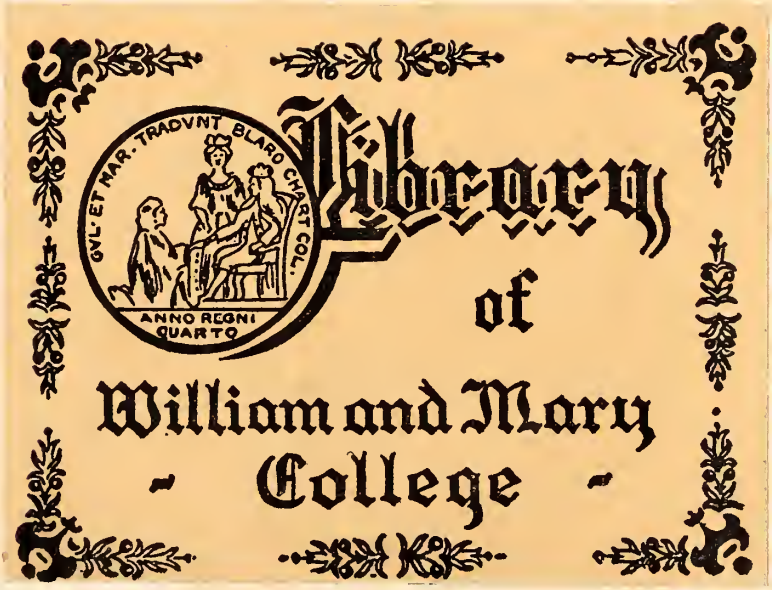
Cure for scrofula page 83



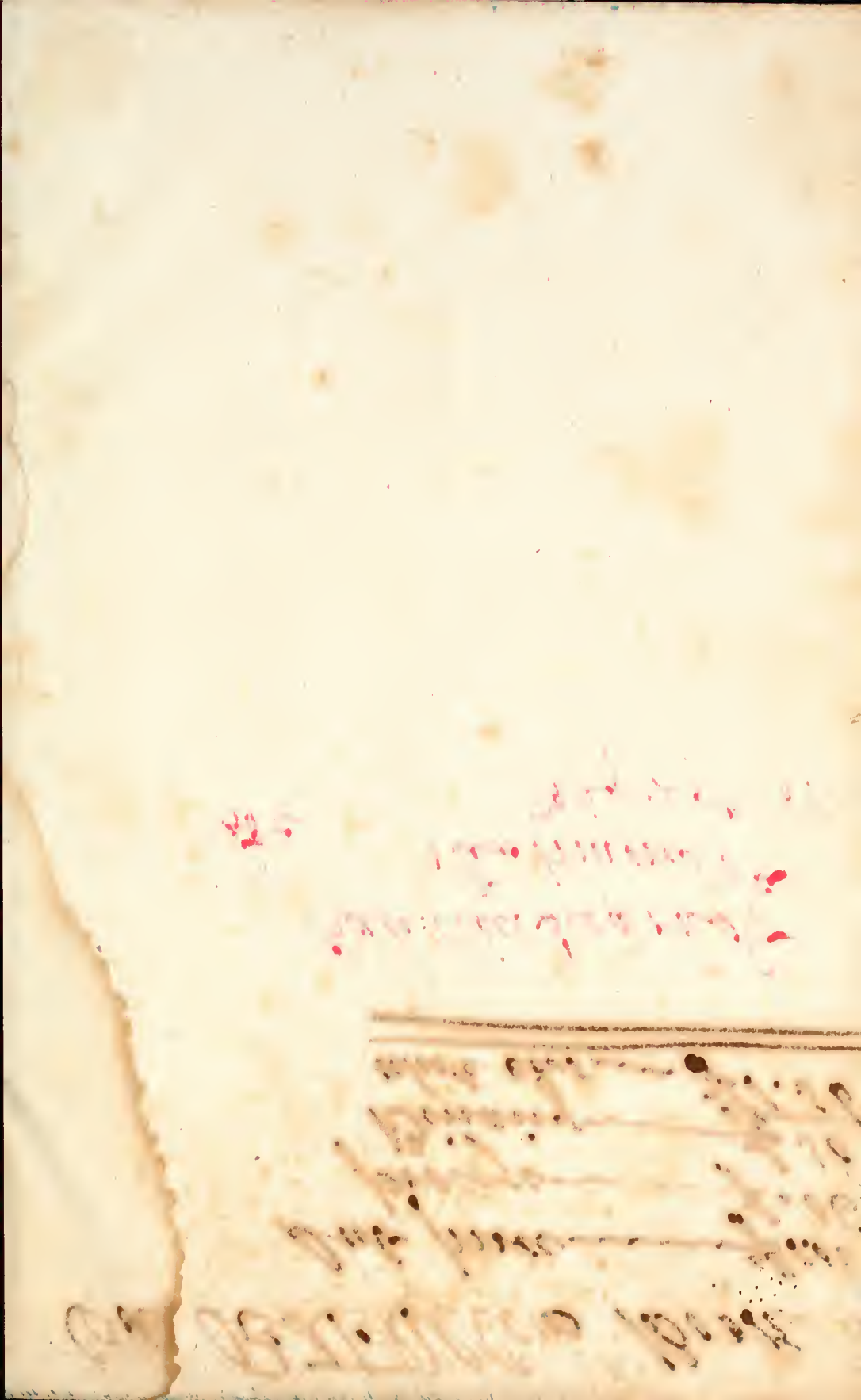
Col R. T. Allens Book

Sub price	$1.00
postage	.06
Binding	.50
whole cost	$1.56

Franklin Stearns Jr
Richmond Va
Feby 25th 1896

50c

Col R



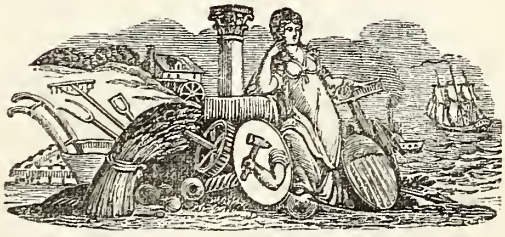
THE

SOUTHERN PLANTER,

A MONTHLY PERIODICAL,

DEVOTED TO

AGRICULTURE, HORTICULTURE AND THE HOUSEHOLD ARTS.



VOLUME XV.

FRANK: G. RUFFIN, EDITOR AND PROPRIETOR.

RICHMOND:

PRINTED AND PUBLISHED BY P. D. BERNARD, SOUTH TWELFTH STREET.

1855.

THE

SOUTHERN PLANTER.

Devoted to Agriculture, Horticulture, and the Household Arts.

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

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

FRANK: G. RUFFIN, Editor and Proprietor. P. D. BERNARD, Publisher.

Vol. XV. RICHMOND, JANUARY, 1855. No. 1.

For the Southern Planter.

ON THE CULTIVATION AND MANAGEMENT OF TOBACCO.

BY THOMAS D. EDMUNDS.

This crop in our section of Virginia is the source from whence we derive most of our ready money. I cannot eoneeive why it is that we do not more frequently hear from our brother planters in relation to it, unless, indeed, they ascribe the impoverished condition of Virginia to its cultivation, and think that on that aceount it ought to be expunged from the record of farming productions. Be this as it may, it does not appear that in our present circumstances we can very well afford to dispense with it. With most of us a large proportion of our land is in a poor and exhausted condition, while we have generally a laboring force capable of cultivating a much greater breadth in the ordinary grain crops, than with our limited means of improvement ean be cultivated profitably. We are obliged, therefore, to devote the better portion of our land to the tobacco crop from its requiring more labor, and making better profit on that labor than other crops. Otherwise we should have to incur an amount of debt not reeoncilable with prudence for the means of enriehing our soil, or to adopt the disagreeable alternative of selling off a portion of our labors in order to adjust their number to the richer portion of our lands that would yield a profitable return for their cultivation in farm crops. But it is not every one who cultivates it that sueceeds in making it profitable. There is no other article which admits of such a wide diversity of price and quality, and whieh so well repays extra labor and skill in the assortment and management of it. For instance, a difference of two dollars per hundred (a very common one) in the average price of a crop, resulting in favor of the best manager, all other things being equal, will show how much the aggregate profit of production is dependant upon the skilful and judieious applieation of labor in the management of the crop, and if we suppose a general attention to this department of the business and a consequent improvement, to the same extent, in the market value of the whole crop of the State, a simple process of arithmetie will demonstrate that the gain to the tobacco producing portion of the State would be more than one million one hundred and thirty thousand dollars. This, too, without adverting to the difference in the quantity produced by the inequalities of management and want of judgment in the selection and preparation of land, for plant-beds, planting and cultivation of the crop, &c. If we take these into the aeeount, and again suppose a general improvement in the quantity produeed such as would result from universal good management and judieious application of labor and skill we should have another addition to the aggregate profit of eultivation even larger than the one above supposed. Sinee then the neeessity for the cultivation of this crop in our cireumstances is so obvious it becomes a matter of the greatest importanee that a system of cultivation and management, upon which so much depends, should be adopted that shall yield the most profitable returns from the land and labor employed in the production of it. With the view, therefore, of eliciting information I venture to offer a few suggestions, hoping, in return, to draw from my brother farmers sueh instruetion as will enable us all so to improve our practice as to allow the highest rate of produetion and maximum priees for our crops.

1st. As to the raising of plants. Is there not room for improvement here? How does it happen that so many fail to raise plants? It is true, that the depredations of the fly are often so destructive as to produee a failure, but there are other eauses of failure the remedy for which is in our own hands. Among the most prominent of these is the too limited spaee generally allotted to the produetion of plants and the want of due care in the location, burning and drainage of the ground, by the neglcet of which the seed-beds are often so eold as to be uneongenial to the growth of the plant, whilst from that very condition they are particularly inviting to the ravages of the fly. The advantage to be derived from a certainty of planting in due season and to the desired extent, will fully justify the expense of preparing ample grounds, well drained, (some time before burning,) well burnt, deeply stirred, finely prepared, and thiekly covered with brush. It is also important that in laying on the brush, the but ends should rest on the laps. A southern or eastern exposure should be seleeted for the beds, and, if praetieable, proteeted on the north and west by some kind of growth. Now let us compare the produet of two crops. One by the proper observance of the above suggestions, is planted in good season, with plants of good size and vigorous growth, and a remunerating erop is the result, while the other failing to observe these suggestions, suffers from the evils of deficiency of plants, or the backwardness of their growth, so that late planting is unavoidable and often the reduction

of the crop from what it might have been under other circumstances is from one-third to one-half. It will at once be seen what a loss is avoided by a proper attention to the due preparation of grounds for the rearing of plants, and what a difference occurs in the money value of the two crops. One we will suppose makes twelve thousand pounds from fifty thousand hills, of a quality to command ten dollars per hundred, which is twelve hundred dollars; the other at two-thirds or one-half a crop, which, if it were of a quality to command the same price, a thing very improbable, would be only nine hundred or six hundred dollars, as the case might be. Yet there has been no remission of labor in favor of him who produced the short crop, for the land required the same cultivation as if there had not been a vacant hill in the field. He could not, therefore, remunerate his loss by a diversion of labor to any other more profitable employment.

2d. We do not properly regard the advantages to be derived from *manuring well*, either with strong concentrated manures, such as may be made by composting the weak productions of the farm-pen with Peruvian and Mexican guano, or by the use of strong, well rotted manure from the stables and hog-pens. The reason for the use of finely decomposed manure for tobacco is that it has only four months in which to ripen (a short period) during the dryest and hottest season of the year, consequently the manure ought to be in a state to minister to the rapid growth of the plant, for if it be too coarse it will keep the land open and thirsty, and thus check the growth, injure the quality and curtail the quantity of the crop. It has been found with us that with the use of coarse, weak manures, it requires six or seven plants to make a pound, and that the average production per acre is not more than six or seven hundred weight, while with well rotted, strong manure, four plants will make a pound or one thousand pounds to the acre, the difference in favor of the latter, calculating the product of each mode of manuring, at ten dollars per hundred, is *thirty! dollars per acre.* Extend this calculation to one hundred farmers, each cultivating ten acres, and it will be found to produce the enormous sum of thirty thousand dollars. Away, then, with the system of half-way manuring, and adopt the alternative one which produces such results as this. What if we suppose the cost of such preparation and manuring as we recommend to be thirty dollars per acre? Are there not, then, left seventy dollars for profit?

3d. But, to obtain such a result the land should be well prepared for the young and tender plant, for it can no more thrive on land badly prepared than it can feed on coarse, unrotted manure.

After having prepared the land and made the hills, set out the plants, placing the long-legged ones deeper than the rest, and if the ground should be wet, some precaution is necessary to guard against pressing the ground too hard around the stalks. Serious injury is done from it; the ground bakes around the stalks, and if dry weather follow, it causes indentures on the stalks and so checks the growth that it rarely recovers from it. I am inclined to think the plants should not vary too much in depth from the one occupied in the patch. The cultivation should vary according to the land; the distance should be fully three and a half feet apart, in order that it should have scope for the extension of the leaves and a free circulation of air, for even at that distance, if manured with strong, and finely decomposed manure, it will be difficult to pass along the rows to worm and succor it without breaking the leaves. Some might object to growing it so large, urging the coarseness as an objection. If they were certain to be remunerated by greater prices then it might be good policy to grow it fine. If not certain, then they are losing by it. Without certainty of securing a price sufficient to make up the loss sustained from the difference of weight, the true policy would obviously be to aim at the greatest amount from an acre which could be raised. The objection to growing it too coarse may be measurably remedied by topping high, say from eighteen leaves down to six, without decreasing the weight, always taking care to pull off the plant-leaves. The topping should be regulated according to the time it has to stand out. Tobacco will ripen, with the ordinary seasons, in about six weeks after topping. High topping gives a finer texture, and from some experiments, I am induced to believe the weight is increased sufficiently to balance the cost of all the extra labor of worming, succoring, cutting and housing the additional leaves. As the tobacco will be larger than the ordinary topping and cannot be hung in the barns without risk of damaging, it should, as a preventive, be cut in two pieces and split, by which means you may get clear of all the dirt, except the lower part of the stalks. May not high topping be a preventive of the spot? If a redundancy of sap and hot weather is the cause, it seems to me that the greater the number of leaves the less sap to the leaf, and consequently the less liability to spot. But to lay aside all philosophy about it, and come to practical observation. Without intending to assert anything positively in reference to this part of the subject, I will merely say that the high topping, so far as my observation goes, has not spotted as badly as the low, whether it did not, from that cause alone, I will not undertake to say, but should this be the observation of many other farmers, it might strengthen the evidence. I believe that the spot is regarded as one of the greatest evils incident to the tobacco crop. Convinced of this myself, I have thrown out these farmer-like notions in hopes that it may bring out further light on the subject.

4th. The working of tobacco ought to commence as early as a stand can be had, in order to give the plants a broad growth. Very frequently it is permitted to stand too long after it is planted, and consequently assumes a narrow growth, which cannot be materially changed afterwards by any kind of working. The working should cease early, in order that it may begin to ripen. It is a loss of time to work it after it has had enough to mature it. I have seen it worked frequently, when the tobacco would have come to maturity much better without it.

