has also been pronounced good by those who, to judge of its qualities, have submitted it to careful experiment, and by all who have tasted it in proper condition—that it is, when taken from a sound and rested horse, and kept sufficiently long. It is then excellent roasted; and if it be not so acceptable as *bouilli*, it is precisely because it furnishes one of the best soups—*perhaps the best* that is known. It is good also, as experiments prove, made by myself, as well as others, when taken from old horses, not fattened, whose age was sixteen, nineteen, twenty, and even twenty-three years—animals thought to be worth no more than a few francs beyond the value of their skin. This is a capital fact, since it shows the possibility of utilizing a second time, for their flesh, horses which have already been utilized up to old age for the strength; and consequently, of obtaining a further and almost gratuitous profit at the end of their life, after they had well nigh paid the cost of their rearing and keep by their labor."

So much for the great champion of horse-flesh.

Having disposed of the flesh, we come next to the blood, heart and tongue, weighing about 60 lbs. The former is used, like the blood of other animals, as a decolorizer, for manure, and for making, with other animal substances, the well known salt, prussiate potash. The disposal of the heart and tongue we will say nothing about, as there is somewhat of a mystery resting upon their appropriation.

The intestines of the horse, weighing about 80 lbs., are converted to several uses. When cleaned, they serve for covering bolonies and sausages; or they are twisted into bands or strings for bowing cotton, or for other purposes.

There is seldom much fat to be got from the horse: probably about 20 lbs. may be obtained; and this is used, after being distilled, for lamps. We import horse grease largely from the River Plate, but we get better at home. The grease is also worked up by the soap and candle-makers in common with other

fats, while the entrails and remnants are given to hogs, to make food for home consumption—at least this is so in the United States, where the porcine race are less daintily fed than our own store-fed pigs.

The bones come next; and these weigh, say about 160 lbs., and are sold at the rate of 4s. 6d. per cwt., either to convert into knife-handles, or for making phosphorus, and super-phosphate of lime. They will not do for animal charcoal, because horses being usually killed when aged, the bones contain too great a proportion of phosphate of lime, and too little animal matter. Ground into dust, or crushed into half-inch bone, they make excellent manure; while other special manures for turnips, &c., are made from the blood, flesh and bones combined.

The Kensington Museum catalogue, compiled by Mr. P. L. Simmonds, lets us into the secret of cleaning the bones and divesting them of putrid flesh, &c., so as fit to them for use in manufactures. To take off the flesh by hand is a tedious and difficult operation. An ingenious Frenchman solved the difficulty. He noticed that rats were very fond of horse flesh; so are fowls—other arguments in favor of M. St. Hilaire's reasoning of the wholesomeness of the food. Our Frenchman advised the authorities to colonize the dead horse-pound with rats. This common pound is an enclosed area of about ten acres, surrounded by a stone wall, to which all carcasses, &c., are taken, and among the rest the 400 horses which die or are killed in a week in Paris. The catacombs furnished rats by thousands; and now a dead horse put in over night is picked beautifully clean by morning, and the bones are ready for the bone-dealer. A grand battle is periodically made, to keep under the rats, and they are utilized by making the skins into gloves, and possibly their flesh into ragouts or pies. We have nearly done with the economic uses of the worn-out hack; there remain but his pedal extremities to deal with. The hoofs, weighing about 8 lbs., are worth 8s. to 10s. per cwt. for gelatine, or for making prussiates. They are not adapted to pressing into the so-called horn buttons, which are made of ox-hoofs, but possibly may turn up in the shape of a snuff-box, capped with silver. The shoes will work up into shoes again, or sell for old iron; and the nails are much esteemed for making gun barrels.

We have now used up our "old horse," and this is merely the example of many other animals whose carcasses are turned or might be turned to various useful purposes. Such a history points a moral that nothing should be despised, for out of many waste substances money is to be made, and the large profits of scavengers, knuckers, and the dust contractor, are evidences of the utilization of offal and sweepings.—*Lecture of Dr. Playfair on Refuse Animal Matter.*

Premium Farm.

