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THE SOUTHERN PLANTER AND FARMER,

DEVOTED TO

Agriculture, Horticulture, and Rural Affairs.

L. R. DICKINSON.....Editor and Proprietor.

RICHMOND, VA.,

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THE SOUTHERN PLANTER AND FARMER.

This journal enjoys the possession of a corps of contributors not found in connection with any other publication of the kind in this country. It discusses, with freedom, all questions of importance to the Southern country; in fact, it is the exponent not only of Southern agriculture, but of Southern opinion. No effort is spared to make it of absolute value to all of its readers.

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THE SOUTHERN PLANTER & FARMER,

DEVOTED TO
AGRICULTURE, HORTICULTURE AND RURAL AFFAIRS.

Agriculture is the nursing mother of the Arts.—XENOPHON.
Tillage and Pasturage are the two breasts of the State.—SULLY.

L. R. DICKINSON, - - - - - EDITOR AND PROPRIETOR.

Vol. XXXVIII. RICHMOND, VA., OCT., 1877. No. 10.

THE PRESIDENT OF THE STATE AGRICULTURAL SOCIETY TO THE PEOPLE OF VIRGINIA.

It gives us peculiar pleasure to present this address in our pages. The appeal is not from a man whose acts are less substantial than his words, but from the very prince of farmers. Major DREWRY's work is known of all Virginians, and they are proud that glorious old "Westover" boasts such a worthy proprietor.

But what can the Major do, in a State as big as Virginia, all by himself? He might be HERCULES indeed and still succumb under such a task. Let us then be permitted to join our most earnest appeal to his, that help to the cause will come from every corner of the State. We have no county that lacks for men of influence, and we do hope that, for the little time between this and the Fair, they will forget that there ever was such a thing as a seat in Congress, or other position provided to write their names "high on the scroll of fame." To make laws is not the chief end of man. To make our fellows happier should be. Will not two or three gentlemen in each county take the trouble to go round and see what can be done looking to new members for the State Agricultural Society? Five dollars per annum could not possibly be spent better, and, as hard as the times are, we would be surprised, if we tried to find out, how many could afford it. How could any plan be devised that would more certainly unite the State than the assembling together once a year, at the capital, of so many of its solid men and excellent women.

With a better fund at the disposal of the Society, premiums could be arranged that would prove to be a stimulant indeed, to the young people in particular, and they, being the hope of the Commonwealth, demand our best and constant care.

Give, then, to Major DREWRY your very best service in this business of the Fair, so that he may, with a heart filled with pride, present WADE HAMPTON and the PRESIDENT to a people worthy to receive a king:

OFFICE OF THE VIRGINIA STATE AGRICULTURAL SOCIETY, }
RICHMOND, September 7, 1877. }

To the People of Virginia:

The near approach of the next Fair of the State Agricultural Society suggests the propriety of a brief appeal to you in behalf of the Society. Its Fairs exert an important influence on the material

interests of the people, and its work in collecting and disseminating important information bearing on practical agriculture, horticulture, stock-breeding, manufactures, domestic economy, &c., brings it in contact with and constitutes it a friend of all efforts to advance the arts of civilization and the wealth of the State.

It is not a corporation laboring for the selfish ends of corporators, but, from the terms of its constitution and charter, has a noble and disinterested work to perform. With one exception it has no paid officers, and all its resources are devoted, in the words of its constitution, to the "advancement of agriculture and the auxiliary mining and mechanic arts." It has the highest claims, therefore, to the confidence and support of all classes of the community. The life membership, which constitutes the corporate strength of the organization and regulates its affairs, should embrace men and women from every county in the State, and of all occupations; and when brought together annually for a short recreation from the labors of the year, for information to be gained and acquaintance formed by contact and association, for the inspection and study of the large display of the products of the farm, garden, orchard, vineyard, mines and factories, of animals and poultry, and of the household arts, not one will return home without a feeling of satisfaction that something has been gained, and without also a feeling of just pride in the people and the resources of the Commonwealth. Why, then, should just expectations be disappointed in respect to this membership? The cost is small to each individual—say twenty dollars in cash, or five dollars annually for five years. The aggregate should be large, and would enable the Society to expand its efforts for usefulness in many ways. The last census shows that there are in the State about eighty thousand persons who are the owners of farms, and about twenty thousand more who are engaged in mining, merchandise, manufactures, and the professions who live by the products of agriculture. Now, if but one in ten of this number would identify himself with the Society by becoming a member upon the terms indicated, there would be ten thousand new members, bringing in the aggregate two hundred thousand dollars, with a reasonable annual increase, which would afford an income sufficient to double the annual premium list of the Society and largely increase its means for the general good in other respects, and each member at the same time have an ample consideration for his expenditure. The privilege of the Fairs for the period of his life, together with his wife and children under twenty-one years of age and unmarried daughters, and his constituent voice in the general management of the Society, to say nothing of incidental and other advantages, furnish a valid and adequate equivalent for his outlay.

More than this, and better than all, each member must feel that he is one of a number of citizens who are devoted to the interest of our old State, and working in a practical way, which will develop resources alike beneficent to private and public interest, virtue and credit.

The coming Fair promises to be one of the best since the war, or, indeed, in the history of the Society, and as a grand reunion of the best men and fairest women of the old Commonwealth, it is an event to be anticipated with pride and pleasure. Bear in mind, however, that the great need of the Society is membership, which furnishes the bond of union and creates force and means for its work. The people in every county of the State should organize a club of membership, and thus bring to bear an influence which will be felt and diversified throughout the Commonwealth. With such local efforts to be concentrated in the Society, the citizens of all sections and all occupations will be brought together, not only in their annual reunions, but in their thoughts and labors, which contribute to individual, State and national prosperity.

The officers of the Society expect a large attendance at the Fair, and they will greet and welcome all who may come; but they earnestly hope that the question of membership will not be overlooked, as this more than all else gives vigor and effect to all that the Society is designed to accomplish.

It gives me pleasure to add that on the second day of the Fair the Annual Address will be delivered on the grounds by that distinguished citizen and planter, Gov. Hampton, of South Carolina, and that President Hayes will be present on that day and probably on the next. The recent circumstances which have brought these gentlemen so prominently before the nation are familiar to all, and the satisfactory manner in which each has discharged his public trusts commends them to confidence, and the large assemblage of Virginians on the occasion will be glad to welcome and do them honor.

A. H. DREWRY,

President of the State Agricultural Society.

ADDRESS OF HON. WILLIAM FULLERTON BEFORE THE PIEDMONT AGRICULTURAL SOCIETY.

We could not possibly follow the appeal of the President of the State Agricultural Society with anything better than the address of Judge WILLIAM FULLERTON, of Fairfax, delivered last year before the Piedmont Agricultural Society, Culpeper Court-house. We accordingly present it, in what follows, and say that the Judge is a farmer who shows his faith by his works; and these are the men our people in Virginia need now to listen to:

Mr. President and Members of the Piedmont Agricultural Society:

The production of the largest crops with the least labor and expense, is the great object to be attained by the cultivation of the soil. How to accomplish this is a question now agitating the whole agricultural world. It must be conceded that it has not been done in Virginia. That much of her lands are unproductive from bad cultivation admits of no denial. Her bare hills, the pestiferous broom sedge, meagre crops, fields abandoned to unsightly pines, the absence of grass and cattle, are unimpeachable witnesses that prove her agriculture defective.

I should hesitate to use this language, were it not that what I assert is candidly admitted and deplored by all her leading citizens. This

ought not so to be. With her large territory, her easily-cultivated lands, her genial and salubrious climate, her energetic and intelligent people, her facilities for reaching good markets, Virginia ought to be one of the leading States in agricultural products, and her farmers among the most prosperous of her citizens. In order to become so, she has only to use her natural advantages, and restore to her soil that which an improvident agriculture has deprived it of.

It is but just to say, however, that this condition of things is not confined to Virginia alone. Wherever man has planted and reaped, the same ruinous consequences have followed. Lands naturally rich and productive have become infertile.

The whole of the Atlantic States, to a greater or less degree, are suffering from exhaustion. Though improvidently cultivated, they once yielded bountiful harvests, but now fall far short of sustaining their population. Even the rich prairies of the West are rapidly deteriorating. The same wasteful method of cultivation is pursued there, and the same fatal results are in the near future. And even the Old World long since became alarmed by the discovery that while her population was rapidly increasing, the products of her soil, upon which it was to subsist, were as rapidly diminishing. A remedy was eagerly sought for.

Governments took the matter in hand; the services of learned and scientific men were enlisted; and during the past half century there has been no question of political economy, in either hemisphere, upon which has been expended so much thought and labor.

And these labors have not been without good results. Nature has yielded up her secrets to the skill of man. The laboratory of the chemist has disclosed the laws which regulate and govern plant growth, and taught us how crops feed and grow, and upon what food they subsist.

The value of these discoveries to the human family cannot be estimated. There never was a time when the tillers of the soil could prosecute their calling with so much intelligence and certainty of success as the present; and if they do not hereafter find their labors better rewarded, it will be because they shut their eyes to the light that is afforded them. To be ignorant of these discoveries at the present day is to be without excuse.

Agricultural colleges and stations, with their admirable systems of experiments, and agricultural journals, where there is such a valuable interchange of thought and experience upon all subjects connected with the cultivation of the soil; and agricultural societies, where the results of different systems of cultivation are exhibited, afford opportunities for improvement which it is almost criminal to neglect.

There is no other calling in life in which there is manifested such an indifference to new discoveries as is seen among the tillers of the soil. If a mechanic or manufacturer should in like manner fail to avail himself of improved implements or machinery, he would be compelled to relinquish his business. It is the farmer alone who resists anything new appertaining to his calling. This arises mainly from a deep-seated prejudice against what is called scientific or book-farming.

A great majority of those engaged in cultivating the soil regard it as a mere muscular exercise, rather than a scientific pursuit, and they have regarded with indifference, if not with positive displeasure, every attempt to impart to it a scientific character. This is a serious error. Science is not learning; it is merely the interpretation of the laws of nature, and

an unlettered man may do that. Indeed, some of the most valuable discoveries to the human race have been made by uneducated men.

He who, by intelligent experiment and observation, increases the products of his land and maintains its fertility, is a scientific farmer; and such a man has only to prosecute his work in the light of modern discoveries, to reap a rich reward for his labors. He will learn how the crops he cultivates feed and grow, and what is their respective appropriate food, and that providing the same nutriment for all kinds of crops is as unwise as it would be to feed the same kind of food to all animals.

But farmers, as a general thing, shrink from the study of agricultural chemistry, because they regard it as an occult science, requiring great research and investigation to comprehend it. So it does; but there are some elementary truths which lie at the foundation of the science which every farmer can comprehend and apply to the cultivation of the soil.

It is not long since I saw a man making a compost of caustic lime with fresh barn-yard manure. If he had understood the chemical action of the lime, he would have known that the ammonia, the most valuable ingredient of the mixture, would be entirely dissipated by it, and the compost itself rendered almost worthless. He would also have known that if lime in another form—that of sulphate—had been substituted, it would have preserved instead of dispelling this same ingredient, and thereby added largely to the value of his mixture. It is a want of familiarity with these things that renders them distasteful to the farmer. If he would make a few of the simple principles of chemical action his study, and become familiar with them, they would lose their mystery and he could profitably and safely apply them in his business. He does not hesitate to mix lime and sand together when he has occasion to use mortar, and he sees and comprehends the chemical union which follows. He slakes his lime by pouring water upon it, and he witnesses the effects of that chemical law which causes it to heat, disintegrate and fall into powder fit for use. He sees the housewife use yeast in making bread, and beholds the beautiful and useful results. These things are *familiar* to him from daily use, and the mystery which otherwise would envelope them has disappeared. He justly regards a knowledge of them as indispensable. But when you talk to him about the chemical laws which are involved in the growth of plants, how the soil becomes exhausted of their necessary food, and the means necessary to its restoration, he turns a deaf ear and treats the subject as too intricate for his comprehension, and therefore one to which he should give little or no attention. Whereas there is nothing in all this that should deter him from investigation, but much that should induce it.

If there had been the same shrinking from the application of chemical laws in the arts, by unlettered men, the world would not have advanced where it now is. The article of soap in daily use in every household is manufactured by men who make no pretensions to a knowledge of chemistry. They neither care nor need to know beyond the fact that the chemical combination of certain materials in given proportions produces the results which they seek to attain. The same thing may be said of the manufacture of gunpowder—that explosive material which requires such delicate manipulation—or of a score of other things which will readily occur to you all.

Indeed, there is nothing in the laws governing the growth of plants any more intricate or difficult of comprehension than those which are in-

volved in the manufacture of the articles named, or in making butter or cooking food, which is daily practiced in every household. I repeat, it is only necessary that farmers should *become familiar* with the laws which govern the growth of their crops, in order to dispel that mystery which deters them from availing themselves of their advantages.