5th. Curing may be performed in various ways to suit the particular quality of tobacco. This branch of the subject should be studied and well understood. Nothing more is needed to prove it than simply to compare the sales of two planters who have grown tobacco with equal success, and upon similar lands, the one doubling the other in price, as is frequently the case. How can this difference be accounted for in any other way? The fact is too apparent. Many will confess that they have grown as good tobacco as others, and yet make lower sales. How much is lost to the planters of Virginia by not attending to this department of the crop may be easily estimated by extending the calculation of the difference between a high and low

price to the whole crop of the State. Take, for instance, the difference between five dollars and ten, which is very common, extend the calculation again to one hundred planters, making ten thousand pounds of tobacco each, and we have the enormous sum of fifty thousand dollars. It is very important that it should be permitted to stand out, if the season will admit of it, until it is fully matured, as, like an apple or peach, it is sweetest and best when properly ripe. It is very difficult to describe ripe tobacco; hence some say when you think it ready for the knife let it stand out one or two weeks. Tobacco ripens differently according to the land it is grown on. On fresh lands it will ripen yellow or dapple; on lands inclined to be springy, such as black-jack, it will ripen more uniformly yellow and the leaves will generally be thin and silky; on light lot land it will generally ripen yellow; on red, stiff lands it will ripen of a green color; it will become thick and brittle, and when pressed between the fingers will crack; it will also have changed when ripe, as the plants naturally change from green to yellow; it is evident that they must part with that substance which gives it that green color. What it is I shall not stop to inquire into, nor is it material. Probably it may contain some acid peculiar to its kind, which, as the ripening process goes on, is evaporated or changed into saccharine matter. Tobacco for manufacturing purposes should be exposed to the air on scaffolds, and if ripe and sun-cured it will have that sweet aromatic flavor so peculiar to good tobacco. The cutting should be completed by going over twice, if possible. After cutting it should be carried to the scaffolds, and hung about eight plants to the stick and closed on the scaffolds for the purpose of sweating, by which process the green color is expelled and the tobacco becomes yellow, which is far preferable. I have never seen any good manufacturing tobacco of a green color. After hanging on the scaffolds sufficiently long to yellow, but not too long, to sour, it should either be thinned or removed to the barn. If suffered to remain on the scaffolds longer, care should be taken when it begins to brown in spots to have it removed to the barn before it is caught in rain, and then thinly hung six or eight inches apart, which is very important to prevent moulding, as it will do when the stems and leaves touch. After having attended to the various parts necessary to grow good tobacco we may yet be disappointed. It must, in the sixth place, be neatly managed.

I venture to give my plan hoping that it may induce others, more experienced than myself, to relate their manner of managing, for it is very certain that my prices range low, in comparison with many others.

The order for stripping and tying should be pliant. My cutters pull off the ground leaves, of course; they are my best judges of tobacco. They, also, assort it by making three kinds, throwing the best to select hands to tie up. They are to refuse any that does not class with the best, if by accident any should be found there. The second quality is thrown over to the more inferior hands. The same thing is required of them. In this way all assort. After it is stripped I then hang up in the top of the barn each class to itself until the last of March or first of April, and then after the tobacco has dried I select soft, warm weather to strike down for prizing. During the prizing, the hands are cautioned against putting any inferior bundle with the good. In this way it is again assorted while prizing.

For the Southern Planter.

REPORT OF THE AGRICULTURAL COMMISSIONER.

To the Executive Committee of the Virginia State Agricultural Society.

It is my duty to report my proceedings as Agricultural Commissioner under your appointment, which may be done very concisely, with the aid of reference to annexed and longer papers, connected with the service in question.

The duties required of the Commissioner, and also of the assistants whom you authorized him to appoint, were stated as follows, in your proceedings of March, 1854:

"To visit such counties, agricultural districts, or particular localities, as may be deemed by the Commissioner most suitable to aid and to be aided by his services for the Society; to gather, (either directly, or by and through any farmers or others aiding his inquiries,) useful agricultural information; to encourage and induce the establishment of County Agricultural Societies, auxiliary to the State Society, and formed and working upon a proper and uniform general plan; to hold conversational discussions with such Societies or with other meetings of farmers, and to address such meetings in furtherance of his duties on any subjects designed to promote agricultural instruction or improvement; to endeavor to obtain agricultural reports of particular counties, or to collect facts and materials for future reports; to solicit and obtain new members and donations for the State Society; and to report to the Society, through the Executive Committee, in general, whatever he may have done, and especially and particularly the useful agricultural facts and instruction, not generally understood or practised, which he may have collected, or received from other persons."

Soon after my appointment, I published through some of the newspapers the annexed notice, marked A, and, soon after, the one marked B; and next a plan or general form of constitution (C) for a county Agricultural Society, or Farmers' Club, to serve as convenient suggestions and ground-work for any new establishment of either kind of association.

Believing that an important service to agricultural improvement could be effected by even the partial and limited execution of one or more agricultural surveys of counties, or smaller sections of Virginia, I prepared an extensive scheme of proper subjects or headings, as suggestions for the frame-work of any such survey and report, which scheme was reported to the next meeting of the Executive Committee, approved and ordered to be published. [D] This was done, and, as was also the case with all other publications made by me, under your authority and general directions, no expense on this score has been caused to the Society. For such printing of all my different papers, I have been indebted especially to the liberality and public spirit of the several publishers of the Richmond Dispatch, Enquirer, Examiner and Southern Planter.

In the hope of inducing either County Agricultural Societies, or other voluntary associations, to aid in effecting agricultural surveys of their respective counties, I obtained, either by my particular requests, or by their own voluntary and welcome offers, the promised aid of the following gentlemen, as assistant Commissioners, viz: Thos. L. Preston

of Smythe county, B. Johnson Barbour of Orange, P. St. George Cocke of Powhatan, Richard Irby of Nottoway, John R. Edmunds of Halifax, Willoughby Newton of Westmoreland, and Professor Charles Stuart of Mecklenburg. These assistants were invested, (under your previous resolution and authority,) within their respective counties or other named limits, with all the powers and duties of the Chief Commissioner. That they have done no more, and especially in regard to the chief object of obtaining county surveys, may be sufficiently accounted for in the universal deficiency of aid from any County Agricultural Societies, or other associated individuals offering and giving their combined labors of investigation for the object in view. The only reports thus obtained, or now in progress, are from Richard Irby, Esq. of the county of Nottoway, and Willoughby Newton of Westmoreland, and are the praiseworthy, but necessarily imperfect labors of these two unaided individuals. These reports, not yet completed, will hereafter be appended and marked R and S.

My journeys and visits to different County Agricultural Societies, and Farmers' Clubs, and to neighborhoods, where either have been established subsequently, were confined to such as specially invited my presence and aid. A greater number of like invitations had to be declined, because of my want of time, or the want of travelling facilities to remote places. I have attended meetings of Agricultural Societies, or Farmers' Clubs, or otherwise more full and promiscuous public meetings, in Prince George, Gloucester, Nottoway, Amelia, Powhatan, Prince Edward, and Cumberland; and with each, either joined in conversational discussions, or otherwise, and at more length, offered verbally my opinions and views of the matters of debate, or delivered addresses suitable to the occasions. A digested report of one of the most regular of these discussions, (of the Powhatan Farmers' Club,) I had prepared and published, to serve as a sort of working model for such action—which report is annexed, [E.] My services of this kind have been incidentally extended to other places, and even into North Carolina, and perhaps not ineffectually, both for my gathering information, and conveying some useful instruction. It would be impossible to determine, and improper for me to estimate, how far this action of mine may be useful, either immediately or remotely.

In the course of this business, and my recent intercourse with practical observant and reliable farmers, I have gathered and noted many matters of useful information, and mostly for instruction in practice, and each of which, if alone, would have been deemed by most persons, (though very incorrectly,) of too little importance to be reported for publication. Such is far from my opinion, as to any useful facts, or of instruction in the most trivial matters. I have written and afterwards published these "Minutes of Agricultural Facts and Observations," to the number of 90, at successive times, and which are here embodied and marked F. This collection and publication have been made, not only for the intrinsic and practical value of the matters thus presented, but also to show, by example, to every reader, how much of useful information and instruction might be afforded to all, if every one would communicate to the State Society even but one such small matter of personal experience or observation in practical agriculture.

There are also annexed three other papers (severally marked G, H, I,) which were mostly prepared at my request and delivered to me as Commissioner. These are: 1st, "On the Distemper of Cattle," by Dr. William S. Morton of Cumberland. 2d, "On Hillside Terraces," by Gen. John H. Cocke of Fluvanna; and 3d, by F. N. Watkins, Esq. of Prince Edward, a carefully prepared and valuable report of the population, statistics and condition of a body of emancipated negroes; and also, of like statistics of others remaining as slaves in the same neighborhood. These pieces have been very lately received, and are still in manuscript, as well as other agricultural communications, sent voluntarily by their writers to the Commissioner, (and marked K, L, M and N.) For, though the papers of the Commissioner, and all other communications to the State Society, approved by the sub-committee of publication, are authorized by the Executive Committee to be published, these and some other much older papers have necessarily remained unpublished for the want of present space in the Southern Planter, and the absence of any proper organ of the Society for publishing promptly all its transactions. On account of this condition of things, your Commissioner, and, also the sub-committee of publication, in regard to other communications, have had to be indebted, for access to the agricultural public, almost exclusively to the courtesy, or the voluntary offers and gratuitous action of sundry different newspapers, whose publishers have selected, and of course, at their own choice and convenience, such of the communications and other papers as the respective editors thought proper to admit and send out as suitable to their readers.

In regard to one duty and authority committed to my charge, almost nothing has been done, or attempted. This was the soliciting and obtaining subscriptions of new members, and donations, to the State Agricultural Society. At the very outset of my operations, it was found that the authorizing resolutions of the Executive Committee, in this respect, were misconstrued and misrepresented, and aspersions cast on the committee, and on me as its agent. Therefore, I was not willing to occupy ground which could be so grossly misunderstood and misrepresented. Subsequently, I have in no manner whatever exercised this part of the prescribed duties. And when, as thus, not asking any thing for the pecuniary aid of the Society, nor even alluding to it, it is not strange that almost nothing has been tendered or received. The gross amount of the few subscriptions and donations which have been made through me, has been paid over to the Treasurer, (as stated in the accompanying paper marked O,) without any deduction, or any charge otherwise made for my personal, travelling or any other expenses.

It is my duty to acknowledge, with thanks, that my travelling expenses, during this service, have been much lessened, and my labors as Commissioner facilitated, by the liberality of the officers of the following companies, viz: The Richmond and Danville, the South-Side, the Richmond, Fredericksburg and Potomac, and the Central Rail Road Companies—and the Rappahannock (Old Dominion) Steamboat Company. These companies voluntarily offered to me free tickets for my conveyance during my term of service—and also the Virginia and Tennessee Rail Road Company, for one journey to and from Montgomery and Pulaski counties. One of these courteous offers I have had no opportunity to use. On all other routes travelled, and in every mode, my conveyance has been paid for or provided by myself.

As little as I may have done, or as little as even much better ability could have effected in the time of my short service, (now closed by its limitation,) I think that it has served to suggest to many minds the important benefits that may be achieved by similar action, if by more and better hands. Such partial and limited services as mine, cannot do much more than merely indicate how much more might be done for the promotion of agricultural knowledge and improvement, by inducing a general system of county agricultural societies and clubs, which, whether so named or not, would necessarily be auxiliary in action to the State Agricultural Society; by inciting these associations, and also numerous individuals, to contribute, from their several stocks or supplies of information, to the great common treasury for all; and to incite to, and aid in, the discussion and investigation of all doubtful and important questions. A still more important service, if to be so obtained, will be the making of correct agricultural surveys of as many counties as may be induced to undertake this aid to agricultural progress—and which, whenever carried through, though instructive and beneficial to the whole agricultural community, will be especially so to the particular counties or districts so examined and reported upon.

EDMUND RUFFIN,
Agricultural Commissioner.

Oct. 28, 1854.

For the Southern Planter.

FRUIT.

According to the census returns of 1850, Virginia was the largest tobacco growing State in the Union; in wheat the fourth, and corn the seventh. In orchard products, eleven of her sister States surpassed her. In 1850 the orchard products of Indiana were valued at $324,000; Illinois, $446,000; Missouri, $514,000; Ohio, $695,000; Maine, $324,000; New Hampshire, $248,000; Vermont, $315,000; Massachusetts, $463,000; New Jersey, $607,000; Pennsylvania, $723,000; New York, $1,761,000, and Virginia only $177,000!

Impressed with the belief that our orchards are sadly neglected, and that our own comfort, as well as our pecuniary interests would be promoted by bestowing more attention to the culture of fruit, I design offering a few remarks upon the subject, and especially in reference to apples. The value of good fruit, as an article of food, is almost universally acknowledged, and argument upon such a topic would be deemed superfluous. The young and the old—the bond and the free—the ignorant and the enlightened—admire and appreciate fine peaches, apples, &c. The neglect of fruit culture in Virginia has not resulted from any indifference to fruit, but is attributable to other causes. Our orchard products are inconsiderable, because the farmers and planters of the State (with a few honorable exceptions) have had their time and thoughts almost wholly engrossed with the cultivation of corn, wheat, oats, tobacco, &c., and the raising of stock. Had they devoted more labor to their orchards every agriculturist would have raised fruit enough for his family and some for sale. We may not be able to rival the farmers of Delaware and New Jersey in raising peaches, but the landholders of Eastern Virginia would probably find it profitable to raise peaches for market. Fine apples can be raised in every county throughout the Commonwealth. The apples produced in Albemarle, Nelson, &c., are superior in flavor and size to any which the writer has ever seen in New York, Philadelphia or Baltimore. An intelligent Pennsylvanian who had paid great attention to fruit, and who had travelled through many States of the Union, recently stated that he regarded the Piedmont region of Virginia as decidedly the best portion of the United States for the production of fine apples.

While the improvement of land and the cultivation of the usual crops demand, and should receive our attention, our orchards should not be disregarded or forgotten. The greater the variety of our products, the greater our prosperity. The annual income of the farmer ought not to be dependent upon one or two products of his soil. We cannot expect to raise good fruit by planting out trees in a careless manner and bestowing no labor subsequently: on the contrary, some attention and skill are essential in planting trees, which rarely fail to remunerate the owner for the care and industry required annually to insure their growth, maturity and preservation. The amount of labor is small in proportion to the reward obtained, and without labor a crop of no kind can be secured. If it be urged that apple trees do not bear fully every year, it must be remembered, that we do not always make a full crop of corn, wheat, &c., notwithstanding all of our care and exertions. Mr. R. Pell, of Ulster county, New York, says that he has for some years been experimenting upon the apple tree, "having an orchard of 20,000 Newtown pippin trees. It has been my study to assist nature so as to enable the trees to bear *every year*. If supplied with the proper sustenance, apple trees will bear every year. Three years ago I scraped all the rough bark off a portion of my trees in April and washed the trunks and limbs within reach with soft soap, trimmed out all the branches that crossed each other, early in June, and painted the wounded part with white lead, to keep out the moisture; then split open the bark by running a sharp pointed knife from the ground to the first set of limbs, in the latter part of the same month, which prevents the tree from becoming bark bound, and gives the inner wood an opportunity of expanding. In July I put one peck of oyster-shell lime around each tree, and left it piled about the trench until November, when I dug the lime in thoroughly. The following year I collected from those trees 1700 barrels of fruit; some of which was sold in New York for $4, and the balance in London at $9 per barrel. Strange as it may appear, *they are literally bending to the ground with the finest fruit I ever saw. The other trees in my orchard, not treated as above, are barren, next year being their bearing year.*" Will not the farmers of Virginia profit by Mr. Pell's example? The farmers of our State should not content themselves with endeavoring to raise fruit enough for their own families, but they should go further and produce fruit in such abundance as to supply the demand in every city, town and village in the Commonwealth. The pippins of New York, &c., should be superseded in our own cities by the pippins of Virginia. That apples can be profitably raised in Virginia for market has been fully demonstrated. Mr. W——— M———, an intelligent and wealthy farmer residing in Nelson county, near to no rail road, and eighteen miles distant from the James River Canal, has sold apples to the amount of $1000 net per annum, besides making large crops of wheat, corn, &c. Heretofore many farmers have