We have already stated that Mr. Robert J. Swan, of Rose Hill, near Geneva, New York, received the first premium of the New York State Agricultural Society, at its last meeting, for the best cultivated grain farm. When the Report of the Visiting Committee appears, we shall probably, for the benefit of our readers, present some of its facts in our columns. We have several times visited this farm, both before and since it came into the possession of Mr. Swan. We had the pleasure of going over it last season, while the hay crop was being gathered, and just before the splendid wheat crop was harvested.—some notes of our visit being published in our issue for August 1st, last. But we see by the May No. of the *Genesee Farmer*, that the editor of that paper had lately visited Mr. Swan's farm, and he gives an interesting account of what he saw there. He mentions a striking fact in regard to Mr. S.'s improvement in wheat-culture, which we do not remember to have noticed ourselves, viz: that the wheat crop the year of his purchase of the farm, 1851, only averaged five bushels to the acre.—Mr. S. underdrained and summer-fallowed six acres that year, which was all that he put to wheat, and it yielded over thirty-three bushels to the acre—more in the aggregate than he obtained from forty acres the previous year.

Mr. Swan saw that drainage was the first requisite—the soil being mostly a pretty compact loam, baking hard under drouth—and he laid, the first year, 16,000 tiles, and has gone on till in the language of our contemporary, "there is not a wet spot on the farm," and that there are now over *sixty-one miles* of underdrains, on the 344 acres comprising the estate, or an average of sixty-three rods to the acre.

We wish to call particular attention to the cost of Mr. Swan's drains, because when the subject of drainage was under discussion at one of the agricultural meetings at the State House, last winter, most of the speakers estimated the expense at from fifty to seventy-five cents a rod—the latter being the least cost of some drains of three and a half to four feet deep, some of them having cost considerably more.—We took occasion to state at the same meeting, that, as this heavy expense might

be considered a great obstacle to drainage, it was proper to mention the fact, that drainage had been done effectually at a much cheaper rate—even in some instances as low as twenty-eight cents a rod.—We alluded to Mr. Swan's operations, but spoke only from memory. Our cotemporary before mentioned states, that the average cost of Mr. Swan's drainage has been twenty-eight and a half cents per rod, and that the cost per acre was about \$19; that on the higher and wetter portions of the farm the drains are twenty-seven feet apart, and from two and a half to three feet deep; that they were dug by contract at twelve and a half cents a rod; that the cost of laying the tiles and filling the drains with ploughs was three cents per rod; the average cost of tiles and cartage, thirteen cents per rod.

As before remarked, the nature of the soil of this farm was such that drainage was necessary in the outset, and the result has been entirely satisfactory. But our contemporary well remarks, that "While underdraining has formed the basis of Mr. Swan's improvements, it would be erroneous to ascribe his splendid crops to underdraining alone. The land is thoroughly cultivated by means of summer-fallows and hoed crops. It is not over-cropped with cereals; clover is sown with an unsparing hand; about nine tons of plaster are sown each year on the pastures and meadows; nearly everything is consumed on the farm except wheat, and, in addition to this, a considerable quantity of oilcake is fed to cattle and sheep. In this way a great quantity of manure is made—and it is *good manure*—not rotten straw."

It is further stated Mr. Swan had in his stables and yards, eighty Leicester sheep, which would average 140 lbs. live weight, or 80 pounds dressed weight. They were fattened on good clover hay and eighteen ounces of oil-cake each per day. There were also eight steers, two years old this spring, whose average live weight was 1,075 pounds each. They had each been fed one quart of ground or crushed oil-cake per day since last fall. The cost of the oil-cake was \$27 per ton.—*Boston Cultivator*.

☞ A false friend is like a shadow on a dial; it appears in clear weather, but vanishes as soon as a cloud appears.

Human Life.

"In the morning it flourisheth, and groweth up; in the evening it is cut down and withereth."—Ps. xc., 6.

I walked the fields of morning's prime,
The grass was ripe for mowing;
The skylark sang his matin chime,
And all was brightly glowing.

"And thus," I cried, "the ardent boy,
His pulse of rapture beating,
Deems life's inheritance is joy—
The future proudly greeting."

I wandered forth at noon:—Alas!
On earth's maternal bosom
The scythe had left the withering grass,
And stretched the fading blossom.

And thus, I thought with many a sigh,
The hopes we fondly cherish,
Like flowers which blossom but to die,
Seem only born to perish.

Once more, at eve, abroad I strayed,
Through lonely hay-fields musing,
While every breeze that round me played,
Rich fragrance was diffusing.

The perfumed air, the hush of eve,
To purer hopes appealing,
O'er thoughts perchance too prone to grieve
Scattered the balm of healing.

For thus "the actions of the just,"
When memory hath enshrined them,
E'en from the dark and silent dust,
Their odor leave behind them.