I have spoken of the alarm which once prevailed lest the production of the earth, lessened as it was by reckless and wasteful tillage, would not keep pace with its rapidly-increasing population, and of the means adopted to discover a remedy. The result is, that to-day it is as well known what our crops extract from the earth, which tend to its exhaustion, and how fertility can be restored to it, as it is that light and heat are necessary to successful cultivation. And this knowledge, so dearly acquired, and so reluctantly accepted by those who could be most benefited by it, is absolutely indispensable to an intelligent and successful cultivation of the soil.

I do not mean to be understood as advocating the doctrine that the farmer should be able to explain the great mysteries of nature, or attempt to analyze her productions, as the chemist does; but I do mean to assert that he should know that his crops feed as his cattle do, each one requiring its appropriate food, and that when this food is exhausted from the soil it must be restored *in kind*, or sterility will follow.

And now let me approach this subject a little nearer, and see what these discoveries are, and whether I over-estimate their importance.

Chemistry has determined with as much certainty what different materials enter into the composition of our crops, as the farmer can determine the different animals which are grazing in his fields. They are many in number, but I need mention only those which it is necessary we should restore to the soil in order to keep up its fertility—the earth, as a general rule, containing a sufficiency of all others. They are three in number, viz: *Nitrogen*, *Potash*, and *Phosphoric Acid*. Without all of these no crop can grow; that is, deprive the soil entirely of any *one* of them, and it is sterile. And crops are large or small just in proportion as the proper quantities of these materials exist in the soil. So that the farmer may be assured that when his land fails to produce a remunerative crop, it is deficient in one or more of the constituents I have named. It is not enough for him to know that his land is poor and wants enriching; he should know what there is lacking in it to make it so. With the aid of chemistry, or what has been called book-learning, he can now know with as much certainty what quantities of these materials his corn or wheat have extracted from the soil, as he can to what extent he has exhausted his bank account by the checks he has drawn upon it. For example, fifty bushels of corn to the acre extracts from each acre 64 pounds of nitrogen, 77 pounds of potash, and 31 pounds of phosphoric acid. Barn-yard manure is valuable only as it contains more or less of these ingredients. It follows, if the farmer sells his crop of corn, then for every fifty bushels that leaves the farm there is taken just the amount of nitrogen, potash and phosphoric acid I have named. If, on the other hand, he feeds his corn up on the farm by fattening animals, then much of these materials are retained on it and returned to the soil. That only is carried off which goes in the carcasses of the animals sold.

It is seen by the example given that the exhaustion of the soil of these materials by a corn crop is not in equal quantities. Nor do any two crops exhaust the soil alike. This is an important fact for the farmer

to know, for it enables him to see at once that when his land refuses to return a remunerative crop, it may be for the reason that only *one*, and not all, of these materials has been exhausted.

We often hear complaints made that the continued use of guano will in the end exhaust land, and for that reason it has been condemned by many. A moment's intelligent consideration reveals the cause of such a result. By constantly using guano in the cultivation of a crop which takes from the soil more of any one and less of the other two materials named than the guano supplies, you can see very plainly that the ingredient so disproportionately drawn upon will in the end be insufficient for the crop, when there would be a surplus of the others. Soil in this condition is unproductive for the lack of only *one* of the elements of plant food, and by the application of that one can be restored to productiveness. A knowledge of this simple fact leads to economy in farming. If land needs potash, it is a waste of time and money to apply bones or nitrogen.

This is very frequently the condition of land, and it is the reason why we so often hear complaints that superphosphate or bone meal had no effect. The material in such cases is pronounced spurious, and the vender condemned in unmeasured terms. Bones contain no potash, and superphosphate no nitrogen, and by adding either or both of these to land which is deficient only in potash, is as wide of the mark as to offer corn to a well-fed horse when he is dying for water.

When we observe that no two crops which the farmer cultivates require the same amount of the different kinds of plant food for their perfection, it opens a wide field for the exercise of intelligence and observation in managing a farm. If the farmer has raised a crop of wheat, he knows that the land has parted largely with its nitrogen and phosphates, and has retained a large per cent. of its potash. He sees at once that such land will produce a crop for which potash is the dominant manure, and where little of nitrogen or phosphoric acid is required; and so, from time to time, he will regulate his crops by an enlightened policy, and not by blind chance.

It follows that whatever is sold from the farm must, to a greater or less extent, diminish its fertility. Nature, on the other hand, renovates by her processes, instead of exhausting the earth. In forest and field, whatever grows in the soil is returned to it in the shape of leaf and branch. Whatever the air has contributed to vegetable growth is so much gain, and to that extent the soil is made richer instead of poorer. But the farmer cannot imitate nature in this respect. He must carry his products to the market away from the farm, and in this way there is a constant process of exhaustion which, unless compensated for in some way, will lead to ruin.

It therefore becomes a vitally important question for the farmer, whether he can restore to the soil what his products take from it at a cost which will ensure a profit; and if so, by what means.

From what has been already said it follows that there is no system of agriculture by which the farmer can keep his farm to the highest state of fertility by the use of the manure he can make upon it. This has been demonstrated by all experience, and would seem to be a well-settled, if not self-evident, proposition. Relying *solely* upon barn-yard manure is not a wise policy. Let us see what it contains. This, science has demonstrated for us.

Assuming that a cord of average barn-yard manure weighs 3,000 pounds (and that is about its average weight), it contains by actual tests 2456 pounds of water, 138 pounds of common sand, and 332 pounds of carbonaceous matter, which is of no more value than common straw. There is left then only 74 pounds of active fertilizing material possessing a money value. The loss in carting so much worthless material is apparent. The 74 pounds which is only valuable could be carried by the farmer to the field in one hand and applied in a few minutes. I do not mean by this to discourage the manufacture or use of barn-yard manure. On the contrary, I would enjoin farmers to make more than they do, and to protect it with the greatest care from sun and rain before applying it. I am only trying to show that, inasmuch as the farmer must purchase outside materials for fertilization, that there is an advantage in getting them in a concentrated form, so as to lessen the cost of hauling and application.

About the first resort of the farmer, heretofore, in order to supply this deficiency on the farm, has been the purchase of Peruvian guano. When obtained pure, this is a most excellent fertilizer, but for reasons already stated it cannot be relied upon through a series of years for crops requiring a greater amount of certain portions of plant food than that which exists in the guano itself. The same ingredients it contains can be purchased separately in reliable form, and the farmer can compound them in such proportions as suit the different crops he cultivates. Bones will furnish him his phosphates, the nitrate of soda his nitrogen, and the Stassfurt salts his potash, and by a prudent and intelligent composition of these he can meet the wants of each crop he cultivates, and at the same time economize in their use by knowing the deficiencies of his soil.

It is in vain that the farmer seeks for a single manure which will meet the demands of all crops, for no such exists. In Virginia there is a great variety of soil. No two fields are alike in respect to their composition. They need different treatment and the application of different materials in different proportions, and he who expects to find any one thing that shall act equally well on all soils is certain of disappointment.

This brings us to the subject of expense, and one of vast importance. In treating of expense, I am aware I am encountering the prejudices of many who have purchased commercial fertilizers and applied them indiscriminately to lands without reference to their particular needs, thereby entailing a serious loss. I have already referred to this subject, and shown how the error was committed. Wisdom is gained by experience. And if any one who has suffered in this way will give the matter sufficient attention to comprehend it, he will see where his mistake was and remedy it. Science has done her part in making the way plain for him. It has furnished in the market all those elements out of which nature manufactures her products, and in the form in which she requires them. They can be had at a price which farmers can afford to pay. Whatever he lacks on the farm he can readily supply himself with, and his intelligence, the outgrowth of observation and experience, must do the rest. Of one thing he may rest assured, that if he uses the means at his command, as he can and should, he can invest his money in fertilizers so as to reap large returns for the outlay.

No farmer can prosecute his business successfully on poor land, and there is no necessity for doing it for any great length of time. It is a

waste of time and money, of energy, and of life itself. It brings neither money to the pocket, nor joy to the heart. Farming is a very hard life unless it brings pleasure, aside from the profit. It is necessary for the farmer's enjoyment, as it is for his pocket, that his land should produce what it is capable of when well fed and cultivated. And he can no more afford to raise less than that than he can afford to pay his hired man full wages and require him to labor but a part of the time. The interest on the cost of his land is running whether the land yields much or nothing, and the tax-gatherer must be satisfied though the garner may be empty.

Cultivating a farm without getting from it as large a result as the land is reasonably capable of producing involves a useless loss. The difference between a crop of 80 and 20 bushels of corn to the acre is the difference between success and failure. The expense of cultivating the larger crop is but little more than that of the other, while the cost of production of the smaller crop, compared with the result, is very much greater. Here, then, is the secret of the farmers' success or failure. Large crops within a small area should be his aim, and all his energies should be given to its accomplishment. If he has not sufficient manure to enrich twenty acres, let him put what he has upon ten. If the supply is insufficient for ten, then reduce the area to five. *At all events, whatever space he cultivates, let him enrich it and raise a maximum crop.*

I know what some of you may say: that in consequence of the lack of means I am recommending impossibilities. I respectfully, yet earnestly, deny the soundness of any such proposition. There are very few farmers so limited in their means that they cannot at once enter upon the system of cultivation which I shall point out, and which will as certainly result to their benefit as that seed time and harvest shall continue. I venture to lay down this proposition as indisputable, that there are farmers who entertain the idea that they cannot afford to buy fertilizers who waste enough each year in unwise tillage to supply themselves with them. I have seen such cultivate a large area of poor land at an expense which would have enabled them to fertilize and cultivate one-half of such area so as to make it produce as much as did the whole. And this diminished area could not only have been made to produce as much as twice its extent in acres, but it would be left after the crop was removed in a condition which, with a proper rotation, would cause it to increase, and not to diminish, in its fertility.

The amount annually lost in this State from too large farms, and the cultivation of too great a surface without remunerative returns, and the sale of whatever is so produced from the farms, without any return to the soil of the elements removed by the crops, is something alarming to contemplate. Such a reckless system would impoverish any land, however productive in its natural condition. And when I recommend the purchase of fertilizers, in order to insure large crops, it is not with a view of encouraging that system of tillage which removes everything from the farm which is produced upon it. Nothing but a truck farm, where vegetables are raised for city consumption, could warrant the expense of such husbandry.

The necessary steps towards an improved husbandry in this State are:

1. To cultivate less land.
2. To make that which is cultivated rich in plant food, so that it may produce large crops.

3. The practice of a rigid system of rotation of crops, and mixed farming.

4. The cultivation of the grasses and less of the cereals, and feeding upon the farm the most of its products.

5. Raising clover and enriching the land by turning under green crops.

I speak earnestly and sincerely when I say that I believe that the faithful practice of such a system of tillage would in ten years increase the value of real estate in Virginia 100 per cent., and place the farming population in an independent condition. There is nothing new in these suggestions. They are the same old, old story, oft repeated and often disregarded. They, nevertheless, employ the true policy for tillage, and the time will come when they will be universally adopted.

The advantage in small farms can scarcely be over-estimated. France is an eminent example of this, and she is to-day the wonder of the world. With a territory not equal to one-fifteenth of our States, and but little greater than Texas, she raises nearly double the wheat produced by the United States, and besides supporting a population of nearly forty millions, her exports the last year exceeded our own. This all arises out of the fact that her farms average less than sixty acres, and are made to produce to the full extent of their capacity.

All observation and experience go to show that those sections of the country are most prosperous where a mixed system of farming prevails. Not only a nation, but a farm should be as near self-supporting as possible; and that mode of cultivation which comes nearest to accomplishing that object ensures the largest measure of success.

The farmer who finds in his own garners that which is needed to supply his daily wants is far removed from the vexations and losses attendant upon outside purchases which so severely tax his means. It is not unfrequently the case, when he produces but a single article for the market, that it commands a price which but poorly compensates him for his labor, while he has to pay exorbitant prices for that which he is compelled to purchase. This is "selling the *hide* for a penny and buying back the *tail* for a shilling," which surely is not a profitable transaction.

Mixed agriculture necessarily leads to a system of rotation of crops, which is the key to successful farming. That there is a vast recuperative power in lands where a succession of different crops is grown, no one can deny in the light of universal experience. Thousands of those who have hitherto devoted themselves to a single production, such as cotton, tobacco, or grain, now acknowledge their error.