declined making exertions to produce fruit for sale because of the want of access to good markets. This reason can no longer be urged as an excuse for neglect. Rail roads are now penetrating various portions of the State and affording facilities for the safe and speedy transportation of all agricultural productions. By our rail roads and the James River Canal fruit can now be promptly forwarded to our cities and towns to supply their wants. Those owning land along and contiguous to our several rail roads, the James River Canal and our navigable rivers, should arouse from their apathy upon this subject, and go to work immediately. Nothing can be gained by delay. Many thousands of fruit trees should be bought and planted in Virginia this fall, and for several succeeding years. At present, the supply of fruit on most farms is inadequate for home consumption. This is particularly true throughout the tobacco growing counties. No one need apprehend any material reduction in the price of good fruit for many years to come. The increasing population of our cities and towns will give a hearty welcome to all the good fruit which is likely to be raised in the State for the next century. Do the farmers of Virginia doubt whether they would be remunerated should they attempt to raise apples for market? Instead of anticipating failure, let us see what the farmers of other States have done, and then consider whether their example does not afford encouragement. The following are extracts from the letters of Northern farmers, and communicated to the Commissioner of the Patent Office. Mr. Smith, of Maine, remarks in 1851, "Apples are the only fruit cultivated to any extent. Thirty years ago, apples were a rare article, but now, by the industry of our farmers, lots are annually shipped to the West Indies and other places." Mr. Guptill, of Maine, observes, "There is but one opinion among those who understand any thing about the matter, and that is, that nothing pertaining to the farm pays so well as orcharding. A neighbor of mine, who has a fine orchard, has often said to me he wished that his whole farm was planted with apple trees. His farm is among the best for raising fine cattle and horses and for dairy purposes." Mr. Spear, of Vermont, states, "That some of his apple trees were grafted forty or fifty years ago: those have borne abundantly. There are orchards which yield from $200 to $500 *to the acre.* The Baldwin is our best apple for winter and spring use." Mr. Day, of Connecticut, "Many apple orchards in this vicinity, of four or five acres, yield a net profit of $500 per annum." Mr. Copp, of the same State, "The two kinds of fruit most certain here are *peaches* and quinces. With me, as yet, neither have failed; and I think I can raise either, at the present high price of labor at forty cents a bushel." Mr. Howe, of New York, "The cultivation of fruit, and especially of apples, is now commanding great attention. It is estimated that from 400,000 to 500,000 bushels are sent from Wayne county; this county, (Ontario,) it is believed, exports a large amount." Mr. Van Buren, of *Georgia*, "The interest manifested in the cultivation of fruit is decidedly on the increase in this county. The apple crop can, most undoubtedly, be made one of the most profitable, if not more profitable than any other that can be grown here. The best keeping Northern varieties are the Esopus Spitzenburg, Newtown Pippin and Northern Spy." Mr. Blue, of Missouri, "Apples are a very sure crop, and fruit culture is exciting much attention." (Vide Patent Office Report of 1851.) Mr. French of New Hampshire, "Mr. Robinson planted his orchard fifty-five years ago, and still enjoys the fruit of his labor. His orchard covers about two acres of land. In 1847 he refused the offer of $600 for his apples, *upon the trees*, to be gathered by the purchaser. Upon careful inquiry, I am satisfied that the net income of his two acres has averaged $300 a year for ten years past. I have charge of a small orchard in the same town, covering about half an acre. In 1847 I selected eight barrels of the apples and sold the remainder for $100 on the trees. In 1849 I gathered fifty-five barrels, for which I realized $125 above all expenses of care and cultivation for the year. These are small matters, compared with grand operations in wheat fields and cotton plantations; but these small matters add to the wealth of the country." (See Patent Office Report of 1849.) Mr. French, of New Hampshire, "In the present year (1852–'53) it is a fact beyond controversy, that many farmers in the county of Rockingham have received more money in exchange for their surplus product of *apples* than for any other article raised upon their farms. Ten years ago, he would have been a bold man who had predicted that *fruit* would one day become a principal source of wealth to any part of New Hampshire." The same gentleman continues, "Throughout New England we hear much complaint every spring, that fruit trees are *winter-killed*. Of one hundred and sixty young apple trees which had been set in my orchard, about thirty were severely injured by the winter of 1851–'52, and many more somewhat affected." A writer in the New England Farmer states that he knows "an orchard of *forty* Baldwin apple trees that yielded more than three hundred barrels of fruit of the best quality the past season, and about the same quantity in 1850." He says, further, "the ground about these trees has been kept in a perfectly pulverized state for half a dozen years or more, and manured like a garden."

The farmers of the Northern States pay great attention to planting out their trees properly, and subsequently sparing no exertions to ensure their growth and productiveness. Hence the farmer is amply rewarded for his industry and supervision, notwithstanding his trees are liable to be *winter-killed*. In accordance with the request of Mr. John S. Skinner, Mr. Allen Dodge furnished a paper on the care and cultivation of orchards in New England. The following are extracts from that communication: "The notion that a fruit tree will live and flourish, on being thrust any how into the ground and left to take care of itself, has here long been exploded. The holes in which the trees are set should be dug wide enough to admit all the roots without bending or diverting them from their natural direction, and if wider, all the better. The subsoil should be removed from the bottom at least a foot deep in shallow soil, and its place supplied with good surface soil or compost. Care should be taken to plant out the trees no deeper than they grew in the nursery. Mulching of newly transplanted trees is by all means to be recommended, as it retains in the ground sufficient moisture to carry them safely through the severe droughts that often occur in summer. When every thing is done in the matter of transplanting to insure success, the farmer must not vainly suppose that his trees will take care of themselves. On the contrary, he must exercise due forecast, and from year to year see to it that the ground is properly stirred and manured, if not on the entire field, at least around

every tree. The most thrifty and productive orchard I ever saw was cultivated every season: it was ploughed, manured and planted in beans, &c., not of an exhausting nature; and from it 1500 barrels of large merchantable apples have often been gathered in a single year. When swine will fatten without good food—when cows will yield large quantities of milk without good pastures—when steam engines will go without being supplied with fuel, then may we expect to see orchards without manure or cultivation growing vigorously and yielding good crops of large and fair fruit."

R. T. H.

October 20, 1854.

From the Virginia Sentinel.

THE TRADE IN GUANO.

This subject, so interesting to farmers, has also engaged the earnest attention of our government, both in its legislative and executive departments.

During the session of Congress just concluded, a Select Committee was raised to take cognizance of the whole matter, and to devise some plan to procure the removal of the existing restrictions upon American vessels engaged in the Guano trade, and to place that trade upon a more just and liberal basis. That Committee, on the 31st of July, made a report of fifty-three pages, composed chiefly of copies of treaties and diplomatic correspondence, and prefaced by some remarks of the committeemen, and concluding with certain recommendations. We shall present to our readers an abstract of the subject, based upon a careful examination of said report, and upon such further facts as our own inquiries have brought to our knowledge. We shall not be deterred by the fear of being prolix; because there are few subjects in which so much interest is felt, and which are yet so little understood.

Guano, spelled *Huano* by the Spaniards and Peruvians, and so invariably written by Mr. J. R. Clay, our Charge des Affaires at Lima, has been in use in Peru from the time of the Incas; but its introduction into other countries is of very recent date. It is found in various parts of South America and in Mexico and Africa; but the principal, and by far the most valuable deposit is met with on the three barren and uninhabited islands of Chincha, lying about eight miles west of the coast of Peru, to the government of which country they belong, as unsold public lands. These islands are very small, but the guano beds are so very thick that it will be impossible to exhaust them under a century, the quantity being variously estimated at from twenty to fifty millions of tons.

Guano became an article of regular export to England in 1839, and to the United States in 1845; the quantities used in each being, at first, quite small, but steadily increasing from year to year. In 1845, only 14,450 tons were sent to England. In 1850, according to Mr. Clay, it had reached 80,000. We are not apprised of the present consumption there.

We are informed that the quantity imported into this country during 1853, was 47,000 tons, and that the probable quantity of the present year will be 100,000. The committee, indeed, estimate the importations of the present year at 200,000 tons. The great advance, however, which has taken place in the price demanded, has operated to check consumption, while it has caused loud and general complaint. During last year, it was sold in large quantities at $46 20. At the commencement of the present year the price was fixed at $50. Now, by a circular letter of the Peruvian agent, which lies before us, bearing date May 27, 1854, it appears that "in consequence of the increased rates of freight," the price has been raised to $60, for any quantity under five tons, with a decrease in price as the quantity increases to 200 tons, when $55 is named as the price and a small discount allowed for each payment.

From the beginning of the trade in guano down to the present time, the whole business, from the digging and lading of the guano, to its sale in foreign ports, has been conducted exclusively by the Peruvian Government, through its agents and consignees. It has not, as a simple proprietor, invited purchasers to its guano banks, but as a shipper and trader, has carried the guano to the points of consumption. In our inquiries, therefore, as to the price at which guano ought to be afforded to our farmers, two prominent elements present themselves: 1st, What is the effect of the present mode of conducting the trade? and 2d, Does the Peruvian Government, in fixing the price of guano, evince a proper degree of liberality to consumers?

First, as to the mode of conducting the trade: The documents published in the report of the committee, show the belief of our government, (in which the committee express their concurrence,) that the trade would be much more cheaply conducted, and consequently the price of guano be lower in foreign ports, if Peru were to withdraw from its transportation, and content herself with selling it at a fair price at the islands, to all who might there present themselves as purchasers. The argument is, that governments cannot manage questions of business details so prudently and advantageously as interested individuals, acting under the stimulus of competition, would do;

and the expenditures to which the argument applies in the case before us, are those for lading the ships at the islands, and the freight-charges thence to foreign ports. Our government has, therefore, earnestly labored, during the last three administrations, including the present, to induce Peru to change her system. Our diplomacy has, however, been entirely fruitless, and there is, indeed, no probability of success for a long time to come. Peru has several objections. She fears that in the competition which would undoubtedly ensue from the proposed change, her guano would be so adulterated as to lose its reputation, and thus diminish her revenue by diminishing its sales. For example, vessels instead of going to the islands in ballast, which they would be at the expense of there discharging, would reach there partly laden with Patagonian or other inferior guano, or even common earth, which they would intermix with the guano of the Chincha Islands, and pass it all as such. Under the present arrangement, Peru can keep up its credit by insuring its purity. But another and the controlling reason is, she is not at liberty to change her system. Being greatly straitened, as stated by her minister, Senor Tirado, for funds to pay the debt incurred during her war of Independence, she, in 1839, accepted advances of money from certain capitalists and merchants of England, on terms by which they undertook to introduce the use of guano into Europe, and sell it as the agents or consignees of the Peruvian Government. These parties made an immense profit by their agency; but Senor Tirado argues that the arrangement was also very beneficial to Peru, whose government would not have been able to bring guano into foreign use, "had it not been for the interest felt, and the ability displayed, by the consignees." Their success at once established the reputation of the guano banks as a source of credit to Peru; and capitalists have ever since eagerly met the recurring wants of her treasury on similar terms. This facility of obtaining loans by granting mortgages on her guano banks, and commissions on all sales of that article, has unhappily stimulated the extravagance and corruption of her rulers; so that her public debt is growing larger, and the amount of the mortgages heavier. The debt of Peru is stated in the report of the committee at fifty millions; of which more than one-half is held by English capitalists, on terms which not only bind the guano banks, but stimulate for the employment of the lenders as sole agents for disposing of that article in Europe. Barreda & Brothers, of Baltimore, by making advances of money to Peru, acquired in like manner, two years ago, the sole agency for the sale of guano in the United States, for the term of five years, we believe. So that Peru is not only, disinclined, but unable, and daily becoming more so, to change her system of conducting the traffic; and our advice and importunities on the subject, only serve to offend and annoy her government, as the following extract from a letter of Mr. Clay to this government, on the 11th of November last, will attest:

"The fact is, that as the Peruvian Government relies entirely upon the amount produced by the sale of its guano, in the United States and Great Britain, to pay the interest upon the national debt, it is a delicate subject to touch upon and on which to offer suggestions, and I have always found it necessary to approach it with caution; for as the Peruvian nation is the owner of the deposites, the diplomatic agent who represents to its government the necessity of a reduction in the price at which it is sold, risks being met at the threshold by the intimation that the possessor of an article of trade has the undoubted right to dispose of it as he may think proper. The feeling on the part of this government is, that the manner of disposing of the guano, and the price at which it is sold, are considerations which belong entirely and exclusively to the Peruvian nation, and are not subject-matter of negotiation with foreign powers.

Under the present system of contracting with the mercantile houses for the sale of guano, the government can obtain an advance of money, at any time it may be required, without the trouble of negotiating a loan in the manner adopted by other nations. This is found to be very convenient, as the government applies to the consignees for the sum it needs, the agents furnish the money, and render a semi-annual account of their sales and advances to the treasury, where they are not exposed to public scrutiny, as they would be in the United States."

* * * * * * *

The Peruvian Government being thus shut up by both necessity and inclination to her present mode of disposing of guano, it remains to be seen with how much judgment and liberality to the consumer she has exercised her assumed duties. This being a question of figures, we shall at once introduce them.

The cost of delivering a ton of guano in one of our ports, is made up of several items which we shall state separately:

1st. The cost of digging and loading in at the islands. This, including bags for the "ground tier," Mr. Clay stated in his letter dated October 20th, 1850, at $2 per ton, with

a probable increase in cost as the guano near the shore was removed. We have heard a much higher figure named as the price now paid by the Peruvian Government.

2d. Freight to this country: this is very fluctuating. It was once as low as $6 to $10. Mr. Clay states it in 1850, at $12 to $15. In 1853, Mr. Marcy says private contracts could be had at $15; Peru however, allowed $20. During the present year, freights have risen enormously, being $25 at the time the present price was fixed on guano; but being since hard to obtain at even $30 per ton.

3d. The bags in which the guano is unloaded on its arrival for delivery to customers—16 bags at 15 cents, $2 40; also, assistance in discharging cargo 60 cents. In all $3.

4th. The agent's commission. We understand that of Barreda's to be 6½ per cent.

5th. Insurance for the sea voyage.

6th. The charge for the guano itself, independent of the cost of getting it here. This is entirely arbitrary on the part of Peru, and is expressed by the residue after deducting the expenses of transportation, commission, &c., from the selling price.

Collecting these figures and applying them to the years 1853 and 1854, we have the following:

1. Cost of loading in, &c.....	2 75	3 00
2. Freight.....	20 00	25 00
3. Bags and unloading, say.....	3 00	3 00
4. Agt's com. at 6½ per cent.....	3 05	3 57
5. Insurance risk for sea voyage.	1 20	1 50
6. Price received by the Peruvian Government for the guano simply	16 20	18 93
	$46 20	$55 00

In the above we have set down the freight in 1854 at $25, that being the rate on which the present price of guano was based. The rate subsequently advancing to $30 or even $35, reduced the profit of Peru to $13 93, or less.

In reviewing the various items, there does not seem to be any room for reduction on the 1st, 3d and 5th, if indeed they are not too low. The price of freight is probably somewhat above what private merchants could have got it at. The agent's commission is too high, but its reduction would not make much difference in the aggregate. The price which Peru appears to receive for the simple guano is pretty high, though probably not much above what we would be willing to consider fair. Mr. Clay in a letter dated December, 1851, estimates its value at the islands at $20 per ton.

If Peru had demanded at the islands, of shipping merchants, the price she appears to have netted, we doubt if they could have furnished us with guano at as low figures as above. They would have avoided the charge for commission, and probably effected a saving in freight; but the profit on the investment and enterprise to which they would feel entitled, would balance if it did not greatly surpass the savings. The *commission* of 6½ per cent. would have given place to a much higher rate, for *interest* and *profit*. On the whole, therefore, we very much question that if Peru had acceded to our request and changed the mode of selling guano, whether we should not have been losers in more ways than one, instead of gainers. However that may be our only hope is in the good management and moderation of the Peruvian Government.

After what we have stated it will readily be presumed that we do not concur in the recommendations of the committee. These recommendations are two: 1st. That our government be urged to renew its negotiations with Peru for the abolishment of the present system; which is a worse than useless effort, impossible of accomplishment, and of more than doubtful expediency if it could be accomplished. 2d. If Peru still decline our proposition, then the committee recommend a sliding scale of duties on guano, so as to admit it free if offered at a certain price, and imposing duties as the price increases, up to final prohibition when the price reaches a certain maximum. This recommendation, is, in our judgment, liable to grave objections. Why should government undertake to judge for the farmer and tell him at what price he may buy guano, and at what other price he shall not? It is the policy of our government not to decide for the people, questions affecting their private and personal interests; but to leave them to their own sagacity. The public will not endure such interference. It is a singular relief too, against high prices, to *increase* the duty as the price increases. The user of guano, between the Peruvian Government and his own, would in such case find himself between the upper and the nether mill-stone.

Like all other business questions, this will best adjust itself, and work out its natural and proper result. Farmers after consultation with each other, or by the exercise of individual judgment, will cease to use guano when it ceases to be profitable, without being coerced thereto by government.

All that our government can do is to use its influence with Peru, inducing her to be content with as small a price for her guano as possible, and aid her if opportunity offer, in the economical management of the trade.

It does not appear that there is any discrimination in the price of guano, made by Peru against this country as compared with other countries. On the contrary, Senor Tiralo says that in consequence of greater expenses the price is somewhat higher in England than here; and the committee also inform us that "in England the agriculturists are now protesting against the price; knowing at the same time, that such price is inflicted on them by the cupidity of their own capitalists."