[*Barton's Household Verses.*]

Live in Love; 'Tis Pleasant Living.

Be not harsh and unforgiving,
Live in love; 'tis pleasant living.
If an angry man should meet thee,
And assail thee indiscreetly,
Turn not 'hou again and rend him,
Lest thou needlessly offend him;
Shew him *love* hath been thy teacher,
Kindness is a potent Preacher;
Gentleness is e'er forgiving,—
Live in love; 'tis pleasant living.

Why be angry with each other?
Man was made to love his brother:
Kindness is a human duty,
Meekness a celestial beauty.
Words of kindness spoke in season
Have a weight with men of reason;
Don't be others follies blaming,
And their little failings naming;
Charity's a cure for railing,
Suffers much—is all prevailing.
Courage, then, and be forgiving,
Live in love; 'tis pleasant living.

[*British Workman.*]

Ye can Conquer, if ye will.

Rugged toiler—son of labor—
Stoutly battling every day
For existence—O, my brother,
Thou shalt triumph in the fray.
On life's changeful scene of action,
Though defeat may oft appear,
Thou shalt win the victor's laurels,
If thou wilt but persevere.

Though thou art obscure and lowly,
Ye may reach the wished for goal,
Grasp the prizes, wealth and station,
If thou hast a dauntless soul;
If thou hast a resolution
That misfortune cannot shake;
One on which the angry surges
An impression fail to make.

Art thou sneered at and derided
By the self-styled lofty born?
Heed you not the fool's contumely,
Or the weak mind's harmless scorn.
Art thou friendless—friends will gather,
As do courtiers, king around,
When thou hast achieved distinction,
When thou hast position found.

Strong in faith, let naught repel thee,
Thou shalt in the end prevail;
In life's trials, and its battles,
None but dastard cowards fail;
Noble nature prove ascendant,
In earth's mighty contest rang,
To renown, from dark oblivion,
Robed in glory up they sprang.

What if years of fierce endeavor
Have been spent by thee in vain?
What if thou hast met disaster?
Up and take the field again.
Wreck and ruin all about thee,
Give not up, but struggle still;
Stubborn courage is resistless,
Ye can conquer if ye will.

[*Miner's Rural American.*]

"By-and-By."

There's a little mischief-making
Elfin, who is ever nigh,
Thwarting every undertaking,
And his name is *By-and-By*.

What we ought to do this minute,
"Will be better done," he'll cry,
"If to-morrow we begin it;"
"Put it off!" says *By-and-By*.

Those who heed his treacherous wooing,
Will his faithless guidance rue;
What we always put off doing,
Clearly we shall never do.

We shall reach what we endeavor,
If on *Now* we more rely;
But unto the realms of *Never*,
Leads the pilot *By-and-By*.

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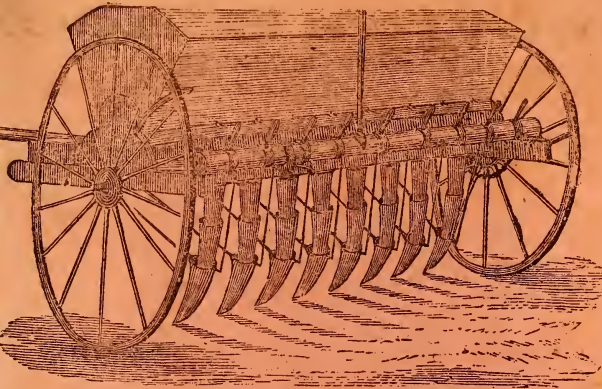
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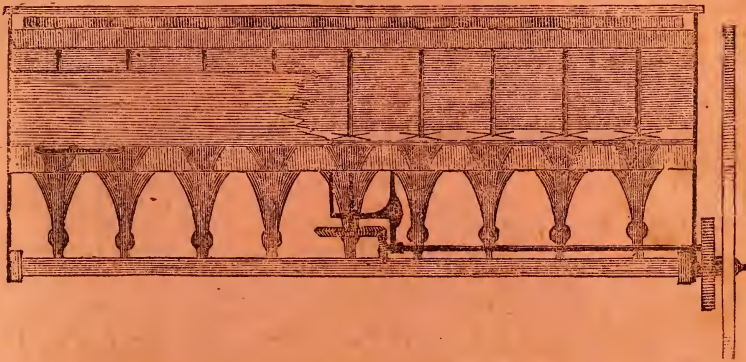
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