Successive crops of the same character exhaust lands of the particular food they require with great rapidity. The aid which nature so freely renders where crops rotate, is withheld in such a system of cultivation, because the farmer is violating her laws. To fight against nature is to war at fearful odds, and it is not difficult to forecast the result. To work in harmony with her ensures a comparatively easy victory. One of the most beautiful of her provisions is that while one crop exhausts the soil of that element which enters most largely into its composition, by the operation of some mysterious law, *it prepares that same soil for some other crop of a different character.* This is a very curious and interesting process of nature, which results immensely to our advantage if we accept her aid. As an illustration of this principle, we know that

clover does not successfully follow itself, although it leaves the ground in the best possible condition for corn or wheat. One crop, therefore, restores in a measure what another has taken. By raising continuously the same plant you interfere with this beautiful contrivance of nature to rebuild her wasted strength. How this is done is imperfectly understood. We do know, however, that the deep-rooted plants, like clover, will pump from the depths below for the use of those that grow near the surface that food which has been carried beyond their reach. And not only that; this element, when thus brought to the surface, acts chemically upon what it finds there, and renders soluble and available as plant food what before was inert and resisted assimilation.

Nature, therefore, will do much of our work for us if we will only second her efforts and give full scope to her beneficent laws. It is, therefore, a question for the farmer to determine whether he will, by a rotation of crops, have his soil enriched by drafts on nature's treasury, or draw entirely upon his own.

I do not mean to argue that there is nothing for the farmer to do but follow this system of rotation to make his lands productive. Far from it. But I do argue that he may make nature a co-worker with him in attaining a most desirable end. Change is a prominent feature in nature's economy. Cut down the forest of hard wood, and the pines succeed. Again, remove the pines, and the hard wood reappears. One kind of grass succeeds another, and nature supplies the seed. These changes give the soil rest, to the end that the process of reinvigoration may go on. Day and night succeed each other, and each performs its particular function in promoting vegetable life. Eternal sunshine would result in eternal blight. The falling dew brings with it the nitrogen from the air to gladden vegetation. The sun appears. Its light and heat liberate the acids and gases, which enter upon their work of usefulness in preparing a variety of vegetable food.

Winter and Summer follow each other. Frost disintegrates and renders the earth porous, opening the way for the heat and moisture of Summer, so that chemical laws may work out their beautiful results.

Thus unceasingly, year after year, the silent agencies are at work preparing the earth for man's use, that it may bring forth abundantly of everything which was designed by a beneficent Creator for his support.

There can be no rational or successful rotation of crops unless grass, including clover (and for all present purposes I shall treat clover as one of the grasses), holds a conspicuous place. *The great need of Virginia to day is grass.* It is the great source of the world's wealth. I do not overrate its value as estimated at the present or in ancient times.

In issuing the command which brought vegetable life into existence grass was first enumerated.

"And God said let the earth bring forth *grass*, the herb yielding seed and the fruit tree yielding fruit after its kind."

"And the earth brought forth *grass*, and God saw that it was good."

This was before the creation of man or beast, and was designed to fit the earth for both.

Named first in the order of creation, it stands among the first in importance to the human family. All history shows that no nation was ever agriculturally prosperous that did not make it one of its chief products. Raising grass necessarily involves raising cattle; and you can measure the prosperity of any nation by the number of cattle within its

borders. That kind of husbandry takes less from the soil than any other, and requires less labor to prosecute it.

A practical Southern writer, in speaking of the high price of lands in the North as compared with those in the South, uses this forcible language:

“Why this difference? Is the land in these countries better than ours? Not by nature; if it be better, it is by the difference of treatment. Is their climate better than ours? The acknowledged superiority is on our side. Are the prices of their products any better than ours? On an average not so good. Are their taxes lighter than ours? If we were compelled to pay their tax, either at the North or in England, our land would be at once sold for taxes. Have they valuable crops which they can raise, and which we cannot raise? There is not a farm product in either Old or New England which we cannot raise in equal perfection at the South. Is their labor cheaper than ours? The cost of labor at the North nearly doubles the cost of labor at the South. In England labor is cheaper than with us. But the difference is, perhaps, compensated by the poor and church rates, and other excessive taxes paid by the English farmer.

“If, then, our climate is as good as that of the countries referred to; if our land is as good as theirs; if our products bring as good prices; if our taxes are much lighter; if we can grow all the crops that they grow; if labor is cheaper with us than it is at the North, and if difference in taxes compensates for the cheapness of labor in England, why is it that their land is so valuable, and ours so valueless?

“We shall find the map of use to us in answering this question. If we take the map of the United States, and put our finger upon the States or parts of States in which land sells at the highest price, we shall find that in those States or parts of States the greatest attention is paid to the cultivation of the grasses and forage plants. If we open the map of Europe we shall find the same rule holds good. The cheapest lands in Europe are those of Spain, where little attention is paid to grasses. The value of lands rises exactly in proportion to the attention which is given to them—in England and Holland reaching sometimes, for farming purposes, to \$1,000 per acre. Holland is almost a continuous meadow. This land value culminates in Lombardy, where irrigated meadow lands *rent* for \$60 to \$100 per acre. Without exception, in Europe and America, where a large portion of land is in grass or forage crops, the price of land is high—reaching the figures above mentioned. On the other hand, without exception, wherever in either continent the grasses do not receive this attention, landed estate is of comparatively low value.

“Now when, in the investigation of the cause of a given effect, we find in a number of instances in which the result occurs, the presence uniformly of a particular agent, and in a number of similar instances in which the result does not occur, we find this agent to be absent, then, unless good reasons to the contrary be given, we are at liberty to attribute the result to the presence of this agent. The conclusion is irresistible that a large attention to the cultivated grasses is essential, not only to improved agriculture, but also to a high value of landed estate. If there be a flaw in this reasoning, the writer has been unable to detect it. Fifteen years ago this solution was offered of the apparently anomalous condition of our lands, so favored as to all the elements of agriculture, and yet so ruinous low in salable value. Time has but strengthened the convic-

tion of its correctness. The argument is strengthened by the consideration that extended grass culture in any country is an index of the existence of an improved agriculture. Where this occurs there must be large numbers of horses or mules, sheep and cattle. These produce an abundance of manure. Where there is an abundance of manure, there will be large crops. Where there are large crops, land will be valuable. These results follow from the grass crop as the first cause."

The abundance and superior quality of the grasses which abound in some parts of this country has given rise recently to a new branch of trade which is not without significance. Weekly shipments of beef are now made to Europe from this country. The experiment seems to have been entirely successful, and it is thought that it is the beginning of a permanent and profitable trade, which may be increased to any extent. The meat thus shipped brings the highest market price, for it is equal to the best in the English market, and far surpasses the most of it. Living, as you do, so near to the points of shipment, you may be interested in knowing what the English papers think of this new enterprise. You may be sure that if anything favorable is said of it by them, that it is deserved.

In the October number of the *Southern Planter and Farmer* I find the following extract from the *Agricultural Gazette* of London:

"The success of the system is established, and, the trade being consolidated, we may anticipate receiving importations that will have a sensible effect upon our meat supplies, and consequent reduction in the present exorbitant high prices of all descriptions of meat. The quality of the meat of the grass-fed American bullocks is described as equal to the finest Aberdeen beef; and when its ripe condition from long suspension in a dry atmosphere at a uniform temperature of 38° becomes known, we may anticipate a rivalry between the purveyors of the Clubs and the hard-working artisans in the race to obtain the American beef. The important question for the English feeder to consider is, how is this obtrusive competitor to be met on the retail butcher's stall! Alas! the day is gone when the British farmer boasted of the high quality of his meat. The injudicious use of substances rich in non-nitrogenous elements has injured the character and deteriorated the quality of his beef and mutton. A complaint arises from every householder, that meat at the present time is too fat; that nature's proportion of lean and fat is disturbed, greatly to the disadvantage of the consumer. The production of an enormous fat beast or sheep is no indication of the intellect or skill of the exhibitor. Give to a well-bred animal an abundance of substances rich in non-nitrogenous or fat-forming elements, and fat, and fat only, is produced. Let the physiological truth be admitted, that flesh is formed only from the nitrogen existing in all vegetables, and the sensible feeder, anxious to produce well-proportioned meat, will use with judgment, and not indiscriminately, the refuse of the expressed oily seeds. The American feeders probably could never have invaded the English meat market at a more opportune period. The shambles are sparsely covered, and the quality of the meat exhibited is, generally speaking, unpopular and ill-adapted to cope with the grass-fed meat that they are prepared to offer."

This means that good quality of beef that is raised near the sea-board, because animals that have been subject to the hardships and privations of transportation from distant points to the point of shipment, are not in a condition for exportation. I have been told by one of the largest cat-

tle dealers in this country, that animals fattened near the markets where they are slaughtered, always bring higher prices for that reason, than those brought from a distance.

It is not difficult to see that Virginia, in consequence of her admirable location, her superior winter climate, the adaptation of her soil to raising those grasses which produce the finest qualities of meat, is in a condition to profit very largely, by this new industry, if she puts herself in a condition to take advantage of it. And if she will get her lands in grass, introduce a prudent system of rotation of crops, using the plow only to renew her grass lands when it is necessary, discontinue the raising of wheat except for home consumption, and raise corn only to be fed to her cattle, she can compete with the world in supplying the home and foreign markets with meat.

It may be regarded as a maxim in farming, that, that system is most desirable, which enables the farmer to produce the largest amount in value at the least expense, and at the same time keep up the fertility of his soil. The cultivation of grass and feeding cattle for the market will better enable the farmer to accomplish this than the prosecution of any other business. It does away to a great extent with the plow, the excessive use of which has been the curse of your State, and reduces the expenses of labor to the minimum amount.

But I must speak more particularly of clover. It is called, and properly so, "the sheet anchor of American husbandry." Too much cannot be said in its praise. It is capable of doing more to bring your impoverished lands to a high state of cultivation, with less expense, than any one other agency. Its universal use as a restoring crop, would, in a few years, make Virginia as celebrated for her agriculture as she has ever been for her statesmen. And just in proportion as the farmer cultivates this plant will he be relieved from the necessity of purchasing commercial fertilizers to enrich his land. Whilst there is no system of cultivation which will enable the farmer to keep up the fertility of his land without resorting to such agencies, yet the use of clover will go very far towards accomplishing it.

A writer, in one of the prominent farm journals, in speaking of clover says:

"A few pounds of diminutive seed furnish machinery to absorb from the atmosphere and pump out of the earth the elements of fertility needed to replace what our wasteful and improvident predecessors have expended. I solemnly believe that in the benign providence of God, clover is to be the Moses which is to deliver Southern agriculturists from the bondage of poverty and debt, by restoring our wasted and worn inheritance to its original fertility."

This language is not too strong. Clover does for the land what no other plant can. It is like the gleaner of old, it gathers up and makes useful what is lost.

Nitrogen, in the form of nitric acid, one of the most important and expensive elements which enter into the growth of our crops, descends, by the action of rains, so far into the soil as to be beyond the reach of ordinary plants. The roots of the clover plant are so many messengers to bring it back to the surface again.

The coral insect does not more effectually extract from the waters of the sea the material which enables it to construct the wrecking reef, than does the clover plant seek out and garner plant food from earth and air

for man's use. And then, as if to indicate what great office it was designed to perform in the economy of nature, viz: to prepare the way for other life, it refuses to consume this ingathered nutriment, but dies and leaves it for the nourishment of succeeding crops. It is this fact that has led farmers to say that their lands, where clover had grown in great luxuriance, but refused to grow longer, was *clover sick*. In other words, it had performed its function, accomplished the great object of its life, and then, like the silk worm, died.

There is nothing truer in nature, than that the clover plant, whilst drawing largely upon the richness of the soil for its own sustenance, leaves the earth far richer in plant food than it found it. And this marvelous feat is by a skill peculiarly its own, for the wit of man has never accomplished it. Science has for years been engaged in trying to discover some inexpensive method by which the nitrogen of the air could be forced into combination with other substances so as to be used in cultivating the earth. It has never been accomplished. That it will be I do not doubt, for it would be a bold man who would set a limit to man's discoveries. He that is successful in this field of experiment, will be the world's benefactor, for he will have bestowed upon it a priceless boon. But what man has failed to do, the clover plant is constantly accomplishing. In your fields, where it is grown, this great help-meet is silently but successfully toiling for your good. Earth and air yield alike to its influence, and surrender their riches to its solicitations.

If, then, clover is the Moses to lead you out of the wilderness (and I agree with the writer from whom I have quoted this language), I beg of you let the figure drop there, and do not let it be forty years in accomplishing it. The promised land can be reached in a much shorter period. Pisgah will rise up at your bidding, the waters will divide at your approach, and you can pass over from leanness to plenty. Clover will do for you what miracles did for Moses. Yea, it will do more. It will cancel notes, pay mortgages, extinguish obligations, and bring abundance where there is now want.

And now, having condemned that system, which permits what is raised on the farm to be sold from it, I beg leave to suggest other modes of getting an income from your labor. In doing so I must call attention to some facts which need no comment. You have easy and daily access to the cities of Alexandria, Washington and Baltimore, where there is found a ready market for everything your soil is capable of producing. *And yet the two former cities are supplied daily with the most of the cream which is used for domestic purposes, from distant counties in the State of New York.* And when you request the purchasers to take their supply from Virginia, they will do so only at a reduced price, for the alleged reason, *that for the want of good pasture we cannot produce so good an article.* They think, and with some cause, that broom sedge will not make good cream. It is for this cause that our home markets are closed against us, and we are shut out from an industry that has made my native State rich.