A word in reference to the retailing of guano by private dealers. Merchants now purchasing, receive it on the wharf at the price we have stated, $55 per ton, with a credit of one to four months, or a correspondent discount for cash. It costs them 50 cents per ton to get it into their warehouses. Then comes insurance, storage and interest if they fail of speedy sale.

But they buy by the long ton and sell by the short. A short ton therefore, costs them in their warehouses, $49 55. From this, every one can judge of the reasonableness of the price they may ask. It is now offered in this city, by several dealers at $50 for the single ton, or $49 75 for larger quantities.

Prior to January last, the price per long ton demanded by the Peruvian agent was $46 20. It was then raised to $50, based on the engagement to pay $20 freight. On the 27th of May, as already stated, it was increased to $55, freight having advanced to $25. There has been no addition to the price since, although freights have advanced from $30 to $35 per ton.

We have laid the whole question before our readers, that they may understand how to calculate and what to expect.

FLAX CULTIVATION IN THE WEST.

Passing a few days recently in Southern Ohio, and a part of Indiana adjoining, we were much gratified to see the large fields of flax which abounded in that rich agricultural region. We saw hundreds of acres devoted to this valuable object; but sorry to say, for the most part, with only half its legitimate purposes, that of its seed, in view by the cultivators. Seed is the only object for which the mass of the crop is produced. For the want of proper machinery to dress it, the lint is thrown away, and rotted in the barn-yards. Machines, however, are beginning to work their way into the flax-growing country, two or three being already established in and about Springfield, in the Mad River valley. When machines of the right kind are permanently established, we see no reason why flax will not become a continual crop in the Western States, north of the Ohio River, as hemp is at the south of it. It is an excellent crop for a rotation, leaving the ground clean, light and free; in this particular, an excellent preparation for wheat, and not considered more exhausting than the cereal grains.

As now cultivated, for seed only, it is sown at the rate of one to two bushels to the acre, according to the quality of the ground—too thin for good lint. It grows high and branching, and on good land, yields twelve to fourteen bushels per acre. The cultivation is simple. A single ploughing on mellow, free soils, a dressing with the harrow, then sowing, and a brushing in of the seed, is sufficient. When the crop is matured, it is mowed, or cradled, if very stout. Mowing, however, is the usual way of cutting. After drying on the ground, it is carefully bound into bundles, and the seed whipped out by hand-beaters.

There are large fields of the white, or Canary flax in growth. It is somewhat larger than the common flax, and thought by its cultivators to give a greater yield of seed. We saw specimens of stalks (or straw) just previous to blooming, which were three and a half feet long, a fair sample of the whole field. The flax *seed* of Ohio, Indiana and Illinois, must be worth millions of dollars the current year, as every field we saw was of the finest growth, the season being moist and warm. Oil mills are frequent. The highest price, in cash, is paid to the farmers for the seed; the oil finds a ready market in the Eastern States, and thousands of tons of the cake are transported to this city for shipment to England. It sells at the mills where manufactured, according as they stand contiguous to canal and railway communication, at ten to fifteen dollars a ton. The mills have paid for seed the past two or three years, $1 25 to $1 50 per bushel.

When the sale and preparation of the lint shall become an important object in flax cultivation, as by the introduction of proper dressing machines, we trust it soon will be, the crop will be much more profitable. The yield of seed will be less, as it must be thicker sown to give a finer fibre. It may have to be somewhat earlier pulled, or cut, and a less proportion of the seed may be marketable. The cultivation may have to be somewhat nicer. The method of harvesting will be more expensive, as the crop must be pulled, or cut close to the ground, as with hemp; but all these increased labors and expenses will be doubly compensated by the sale of the lint, which yields some four hundred pounds to the acre of well dressed flax, worth six to eight dollars the hundred. In Ireland the average is about two tons of

straw per acre, which yields about five hundred pounds of dressed flax.

It is a matter of surprise that, in a country where cotton and hemp have arrived, years ago, at an advanced state of improvement in their manufacture, flax, an equally valuable article, in the extent to which it is used, should be so far behind. The flax-cotton, about which so much was said a few years since, for linen fabrics, proved a failure; for, by shortening its fibre, the desirable characteristics of the linen article was lost. That could be spun on cotton machinery, or something near like it, but flax proper, requires manipulations of its own. With a broad growth of the article among our farmers, and efficient machines to break and dress it into marketable shape, we have little doubt that it will afford a profitable staple of manufacture, even into many articles where hemp is now used. For all the coarse, heavy purposes, hemp, as now, must be required, its great length of fibre affording a strength that flax is unequal to; but if we cannot go into manufacture of fine linens, coarse ones, with threads, twines, cords, and various articles, may be made in this country, of great consumption among our own people and trades, and building up for their fabrication permanent establishments, adds largely to our wealth and resources. *American Agriculturist.*

MANURE FOR FRUIT TREES.

We select the following prescription by A. J. Downing, from the second volume of the Horticulturist:

"The best compost for all fruit trees (without endeavoring to suit the wants of each particular fruit,) is a compost of peat or swamp muck, reduced, or rendered available to plants, by unleached wood ashes. The peat should, if possible, be dug and carted out in the winter, though it will answer if dug in the spring. As early in the spring as is convenient, mix thoroughly the wood ashes with the peat, in proportion of five bushels of good hard wood ashes to one wagon load of peat. Let the heap lie a week, turn it over to incorporate more thoroughly, and in two or three weeks it will be fit for use. This compost or manure contains largely lime, potash, phosphate and vegetable matter, the elements most necessary to the growth and health of fruit trees generally—and in a state ready for food for these trees."

In a subsequent number of the Horticulturist is a letter from L. Wyman, Jr. of West Cambridge, in which he says:

"I have used and recommended the compost you speak of in the March number of the Horticulturist, in your article on 'Special Manure for Fruit Trees,' as a manure for the pear tree in particular. I have usually added to the compost, say in measure, one peck of fine iron filings, or one peck and a half of crude turnings of iron, to each load of peat or muck, and in that proportion for a larger or smaller quantity; and have always noticed the most favorable result

"Two years since I applied this compost to a large pear tree which stood in a damp, loamy soil, but which had not borne any fruit of consequence for six or seven years in succession, although it grew rapidly in size, and sent out a large number of fine healthy shoots. The owner of the tree proposed engrafting some other kinds of scions upon the stock, it being a fine variety (the Andrews.) I recommended 'one year's patience.' He then said, 'What would you do with it?' I replied, 'I would attempt to remove it, or give it a better soil, and one more adapted to its wants.' He remarked, 'Very well, take it under your charge; I will spare it this year.'

"After examining the soil very carefully, I found as before remarked, a clayey loam, quite damp, and the tree growing in a lone situation. I caused nearly all the earth to be removed from the roots of the tree, and the turf taken off in a circle seven feet in diameter, leaving the tree in the middle of a pan caused by a removal of the sod and earth. I then applied a sufficient quantity of compost to fill the hole full, the whole new soil rising a little above the body of the tree. The quantity of muck used was one quarter less in this instance, as I believed the tree required not so large a quantity of muck as one would growing in a higher location, but rather more sand. I used sand. My compost was formed as follows: three parts of muck to one part of sand, and a proportionate quantity of potash water; and iron filings, one peck and a half to the load. The tall or leading shoots of the tree were shortened, the tree well scraped and trimmed, &c. The result of this application was a full crop of pears, and the tree making, the same year, a good growth of wood, every way healthy; the fruit, two barrels and one-half, grew fair and ripened well; and the tree has ever since borne a good crop, and continues to grow vigorously. This is, to my own mind, a sufficient test of the utility and value of the compost you commend in your widely extended and truly valuable work.

"Salt, as an article of manure for the plum tree, I have long known to be valuable, and have used it to a considerable extent."

The black mud of swamps and marshes, commonly called muck, is very extensively used

in the manure heap, and sometimes by itself, as a fertilizer, by our Eastern farmers and horticulturists, with the best results. It is well known that swamps and marshes, when made sufficiently dry by draining, produce the most enormous growth of corn and other luxuriant feeders, but will not answer for crops of a tenderer growth. This has probably led to experiments with muck as a fertilizer, with valuable results.

The usual plan of using it is to haul it to the barn-yard, and mix it with the manure heap, afterward carting the whole to the fields. Those who have muck on their farms will find it valuable.

For the Southern Planter.

CLOVER.

Mr. Editor,—Be pleased to republish Mr. Ed. Ruffin's essay, published in the Planter some years ago, giving a plan of curing clover for hay. But few of the present subscribers to the Planter have read it; indeed it seems to have attracted but little attention. I have tried it several years, and can vouch for the truth of almost every word of it. I think I have made a little improvement upon it. Mr. Ruffin, if I remember aright, after turning the recently cut clover, so as barely to wilt both sides, throws into little heaps, enough to be conveniently taken by the hay-fork and carried to the little stack. I tried this plan with a part of my crop one year, and found the scorching sun not only parched the top of the piles, but permeated them to a very considerable depth. Since then I let one side be exposed to the sun just long enough barely to wilt it; then turn and lap the rows, and let the other side be also dried and wilted. Then at once take from the rows to the little stacks. This is not only a saving of labor but makes better hay.

I am glad to perceive that Nature's time of sowing clover, and the grasses generally, is gaining ground. The usual time of sowing is the latter part of the winter and first of the spring. When seed are cheap it may be well enough to try that time. I have tried it repeatedly, but have very rarely succeeded in getting a good stand. Last spring I succeeded, notwithstanding the dry summer. I had a piece of wheat which came up very sparingly. I ran an iron-tooth drag over it, immediately followed by a sparse sowing of clover-seed. The seed were immediately followed by a pretty heavy roller. The wheat was not only uninjured, but I believe was benefited, and I have a first rate stand of clover.

Three years ago I bought some fine clover-seed at a pretty high price. It was sown the latter part of February and the first two weeks in March. It proved almost a total failure. Determined not to be foiled and thrown out of my routine, after I had cut my wheat I ran the iron-tooth drag over the wheat stubble the latter part of August or first week in September, immediately following the drag by the clover-seed, without the roller. Upon the greater part of the land I harvested quite a heavy crop of hay last summer. You may judge when I assure you that one hand, without help, earned nine dollars in one day, and two hands, starting about eleven o'clock, earned about fourteen dollars before night. It is proper to mention, however, that forage was very scarce and selling very high.

Some salt their clover in storing it away. My horses are fond enough of it without any such bribery. They never tire but always thrive upon it. Upon Mr. Ruffin's plan it will keep without salt. Don't let it sun-burn or get wet; let it have air and it will keep, if put up barely wilted. But it must be protected from extraneous moisture. That ruins it, whereas if it has air enough it will very rarely spoil by its own sap.

There is a prevalent error, I think, in giving all of the clover to the land to enrich it. To be sure land that has been bare, without any vegetable matter turned into it, or land that is too stiff can never be injured by the green fallow, but generally it is best to cut off the clover, and you may pay off in full by stable-manure, plaster and slacked ashes.

I had several years ago a fine lot of clover, all of it high enough to cut. But a part of the lot being rather poorer than the rest of it, I left the clover to enrich the soil; while the part that was cut clean brought forth a second crop, almost as heavy as the first, with scarcely a foul weed in it. The part not cut, instead of a second crop of clover, paid me off in broomstraw, lifeeverlasting and other pest weeds, and the next year in a crop of worms, which very materially injured the crop. To produce a good second crop, the clover ought to be reaped with a keen blade, and not bruised during the operation, for the whole energy of the roots are exhausted in striving to resuscitate the wounded stalks.

T. H. A.

Halifax C. H., Dec. 31, 1854.

ANALYSIS OF GARDEN VEGETABLES.

We recently alluded to the interesting contribution of Dr. Salisbury, to the transactions of the New York State Agricultural Society, of a paper containing analysis of various garden vegetables. As we have no room to give these analyses, we have briefly condensed some of the conclusions arrived at by Dr. Salisbury, which afford valuable suggestions for experiments in the culture of these products.

The roots of the *Vegetable Oyster*, contain a large per centage of sugar, dextrine, and albumen, which accounts for their richness.—They contain about five per cent. of water more than the potato, that is about 81 per cent. for the root, and 85 for the top. Dr. Salisbury recommends the following component parts for a special manure for this vegetable, viz: 33 parts of ashes, 10 parts common salt, 5 parts plaster.

The root of the *Carrot* is rich in sugar, dextrine, albumen, and starch. One ton of the roots contains 141 pounds of sugar, 30 pounds of dextrine, 4½ pounds of casein, 17 pounds of albumen, 9 pounds of starch, 1½ pounds of gluten, and 1-5 pound of fat. One hundred pounds of ashes, 50 pounds of common salt, and 10 pounds of plaster, will supply the inorganic matter taken by a crop from the soil; or, in other words, will form the constituent of a special manure for a soil which happens to become alike destitute of the materials of these substances—if there should happen to be such a soil, and if this fact could be determined.

The root of the *Beet* is about *nine-tenths water*. One ton of the fresh roots of the *turnip* beet contains 62 pounds of sugar, 20 pounds of dextrine, and 12 pounds of albumen, casein, and gluten taken together. The long *blood* beet contains about twice as much sugar, and about twice as much albumen, casein and gluten. The white sugar beet is less rich than the latter, but richer than the former in materials. Three hundred pounds of ashes and 200 pounds of common salt, are recommended as a special manure for a crop of 20 tons.

Muskmelon and Watermelon.—Dr. Salisbufy remarks on these, "The muskmelon contains a very large per centage of phosphoric acid and soda, and considerable potash; the watermelon a large per centage of soda and potash, and is quite rich in phosphoric acid. The occurrence of these bodies in such quantity in these plants, explains to us why dead animal matter, as flesh, bones, &c., common salt, and ashes, have such marked influence in promoting their growth and productiveness.

The *Cucumber* is similar in composition, but is most remarkable for the very large proportion of water it contains, being about 96½ per cent. In other words, a ton of cucumbers contains only 70 pounds of solid matter, the remaining 1,930 pounds being water!—*Country Gentleman.*

From the Indiana Farmer.

MORE FACTS FOR FARMERS.

It is a fact that all domestic animals can be improved in size and value. One hundred and fifty years ago the average weight of cattle at the Smithfield Market was not over 370 pounds, and that of the sheep 28 pounds. Now the average weight of the former is over 800 pounds, and of the latter 80 pounds.

The average weight of cattle, properly termed beeves, in the New York market, is about 700 pounds, and sheep 50 pounds.

The average live weight of the heaviest drove of beeves of 100 in number ever brought to this market was 2067 pounds, weighed from dry feeding, in Illinois, last spring.

The mode of selling cattle in New York is at so much per pound for the estimated weight of meat contained in the four quarters. The estimation is made upon the live weight of cattle as follows:

A drover in buying a lot of grass-fed, common stock in Illinois should never calculate to get an estimate of over one-half here of the live weight there. That is, if the drove average 12 cwt. they will make 6 cwt. of meat each.

Medium beeves may be estimated at 54 or 55 pounds per cwt. Good beeves at 56 or 57 pounds. Extra good, large and fat, from 58 to 62 pounds per cwt.

In the Boston market the weight is generally estimated upon "five quarters," that is, the product of meat, fat and skin. There the cattle are generally weighed, and the product estimated upon an average, 64 pounds per cwt.

In New York not one bullock in ten thousand goes upon the scales to determine his price to the butcher.

It is a fact that cattle of a large breed or variety are the most profitable for the grazier who feeds for beef. It is doubtful whether that will hold good with poultry. Dorking fowls are medium size, and a much esteemed variety. They have five toes.

Timber should be cut while the tree is in its most rapid season of growth, and near the close of the growing season, when the terminal bond of each limb is fully formed. Saw logs cut in winter always decay on the outside more or less if left over, while summer cut logs keep sound for years. Hickory cut in winter soon suffers with "powder-post." If cut in August it will keep forever.

Posts should always be set top end down. They will last twice as long. Put six inches of broken stone in the bottom of the hole.

Locust Trees make most valuable timber, and grow quick and easy from the seed, if it is scalded with boiling water, or still better, lye, and then planted as you would beets or onions, and the plants are about as sure as those vegetables to live when transplanted.

Salt applied at the rate of four quarts to a ton of hay will aid materially in its preservation, and make it more nutritious and wholesome for stock, and is just about the amount usually fed by a good farmer to an ox while eating that quantity of hay.

Composition Roofs are cheaper than tin, better than shingles, are perfectly tight, and almost fire proof against sparks, when made as follows:

Sheet the rafter with close boarding up and down. Cover this with felting paper, laying the sheets to break joints, with one-third exposed, just as you would courses of shingles. Fasten the courses to the boards by nailing thin strips of lath, and also upon the eaves, sides and all exposed edges. The whole is now covered by the "composition," which we believe is just such as caulkers use, that is, boiling pitch. It saturates the paper and sticks the sheets altogether and to the boards. As fast as one man puts on pitch enough, another must cover it with clean gravel, dried by heating in a very hot sun, or an iron pan over the fire. Make a complete gravel surface in the hot pitch, and your roof will be very tight and durable.

King Birds.—It is a fact that they do eat bees. That is settled. And it is almost indis-

putably settled that the birds never touch a working bee. They pick out the drones and destroy them, as all *drones* should be. These are beautiful birds, and should never be destroyed, because they are both ornamental and useful to the farmstead.

From the Ohio Cultivator.

HOME-MADE FURNITURE.

In the present pecuniary troubles, many a wife finds an unusual necessity for practising the strictest economy in household matters. Perhaps housekeeping is just to be commenced, and the great problem is, how much furniture and how many conveniences can we afford to procure? A little money must go as far as possible. Such would, perhaps, like to be initiated into the art of making cheap articles of furniture—both useful and ornamental. Many a neat and comfortable sofa or lounge, chair, stand, bed, book-shelves, &c. &c., have we seen, that cost its owners almost nothing.

A few boards, a little stuffing, and a few yards of shilling calico, put together with ingenuity, will give a tasteful and even elegant air to an otherwise bare and comfortless room. Most of the work we shall describe can be done by the females of the household, and we are sure will afford them more pleasure and comfort than the so-called "ornamental" worsted work, bed-quilt piecing, &c. And in almost every family there is enough mechanical ingenuity among the boys, if not among the girls, to do the sawing and nailing.

The *barrel chair* is a very easy and comfortable, as well as cheap and pretty seat. It can be made by taking a stout oak barrel with one end out, sawing half through the barrel at the proper height for a seat, and leaving the other half full height, rounding off the top, for the back of the chair. Stretch stout bagging across and nail it firmly on for the seat; make a cushion to rest upon this, and if the barrel is large enough to allow it, cushion the back also, by tacking on sheets of cotton batting, which costs but a trifle at any of the stores, or stuffing with any other cheap material. Now cover the entire chair with worsted stuff, glazed furniture calico, or any thing else convenient, and cover the edges with cord, gimp, braid, or even a narrow band of the same.

A simple *lounge* can be made by taking a broad, thick plank, strengthening it by nailing on cross pieces underneath, and inserting four short legs; add a cushion filled with straw and cotton batting over it; cover the cushion with any material you wish, and add a valance of the same to conceal the legs. A back and either one or two ends may be added, if desired, by nailing on boards and cushioning them like the seat.

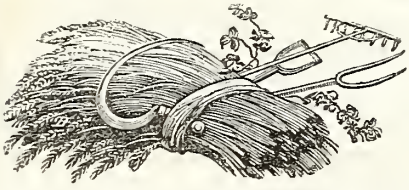
A *cot bedstead*, many of you know how to make. Take four sticks about four feet long and three inches square, bore an inch hole through the middle of each, and put a round stick, six feet long, through, and pin through the ends; arrange these like the four legs of a saw horse; then to form the sides, connect the head and foot posts by nailing a rod or strip of board on to their tops; take a piece of bagging six feet by four, stretch it across and nail it firmly on to the side pieces. To strengthen this, make a narrow head board, nail on a small rod at each end, and bore holes in the side pieces at the head to receive them. By lifting this head board out, the bedstead can at any time be folded together and laid aside, if not wanted.

A convenient *seat* for children, or for the garden, is made like a cot bedstead, with the head board omitted. The sticks for the seat should be one foot long, those for the legs, one foot six inches long. Bind a bit of carpeting for the seat. These are so light, and so easily folded and carried about with one hand, as to be very convenient.

Hanging book shelves is another article of furniture easily made, and very convenient. For a small size, take three planed boards one-fourth of an inch thick; let the largest shelf be about thirty inches long by eight wide, the other each one inch narrower and two inches shorter than the one below it. If convenient, paint, or oil and varnish them. Bore a gimlet hole in each of the four corners; take a stout cord and pass it down through one hole in each shelf, taking care that it is at the same corner of each; then pass it up through the remaining holes in the same end, making a knot in the cord under each shelf for it to rest upon. Pass a cord through the other end in the same manner, and tie the four ends of the cord together a foot and a half above the upper shelf, and hang it up.

To make a *workstand*, both light and ornamental, procure from a carpenter an exact octagon, (eight sided,) sixteen inches across, made from two inch plank for the base, and another the same size, of one inch plank, for the top. Bore an inch and a half hole in the centre of each, into which insert a post for a standard long enough to make the whole the height of a common table, and cover the whole with furniture calico. For this purpose, sew together like a bag two breadths of the calico, each about three inches longer than the height of the stand; now slip this over the stand, and

tack the upper end of the cloth smoothly round on to the edge of the upper plank; pass a ribbon or heavy cord round a little above or below the middle of the standard, tying the cloth back tightly; then turn the lower edge over the base plank; nail it on to the bottom, making the whole resemble an hour-glass. Put a little cotton batting on the top of the upper plank, and cover that also. About two and a half or three yards is sufficient for the whole, unless, which is quite desirable, pockets are added. If so, these should be semi-circular, plain back and full front, drawn with a cord. Tack one of these on each side of the top, and conceal the tacks with a row of braid.



THE SOUTHERN PLANTER.

RICHMOND, JANUARY, 1855.

TERMS.

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

☞ No subscription received for a less time than one year.

☞ Subscriptions may begin with any number.

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

☞ Office on Twelfth between Main and Cary steets.

ADVERTISEMENTS.

A limited number will be inserted at the following rates: For each square of ten lines, first insertion, ONE DOLLAR; each continuance, SEVENTY-FIVE CENTS. Advertisements out of the City must be accompanied with the money, to insure their insertion.

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

NOTICE.

☞ If subscribers do not order a discontinuance of the Planter before the commencement of a new year, or volume, it will be considered as a renewal of their subscriptions, and they will be charged accordingly.

☞ Postage on the Southern Planter, (when paid in advance,) to any part of the United States one cent and a half per quarter, or six cents per annum.

TO THE SUBSCRIBERS TO THE SOUTHERN PLANTER.

Having disposed of the "Southern Planter," it becomes my duty formally to take leave of the patrons of that journal. I have been connected with it from its commencement, fourteen years since, to the present time, as publisher or proprietor. During that period I have received many evidences of good will on the part of the subscribers to the Planter, which it becomes my duty, as it is my pleasure, thus publicly to acknowledge. I have been, from year to year, cheered on in the prosecution of the enterprise by the aid and coöperation of many patrons who felt interested in permanently establishing in this city an agricultural journal of high character. Through their generous efforts I have succeeded in making the Planter what it now is. My heartfelt thanks, therefore, are due, and are hereby cordially tendered, to them.

In disposing of the Planter to Mr. Ruffin I enjoy the satisfaction of knowing that it passes into able and competent hands. For upwards of three years, as the readers of the journal know full well, he has conducted it with unequalled ability and success. The past affords an earnest of the future. Under his direction and control it is destined to become, I verily believe, the ablest journal, devoted to the cause of agriculture, in the whole South. Nay, more, it will become an ornament to the profession.

May I not hope, in conclusion, that those who have for so many years illuminated the pages of the Planter by their contributions will continue their labors for the good of the cause?

P. D. BERNARD.

TO THE SUBSCRIBERS TO THE SOUTHERN PLANTER.

For the first time in my life I have made a speculation. I have become the sole proprietor of the Southern Planter.

My motive in the purchase was to put the Planter on a somewhat different footing, to have the responsibilities of the whole office upon myself, and to simplify its management and its affairs generally. I have bought it at a high price, but with the hope that the great agricultural interest, which I have for several years endeavored to serve, would, at least, bear me harmless in the venture. And I am emboldened to think it will, because in three and a half years that I have been connected with the paper, I have run up the number of its subscribers from some eighteen hundred, perhaps a little less, at the rate of nearly one thousand per annum. But to succeed the number must still be very considerably increased. Of more than eighty thousand farmers in the State, only about four thousand six hundred take this paper, and many more than

that will be required to make it a profitable investment. When particular papers in New York can claim their thirty thousand subscribers, it is no wonder that all flourish, and that their number is increasing, while similar enterprizes here languish for want of support.

Ever since Mr. Chas. T. Botts started the Planter, now fourteen years ago, it has been struggling to make buckle and tongue meet, and has burnt the fingers of every man that touched it until of late years, when the advertisements that fill a portion of its pages have saved the proprietor from further sacrifices. I certainly have made little or no money by it up to this time, and perhaps have lost, if I were to estimate the value of the attention it has abstracted from the business of an extensive farm.

Why then, have I continued at it; and why now do I go deeper into it? Because I like it; because it affords a species of occupation and of excitement which I cannot otherwise obtain; because it keeps me busy; and, perhaps, because it enables me to do some good, at least to make an effort in that way, and to think that I am not living altogether in vain; and because I will not believe that the farmers of Virginia, with all their recent and glorious awakening to the importance of their calling, will continue to remain indifferent to even the feeblest attempt to represent them by a press.

Of the mode in which I shall conduct the paper I have not much to say. The past, such as it has been, must be an earnest of the future. It would be discourteous to the editors in other sections to say that I shall make the Planter the best paper in the Union. I have always endeavored to make it equal to any other, and I shall continue to do so. I am now nearer to it—sold my land in Albemarle to be nearer to it—shall be in my office daily at all hours, and shall have it in my power to devote myself to the work more uninterruptedly than heretofore. I hope the effect will be seen in the improvement of the paper. But in one respect I doubt it cannot be much improved. The high character of the communications generally made to it cannot well be surpassed.

One practice I shall continue, though some of my friends think it indiscreet: on all proper occasions I shall protect the interest which I have assumed, presumptuously it may be, to guard and instruct. I shall not go out of my way to attack or expose things that I do not approve, or flaunt my opinion in the face of the public—that were arrogance and folly. But, humbly confessing to as much fallibility as any one can charge to my account, I shall say what I think when occasion demands it freely and gladly according the same privilege to all who may choose to reply through the same medium. I think that honest, and therefore most likely to please my subscribers in the long run. A paper which bestows an indiscriminate praise, or preserves a *politic* silence, can never be very instructive on new things or on mooted points. And even were it more profitable, which I doubt, I have no ambition to make money at the expense of candor.

After this (January) issue, which was nearly made up when I made my bargain, and could not be well altered, I shall change the form of the paper somewhat, and, I hope, for the better. I shall print the whole of it in the large type that is now used for a part, and shall print the advertisements on a separate cover. From the large size of the type there may not be much more reading matter than there is now, but it will be more agreeable to the eye. When a sufficiently increased list is had, I shall enlarge the paper, or diminish the size of the type, so as to give more reading matter. There will be no advertisements in the paper itself, except a few that may not be able to get in the cover, and they will be transferred to an enlarged cover whenever the accumulation shall justify it. It shall be issued promptly on the first of every month, and be mailed, commencing on that day, as rapidly as possible.

There are large arrears due the office, and it would disembarrass me very much if they were paid as they ought to be, and easily can be; for they are due in small sums from the most responsible men in the State. I earnestly entreat all persons indebted to the office to make immediate payment. The several thousand dollars now due make a serious aggregate, in these hard times, to me, but a mere trifle to those among whom it is distributed.

In parting with Mr. Bernard, who has been so long connected with the Planter, it affords me pleasure to testify to his worth, and to state that during my association with him not a ripple has disturbed our placid intercourse. I owe him thanks for much kindness.

To the numerous friends who have so kindly aided me heretofore, and who have kept the Planter steadily increasing in its number of subscribers, and to those not less useful and efficient, who have furnished to its pages so large an amount of invaluable contributions, it is hardly necessary to say that I am deeply grateful, and solicit a continuation of their favors in both kinds. My acknowledgments are equally due to the great body of my subscribers whose good nature has indulged my many faults.

To have displeased no one would argue that I had not done my duty to the public. But I am free to declare to the small number whom I have angered—and I know there are some—that what I have done to each, and will do again upon occasion, has been in the way of public duty. I have no feeling of personal hostility, so far as I can recollect, to any one who has ever subscribed to the

Planter, and [illegible] directors.

Finally, I appeal to all [illegible] agricultural [illegible] of agricultural improvement, [illegible] the Southern Planter [illegible] and I [illegible] to enable the agriculture of Virginia.

Frank G. Ruffin.

Friendly editors are requested to call attention to the above. F. G. R.

A WORD OF APOLOGY.

The business of the State Fair was not closed when we were called off suddenly to Albemarle to the bedside of a sick child. In quick succession three of them were seized with typhoid fever, and for five weeks we never left them at night and but rarely in the day, and not then to transact any business. This will, we are sure, be an excuse with all for any neglect of duty in such a trying time.

We are now relieved of that duty, and in great measure of the troubles and perplexities of settling a new place, and have time for the [illegible] attend to the public business we have in hand.

We shall be at the office of the Virginia State Agricultural Society in the morning [illegible] and the Planter's business, [illegible] will be there all day.

PAY UP.

We shall send out all the bills that we can [illegible] and the balance in February. We beg that all persons indebted will remit their subscriptions. [illegible] and will be a great help to us. We believe that nearly every man on our books is good for his bill, and [illegible]

CATTLE RAISING.

"The [illegible] Herald says, Major James [illegible] Kent, of Montgomery county, recently sold his lot of [illegible] cattle for twenty-three thousand dollars."

Well done, Major Kent. How many of them were [illegible] —Ed. So. Pl.

[illegible] Seeds.—See the advertisement.

For the Southern Planter.

[illegible]

[illegible]

[illegible]

THE STATE FARM.

At a meeting of the Board [illegible] was purchased [illegible] for the purpose of a model farm [illegible] the Hon. [illegible] was appointed [illegible] eighty-five dollars per acre.

Mr. [illegible] appointed Superintendent, at a salary of one thousand dollars per annum.

From the Boston Traveller.

INTERESTING FROM THE CHINCHA ISLANDS.

We have been favored with the perusal of a private letter from the Chincha Islands, dated the 19th February, which contains some items of public interest, which we are permitted to copy.

There were at the islands, at the date of the letter, one hundred and sixty vessels of various sizes, from 300 to 2200 tons burthen—averaging probably 800 tons. The estimated average time for loading with guano was forty days.

The rate of exportation of guano from the islands is said to be one thousand tons a day, which it was thought would not exhaust the heap in ten years. A geological survey, made by order of the United States government, had estimated that eight years would exhaust the supply. We extract from the letter as follows:

"There are three of the Chincha Islands, lying in a line, N. and S., the passages between them being less than half a mile. The wind is always S. and E. and it is never known to rain. The North island is the largest It is nearly circular, and about one-third of a mile in diameter, and about one hundred feet high. Some parts of the coast are steep, high cliffs, and others sandy and rocky coves of gradual ascent from the shore. The heap of guano continues to deepen to the highest point of the island, where it is one hundred feet in depth. Fancy a large, old-fashioned loaf of brown bread, laid on a table but little larger than the base of the loaf, and you can pretty nearly see the pile of guano on either island. The laborers commence digging and proceed along the top of the rock in the direction of the centre, from all parts of the island; and, therefore, in their progress, have shown the guano in the very steep side from the base rock, eighty feet high; and from every part it appears to be the same substance—hard and close.

"Every spoonful is dug with a pick, and when loosened is as dry as powder, and of course dusty. If left in a pile but a brief period, it again becomes hard, and must again be loosened with a pick; from the base to the top are found feathers, eggs, and stones of all sizes, some weighing even two or three tons. I have taken out many perfect feathers, far from the top; and near and upon the surface have seen what appeared to be bone and flesh decomposed.