Washington has also received the most of her supply of *hay* from the same source, and her *best butter* from New York and Philadelphia. This is a reflection upon our soil, which, though now deserved, it is needless to say will not long be submitted to. For it is capable of growing grasses as sweet as ever sprang from the earth, and in quantities to satisfy the most exacting. It follows that the aroma of our butter and

cream may be such as to tickle the palate of the most fastidious. I sincerely trust that the day is not far distant when the order of things will be reversed, *and the place of demand and supply respectively changed.*

Neither does Virginia manufacture the cheese she consumes, an industry which has enriched a great portion of the North, and for which the most of your State is well adapted.

Your short winters, and the consequent advantage you possess in fattening cattle and sheep for the market at a diminished expense, suggests a branch of business which other sections of the country, less favored than you, have made profitable. So far as these things are concerned, you should fear no rivalry. Corn, one of the most important crops in our country as a fat-producing food, finds a congenial soil in Virginia. Boast as they may of the products of the Western prairies, your lands will produce as much per acre as theirs under that treatment which you ought to give them.

Virginia is a favored State, and I can foresee a great future for her. There is a spirit of inquiry among her people which will bear good fruit. One of the most cheering indications of her improvement is, that there is now published within her borders, one of the best agricultural papers in this or any other country. Each number is worth ten times the year's subscription to any one engaged in agriculture. As a matter of self-improvement, as well as State pride, it should be read in every farmer's household within the State. I refer to the *Southern Planter and Farmer*, published in Richmond. If it does not radically change the defective agriculture of this State, it will be because its wise counsels are not heeded.

There is much at the present time to encourage the farmer, for the outlook for our agriculture was never more favorable. The Old World is not self-sustaining so far as bread and meat are concerned, and the deficiency in those essentials is constantly increasing. The demand made at the present time for our breadstuffs is very large; and in view of the constantly increasing population abroad, no one can doubt but that those demands will increase rather than diminish. A constant future demand seems therefore to be ensured, which must necessarily affect the price for farm products. It is true that we are annually bringing extensive tracts of "virgin" soil under cultivation, thereby adding largely to the products of the country; but it is equally true that lands already under cultivation are producing less every year from wasteful culture, and our own population is rapidly increasing, so as to require a larger amount for home consumption. The increased product will not more than keep pace with the increased demand. And had it not been for the partial restoration of the exhausted lands of Europe by the use of bones and guano, our country, with all its vast resources, would have been taxed to its uttermost to supply the foreign demand. Everything indicates a bright future for the farmer, and if the soil from which he must derive all of his wealth is the object of a wise care, his success would seem to be assured.

If I am not trespassing too much on your patience, there is another subject upon which I should like to say a few words. In the October number of the *Planter and Farmer*, a correspondent writes as follows: "There is a topic which cannot be too earnestly brought home to farmers. I mean this: *Their profession must be made more attractive. Every young man who can get a beggarly clerkship in town is quitting the country, and farming is treated with contempt. Is there no cure for this?*

The last census shows that this is the case to a very great extent throughout the rural districts generally. It is an evil which challenges serious attention. Virginia may be said to be an agricultural and not a manufacturing State. Her strength, therefore, lies in the products of her soil. By the withdrawal of her young men from its cultivation, she is weakened in a vital point. Goldsmith deplored this evil. In his "Deserted Village," he immortalized a great truth by saying:

"Ill fares the land, to hastening ills a prey,
Where wealth accumulates, and men decay.
Princes and lords may flourish or may fade;
A breath can make them, as a breath hath made.
*But a bold peasantry, their country's pride,
When once destroyed, can never be supplied.*"

The future glory and prosperity of Virginia depends more upon the character of the men who shall cultivate her soil, than those who shall draw salaries from her treasury. Put intelligence upon the farm, and you will have distinction in the cabinet. A successful scientific agriculture infuses life and health in the whole body politic, and strengthens the arm of the State. Young men can make no more fatal mistake, than to look upon farm labor as degrading. To till the soil is an honorable as well as a useful employment. The first command of the Almighty, after the creation of man, was, that he should "subdue" the earth. That command afterwards received its practical fulfilment when Adam was placed in the Garden of Eden with the Divine injunction "to dress and keep it." And as if this were not enough to dignify and ennoble the labor of the husbandman, we are told by the sacred historian that whilst "the heavens, earth and sea" were called into existence by a simple command, yet that "*The Lord planted* the Garden which Adam was commanded 'to dress and keep.'" The necessity for toil, therefore, is not, as has been so often alleged, a part of the curse, consequent upon the fall, for these events to which I allude were before the great transgression. The necessity for labor should therefore be regarded as a blessing. The Psalmist, in enumerating the evidences of God's goodness and wisdom, exclaims, "Man goeth forth unto his work and to his labor until the evening." Labor, therefore, should not be treated with contempt. Neither should farming be made so unattractive and repulsive as to drive young men to the large towns and cities to seek precarious livelihoods there. Is the country to lose not only their presence, but also their energies, their talents, and the benefit of their example? A remedy may be found for all this. Young men can and must be attracted to country life. That remedy is in the hands of the present generation. It is to make farming more attractive by making it more profitable and less laborious. If, instead of fields covered with broom sedge, and scarred by deep, cavernous and unsightly gulleys, capable of producing, under the treatment they receive, barely sufficient to pay the expense of cultivation, your sons could look upon rich, well-cultivated and productive farms, adorned with herds of well-bred cattle, barns bursting with the rich fruits of the harvest, they would cease to sigh for city life and adventure. They then could see something ahead in their lives beside uncompensated toil and griping poverty. I do not say they could accumulate great wealth, but I do affirm that they could surround themselves with the comforts and luxuries of life sufficient for a rational enjoyment.

What we want on the farm is that energy and enterprise which makes the successful merchant, that talent which makes the successful professional man, and that educated observation which enables men to unlock the secrets of nature, comprehend her laws, and appropriate her wealth. No other calling opens a wider field for investigation or a grander opportunity for useful experiment, which may benefit not only the individual, but all mankind.

It is desirable to accumulate wealth, but it is still better to be useful. It is our privilege to be rich, whilst it is our duty to be useful to our fellow-men. It is a hackneyed saying, that he who makes two blades of grass grow where but one grew before, is a public benefactor; and it is true. It illustrates that great want that everywhere exists for progress in the cultivation of the earth, and the willingness of the world to honor those who contribute to it.

Who deserves to be more honored than he who first discovered the constituent elements of vegetable life, or Lawes and Gilbert of England, and Ville of France, who have spent their lives in experimental farming for the good of mankind, or Johnson, of our own country, who has written those wonderful books entitled "How Plants Grow" and "How Plants Feed?" And who will so effectually win fame as he who shall yet discover some practical method by which that coy constituent, composing ninety per cent. of the atmosphere, shall be wooed into an alliance with other objects, so as to be used in enriching the earth? Whose names more readily occur to us here to-day at this harvest festival, as objects of our gratitude, than Ruffin and Taylor, of your own State, who have left behind them as monuments of their usefulness, the examples they set in improving agriculture? Had their admonitions been heeded, Virginia would have been to-day far in advance of her present condition; and while all may not expect to reach the same measure of usefulness, yet there is an opportunity for every one who tills an acre of soil, to aid in bringing about a state of things which will remedy the evils which now exist.

It should be the object of every one, young and old, to co-operate in making Virginia more attractive than it is. The West, with all its boasted advantages, has no such claims on the favors of the young, nor does she present so many advantages to those seeking new homes; and yet when it is proposed to such that they turn their faces toward this State, they raise two objections which are difficult to answer.

First—That her lands are exhausted, and cannot be resuscitated except at a great expense.

Second—That her roads are neglected, and, at times, almost impassable.

For these reasons, hundreds of persons who otherwise would seek homes here, are turned away.

It is in your power to remedy these things, and in doing so, you will not only attract strangers from abroad, but you will make Virginia more attractive to your children at home. There is no more important object than this. Bind your sons to the soil by every means in your power. Overcome, if possible, any desire on their part to leave the country for city life. Let them compare the present condition of the tillers of the soil with that of the tradesman, and they will see that the advantage is largely with the husbandman.

A general wave of commercial disaster has swept over the country,

and what wrecks it has left behind! Fortunes, which were the accumulations of years of industry, have been swallowed up in an hour! Men rich yesterday are poor to-day! But these misfortunes have fallen upon those engaged in trade and commerce, and those who lived upon investments. The tillers of the soil have been affected less by this general disaster than any other class. Land withstands commercial shocks and crises, when everything else gives way; and he who now owns even a poor Virginia farm, is envied by the man who but a few years ago was the leader in commercial strife, and thought himself secure against all perturbations of trade. If there ever was a time when young men should pause before leaving the farm to enter upon that voyage, where out of every one hundred who embark, there are ninety-nine wrecks, it is the present.

Though large wealth is not accumulated by cultivation of the earth, yet there are compensating advantages.

Men may cease to trade, but they must and will eat. Bills of exchange may prove valueless, but the garnered harvest will still have a value. The ship may rot in the harbor, but the plow will still turn the furrow. Nature is never bankrupt. Whatever else fails, she will remain solvent. The dews and rains of heaven will ever fall lovingly upon the earth's bosom, and the arrows of light descend from the sun's exhaustless quiver. She will never fail to bring forth corn and wine to make glad the heart of man. Thieves may break in and steal bill and bond, but the farm is not the subject of larceny.

Go to the mansion of the rich man, even in his days of prosperity, and wherein has he the advantage of the farmer? He may point to his polished mahogany, but *he* did not give it that polish, and the cabinet-maker has plenty more of the same kind to sell to him who has money to buy. He may point with pride to his stately mansion, but it is too elaborate to be comfortable, and too expensive to be enjoyed. The farmer, on the other hand, looks upon the fields, that *he* has made beautiful, upon herds that *he* has reared, and upon the golden grain that *he* has garnered. They are the immediate products of *his* toil and not of another's, and therefore give zest to his enjoyment.

The country, with all of its hardships and toils, is the place for rational enjoyments, and all the wealth which the city offers to the most successful enterprise will not repay its loss.

The tendency of city life is to blunt the sensibilities and demoralize the heart. I have seen those who had severed all connection with country life, and become so absorbed in schemes for amassing wealth, as to lose all capacity to enjoy the country. In my judgment, this is a loss wholly uncompensated by the wealth which they have sacrificed their better natures to accumulate.

I know of such who have acquired in commercial pursuits far more than sufficient for the gratification of actual or fancied wants, and who, weary and worn with city cares, have returned at the close of life to enjoy the country. But alas! they found, when too late, that they had bartered away their capacity to do so. They had never brought an offering to nature's shrine, and in return she refused to permit them to participate in the beauties of her laboratory. She withholds from the eyes of such, the beauties of her face, and from their ears, the music of her thousand voices. I know of no sadder spectacle than this.

"He that soweth, shall he not reap?"

Such men look upon broad acres only to calculate how much they would cut up for into city lots.

Such persons can never truly enjoy anything. Their ideas of happiness are inseparably connected with wealth and ostentation, and the value of a thing is judged always by what it costs. To such, age brings no repose. Wealth has always been the god of their worship, and when declining years impair the mental and physical powers, the idol becomes the master and rules its slave with a rod of iron. No greater misfortune can befall any man than the accumulation of great wealth without the capacity to enjoy anything beyond the bank account or the balance sheet.

Such is the penalty often involved in success in great cities, where wealth comes in like a flood, to drown all desires and emotions, except the worship of itself.

On the other hand, what a harmony there is between waning years and the tranquility of rural life, where the objects of existence have not been perverted. If a life has been well spent, age brings with it a desire for quiet and repose. That can only be found far away from the mart and the forum. The rustic patriarch in some country retreat enjoying a bare competence, who sits under the shade of the tree *his* hand has planted, and admires the green fields which *his* labor has beautified, is more to be envied than the rich man who measures his rent rolls by the yard, and counts his fortune by millions.

Again, and again, let me urge upon those who despise the farm and are chafing for opportunity to plunge in the whirlpool of city adventure and strife, to profit by the experience of those who have preceded them in the perilous step. Go not where the eternal hum of busy life ever stuns the ear; where the never ending struggle in social, commercial, and political position engrosses every hour; where the mingled voices of pleasure and pain, hope and despair, burden the very air of heaven.

Remain in the country where wants are measured by the capacity for rational enjoyment, and where nature, and not the follies and misfortunes of your fellow-men is your teacher.

Stay, where every hour, some object of natural beauty, fresh from its Maker's hands, presents itself for your admiration and enjoyment. Grow wiser and better in looking upon the simple violet which makes its toilet of beauty obedient to its Maker's will.