"It is thought the pile now called guano, is the decomposition of sea animals, of which there are multitudes now, and they are presumed to have been far more numerous in ancient days, before the white man came to destroy. Sea lions of a large size—a ton weight—seals and endless quantities of sea fowls have been the inhabitants of these islands for myriads of years, and the islands have been the burial places of these animals; for if wounded they crawl up to the top—so say the knowing ones. Birds and bird lime go to increase the pile. Guano is really decomposed animal matter, but whether this was the way so vast a pile accumulated, or whether the islands were thrown up from the bottom of the sea with the deposit upon them, you must judge for yourself.

"The second island is similar in size and pile to the one described. The third one has not been touched yet. It is much smaller, but well loaded. Guano secretes large quantities of ammonia, and confined as it is in a ship's hold a man cannot stay more than five or ten minutes at a time among it. Besides large lumps of pure ammonia, are daily found apparently decomposed bones, eggs, &c., and among other items a man in a perfect state of preservation—the real ammonia, strong as volatile salts.

"Now do you wish to know how all those ships are loaded, and a thousand tons per day dug and sent from the island? Well there are about 100 convicts from Peru, and about 300 Chinamen from the Celestial Empire. The former are in the right place; the latter were passengers that engaged passage in an English ship for California, and engaged before they left their own country to labor after their arrival for a limited time to pay their passage ($80.) Instead of being landed at California, the ship brought them direct to this place and the captain sold them for three and six years, according to the men, to work out their passage; and here they are slaves for life.

"They are allowed four dollars per month for their food, and one-eighth of a dollar per day for their labor, with a pile of guano before them which will last the next ten years; and long before it is exhausted the majority of them will be dead. Each man is compelled to bring to the shoot five tons of guano per day. A failure thereof is rewarded with the lash from a strong negro; and such is their horror of the lash, and the hopelessness of their condition, that every week there are more or less suicides. In the month of November, I have heard, fifty of the boldest of them joined hands and jumped from the precipice into the sea. In December there were twenty-three suicides; this is from one in authority; in January quite a number, but I have not learned how many. I was a few days since on the South island, and there saw two of the most miserable starved creatures. They had swam across on their wheel-

barrows, and fully determined to die. I could not feed them, and my heart ached for them; so after we reached the ship a boat was despatched with bread and water for their relief. Perhaps this availed nothing, for they must either return, or some one must feed them daily.

"The Chinese, it is said, are educated to believe in the transmigration of souls, and therefore think if they leave this life they shall return to their own country. It is thought that faith induces them to leave their wheelbarrows and commit suicide.

"Thus by diminishing the number of laborers, the exports are reduced, and to meet the demand of so many ships, two English ships (one of which has been here before) are soon expected with other loads of passengers from the Chinese dominions, deceived, most probably, with the idea of going to California to dig gold. In fact, it is said, the first batch of Celestials had dug many days before they were undeceived.

"The process of loading the ships is either by placing the ship close to a steep, rocky cliff, and have the guano run through a large canvas hose from the top of the hill into the ship's hold. Five hundred tons per day are put on board by this method; and as there is seldom much wind or swell, a ship can lie very well. Boats that go under smaller shoots, are sometimes loaded and return to the ship, where it is taken on board in tubs made of barrels."

From the American Cotton Planter.

RUMINATION.

The following article from the Genesee Farmer more clearly and briefly describes the process of rumination than anything we have seen on the subject. It also explains what we said sometime since in an article in the Journal on "Economy of Feeding," viz: the importance of fully incorporating *all the grain* that is fed to stock in the form of fine meal with the coarse food. It has been found by those who have fed crushed corn and cob in a dry state, as many are in the habit of doing, that its effect is injurious to the intestines of the animal, besides the great loss sustained by feeding in that state. We do not believe that animals can be fed on meal, bran, or "brewers' grains and distillers' wash" alone for a long time and remain in a healthy condition. All the important organs adapted to the process of rumination remain inactive and dormant, and must finally result in disease and the death of the animal, but not so when these substances are incorporated in the coarse food:

"*Rumination* is the remastication of food by a ruminant animal. Liquid or attenuated food passes at once into the third and fourth stomachs, and is not remasticated; but all other food, particularly such as consists of comparatively dry and solid vegetable matter, descends into the rumen, is there slowly macerated, passes by little and little into the second stomach, and is there separated by compression into a liquid and a solid portion, the liquid to pass on to the third and the fourth stomachs and the solid to be returned in pellets up the gullet for such remastication as shall reduce it to a pulp, and fit it to pass direct, by re-deglutition, into the third and fourth stomachs. The remastication is effected while the animal lies at ease—and constitutes what is popularly called 'chewing the cud' and takes place only upon matter which nothing short of an operose process can reduce to perfect pulpiness or liquidity; and the regorging which attends it differs widely from the belching or vomiting of a non-ruminant animal, and is regularly conducted by a specially constituted organism as deglutition or absorption or secretion or any other ordinary act or function of the animal system.

"In order to understand the process of rumination, we must advert to the manner in which the four stomachs communicate with the gullet and with one another. The gullet is an extensive membranous tube, much more complicated in ruminating quadrupeds than in man, the muscles which surround it being strong, and consisting of two rows of fibres, crossing one another, and running spirally in opposite directions; and these muscles, by their contractions, so powerfully force the morsel of food begun to be swallowed onwards into the inlet of the stomachs, that the process of deglution once commenced cannot be stopped, even by the will of the animal. The gullet enters just where the first, second and third stomachs approach one another, and discharges itself almost equally into the first and second. Connected with it is another organ which may be termed the cud-duct. This is sometimes a groove and sometimes a tube, according to its action; and runs from the termination of the gullet to the third stomach, with the first stomach on the left, and the second on the right, and discharges itself almost equally into the second and the third. It has thick prominent margins, which can be brought to meet so as to form a complete canal, and thus constitute a continuation of the gullet across the second stomach into the third. All these parts, the gullet, the cud-duct, the first, the second and the third stomachs, not only communicate with one another, but all communicate by a common

point, the point where the gullet terminates, where the cud-duct commences, and toward which the three stomachs open or end. Now in the process of returning the macerated food for remastication, it is the cud-duct, together with the shut termination of the gullet approached to the shut inlet of the manyplies, which forms the pellets. To understand the mechanism by which these are moulded, let it be marked, first that the cud-duct extends from the termination of the gullet to the inlet of the manyplies; secondly, that when it contracts, it approaches one or the other of these apertures; thirdly, that of these two apertures, the termination of the gullet is habitually shut, and the inlet of the manyplies, naturally straight, can be so narrowed as almost to close by its own contraction; and fourthly, that when the first two stomachs, compressed by the abdominal muscles and the midriff, contract, they push in consequence the materials which they contain both against the two apertures opposite to each other, and against the cud-duct opposite the two stomachs. The two stomachs, in this manner, in proportion as they contract, push the materials contained in them between the margins of the cud-duct, and the cud-duct also contracting, causes the two apertures of the gullet and of the manyplies to approach; while the two apertures being closed and brought nearly together, seize upon a portion of the aliment, and detach it in the form of a pellet. The aperture of the gullet is closed during the act of detaching the pellet, because at that instant the midriff is contracted, and it only opens when the midriff is relaxed; and the aperture of the manyplies is closed, because at that instant the manyplies, as well as other stomachs, is contracted. From these circumstances, it is obvious that the pellet must be detached, as it could not otherwise be seized by the two approaching apertures—that the pellet must be round, for this is the form of the cavity formed by the parts of the organ employed in the process—and that the pellet must be about an inch in diameter, for the cud-duct, when contracted in the act of forming the pellet, is about an inch in length. How beautiful a contrivance—how exquisitely adapted to the structure and wants of the animal—and how minutely and highly illustrative of the all-pervading beneficence and skill which every where shine out in the works of the Creator!

"One important practical lesson suggested by the nature of rumination is the proper feeding of cows, in order to produce the greatest quantity of milk. If they are fed on very dry food, such as hay, the greater portion of fluids in the blood will be spent in the process of rumination and digestion, and the milk will be scanty; but if they be fed on aliment which abounds in liquid, such as mangel-wurzel or brewers' grains and distillers' wash as in Holland, they will ruminate much less; a quantity of saliva will be wanted for chewing the cud, and a large proportion will go to the production of milk, though this will be thinner, and not so rich in cream as the milk produced from drier food. It is questionable whether cows fed wholly on distillers' wash would ruminate at all any more than calves, which, so long as they suck, never ruminate.

"Another important practical lesson has reference to the giving of medicines, and is stated as follows by Clater: 'We may, to a great extent, send medicine into what stomach we please. We may give it in a ball, and it will fall into the paunch, and thence go the round of all the stomachs; or it may be exhibited in a fluid form, and gently poured down, and the greater part of it passed at once into the third and fourth stomachs. That which is meant to have a speedy action on the constitution or the disease should be given in a fluid form. That also which is particularly disagreeable should be thus given, otherwise it will enter the paunch, and be returned again in the process of rumination, and disgust the animal, and perhaps cause rumination to cease at once. This would always be a dangerous thing, for the food retained in the paunch would soon begin to ferment, and become a new source of irritation and disease.'

"A third important practical lesson has reference to the sweating of the domestic ruminants, particularly sheep. Sweat is a production of the fluid portion of the blood, or arises from the same source as the salivary secretion employed in rumination; and hence the flow of it is more to be dreaded in ruminating animals than in others, inasmuch as it greatly diminishes the supply of fluid which ought to be employed in rumination. If sheep are sweating while they ruminate there will be two evacuations of fluid at the same time, the body will be dried, and the blood exhausted and heated by the loss, while thirst will supervene, so as to make them drink till they are incommoded and their temperament altered. Sweating is also hurtful to sheep in other respects, for the fibres of their wool are thereby deprived of a part of their nourishment, which the sweat carries out of their body, while the heat which occasions the sweat, causes the wool to grow too rapidly to acquire sufficient consistence."

No sweet without sweat, no grains without pains.

From the Mark Lane Express.

WHEAT TRADE.

The estimated extra breadth sown in the United Kingdom last season is *one-tenth above the average*, equal to 1,600,000 quarters. On the other hand, there is an excess of produce above the average of from one-sixth to one-eighth. Taking the mean of one-seventh, our account of the present crop and stock stands as follows:

	Quarters.
Average produce, - - -	16,000,000
Excess in breadth one-tenth,	1,600,000
	17,600,000
Excess of produce one-seventh,	2,514,285
Quarters, - - - - -	20,114,285

If to this we add one million and a half of foreign grain, we have an aggregate of 21,614,285 quarters to meet the consumption of the year, which is estimated at 21,000,000. There will still, however, be the usual stock of the country—now minus 5,000,000 quarters—to be made up. For it would be monstrous to suppose that in a country like this, there should be no stock on hand to fall back upon in an emergency. We shall, therefore, require an importation this year of from four to five million quarters, to place us in the average condition we have hitherto found ourselves in, in regard to the stock of wheat.

We shall next take a look round, and seek how this supply is to be obtained. As we have just stated, any calculations for the future, founded upon the experience of the past, are not to be depended on. With present appearances, it is not at all likely that we shall obtain the usual supply from the Black Sea ports, even if the Danube is free to navigation, and the Crimea and Odessa were in the possession of the allies—as I hope will soon be the case. The consumption and waste of such large armaments, and the disarrangement of commerce and agriculture under the iron rule of war, to say nothing of the probable prohibition of the Czar to his subjects from supplying the allies, or conducting commerce with them from the interior—all these circumstances lead me to think that the quantity of wheat we shall obtain from Southern Russia this season will be small. And with respect to the Danubian Principalities, they have been for twelve months the seat of war, and are still occupied with vast armaments. Under the Russian coercive domination, neither agriculture nor commerce could be conducted with any regularity; and it is probable that not only was a large portion of the land left unsown last autumn, but that much of the growing crop has been destroyed by military operations, and in furnishing the Russian cavalry with green food; for no economic considerations would, by any possibility, enter the mind of a Russian officer. We shall, therefore, have much less grain than usual from the Danubian and other Turkish Black Sea ports, *if we get any at all*, which is very doubtful.

From the Mediterranean ports, with the exception of Egypt and Syria, we shall obtain but little wheat. France and Italy are, for the present, closed against exportation by prohibitory laws. The former country, and the United Kingdom, has exhausted her stocks of old native wheat, and is compelled to fall at once upon the new crop, which, however good, will not be enough to meet the consumption, and provide the usual reserve stock. It is probable that France and England will continue, as last year, to trade mutually with each other in wheat, according as the market fluctuates. If the price falls here below that in France, the latter will be buyers in our market, and *vice versa*.

With regard to the Baltic and northern countries, with the exception of Russia, the stocks of old wheat are exhausted. Not only had the merchants the stimulus of high prices to induce them to ship to the utmost, but the insecurity and the uncertainty as to what course the war would take, induced them to export to the last quarter to England and France, as the only countries where it would both be safe, and obtain remunerating prices. The crops in those countries are good, and we shall probably get an average quantity from thence, if no untoward events cause a blockade of the Baltic ports.

We now come to the United States of America; and if the accounts of the maize crop—and wheat, also, in some parts of the Union—be correct, their prices will probably be too high this season to allow of their shipping more at any rate than the usual quantity this season. It is stated in the American papers, that the corn crop (maize) is at least one-fourth deficient, which amounts to 125,000,000 bushels, or 15,625,000 quarters. And, with regard to wheat, in some of the Western States, where the largest quantity is raised, the crop is very deficient—in many cases amounting to a total failure. To what extent this may be the case, it is impossible to say; but, taking the deficiency in both crops into account, it will materially affect the export of wheat from the States, and also, probably, draw off a considerable portion of the supplies from Canada, where the crop is represented to be excellent.

Under these circumstances, I estimate supplies for the next year as follows:

	Quarters.
The northern ports, - -	1,750,000
Mediterranean, - - -	500,000
Black Sea ports, - - -	300,000
United States, - - -	800,000
Canada, - - - -	400,000
	3,750,000

This may probably be made up to four millions from the quarters that do not come under the sections above given; but I cannot, by any possibility, see where we can increase that quantity, unless "a sudden transition from war to peace" should restore our northern trade to its accustomed channels. However, with this quantity added to the abundant crop, we shall be able to reinstate the country in nearly the same condition, as to stock, that it has usually held; and we need not fear that prices will materially fluctuate throughout the season.

APPLE MOLASSES.

We are requested to republish the following article, which originated in the Republican Journal. Although but a little more than a year since it appeared in the columns of the Farmer, it will bear repeating, and is very seasonable, at this time.

The juice of the sweet apple, it is probably well known to most of our readers, makes an excellent molasses. The article, when properly made, is pure, possessing a vinous or rather brandied flavor, which renders it greatly superior for mince, apple, or tart pies, to the best West India molasses. If it is made from sour apples, a small quantity of imported molasses may be added to modify the flavor. Beer made with it, possesses a brisk and highly vapid flavor, which common molasses does not impart. Four and a half barrels of good cider will make one barrel of molasses, costing in ordinary seasons, about $5 50. One who has had considerable experience in manufacturing this article, says:—

"I make little cider; my apples are worth more fed to my hogs, than for cider; but I make a practice of selecting my sweet apples, those that furnish the richest, heaviest liquor, and make a cheese from them, using the cider thus obtained, for making apple or quince preserves, boiling down for molasses, and keeping two or three barrels for drink or ultimate conversion into vinegar. When new from the press, and before fermentation commences, that which I intend for boiling is brought to the house, and boiled in brass, to the proper consistence; taking care not to burn it, as that gives the molasses a disagreeable flavor, and taking off all the scum that rises during the process. The quantity to be boiled, or the number of barrels required to make one of molasses, will depend greatly on the kind of apples used, and the richness of the new liquor. Four, or four and a half are generally sufficient, but when care is not used in making the selection of apples, five barrels may be necessary, but let it take more or less, enough must be used to make the molasses, when cold, as thick as the best West India. When boiled sufficiently, it should be turned into vessels to cool, and from thence to a new sweet barrel, put into a cool cellar, where it will keep without trouble, and be ready at all times."

But the making of molasses is not the only important use to which sweet apples may be applied as connected with culinary affairs. Apple butter, as it is made by the Germans in Pennsylvania, is a most excellent article. The *modus operandi* pursued by those who are most expert in the manufacture of it, is the following:—

Having selected six bushels of fine ripe fruit, and divested them of the rind, quarter and carefully core them. Boil down two barrels of sweet cider to one, and deposit the apples in the boiled down cider. Keep up a brisk fire under the kettles, and stir the contents continually to prevent burning. The boiling and stirring must continue uninterruptedly till the whole mass is reduced to a pap about the consistency of thick hasty-pudding. It is then allowed to cool, and may afterwards be deposited in jars for future use. When thoroughly made, it will be nearly as solid as first rate butter, and will keep many years; indeed, it improves by age. The Pennsylvanians make it only once in seven years. It is so much superior to the ordinary apple sauce, that no one who has fairly tested its value will afterwards, we are confident, willingly consent to be without it. The flavor is superior, and there is a neatness and solidity about it greatly superior to that of the ordinary apple sauce. Its price in the market is also higher.

ANALYSES OF SOILS.

We are not a little gratified to observe sentiments advanced by us on this subject some time ago, finding an echo in a journal conducted with so much talent as the "Michigan Farmer." Thus speaks the Farmer:

"During the past ten years there has arisen a class of men, who at all times were willing to make all the processes of agriculture depend upon the announcements which were to come from the laboratory of the chemist. A few samples of the soil of a field were carefully put in paper, or were bottled up in vials and labelled, and dispatched to a medium, who advertised to pronounce, after a careful analysis, just what any field might need to make it grow any crop, in any given quantity. According to the notions which they promulgated, it was just as easy to grow a crop of wheat on a field of dry sand, as it was on the best limestone soil, that ever lay "out of doors;" and so with all other crops, these mediums would prescribe as quickly for a soil, as a spirit rapper for a diseased human being. In fact the processes were very much alike. The analyst had a little vial of earth sent him from a distance, the spirit rapper had a lock of the hair of the patient to manipulate. As a matter of course, the one judged about as correctly of the condition of the field, as the other did of the state of the human body. But both had the faculty of clothing the results of their examinations in a semi-classic jargon, which had all the ring of true science, and the dupes who consulted them were for the most part well satisfied, until at the last the manifest utter worthlessness of the prescriptions, raised some doubt as to the value of the opinion of the analyst, which became with the

lapse of time, certainties so fixed, that the very word analysis would raise a smile of contempt on the faces of those who had paid their five and ten dollars, no matter how appropriately it might be used.

It is far from our purpose to cast a slur upon the services which science has rendered to agricultue; but there was a time when it was actually believed that science was to do every thing, and practical ability nothing. That time is past for the present, but there remains a few amongst us who would seem still to have a cringing desire to make us believe that the knowledge of the "elements" was of far more importance to know how to handle a plough, or to swing or sharpen a scythe. Even the most scientific of the professors themselves have been carried away with the idea that the time had come when they could compel the earth to yield at their mere bidding, and with no labor. Liebig, the most celebrated of them, invested a great part of his means in the manufacture of a compound that was to prove more fertilizing than guano, and which would be of general application. The great chemist found out his mistake, after dear bought experience; his compound proving totally worthless in its application to the growth of crops. S. W. Johnson, an editorial correspondent of the *Country Gentleman*, who is at present pursuing a course of chemical instruction at Munich, in Germany, in a recent letter, gives strong testimony as to the uncertainty and imperfection of the results obtained from the best and most carefully conducted analyses, even when performed by men of the utmost science. He says: "Boussingault long ago pronounced them *more curious than useful*." Stockhardt, (one of the most eminent of the German school of agricultural chemists,) in his lectures, published in 1853, on agricultural chemistry, declares that "to estimate the productive quality of a soil by chemical analysis, is at this time impossible, and will indeed, remain impossible."

The same writer mentions an instance in which three samples, of 14 different soils were selected, and distributed to several chemists to analyze. The chemists selected were such men as Liebig, Rose, and others of a like reputation. Out of the 42 analyses, no two were alike in all particulars. Of course the analyses of each soil approximated in a greater or less degree, but in some of the soils very important elements were found by some of the chemists, while other chemists reported their analysis without being able to find the same element. The same writer adds:

"The addition of a ton of guano to an acre of soil, would make no perceptible difference in the results of an analysis! But the farmer knows that a soil now giving a moderate crop, will often yield a very heavy one, by adding to it a few hundred weight of guano, and be totally spoiled for several years, on addition of a ton. Yet chemical analysis would give him results practically identical in all these cases.

"Practice has taught that exhausted land often recovers its fertility wonderfully, by laying a season or two in fallow. Yet in this case nothing is added to the soil. On the contrary, its organic matter must waste by the ordinary process of decay. The renewal of fertility, depends merely upon a change in the *condition* of the soil. Ingredients before insoluble, become soluble and available; but analysis, at present, is by no means able to follow and estimate these changes. In fact, if it be admitted that the chemist can estimate *quantities* with the utmost accuracy and nicety desirable, yet he cannot get *qualities, conditions*, in their true light. His attempts at this must ever remain vague and unsatisfactory; for the soil is the subject of perpetual changes, which he can only imperfectly understand, much less imitate.

"So much depends upon the *physical* condition of the soil, that analysis alone, can form no safe basis of judgment. Nothing but lichens and mosses will grow on a block of granite. Reduce the granite to pieces as large as a pin's head. and it forms a poor soil. But grind it to a fine, impalpable dust, and wheat sown in it will grow and mature, if it have suitable weather. Yet granite is granite, "though it be brayed in a mortar." It contains the needful inorganic elements, but they are slowly soluble in water. Increase the surface on which water may exercise its solvent action a million times, as is done by pulverization, and proportionately increase the quantity of matter, which the granite may yield to water and to plants in a given time. By simple pulverization, we may convert a mountain of rock into a field, in which the tender grains will almost reach perfection."

We have been induced to quote these remarks relative to the analysis of soils, because we observe from several communications, which have reached us lately, there appears to be a great stress laid upon the benefits to be derived from a knowledge of the analysis of the soils of particular fields, as if there were some peculiar applications which would aid them, far more than good cultivation and the manure bed. There may be something that would prove advantageous for a short time, as a temporary stimulant, but at last the farmer who tries them will find that he will have to return to the first principles of deep ploughing and thorough cultivation, and that stimulants exhaust in proportion to their power, of forcing an unnatural yield.

THE CATTLE TRADE.

New York City is the great cattle market of the Union, all the cattle-raising States looking to that region as the regulator. During the present year there have been sold at the markets in the City of New York 155,796 beeves, 41,085 cows and calves, and 470,617 sheep and lambs. Their aggregate value is put down by the Courier at $11,287,034, which is an increase of $2,072,089 over sales of last year. The material increase in the value is ascribed to the large quantities of stock sent to California from the Western States across the plains, which otherwise would have found markets on the Atlantic. The excess of 1854 over the previous year is not considered at all in proportion to the increase of the city wants.—*Richmond Whig*.

PRINCE WILLIAM AGRICULTURAL SOCIETY.

A meeting of farmers in Prince William county, Virginia, was held on the 13th ult. at Gainesville, for the purpose of forming an agricultural society. Charles H. Hunton was elected President; Bazil Brawner, Fred. Foote and John B. Dogan, Vice Presidents; Dr. J. B. Grayson, W. W. Monroe, W. L. Carter and Edmund L. Berkley, Secretaries; and Dr. C. B. Stuart, Treasurer.—*Richmond Enquirer*.

FERTILIZERS ON GRASS.

What is the cheapest manure for mowing lands, is a question not easily answered. Probably, no one fertilizer is the best under all circumstances. We tried an experiment last spring, which has settled this question for our own premises. The lot selected for the trial was an old mowing field, laid down a dozen years ago, or more, and cutting not far from a ton to the acre. Four plots of ground, of four square rods each, adjoining each other, were measured off, staked and numbered.

May 3d, in a rain, we sowed 15 lbs. of DeBurg's super-phosphate of lime upon number one. On No. 2 we sowed 15 lbs. of Mapes' improved super-phosphate of lime. On No. 3 we put 15 lbs. of Peruvian guano, that had been moistened and mixed with charcoal cinders for a fortnight. On No. 4 we put nothing, in order to show the natural product of the land.

A week after the application the plot manured with the guano could be distinguished, at a distance, by its greater luxuriance, and darker green. The effect of the super-phosphate was not very manifest. About the 1st of July, the grass upon the several plots was carefully cut, dried and weighed. No. 1 gave 84 pounds; No. 2, 70 pounds; No. 3, 104 pounds; and No. 4, 59 pounds. The following tabular arrangement gives a better comparative view:

Manure.	Date of application.	Date of Cutting.	Area.	Lbs.
Nothing.....	May 3d.	July 1st.	1-40 acre.	59
Mapes' Improved Sup. Lime	"	"	"	70
DeBurg's Super Phos. Lime	"	"	"	84
Peruvian Guano	"	"	"	104

It will be seen that the manures were applied in about twice the quantity usually recommended, or at the rate of 600 lbs. to the acre. The return for Mapes' super-phosphate of lime was 11 lbs. of hay for fifteen pounds of the manure; DeBurg's gave 25 pounds; and the guano 45 pounds.—*Am. Ag.*

Poultry dung, if saved properly, will be found nearly as good, if not quite as good, as guano. The evacuations should be gathered weekly, put away in a barrel, and sprinkled over with pulverized charcoal or plaster.

A bargain is said to be a ludicrous transaction in which each party thinks he has cheated the other.

PAYMENTS TO THE SOUTHERN PLANTER,

To the 1st of January, 1855.

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

Dr. L. Roane to January 1855	$4 00
William G. Maury to January 1856	1 00
Bowling Clark to November 1855	1 00
John A. Payne to November 1855	1 00
John Andrews to November 1855	1 00
Charles H. Lyneh to January 1856	1 00
Dr. George S. Newman to November 1855	1 00
John H. Barksdale, Jr. to January 1855	$4 00
Col. Francis Yates to July 1855	2 00
Joseph Starry to July 1855	2 00
William M. Tate to April 1856	1 00
William Frazier to July 1855	1 00
John Churchman to November 1855	1 00
Thomas O. Soyers to January 1856	1 00
William G. Daniel to January 1855	1 00
Capt. H. E. Scott to January 1856	2 00
John N. Griffin to June 1855	2 00
L. H. Taliaferro to June 1855	1 00
William L. Pannill to January 1856	1 00
Col. Braxton Davenport to January 1855	1 00
James H. Fitzgerald to July 1855	5. 50
Christopher T. Lutherlin to November 1855	1 00
James M. Dillon to January 1856	1 00
J. Haw Jones to January 1855	1 00
Peter Hanger to January 1855	1 00
John C. Laird to January 1856	1 50
Capt. William Walden to January 1855	1 00
J. R. Motley to July 1854	1 00
S. A. Buckner to January 1855	1 00
J. B. Lightfoot to January 1855	1 00
Mrs. Susan K. Powell to July 1855	1 00
Ro. W. Bragg to January 1855	1 00
A. J. J. Brown to January 1855	3 00
James M. Fitzgerald to January 1856	3 00
John T. Childrey to January 1855	1 09
T. C. Proctor to October 1855	2 00
Frank Crocker to December 1854	1 00
J. P. Machin to July 1855	1 00
Sharpe Carter to January 1856	1 00
Miss Charlotte Carver to January 1855	1 00
Dr. W. T. Walker to January 1856	3 00
Col. Samuel Drake to January 1856	1 00
William D. Clopton to January 1855	1 00
John Hunter to November 1855	1 00
Dr. D. C. Winfree to May 1855	1 00
Lewis Mabry to October 1855	1 00
Col. W. C. Knight to January 1856	3 00
Hugh Chandler to May 1855	1 00
Capt. Ro. G. Haile to July 1855	3 00
William J. D. Bell to October 1855	1 00
F. W. Brown to June 1855	1 00
A. G. Waro to November 1855	1 00
James Howison to January 1855	1 00
F. J. Jeffress to November 1855	1 00
Nathaniel S. Goffegon to January 1855	2 00
J. H. Evans to November 1855	1 00
Col. Joseph Martin to July 1855	1 00
Estate of Wm. Greenhow to January 1851	6 00
William S. Dance to January 1856	1 00
H. Carpenter to July 1855	1 00
Ebenezer McGregor to January 1856	1 00
Addison Dunlap to January 1853	2 00
James H. Jameson to June 1855	1 00
Capt. F. M. Wiley to April 1854	1 00
Capt. James Lindsay to January 1855	1 00
James M. Ranson to September 1855	1 00
John Strong to November 1855	1 00
John Wootton to January 1854	1 00
P. H. Hurt to July 1855	1 00
Col. T. C. Dennis to September 1856	1 00
A. B. Carter to September 1855	1 00
A. W. Hanserd to September 1855	1 00
James M. Hite to January 1856	1 00
R. Skipwith to January 1855	6 00
John G. Norvell to September 1855	2 00
Dr. W. W. Anderson to January 1855	6 00
Daniel O. Bass to January 1856	1 00
Albert Kennedy to July 1855	1 00
Henry T. Watkins to October 1855	1 00
Col. W. Cardwell to January 1855	1 00

Felix B. Welton to January 1856	$1 00
J. E. Smith to July 1855	1 00
W. G. Friend to January 1856	1 00
William Murray to January 1856	2 00
G. A. Chaffin to July 1855	1 00
C. T. Baylor to January 1855	3 00
David Lee to January 1856	1 00
John H. Lee to January 1856	1 00
Thomas Clarke to January 1855	1 00
Henry M. Vaughan to April 1855	1 00
Thomas Leigh to January 1856	2 00
Elijah D. Hundley to April 1856	2 00
Joseph K. Anderson to January 1855	1 00
Post Master at Gill's Creek to January 1856	1 00
George Bouton to July 1855	1 00
Benjamin Hoover to July 1855	1 00
George H. Toler to April 1855	1 00
Dr. George Fitzgerald to January 1856	1 00
Col. J. Grigg to January 1855	2 00
Dr. George W. Ruffin to January 1856	1 00
Samuel Hancock to January 1855	2 00
L. H. Knight to July 1855	1 00
Dr. S. Davis to April 1856	3 00
P. C. L. Burwell to January 1855	1 00
Judge R. C. L. Moncure to November 1855	1 00
John M. Conway to January 1856	1 00
Major Samuel L. Brook to January 1856	1 00
Peter D. G. Hedgman to January 1856	1 00
John Schooler to January 1856	1 00
Peter D. Lowry to January 1855	1 00
Dr. S. Fletcher to March 1855	2 00
Robert H. Vest to January 1855	1 00
G. M. Dettor to January 1856	1 00
William R. Briggs to September 1855	2 00
William F. Barner to January 1856	1 00
N. Horsely to January 1856	1 00
John G. Guthrie to July 1855	1 00
James M. Carter to July 1855	1 00
William E. Clopton to November 1855	2 00
W. J. Bingham to January 1856	1 00
R. N. W. Keeling to January 1855	1 00
T. L. Burgess to January 1856	1 00
William F. Gunn to January 1856	1 00
M. H. Effinger to June 1855	1 00
William S. Davis to December 1855	1 00
William H. Clore to January 1856	1 00
Peter C. Lauck to January 1856	1 00
T. W. Chapman to January 1856	1 00
J. C. Clements to May 1855	1 00
J. D. Howle to May 1855	1 00
Jordan Harris to January 1856	1 00
S. R. Irving to January 1856	2 00
Thomas Massie to January 1855	1 00
Charles Massie to January 1856	2 00
John Parker to January 1856	1 00
Miss E. C. Christian to January 1856	1 00
B. Davis to January 1856	1 00
G. W. Southall to January 1855	2 00
R. N. Mead to January 1856	1 00
C. B. Williams to January 1856	1 00
Dr. Williams to January 1856	1 66
R. Campbell to January 1856	1 00
S. F. Patterson to January 1856	1 00
G. H. Timberlake to January 1856	1 00
W. H. Waller to January 1856	1 00
Dr. J. R. Taylor to January 1856	1 00
Dr. J. R. Taylor, Jr., to January 1856	1 00
D. B. Hancock to January 1856	1 00
W. Massie to January 1856	1 00
Dr. E. P. Williams to January 1856	1 00
J. Lipscomb to January 1856	1 00
J. R. C. Chambliss to January 1856	1 00
W. Old to January 1855	2 00
S. L. Pidgeon to January 1856	$1 00
Judge Field to January 1856	1 00
E. H. Flournoy to January 1856	1 00
A. T. Caperton to January 1856	1 00

WOOL DEPOT.