Learn a lesson from the wild clematis which spreads its folds of snowy gracefulness over the fallen oak—the type of charity in an evil world.

Learn humility and forgiveness from the brook which washes clean the rock that obstructs its passage, and chants its sweetest music to the pebbles which lie obscure beneath its surface.

Stay, where the spirit of life and love moves upon everything you see.

“The simple flowers are social and benevolent, and he
Who holdeth converse in their language pure,
Shall find Him who Eden's garden drest—
His Maker, there to teach his listening heart.”

Farmers of Virginia, you live in a favored land, and have cause for gratitude for the blessings you enjoy.

The whirlwind has not torn the ripened ear from its stalk, nor has the herd sickened in the field.

Great cities seek the fruits of your labors, and make you ample returns therefor.

Your fields are no longer crimson with human blood, and made desolate with the tread of contending hosts. Everything around you indicates a growing prosperity.

Here, then, at the close of this annual festival, let the incense of grateful hearts rise to the God of the Harvest and the fruitful field.

“Let His works praise Him.”

“The rolling seasons, as they move,
Proclaim His constant care.”

[For the Southern Planter and Farmer.]

VIRGINIA STATE AGRICULTURAL SOCIETY—SCHEDULE OF PREMIUMS.

We have been favored with a copy of the Rules and Regulations and Schedule of Premiums for the Fair at Richmond commencing October 30th, 1877. In making out their lists of awards the Executive Committee have admirably arranged the premiums on fruits—especially those in reference to the apple, the prince of fruits in our latitude. The pear premiums are also liberal and commendable. The exhibition, we fear, will be too late for the best Summer pears, but those of Fall and Winter will come in all right. Garden products, including flowers, have also received a due share of attention.

We are glad to see that the Committee properly estimate the importance of Pomology as an industry that contributes so largely to the health, happiness and domestic comforts of our people; and, also, as a source of pecuniary advantage and wealth that should be more fully appreciated by the people of our favored clime.

We are pleased to witness that not only liberal inducements to competition in fruit culture are properly set forth, but the entire management and distribution of their funds for the encouragement and promotion of agriculture and the arts employed in our domestic industries, are especially and judiciously arranged, inviting rivalry and lively competition that must lead to success and general improvement.

These premiums and laudable efforts to advance the prosperity of our State by and through our agricultural resources, are highly promotive of a policy and occupation that all must acknowledge is the main supporting pillar of the Commonwealth. Thus encouraged, our exhibitors will be induced to spread extensive tables, not only with the productions of their orchards, but with all the valuable productions of the farm and garden. Doubtless we shall also have a fine show of stock of every description; and the arts appertaining to the *wants* as well as the elegances of life will be patronized and encouraged.

In regard to fruit premiums it seems right that producers alone should be allowed to compete. But, at the same time, it must be recollected that farmers, especially in the Piedmont region, are, many of them, not conveniently situated to forward their specimens,

although facilities for transportation are not wanting, and many thus adversely situated, may not take sufficient interest to add to the exhibition; and many of these, we apprehend, are located in our *very best fruit districts*. Now, if all interested and desirous of aiding in the best display of which our fine soil and climate is capable, should be allowed the procuring and forwarding of specimens, with the view to premiums, we would probably have a display in the fruit department that would fairly show the capabilities of Virginia. This, we think, can only be effected by having the competition *free to all*.

We should be proud to have a fair opportunity to show what the soil and climate of our glorious old State could produce when adaptation and proper culture are attended to by our intelligent orchardists. We should like to see what can be done in the way of numerous and valuable varieties and noble and beautiful specimens of fruits; proud that we have farmers among us who can appreciate the importance of devoting a liberal share of their attention to this interesting and important branch of agriculture.

We are of opinion that if our suggestions, in connection with the inducements already offered, could be carried out, a display of fruits would grace the tables of the Society never before seen in Virginia; or, perhaps, all things considered, any other State or portion of the world.

If we cannot make the Pomology of Virginia rival the productions of the gardens of the *Hesperides*, we can, at least, compete with any other region, and show fruits unequalled and unsurpassed, as to lusciousness, flavor, beauty and perfection, by any portion of the most favored clime subjected to the arts of culture.

The great National Exhibition to be held in Baltimore, in connection with the "Maryland Horticultural Society," on the 12th, 13th and 14th of September next, will doubtless be a grand affair; and, if we could induce our fruit-growers to make proper efforts, we would have a display there that would prove the superiority of Virginia soil and climate for size, beauty and deliciousness of fruits.

In conclusion, we earnestly recommend accordance with the published Rules and Regulations of the Executive Committee, and with whatever else they may have in view or may deem expedient.

Fruit-growers and those interested in fine fruits (and who are not), will, we trust, use every means to effect a splendid show of our Winter and Fall varieties; and we hope our farmers will use their *very best efforts* to render the approaching Seventeenth Exhibition the most imposing and interesting Fair ever held in the old Dominion.

Albemarle county, Va.

J. FITZ.

Exercise is as essential to bodily development as air is to life. No person can acquire a large, compact, muscular organization without it.

HOW DRIED FRUIT SHOULD BE PUT UP FOR MARKET.

The Southern States send forward some of the best fruit we have, and in Virginia, North Carolina, Tennessee and Georgia, the curing of the same has become quite an industry and source of profit. Dealers generally throughout the country will enhance the value of all fruit, and serve their own interest greatly, by observing the following hints of reference to the curing and packing of the same. Care should be taken that all tares are correctly marked, and the fruit to run uniform throughout each and every package; ship none that is not well dried; put in new or very clean second-hand barrels; do not put more than the one kind in the same package, thereby securing for your shipments a reputation which will generally insure quick sales at full market prices; mark or brand the kind and quality, together with weight and tare, distinctly, send invoice descriptive of weights, etc., also railroad receipts or bill of lading with every shipment.

All dried fruits sell principally by color, which should be bright; and to obtain the same in apples and peaches, they should be prepared for drying before fully ripe. Sliced apples, if not bright, do not pay for the trouble of slicing, and the finest qualities should be packed in new barrels, top and bottom lined with paper. Bright quartered apples, well cored, uniform in cut, are always more or less in fair demand; and more attention should be given them. Peeled peaches should be sliced or cut in eights and invariably of a bright color. Dark qualities rule low, and are slow in sale. Unpeeled peaches should be cut in halves and quarters. The largest peaches should be selected for halves, size being a consideration in them, while smaller fruit is usually desirable to cut for quarters. They should be kept entirely separate; when mixed they will not generally sell at over the price of quarters.

NOTE BY THE EDITOR.—We have something to say elsewhere in this number about dried fruit. The above, which we find in the *Lynchburg News*, is so valuable that we reproduce it gladly. This is a great fruit year with us, and what cannot be marketed in the natural state should be dried. Country merchants along the lines of railway, will take all that is brought in, or if shipped direct to the city merchants they will find a market for it. The minor matters of the farm being money as well as the great ones; and we need all we can command in that line.

WILD ONION.—One of your correspondents wishes to know how to eradicate this pest from his wheat field. I will venture to suggest the sowing of the infested lots three years consecutively in oats. Having been troubled a great deal with garlic, and been often mortified at the low price obtained for my wheat on account of it, I tried the above given plan, and the fields are almost entirely divested of it.
Burkeville, Va. R. A. MILLER.

General J. A. Walker will speak in Isle of Wight on the 1st inst.

A VICTORY FOR RETRENCHMENT.

We invite attention to the following article from that sterling conservative newspaper, the *New York Journal of Commerce* :

The important financial budget from our Washington correspondent which we print elsewhere points its own moral to all readers who will carefully study it. It is a summary of the official statement of Treasury receipts and expenditures for the fiscal year ending June 30, 1877.

[The statement is as follows :

RECEIPTS.

Customs,	\$130,956,493 07
Internal Revenue,	118,630,407 83
Public Lands,	976,253 68
Miscellaneous,	18,437,432 04
	<hr/>
	\$269,000,586 62

EXPENDITURES.

Civil and Miscellaneous,	\$ 56,252,066 60
War Department,	37,082,735 90
Navy Department,	14,959,935 36
Interior Department, Indians and Pensions,	33,240,759 49
	<hr/>
Total General Expenditures,	\$141,535,497 35
Add Interest on Public Debt,	97,124,511 58
	<hr/>
	\$238,660,008 93

Which shows a surplus of receipts over expenditures of \$30,340,577 69.]

The figures speak eloquently for themselves to every reflecting mind. But as some persons have not the time or inclination to trace the relation between cause and effect, which holds eternally true in these statistical tables as in everything else, we beg to call their attention to it. They will see here the substantial fruits of those lessons of retrenchment and economy which we have hammered into the public mind for many years. Be it said to the credit of recent Congresses, whatever faults were chargeable upon them, that they have made a steady "improvement in these respects," and the Forty-fourth Congress, with all its shortcomings, set an example of moderation and frugality which will stand forth in all time. Future Congresses may surpass it in ability and patriotism, but we ought to be satisfied if the successors of the Forty-fourth are as careful to save money in one direction and not to waste it in another as the men who served at the Capitol the last two years. This tribute is only their due. It should be generously paid by every citizen, however much he may differ in politics from a majority of that body, or criticise the wisdom of particular measures passed by

them or censure them for neglected opportunities of good. The people will do justice to every man—President, Secretary of the Treasury, member of Congress, or other official, down to the humblest—who aids at this time in cheapening the expenses, without impairing the efficiency of the Government. There are several ways in which the lost national prosperity may be regained. This of judicious economy is one which is plain to the meanest comprehension.

The Treasury accounts for the year show a surplus revenue, in round numbers, of \$30,000,000—exceeding by about \$4,000,000 the estimate of the late Secretary of the Treasury. This remarkable result would not have been reached but for the firm stand taken by the last Congress against Federal extravagance and waste. It was apparent to the economists of both parties in Congress that a further effort must be made to stop the leaks. The revenues of the Government had been steadily decreasing since 1866, with the single exception of the year 1870. There was no telling to what depth the revenues might sink in the general business depression. It was, therefore, the part of wisdom to be more than usually cautious in making appropriations. Resisting the importunities of Cabinet officers, of lobbyists and of party friends, the Forty-fourth Congress boldly cut down the bills, as sent in, by \$20,000,000. Had this not been done the surplus of June 30, 1877, would have been only \$10,000,000. Not only has this large sum been saved to the country to be applied to the future expenses of government, but the way has been paved for still further reductions, accompanied by a removal of more of the taxes on commerce and manufactures. The civil service has not been injured but actually improved by the diminution of the expenses when attended by a discharge of incompetent and superfluous men. The customs receipts are less by \$17,000,000, it is true, than those of 1876; but the decline in imports explains this falling off. The receipts from internal revenue are about \$2,500,000 more than those of the previous year, while the outlay of that department was much less. The saving in civil and miscellaneous expenditures reached nearly \$11,000,000. And, we say again, not one interest has suffered from this exercise of economy; but, on the contrary, the results prove that the civil officers of the Government have done better work on the reduced appropriations.

The last Congress has been savagely abused for its treatment of the army. But the appropriations for the War Department was only \$1,000,000 less than that of 1876, and it appeared ample at the time for all the services for which the regular army ought to be used. The effect of the Indian war and of the strike riots, in the suppression of which the Federal troops took a gallant part, will probably be to stave off a further reduction of the army expenses for the present. The necessity of a regular force is not denied, and since the Administration has ceased to order bayonets to the South to fight for a party the House of Representatives will not be illiberal

to the army. For the navy the retrenchment was not less than \$4,000,000, and it is a navy now fully large enough for a peace footing. Only the naval officers, the contractors and jobbers want more money lavished on it. There is no pretense that any other of the many Government interests have been injured by the frugality practiced of late.

Economy, retrenchment and civil service reform must still be the watchwords for every citizen who would hasten the return of better days. A strong public sentiment pervading the rank and file of both parties must keep the coming Congress on the track of the last one. Differing in other matters, men of every shade of politics should agree in this, and then the country will be safe.

As we, in the South, have to lend such a very considerable hand in providing for the maintenance of the General Government, it is a great satisfaction to know that something is left in the till after all the bills have been met. But the sight is grievous when we behold that the item of interest on the public debt is 69 per cent. as large as the whole of all the general expenditures of the Government put together. The fanding of the maturing 6 per cent. bonds, in bonds bearing a lower rate of interest, will have the effect to reduce this item materially; and should the future show a surplus at the end of each year, as we now happily chronicle for the fiscal year just closed, the principal itself of the debt will, before a great many years, be cancelled. Inasmuch as very much of the debt is held in Europe, the bonds should have been made perpetual, like the English consol. The European folks are not fond of option-bonds (or those liable to be called in by the Government, say in five to twenty years, or ten to forty years). When they make an investment in this way, time is an element with them; and the United States bonds, perpetual, put, say at 4 per cent., would be rapidly taken; certainly in England, where these bonds would yield $33\frac{1}{2}$ per cent. more income than their own consols. The Government, finding it had a surplus to devote to the extinguishment of the principal, could put it in a sinking fund, and go into the market and buy these bonds at their market value, and cancel them.