Richmond, June 22, 1854.

Dear Sir,—Having been engaged for years past in the sale of Wool, we are fully aware of the difficulties that the Wool Growers of this State have labored under to obtain for their Wool its fair market value. For this there are two causes—one is, that in each lot of Wool, indeed in each bag of Wool, there are several grades, and each purchaser has to buy some Wool that does not answer his purposes; he could not, therefore, afford to pay the full value for an article that he did not want, and which he only bought because it was not assorted. All who are familiar with the sale of tobacco, are fully aware of the loss that the planter sustains who does not assort his tobacco. It is the same case with Wool, to a considerable extent.

Another reason is, that the receipts of Wool have been light, and so scattered that it was difficult to get together a sufficient quantity to attract the attention of purchasers. We have found this operate so strongly that we have not generally attempted to make sale of suall parcels of Wool, but allowed our receipts to accumulate; and we have generally obtained from three to five cents per pound more for such large parcels than could be had for small lots. The Wool interest of Virginia is now rapidly increasing, and we think is destined, in a short time, to become an extensive trade. Already there is a sufficient quantity grown, if concentrated to one point and properly graded, to overcome, to some extent, the difficulties referred to above. We think this can be best accomplished by a well conducted Wool Depot. This city appears to be the most accessible point for a majority of the Wool Growers in Virginia.

Being already in this trade, and having an extensive acquaintance with the producers as well as the manufacturers and dealers in Wool, we have determined to open such a Depot in this city, in connection with our present business. In order to conduct it in the most satisfactory manner, we have engaged the services of Mr. John Waterhouse, who was long and favorably known as the efficient Agent of the late Woollen Factory in this city.

All the Fleece Wool sent to us and tub washed Wool, so far as it is practicable, will be graded, and each quality put together, uuless the owner prefers that his Wool should be sold alone—in that event he will so direct us.

Our charges will be—

Commission for selling,.....2½ per cent.
Storage, grading, fire insurance, advertising and labor,.....1 cent per lb.

We shall always sell for cash, unless we find it to the interest of the owners to sell on time. In that event, we will charge 2½ per cent. guarantee. We will be prepared to cash all such sales as soon as made, deducting the interest.

We hope the establishment of such a Depot will meet with your approval, and that we may be favored with your consignments. Yours, most obedient, CRENSHAW & CO.,

Grocers and Commission Merchants, North Side of the Basin, Richmond, Va.

☞ Liberal advances will be made on consignments of Wool, when required.

Genuine No. 1 Peruvian Guano always on hand, and for sale on the best terms. C. & CO.

autf

General Agency and Commission Business.—The subscriber tenders his thanks for the many calls heretofore received, and again offers his services on reasonable terms. Now for sale many Farms in Maryland and Virginia, Stallions, Bulls, Bucks, Boars, of improved stock; improved Fowls of all kinds; Mares, Cows, Ewes, Sows; Ewes one-half and three-fourths Cotswold; Calves at three months old, one-half Alderney; South Down Ewes with their lambs. For particulars address (post paid) the subscriber,

MARTIN GOLDSBOROUGH,
38 Holliday Street, Baltimore, Maryland.

P. S.—Answers to letters particularly desired. M. G.

may—tf

Albany Tile Works, corner of Patroon and Knox streets, Albany, N. Y. Drain Tile of the following descriptions and prices suitable for land drainage, always on hand in large or small quantities of the first quality, delivered at the docks and railroad depots free of cartage:

Horse-shoe Tile.

4½ inch calibre,.....	$18	per	1000 feet.
3½ do.	15	do.	
2½ do.	12	do.	

Sole Tile or Pipe.

3 inch calibre,.....	$18	per	1000 feet.
2 do.	12	do.	

Large Tile for drains about dwellings, yards, &c., of various sizes, $4 and $8 per 100 feet. Sole Tile, 4 inch calibre, for sink drains at $4 per 100 feet. Drain your land and save your crops. Orders from a distance will receive prompt attention. A. S. BABCOCK.

☞ Albany, April 20, 1854. jun—tf

Agency for the Purchase and Sale of Improved Stock.—Stock Cattle of all the different breeds, Sheep, Swine, Poultry, &c. will be purchased to order, and carefully shipped to any part of the United States, for which a reasonable commission will be charged.

Apply to AARON CLEMENT, Philadelphia.

Refer to Gen. Wm. H. Richardson, Richmond, Virginia.

N. B.—All letters, post-paid, will be promptly attended to.

ap '53—tf

Superior Swine and Premium Poultry.—I am prepared to engage pigs by my large Byefield and superior Suffolk boars, from matchless sows of the following breeds: Byefield, Suffolk, Skinner, Essex, Chester, Delaware, Cheshire and Russian—most of them of mammoth size.

The finest collection of ornamental and domestic Poultry in Virginia—receiving the premium as the finest collection and upon individual pairs. They consist of the following: Brahma Pootra, Imperial Chinese, Colatta, Dorking, Spangled Hamburg, Seabright and African Bantams, Sumatra Pheasant Game, Ablin Game, Mexican Game, Ebon Game, Crested Turkey, Purple Turkey, Pure White Turkey, Bremen Geese, Hong Kong Geese, Wild Geese, Crested Black and White Ducks, Java Ducks, Penguin Ducks, Rouen Ducks, Aylesbury Ducks, Pure White Guinea Fowls, Italian Pea Fowl, Madagascar or Lopped Eared Rabbits—ears 22 inches long, 5 broad.

The above are bred in separate apartments, and can be obtained at moderate prices by addressing

JOHN G. TURPIN,
mar—tf Clover Dale, near Petersburg, Va.

William P. Ladd, Apothecary and Druggist, No. 319, head of Broad Street, Shockoe Hill, Richmond, Virginia, dealer in English, Mediterranean, India and all Foreign and Domestic Drugs and Medicines; also, Paints, Oils, Varnish, Dye-Stuffs, Window Glass, Putty, &c. For sale on the most accommodating terms.

☞ Orders from Country Merchants and Physicians thankfully received and promptly attended to. ja'51tf

---

General Agency for the Sale and Purchase of Lands.—Frank: G. Ruffin, Secretary of the Virginia State Agricultural Society, and N. August, Notary Public and Accountant, offer their services to the public as General Agents for the sale and purchase of lands in Virginia, and in the Southern and Western States. Those wishing our services, having lands for sale, are requested to furnish us with a full description of such property, and the terms, &c., upon which they are willing to sell; and those wishing to purchase are requested to inform us of the locality in which they wish to purchase, the price they are willing to pay, &c. Our charges will be moderate.

Office at the office of the Virginia State Agricultural Society. jaf

THE CHINCHA ISLANDS.

As many ships to our address are under charter to proceed to these Islands to load Guano, we beg to submit some particulars relative to the detention of ships and the expenses of loading.

All vessels may expect to lay out the full number of their lay days before loading is completed. A bonus of $10 to $15 per day, for every day saved, is sometimes paid as a gratification to officials. Most ships are kept a month after arrival, before an order is given to ballast, after which it is decided whether they are to load by lighter or by "Manguera," or shoot, by which the Guano is run into the hold.

The "Manguera" discharges from 400 to 500 tons per day. All ships dry up very much, from being exposed to a hot sun, and nearly all are obliged to caulk before leaving, unless they have been very recently caulked. Vessels should be provided with oakum and pitch, and English Caulkers can be obtained at $4 per day and board. American coin or Sovereigns are best for disbursements—the former passing at par, and the latter at $5 each. Captains of vessels, short of funds, can obtain money of resident Houses, if well accredited, at 6 per cent. premium upon sight bills, or draw upon their charters at 12 per cent. premium. The following were the Port Charges and disbursements for a ship of 700 tons:

CALLAO.—Stamps, $5; Sailing License, $11			$16 00
Tonnage Dues, 25c per ton			175 00
Clearance dues, Pisco			4 00
Com'n on Charter			150 00
At the Islands			345 00
Manguera Fees, mooring	$20 00		
Pilot attending	24 00		
Trimm'g Fees, 17c reg'r ton	119 00		
		163 00	
Crew to load from Callao and back, 16 men three months each, at $20 per month	960 00		
Com'n shipping & boat hire, $2 each	32 00		
Market bill for beef and vegetables, 3 months	300 00		
Water bill for the Islands	50 00		
Crew shipped to go home, 16 men, at $35 per month, 2 months in advance, $70 each, is	1,120 00		
Com'n ship'g and boat hire, $5 each	80 00		
Water to go home	30 00		
Captain's expenses at Callao and Lima	25 00		
		2,597 00	
Add for caulking ship			200 00
" " gratification to trimmers and pilots			30 00
			$3,335 00

There is another charge for hire of water casks (2 cents per gallon,) to carry water from Callao to the Islands, which the charter says is to be delivered "free of expense." The water has to be bought, and if the ship has no spare casks, they have to be hired. There is also a chance of losing $50 on the boats or lighters used in ballasting or loading, vessels arriving purchasing of those leaving and when loaded, but not always obtaining as much as they expended.

se—tf HUSSEY, BOND & HALE.

STILL VICTORIOUS!

GREAT PREMIUM FAN, patented December 20, 1853. Montgomery's Celebrated Double Screen Rockaway Wheat Fan, has taken the following premiums the past year: The first premium at the Virginia State Fair, Richmond, 1854; the first premium at the Maryland State Fair, held at Baltimore, 1854; the first premium at Frederick City, Frederick county, Maryland, 1854; the first premium at the North Carolina State Fair, held at Raleigh, 1854; the first premium at the Union Fair, held at Petersburg, Virginia; and the first premium awarded by the Seaboard Agricultural Society, held at Norfolk, 1854. The Maryland Institute has awarded three Silver Medals, in 1852, 1853 and 1854.

CERTIFICATES.

ST. GERAMERS, ST. MARY'S CO., MD., Oct. 6, 1853.

This is to certify, that I have tried Messrs. J. Montgomery & Brother's Wheat Fan in some tailings I made in cleaning a part of my crop, which I did not think could be made worth anything; it extracted from a bushel and a half of filth about three pecks of pure wheat. I must say that I never saw a fan that can even come in competition with J. Montgomery & Brother's Rockaway Wheat Fan for screening wheat. BENJAMIN MCKAY.

—

PRINCE GEORGE COUNTY, Aug. 15, 1854.

TO ALL WHOM IT MAY CONCERN: This is to certify, that we have particularly examined the operations of the Montgomery Fan, and find it, according to our judgment, to be the very best fan we have ever seen, both as regards the speed and the goodness of the work done. We have purchased two of them, one for Mrs. Worthington and one for our own use. B. D. MULLIKIN,
JAS. MCE. MULLIKIN.

—

GREAT MILLS, ST. MARY'S CO., MD., Aug. 28, 1854.

I purchased of you, a short time since, one of your No. 1 Extra Rockaway Fans, which has given entire satisfaction, and performs better than I could have possibly imagined.
J. EDWIN COAD.

—

FARMINGTON, ALBEMARLE, VA., April 28, 1854.

I am so much pleased with the Fan I ordered from you at our Agricultural Fair at Richmond, last November, and which I have been using at my farm on James River, that I am determined to order one for my estate here, and will be obliged to you to have me one made, consigned to my son, T. J. Peyton, merchant, Richmond.
BERNARD PEYTON.

—

This is to certify, that we, the undersigned, have tried the Wheat Fans of Messrs. J. Montgomery & Brother, and we take pleasure in saying that we regard it greatly superior to any fan we have ever seen tried. We are of opinion that the Wheat Fan of J. Montgomery & Brother will in a day fan out more wheat and do it cleaner than any fan we ever saw tried. We can, with the utmost confidence recommend it to the favor of the farmers of Virginia.
JOHN OSBORNE,
SAM'L C. LEGRAND,
of Charlotte County, Virginia.

—

STONY POINT, NEAR YORKTOWN, VA., May 22, 1854.

Your Fan is a perfect machine, doing all that is claimed for it, and answering the highest expectations.
J. R. COUPLAND.

—

REFERENCES.

City of Baltimore: John S. Williams, foot of Commerce street; Messrs. Seth & Godwin, No. 4 Bowly's wharf; E. B. Harris, No. 4 Bowly's wharf; Michael Dorsey, Light street; Thos. J. Hall, Light street; N. E. Berry, Lombard street, near Charles; R. D. Burns, foot of Bowly's wharf; Mr. Wilmer, No. 2 Bowly's wharf—all commission merchants.

Virginia references: Hon. William S. Archer, Virginia; Gen. B. Peyton, Virginia; Hill Carter, Virginia; Lewis E. Harvie, Virginia; Rowlett, Hardy & Co., Petersburg; A. C. Lane, Richmond; Robert Cole, Richmond, Virginia; M. Heartwall, D. T. Payner, James B. Lundy, J. Ravenscroft Jones, Geo. W. Field, Col. Isham Trotter, John Winbeiks, Wm. Towns, Jas. Hays, Sr., Dr. Wm. W. Oliver, Samuel F. M'Gehee, William M. Watkins, William I. Scott.

We are prepared to sell State or County rights to those who wish to manufacture our Fan.

All orders addressed to the undersigned at the Baltimore City (Md.) Post Office, will be promptly attended to.
J. MONTGOMERY & BRO
No. 155 N. High st., between Hillen and Gay streets,
may—1y Baltimore.

SCOTT'S LITTLE GIANT PATENT CORN AND COB MILL,

Patented May 16, 1854.

The attention of Planters, Farmers and Stock-feeders in general, are respectfully called to this Mill as the most important article of the kind now in use; not only well adapted for grinding Cob Meal for Stock, but Grits for the table, and especially Bread Meal from corn not fully ripe or dry in the fall.

In setting this Mill no mechanic or frame work is wanted, only requiring to be fasted to a floor or platform. Easily adjusted and used by any body, even a child.

The LITTLE GIANT has received the first premiums at the late Agricultural Fairs of Missouri, Kentucky, Maryland and other States; and that in the most complimentary manner; as well as the most ready commendations from the thousands witnessing its performance.

These Mills are guaranteed in the most positive manner; and No. 2 warranted to grind 10 bushels of feed per hour with one horse, and offered at the low price of $44, all complete, ready for attaching the team—No. 4, at $66, grinds 20 bushels per hour with 2 horses.

Manufactured by SCOTT & MOCKBEE, No. 7 Balderston Street, near Light Street, Baltimore, Maryland. Liberal discount to dealers. State and County Rights for sale.

From the Cincinnati Gazette.

CORN AND COB CRUSHERS.—We stepped in yesterday to the establishment of Messrs. Scott & Hedges, No. 9 Water Street, and witnessed the performance of SCOTT'S PATENT CORN AND COB MILL, called the "LITTLE GIANT," and can assure those who are in need of a mill for grinding ear-corn for feed, or cracking corn and oats together, that this article is the best adapted for that purpose of any thing we have ever examined. With one horse, they are able to grind at the rate of from 10 to 12 bushels per hour, breaking all the corn and pulverizing the cob completely. The whole mill, ready to hitch the horse to, weighing about 300 lbs, and sold at the low price of $44, and warranted at that—it does strike us it will soon find its way to every good farmer and economical teamster in the whole country. In regard to the style and workmanship of this Little Giant, we must say it is a little ahead of the rest of the family, and no wonder, for it is Western born. no3t*

PIGS OF IMPROVED BREED FOR SALE.—I have for sale, to be delivered at weaning time, a good many pigs of improved breed. I have produced it myself from crosses of the Surry (or Suffolk), genuine Berkshire, (Dr. John R. Woods' stock), Irish Grazier, Chester County, No Bone and Duchess. I think them superior hogs of medium size, and for fourteen years they have not had a bad cross among them. I prefer that purchasers should view my brood sows and my boar on my farm, three miles below Richmond. I will not sell them in pairs, because the in-and-in breeding would depreciate the stock at once and cause dissatisfaction, but I will sell in one lot several of the same sex. Price $5 per head for one, and an agreed price for a larger number. They will be delivered on the Basin or at any of the Rail Road Depots free of charge.
FRANK: G. RUFFIN
Summer Hill, Chesterfield, Jan. 1, 1855.

CONTENTS OF NUMBER I.