Now, this example of retrenchment in the General Government should not be lost on us in Virginia. If we find that this retrenchment is not practicable under our present Constitution, then let a Convention be called, without delay, to prepare a new one, under which it *can* be done. It is the perfection of folly for us to groan under our troubles when we have a remedy for them that may be so easily applied. There is no necessity of one cent more being added to the land tax, and still have all that is required for every needed expenditure.

[For the Southern Planter and Farmer.]

FODDER PULLING.

Your articles in the September number on "Fodder Pulling," reminds me of a promise made some time ago, to publish my experiment with corn-fodder the present year.

I sowed, in drills, three feet wide, about six bushels of corn per acre last week in March. When the tassel was in full bloom, I cut it down, shocked it around small stakes; some I shocked as it was

cut; the other had one day's sun. In about a week I removed some of it to the barn, placing it upright. The other remained in the shock about three weeks, taking some rain; the first made the best fodder. When well cured, I found, by weighing, that I had made about eighteen thousand pounds per acre. I think it would have made better forage if I had sowed eight bushels per acre.

The farmer who will try this plan of making fodder, manuring his land well, will find it much cheaper than that generally adopted.

JNO. T. ALBRITTON.

Wayne County, N. C.

[For the Southern Planter and Farmer.]

THE EFFECT OF A TOBACCO PREMIUM ON THE BLACK PEOPLE OF LOUISA.

We are indebted to Mr. GEORGE J. SUMNER, merchant, of Louisa Court-house, for the following report, and are persuaded it will be read with interest all round:

A public-spirited establishment in Richmond offered to the planters of Louisa county upon the crop of 1876 two special premiums on tobacco. The first was offered to the young white man between the age of 18 and 30 years, whether married or not, who should produce the best crop of tobacco of not less than two acres, of his own production, without the aid of hired labor, *One Hundred Silver Dollars*. The other premium was offered to the colored men of the county, and proposed to award for the best package of tobacco, weighing not less than 500 pounds, to be settled by the highest price received in the Richmond market, *Fifty Silver Dollars*.

The objects aimed at in these premiums were, first, to induce our young white men to remain at home and apply themselves to industrial pursuits, rather than to risk their fortunes in new and untried localities; and second, to induce our colored men to raise a higher grade of tobacco, as well as to encourage them in honorable efforts to secure a decent living by their own labor.

On Monday evening, August 13th, at Louisa Court, a very large and enthusiastic meeting was held to award the premium to the colored man. One of the oldest and most highly respected citizens of the county, Jno. Hunter, Sr., Esq., presided. Mr. John P. Thompson and Wm. M. Bickers were appointed Secretaries. It was stated that though some eight or ten young white men had entered the list for the first premium, owing to most unfavorable circumstances and the difficulty of raising plants last year, only one small crop was offered, which, though it was very creditable to the young man—being about 1700 pounds raised on a little more than two acres—yet, it was determined, as there was no competition, not to award any premium on this result.

Among the colored men there were nine competitors whose sales were presented to the meeting. The result showed that in Louisa

county, during the year 1876, the finest sun-cured tobacco that sold for the highest figures was raised by colored men. Below is a statement showing the pounds produced by each of these nine men, their average net sales, and the highest prices obtained by each of them :

NUMBER AND NAMES.	WEIGHT. LBS.	GROSS SALES.	AV'GE PRICE.	HIGHEST PRICE.
No. 1. M. L. Perkins.....	971	\$162.98	\$16.80	\$20.00
No. 2. F. M. Perkins.....	2882	375.82	13.04	19 00
No. 3. Jerry Price.....	1236	159.85	12.93	22.50
No. 4. Robt. Baker.....	1919	195.02	10.16	18.75
No. 5. Minor Michie.....	1191	100.76	8.46	22.50
No. 6. George Michie....	1427	170.86	11.97	18.25
No. 7. Jefferson Michie.....	1042	134.11	12.87	18.00
No. 8. John Morris.....	2444	251.55	10.30	16.50
No. 9. Edward Randall.....	2595	269.77	10.40	12.00

It must be remembered that these results were accomplished during the most unfavorable year since 1866, and is certainly creditable to the industry and good management of these colored men. The successful competitor, as will be observed, was Marshall L. Perkins. He was called upon the stand, and after assuring the audience that this package of tobacco was his own production, was awarded the premium of *Fifty new Trade Silver Dollars, fresh from the Mint in Philadelphia.*

The gentleman who awarded this premium, as the representative of the donor in Richmond, took occasion to address to the recipient a few words of congratulation and encouragement. It was the reward of honest labor, and should appeal to his manhood and stimulate him to still greater efforts. He commended him more because he was a colored man, recently come to enjoy the rights of citizenship, and hoped it would recommend him to the confidence of all true men, of whom he should ever strive to prove himself worthy. A fact was here stated which reflected the highest honor upon the next competitor. A most industrious and worthy colored man named Jerry Price (an excellent farmer), sold a package of tobacco weighing 510 pounds for \$22.50 per hundred. It was believed that he had secured the premium, and he received many congratulations on his success. When his commission merchant came to settle his sales, he stated that he paid him with the more pleasure because he had won, in addition, a valuable prize. His reply was: "This money is not mine. I cannot honestly claim it. I found I did not have the weight, and called on my neighbor, whose tobacco corresponded with mine, to make up the package. I cannot take the money."

F. V. Winston, Esq., one of the leading lawyers of the county, was called upon to address the meeting. He was there to offer his hearty congratulations to those who had contended for the prize,

and to the successful competitor. He came not to make a political speech, but to talk of those matters in which we were all interested—relating to the rewards and benefits of the peaceful pursuits of industry. He was glad to know that so many of the colored people had bought and paid for their homes; and referred to the willingness of the white people to sell to worthy and industrious colored men land, which could be had at prices from \$5 to \$8 per acre—land which will produce tobacco that brings from \$16 to \$22.50 per hundred. Any working, economical men, even without money, can buy these lands and pay for them from their production in two to four years. This was the true meaning of freedom—to work with energy and honesty, to accumulate, to enjoy the fruits of their labor, to be protected in their property; and any healthy, muscular, honest colored man has it in his power to accomplish this. There are not wanting men who, when they know the colored man is honest and worthy, will extend to him encouragement and assistance. He can have credit if he deserves it. We shall show to our Northern friends that we know how to protect and encourage the negro in all laudable efforts to succeed. The speech of Captain Winston had a fine effect. The countenances of these people were lighted up, and the nod of assent and hearty cheering showed the intense interest with which they listened to every word that was said. Other prominent speakers had promised to address the meeting, but a shower of rain compelled an adjournment.

The representative of the noble-hearted Richmond donor stated that it was his pleasant duty to offer two prizes for the present growing crop of tobacco, open to all parties, both white and colored, as follows: 1st. For the hogshead of tobacco, raised during the year 1877, by any white man in Louisa county, to be solely his own production, weighing not less than 1,000 pounds nett, that brings the highest price in Richmond market during the year 1878, *One Hundred Silver Dollars*. 2d. For the package of tobacco raised during the year 1877, by any colored man in Louisa county, to be solely his own production, weighing not less than 600 pounds nett, that brings the highest price in Richmond market during the year 1878, *Fifty Silver Dollars*.

A handsome certificate, in a suitable frame, will be prepared, signed by the Chairman and Secretaries of the meeting, setting forth the premium awarded and for what, and be presented to the successful competitors.

It is to be hoped other counties will follow suit in these efforts to stimulate our farmers to improve their crop, especially *in quality*.

Nothing gives us more sincere pleasure than to record any evidence indicating improvement in the black race dwelling among us. Here they are; and here they will stay. The AMINADAB SLEEKs of the North induced divers of them to come to that region of "superior civilization;" but the poor things had never been used to codfish and nasal psalm-singing, and so, in due time, found their way back to "our people." The average New Englander is as innocent

of any correct conception of the negro as he is of heaven; and we know he never has been very much in that direction. We are hopeless of a region that could produce a BEECHER or a BRIGHAM YOUNG.

The carpet-bagger can't live near a negro who owns any property; he is shunned by such as a rattlesnake. It is the "forty acres and a mule" negroes (said forty acres, &c., to be gotten, of course, without working for them), that furnished the material for him to work on; and he got out of this material all it would yield.

His career now is ended, and ended forever; and so, the negro being free, it behooves every one of us to do all in our power to help him along in his new condition. The offer of these premiums is one way, and, as Mr. SUMNER hopes, we also hope, that public-spirited people will try the experiment in other counties as well as Louisa; and see practically the quality of the fruit they will bear. We have no concern about the result; it will be what we desire.

Spending a day at "Westover," just before harvest, Major DREWRY gave us an account of how things stood there, in respect of the negroes. What he had to say was so gratifying that we beg he will take the trouble to put it in shape for the encouragement of the farming community elsewhere in the State. He is so practical in everything that a recital of his management, in this behalf, must be beneficial to all hands who have to work this labor.

[For the Southern Planter and Farmer.]

LESPADEZA STRIATA, OR JAPAN CLOVER.

Several years ago I was much pleased by reading Mr. Mott's article in the *Planter* regarding the fertilizing effects of shading land; and after he had written several convincing articles on that subject, the next step was to discover what would be the most economical or available means of producing shade upon poor land. In his opinion it was the above-named clover. The seed could be purchased from him in the dirt. A neighbor and I sent for and received about ten pecks. He sowed upon gray high land, and I upon medium branch land. The land in both cases was prepared and sowed according to directions furnished. My neighbor's did nothing, except come up and get from two to three inches high, and the second year it was thinner than the first. The three acres I sowed had a good covering—except occasional missing spots; promised well at first, but did not get high enough to mow. I never grazed or cut it. Allowed it to stand three years, when the broom-sedge took almost entire possession of the lot, growing thick and as high as one's head. The Japan clover seeds were scattered by winds and birds on adjacent lands. I find it now scattered in patches miles away from the original field growing in pastures, paths, fence corners and on *galls*. From three to six inches is as high as it generally gets; grows thickly on the poorest soils, even though trod hard, and keeps remarkably green all Summer. It is an annual, and does not vegetate until April in this locality; consequently, briers, broom-sedge, &c., have the advantage of it. It is almost needless to add that we were both very much disappointed in our expectations, and, with Mr. F. G. Ruffin, we can willingly say, *exit Lespadeza Striata*.

[For the Southern Planter and Farmer.]

GRAPES AND WINES IN VIRGINIA—MR. LOUIS OTT'S
REPLY TO DR. POLLARD.

I am very sorry that the articles on grapes and wine which I published in the *Southern Planter and Farmer* have brought about a controversy of the character Dr. Pollard chose to engage in, and which is in no way beneficial to the cause.

The remark he makes in his reply in the July number of the *Planter* that he doubts not there are others more competent to treat of grape-growing in Virginia than I am, was, to say the least, superfluous, unprovoked and unjust. There is no sentence in my articles on grape-growing which would justify him in accusing me of the immodesty and over-estimation of myself to dispute that. But where are these competent men, that none of them comes forward to contest my views, leaving it to one who has to confess his own incompetency? Or, do they agree with my views?

In regard to wine-making the matter stands differently. The Doctor supposes that I understand the grapes and wine-making of my native country, but was not competent to speak in such an *ex cathedra* manner regarding the grapes and wines of this country. I came to Virginia nearly twelve years ago, which time, I think, ought to be sufficient to enable a man who was fully acquainted with the elements of the subject before he came here, to acquire rational views on the question in this country. But, aside entirely from that, there are certain principles in wine-making which are valid in all countries. The people of this State, Dr. Pollard not excepted, having had no opportunity to make themselves acquainted with these principles, have been trying to fill up that lack by experiments; the value or worthlessness of their results they are not capable of estimating, on account of their want of knowledge of these principles. So far I have spoken in my publications exclusively of these general principles and not of the details of wine-making—regarding this as a useless trouble until the value of these principles is generally understood and recognized.

I claim to have a prescriptive right to speak about these principles *ex cathedra*, and considering that upon their adoption depends the success of the business in general, and consequently that of my own enterprise, which I brought into promising operation under the most difficult circumstances, I am determined to make the most extensive use of that right. This may serve Dr. Pollard as a clue to explain the singular disinterestedness of my motives, &c., to which he is alluding.

Dr. Pollard says that he is done with me and the subject since it has unfortunately narrowed down to a question of competency and incompetency, and he did not so wish it—while I confess that long since, it was, in the interest of the cause, my most sincere desire to see the question brought just to that point. The business is in its infancy yet, and after incompetent nurses have impaired the consti-

tution of the baby, particularly by confinement to unsuitable and unhealthy localities, and trying to cure it with sugar, &c., it requires now competent nurses to restore it to health and raise it up to a promising manhood. Where are these competent nurses to be found—among the population of a country in which wine has never been made, and wine is used only by a very limited number of the inhabitants? or in countries where wine has been made and used as the universal beverage of rich and poor from time immemorial? Wine-making was no success in the State of New York before the large wine manufacturing establishments engaged the services of European wine-makers by profession, to whom the building up of the business there is due.

The question is now, Are the vinegrowers of Virginia satisfied with making wine for home use and the market which their own State affords them? If so, sugared and galled wine, sherry and champagne made of the Concord and Clinton, Scuppernong wine, &c., will answer the purpose; but my ambition goes further. I want to see Virginia become a great wine country, and Virginia wine a recognized article of commerce in the regular wine market. It is by no means an illusion that some day wine may be exported from Virginia to England, which market has not been sufficiently supplied for years on account of the ravages of the phylloxera in the vineyards of France. The vinegrowers of that country are already replacing their diseased vines with our native varieties, particularly the Nortons, and I fear they will reap the benefit of that valuable grape by introducing the wine made of it, before we can decide who is competent to say how wine is to be made. But so much is certain, that such results cannot be achieved with wines of the kind that are generally made in Virginia at present, and such as Dr. Pollard and others recommend to be made, and only men of the profession are competent to work the matter to that point. An effort to introduce in that market a Virginia sherry made of the Concord or Clinton, would have no other effect but to expose ourselves to the ridicule of the world.

I flatter myself to be a good judge of wine—having had in that line opportunities which are offered only to very few men even in Europe. If there are as good judges of wine in Richmond I cannot say; but what Dr. Pollard says of those he considers to be *connoisseurs*, gives me good reason to doubt it. Does the Doctor know what can be asked of a good judge of wine?

In answer to Dr. Pollard's interrogatory, I state that the genuine "Dauro Finto Port" is made without sugar.

I have only a limited knowledge of the business of raising grapes for table use, which does not belong to my profession, and concede that in the sentence about the value of the Concord as a table grape, which the Doctor objects to, I might have more properly used the word "particularly" instead of "only."

If a vinegrower chooses to make wine only to satisfy those unfortunate creatures to whom nature has denied the great gift of relish-

ing pure wine, and makes no concealment of the fact of its being adulterated, he cannot be accused of doing a dishonest business; but the mere trial of introducing adulterated wine in the regular market is dishonest and detrimental to the mutual interest of the vinegrowers.

After Dr. Pollard declares that he is done with me, I dare not invite him to come here and see how Concord, Nortons, &c., grow on the mountains; but no doubt he will be present at the next session of the American Pomological Society in Baltimore, and I hope that he is not so much done with me that he would refuse to honor with his presence the meeting of the Virginia and Maryland grape-growers which I called to be held at the same time and the same place. I am convinced that a personal acquaintance would help a great deal towards removing, or, at least, modifying, the contrasts of our opinion, and result in a beneficial co-operation.

Nelson county, Va., July 11th, 1877.

LOUIS OTT.

NOTE BY THE EDITOR.—No headway much can be made in anything, in this world, without a fight. Even the mully grubs to be found in a drop of water are constantly at it; and it appears as if we can't fix up as plain a thing as our State debt without a little of such exercise. But, Dr. POLLARD and Mr. OTT are both excellent gentlemen, and as we hope they met in Baltimore, on the occasion referred to above, we trust, in the future, they will work together in everything looking to the proper development of the great interest in which they both feel such a lively concern.

Mr. OTT is entirely correct in his apprehension about France getting ahead of us in the use of our Virginia giant, the Norton Seedling. In the official report of the Commission appointed by the Academy of France to inquire into and report upon the phylloxera, occurs the following:

"Many persons, foremost among whom is Mr. LALIMAN, have proposed to cultivate the American vines, not only for the purpose of engrafting, but for their fruit. From this point of view it became necessary to ascertain the particulars of their budding, maturity, &c., and the quality of the wine they produce.

"It has been found that all, except the 'Warren,' which is late in maturing, may be cultivated within the geographical limits of the European vine. They all recommend themselves by their vigor and fecundity; some, at the same time, by the quality of their grapes. The 'Clinton,' 'Warren' and 'Cunningham,' make good ordinary wines; the 'Taylor,' 'Jacquez'; and, above all, 'Norton's Virginia,' produce wines of the first quality."

It is certainly a pity that we cannot avail ourselves of this great advantage.

Our readers will acquit us of any insensibility to the importance of fostering the wine interest in Virginia. We have dwelt on it continually in the hope that what we urged would find a general response from those whose locations favored its prosecution with perfect promise of success, and we are not hopeless yet by a good deal.

WIRE GRASS.—Will some of the patrons of the *Planter* inform me how to get rid of wire grass?

Nottoway Courthouse, Va.

JNO. B. TUGGLE.

[For the Southern Planter and Farmer.]

FULTZ WHEAT.

I send you a brief communication on Fultz Wheat, which I hope will be in time for your next number, for otherwise it will be useless. I am anxious that it should be seen by our farmers before seed time, now almost upon us, and should it be too late for you I must ask you to have it published in one of the Richmond papers.

I make no comment on the very unjust distinction in the Richmond markets against Fultz Wheat, a distinction which your dealers will find it difficult to justify, now that its merits are fully admitted by one of the largest milling companies of the city.

It would certainly be unfortunate if our farmers should be deterred from sowing a wheat which several years' experience has shown to be best suited to the soil and climate of the State, and I hazard little in asserting that Fultz deserves to be thus ranked. It is important, if true, that our farmers should know that Fultz Wheat is not inferior to other varieties, and that flour from this wheat is as satisfactory, both for home consumption and shipment even to a tropical climate, as that of any other variety; and facts, I think, sustain these positions.

As to its productiveness, there is little if any diversity of opinion. Some of our most judicious farmers have told me that they would continue to sow this wheat even with a certainty of getting ten cents per bushel less for it in the market, whilst others have rated it far higher than this.

These are no vague assertions of my own, but conclusions at which I have arrived after numerous conversations with men of far better judgment than myself, and carefully watching the prices of four different markets.

No wheat I think more frequently ripens with the beautiful and favorite amber, and I know of none, the Lancaster and Maryland amber perhaps excepted, which flours better or yields more flour to the bushel of wheat. It is doubtful, I think, whether the last named varieties are or are not the same wheat. They are both bearded, and probably better suited than the Fultz for all lands which retain an excess of water during the winter months. They are both favorites with millers.

The county of Clarke is one of the best wheat growing counties of the Valley, and its mills grind most of its own wheat and much from the adjoining counties. No flour, I think, has a higher reputation than that of Clarke. A gentleman from Clarke has recently told me that Fultz was a favorite wheat with the millers of his county.

In the beginning of the season a distinction of twenty and twenty-five cents per bushel was made in the Richmond market against Fultz, but recently many of its highest quotations have been for this wheat. Both in Fredericksburg and Alexandria a distinction of from five to seven cents has been made during most of the season, and perhaps an inferiority of flouring qualities, as compared with the best varieties

may justify this difference. I am yet to be convinced that the flour of Fultz Wheat is in any quality inferior to that of other wheats, and with all due deference to his experience and knowledge, Mr. Haxall's conclusions seem to me conjectures rather than facts established by clear evidence, whilst the managers of the Gallego Mills are unwilling to say that "flour made from Fultz wheat is difficult of sale or will not bear transportation to warm climates." In Baltimore, one of the largest grain markets of the Atlantic Coast, the extreme quotations have, throughout the season, been for "Fultz amber long grain red." I use the oft-repeated words of their price-current.

These facts seem to me enough to convince all of the policy of sowing Fultz in preference to every other variety on our high dry lands. On level clay lands, which retain an excess of moisture during the winter months, some bearded variety would probably be best, and I know of none so desirable as the Lancaster or Maryland amber.

I cannot close without a notice of the letter of my friend, Haxall. Like Benton on expunging, when he first introduced his resolution, he seems to stand almost, if not altogether, solitary and alone. May he not be like successful in sustaining his position. With all my esteem for the man, I cannot accept his logic. He seems to me to set at defiance the long-established axiom that demand and supply are the great regulators of prices. Aware of his superior knowledge of the subject, it may seem egotism to offer opinions adverse to his conclusions, yet till convinced of error, I know not how to yield. He seems to think that the farmers should distribute their crops through the year to meet the wants of the milling power of Richmond. He seems to forget, as he has probably not felt the pinching necessities which constrain the great bulk of farmers to press the crop as soon as threshed on the market, nay, often forestall them by credits at the hands of the commission merchant, to whom the crop is often pledged months before it is reaped. I do not commend such practice, yet "necessity knows no law," and alas! with many it cannot be avoided. But more than this, there is a good old maxim that "the farmer should not become speculator;" and to hold a crop with the hope of an advanced price, seems, to some extent, a violation of this rule. Those who have succeeded best are, I think, those who have put their crops so soon as ready on the market.

JOHN WILLIS, SR.

Oakburn, Orange County, Va.

[For the Southern Planter and Farmer.]

WHY WE SHOULD DO OUR BEST TO INCREASE THE VOLUME OF THE WHEAT CROP IN VIRGINIA.

The recent considerable advance in grain; the continued Turko-Russian war and consequent continued disturbance in the great supply districts of Russia and the lower Danube; the partial failure of England's recent wheat harvest—our customer annually for over 100,000,000 bushels of our surplus grain product; the home demand from our large mills for Virginia-grown wheat that our product can

scarcely half supply, ought to encourage our farmers to sow largely of wheat this Fall, as the outlook is favorable for remunerating prices.

* When it is remembered, that of the twenty-five countries in Europe only eight are self-sustaining as regards bread production in peace times, and of these eight, the principal ones are now at war, while the seventeen remaining ones must import bread material every year from countries having a surplus, "and taking the average quantity of cereals required for consumption of each inhabitant, including alimentary food, seed, manufactures, and other purposes at fifteen bushels," we may form some idea of the necessities of peoples numbering two hundred and ninety-millions, with their near sources of supply disrupted and reduced by war. Of the favored nations of the world producing a surplus, the United States stands at the head of the list— $34\frac{1}{8}$ bushels to each inhabitant, to $16\frac{1}{2}$ bushels to each person in Europe. We exported last year about 150,000,000 bushels of grain; and as population in the old countries is constantly pressing upon production, and the deficit in bread supplies augmented by hostilities now on a grand scale, and threatening serious complications over a wider field, we may confidently prepare for larger demands upon our almost unlimited capacity to supply.

As Virginia farmers, it becomes us calmly to consider the situation, and how we shall act in contributing to the food supply so as best to remunerate us. Thanks to the enterprise of our world-renowned mills, our flour is in demand everywhere among white bread-eaters where their celebrated brands are known; and our best grades of Virginia-grown wheat that have established the high character of this flour, is in constant demand at home, with no prospect of over-production. The more we raise of prime wheat, the better and more constant the demand. Healthy, clean seed only will produce prime wheat; any other, even as a gift, is poor economy.

In addition to the usual complaint of the millers, that much of our wheat is sent to market "out of order, defectively cleaned, dirty, smutty, &c.," they object to one variety, constituting three-fourths of the bulk of the Virginia crop—the Fultz—as being "unsuited *alone* for making first-class flour." After thorough investigation, the writer is satisfied that the objection is well founded. To the opinion of our own millers in Richmond, as expressed in the "Grain Movement" by the Southern Fertilizing Company, and the *Southern Planter and Farmer* for September, we may add that of Mr. Ficklin, of the Bridgewater Mills, Messrs. Gambrell & Co., of the Patapsco Mills, Baltimore, and Messrs. R. Aleshire & Co., of Gallipolis, Ohio. All these mills make first-class flour, and their renowned brands are sought after by all lovers of superior white, sweet, nice bread. They claim that the "Fultz" is too poor—has too much starch and too little gluten—"wanting in strength and capacity to

* Statistics from the "Grain Movement," published by the Southern Fertilizing Company, Richmond, Va.

make as much and as good bread," says Col. Haxall. All agree, in the main, that the Fultz *alone* makes an undesirable flour, but is good and wanted for mixing with the "long berry reds" and whites—and in proper combination makes first-class flour.

A lady who is no mean judge of, as she is an adept in making good bread, says, that the Fultz flour will not "rise" like that made of other grades, as the Lancaster and Amber Mediterranean.

The Brazilians prefer a "strong" flour, such as the long berry reds give, and such as keeps well in transport and "tones down by the voyage" to suit their taste. The Fultz is lacking in body and unsuited *alone* for flour for the Rio market.

But the Fultz is hardy, and excels in production. Carrying an excess of starch (a hydro-carbonate, which is largely supplied by the atmosphere) would seem to account for its yielding so well on comparatively *poor* land. It has a stiff straw that stands up well on rich soils, and possesses so many good qualities that we cannot afford to give it up altogether; nor is this recommended by those who are the principal purchasers for our wheat. Our true policy would seem to be to so diversify our varieties as to supply the mills—our best customers—with the grades of wheat, and in such proportion as they demand and need, for producing first-class flour for domestic use or transport. White wheats have been too much neglected, and ought to come in for a larger breadth of our wheat-sowings. The "Clawson" and Minorca are both hardy and productive, and the "Gold Medal" comes well recommended. Of the Amber wheats, the "Amber Mediterranean" is of the long berry variety, hardy and prolific, and makes rich, live flour. The "Lancaster" has long maintained its high character for yield and suitability for mixing with other varieties in making high-grade flour. The writer has no seed wheat for sale; he purposes testing some of the varieties mentioned above, and will continue the Fultz for a portion of his crop—unwilling to give up a wheat altogether that has uniformly given such satisfactory results as to yield.

Corn land will be in requisition for wheat this Fall, especially where fallowing has been retarded or prevented by drought. Wheat, on such lands, with a little help, pays better than to seed the land next Spring in the most uncertain of all our staple crops—Spring oats.

While, as philanthropists, we may not rejoice at the calamity of others, yet, we would be dull indeed not to reap the advantages which circumstances place within our reach, and while Europe and Asia are fighting, supply their demand for bread when they offer us attractive inducements.

Halifax county, Va.

R. L. RAGLAND.

NOTE BY THE EDITOR.—This article is still very timely, as fallowing has been generally much delayed this Fall. We thank the Major for it; and will say that he is ever on hand when it is in his power to be of service: and no man can do more than that.

In the few words we propose here to submit we will start out by reproducing a portion of the letter that appeared in our last number from that veteran miller,

Mr. HAXALL: "I am sure no greater service can be done for Virginia than by stimulating its grain production, of wheat particularly, as it has in the general market a high reputation, and is, therefore, never without a purchaser at a remunerative price. This should increase its growth and production, and thereby its price. It may be thought by some, and probably is, that an increase of its quantity may impair its value. I am confident the contrary is the case. The large and costly mills of this city are not now more than half supplied, without seeking the wheats of other States, which it is not desirable to do for many considerations. *Their owners much prefer wheats of Virginia growth*; but not, of course, thrust upon them with excessive energy and haste—all within a few months of harvest—but uniformly and gradually for ten months succeeding. By so doing, the Richmond mills can manage double their usual quantity. The lack of this abundant supply the season through makes it very difficult for these mills to bear their heavy permanent expenses, and contributes much to render them unprofitable."

What Mr. HAXALL urges at the beginning would, at first blush, seem to involve a paradox. Looked into closer we see that he is absolutely correct. No place should be dignified by the name of market if the wares or produce to be sold there is presented only in small quantities. There must be enough of everything to induce the attendance of a multitude of buyers, and where they are on hand there competition prevails, and competition means the highest figure the demand will allow; in other words, we have a market in the true sense of the word. Except at the opening of the season for the sale of wheat, in Richmond, the offerings on the Corn Exchange are altogether inadequate to attract any buyers beyond those directly on the spot; and as all markets are full at the start, there is no need of buyers then travelling round. If our production was large, our wheats ranking as high as they have done in the past, and we had the ability to bring them into market the season through, the prices received would be always remunerative. Now, here's the trouble: how can we, as needy of money as too many of us are, afford to market our wheat thus in detail? There is one sure way, and that is *by the provision of a first-class grain elevator at Richmond*. Let us see. *First*, as to the millers; it would give them wheat when and in what quantity they wished it, and of the character and quality most desirable at the time; it would provide storage at a much less rate of cost than they now have to encounter, and be perfectly convenient; and it would save them the interest on the money locked up in the large quantity of wheat they have always been compelled to buy ahead. *Second*, as to the farmer: it would enable him to bring in his wheat without haste, and thus insure the best condition possible to put it in; and it would not necessitate his selling, unless he chose to, as much as he might be in need of money. A warehouse receipt, the wheat being fully covered by insurance, would be a perfect collateral in bank, giving him, as it would, money at the minimum rate, as interest always moves up or down in the scale in proportion to the excellence of the security offered. The inability of the grower to command his crop, as he would like to, has undoubtedly operated to keep the volume of our wheat production at the low figure shown every year since the war.

The Richmond mills are no longer content to depend wholly upon their foreign trade. They will, in future, not only push this trade to its utmost limit, but, also, compete with the mills North and West in supplying the domestic market, and present their flour, both as to grade and size of package, in a shape to take in the whole range of custom. This will put them to their best, and necessitate,

in our judgment, more than double the supply of wheat Virginia has yet been able to furnish them.

If it should be found that wheats, like the "Fultz," for instance, continued to give a better yield than the red or long berry wheats, especially in the country east of the mountains, they might be grown to our full capacity there; and what was needed of the reds to mix with them, if we could not produce sufficient in the remainder of the State, could be brought from the country on both sides of and near to the Ohio River, where the best comes from now; and these, too, would find a place in our elevator. Thus would the best interests of all hands be subserved; and the machinations of imaginary "rings" cease to disturb the slumbers of the grower.

Stock Department.

CONDUCTED BY DR. M. G. ELLZEY, AGRICULTURAL AND MECHANICAL COLLEGE, BLACKSBURG, VIRGINIA.

IMPORTED AND NATURALIZED ANIMALS.

Among domestic animals, it cannot be denied that the best breeds we now possess have been imported, and that a great majority of them have originated in England. We do not propose to detract from the high and undisputed merit of the English breeders. We freely accord to them the first rank. Yet, it is now plain that other agricultural peoples are preparing to dispute earnestly with them the claim to continued supremacy. England is evidently approaching an industrial crisis; even the cultivators of her soil are forced to encounter in their own markets the severe competition of the products of cheap lands, improved machinery, and cheapening labor from beyond distant seas. Beef, from the American prairies, hangs in the London butcher's stalls, side by side with that grown on British soil, within an hour's ride of the great Metropolis. It can scarcely prove a consoling reflection to the British farmer, that without the blood of his unrivaled breeds, the American could never have entered the London beef market. We find the American horse also suddenly making his appearance in the English markets. It would scarcely be too much to say, that no horse in America is worth sending abroad, which has not in its veins a large percentage of the blood of the English race-horse. Conceding, therefore, freely the palm of superiority heretofore to the English breeder, sympathizing fully with that great people whose place has been for centuries far forward in the van of human civilization and progress, we yet feel that the hour is come when great and grand old England, in the face of inexorable destiny, must yield the foremost place. We cannot, in this place, follow out these re-

flections, yet we believe the result indicated is as inevitable as death. This much we have said to convey to the reader as fairly as possible the animus in which we enter upon the comparison between the improved breeds of domestic animals as imported from England, and the same breeds after they have become naturalized, acclimatized, and adapted in the hands of the American breeder to present surroundings. Is an imported Shorthorn a better and more valuable beast than one whose ancestors were originally derived from the best English herds, but for a number of generations have been bred in America? Is this true of the race-horse, the Southdown, the Cotswold, the Berkshire, or any other valuable domestic animals? These are questions of great moment and must be discussed dispassionately. Does experience prove that there is anything in the climate of the United States which causes English bred animals so to deteriorate that the standard of perfection can only be maintained by continued fresh importation? This view of the case has often been advanced, and is perhaps tacitly adopted by a majority of our people. In this way the word imported has come to stand in place of a pedigree, putting an end to criticism and enquiry. The enquiry we here propose to make is, upon what facts is such an opinion based? Is there any reason which we can perceive, why, in the nature of things, this ought to be so? It would be a difficult task to point out any such manifest reason; we admit our ignorance of any such, and we believe none such exists. We are thrown back upon the results of experience, and whatever may have been supposed or said, experience affords no evidence to sustain the belief that any English bred animals actually do deteriorate in America. This view was formerly advanced by various writers with regard to the English race-horse, but the wonderful career of Lexington, and his get, goes very far to set aside all mere theorizing on the question. In the case of the Shorthorns, those that have been sent back from America to England compare favorably with the best English herds; whereas, those that are recently imported, are not superior to the average of well-bred and well-managed American herds. The celebrated Rose of Sharon family, of the world renowned Kentuckian, Abram Renick, are confessedly equal to the best Shorthorns in England, and their leading breeders are using Rose of Sharon bulls on their most valuable cows. Now, Mr. Renick created his type out of various materials long naturalized in America. Again, that wonderful animal, the American trotter, shows what the American breeder can do with the best British material.

The Poland-China swine is, for the purposes of the average American hog raiser, the best hog yet produced. We have as yet no American breed of cattle; and unless the American Merino be a distinct type, no American breed of sheep. This, indeed, is mainly because we find no difficulty in perpetuating the best English breeds without deterioration.

If it be true, as we think, that there is no deterioration of the imported animals in America consequent upon less favorable climatic conditions than those of their place of nativity; and, if further, it be true, as we think, that experience establishes that no ultimate deterioration results in practice, why then is it that an imported animal should be held in higher esteem than one of the same breed whose ancestors for several generations have been bred in America, and have become, therefore, thoroughly acclimatized and accustomed to the new conditions of life to which they are here subjected? It ought not to be so at all; the naturalized animal is the more valuable of the two. To sustain this proposition, we have both manifest reason and the results of experience.

It is a well known fact, that the reproductive functions are often so disturbed by the sea voyage and climatic change, as to result in the temporary impotency of the imported animal. It takes, under the most favorable circumstances, several seasons for the physiological forces to re-adjust themselves fully to the new conditions of life. It would be unfair to suppose the fact that such changes, especially in closely inbred animals, ultimately act as a stimulus to fertility in many instances; yet the fact remains undisputed, that during the process of acclimatization, the health of the animal must be more or less disturbed. Experience, we claim, accords with this view. The most distinguished American sires have not been imported. Among our racing stallions, do not Sir Archy and Lexington stand unapproached? The same is true of the great Shorthorn sires; the greatest of them have been bred in America. Our experience with sheep, especially the long-wooled breeds, is to the same effect, and we find from recent conference with several distinguished sheep growers, that we are not singular in this experience.

With dogs, we speak whereof we know, when we say that the imported dogs are far inferior to the home bred stock, where they have been bred with proper care and skill. The conclusion of the whole matter is this: The best blood in nearly all our domestic animals originates abroad, but the best strains procured from thence are improved for our purposes by being carefully and skillfully bred in this country for several generations.

THE HEREFORD CATTLE.

The next of the beef breeds we propose to describe is the long-established and well-known cattle of Herefordshire, England, celebrated for hardihood, heavy weights, and aptitude to fatten; but they are confessedly inferior milkers, and are never used in the dairy. It is claimed by their advocates, that these cattle strongly rival the Shorthorns, and have often beat them for sweepstakes premiums in the show ring. It must, however, be remembered that the sweepstakes premium goes to one or the

other breed, as the animal exhibited may be considered the best specimen of that breed, and is not at all an award of merit as between the two breeds. Nor can we admit from what we have seen of them and what is written by the best English authors, that the Herefords, by any means, rival Shorthorns in excellence. We have, indeed, seen Herefords of superb individual merit; cylindrical in form, and built close down to the ground; carrying an immense weight of flesh; yet they have rather a disappointing touch, and in our experience, when crossed with common stock, their grades lack merit, or at least such merit as might have been anticipated from the excellence of the thoroughbred parent. Compared with the bull or the ox, the Hereford cow appears to great disadvantage and presents far from a striking appearance; lacking the handsome color of the Shorthorn, she lacks the round, well-developed, deep fleshed carcass of the cow of that breed. "The Hereford cow, says Youatt, is apparently a very inferior animal; not only is she no milker, but her form has been sacrificed by the breeder." "She is rather a small and ill-made animal; her bull calf frequently attains three times her own bulk; yet, when put up to fatten, she takes on fat at a rapid rate, and spreads out to an extraordinary extent considering her former appearance and size." As work-oxen these cattle have not become distinguished. They are a little coarse-boned and somewhat heavy in the forward parts, so that they cannot possess the activity of the Devons. Patience, docility and strength they do possess, and when they have been worked for several years they prove excellent feeders, and often attain to heavy weights. The beef, too, is often very fine grained and well marbled, but there is at the same time rather apt to be too much coarse and heavy bone, especially in the fore-quarter. Not possessing the highest excellence for the yoke, being the very poorest milkers, they ought to be indisputably the best beef-producers, if it can be claimed that they are better cattle for the farmer than the Shorthorns. That both Shorthorns and Devons on the contrary excel them in the quality of their flesh can, we think, be successfully maintained. Furthermore, we believe that the true test of the value of the thoroughbred breeds of domestic animals, is the excellence of the grades they produce with the common sorts, and in this particular, the Herefords cannot claim supremacy. Here they are unquestionably overmatched by both Shorthorns and Devons. Their deficiency as milkers unfits them for the general farmers use, and they are apparently not destined to grow into much public favor in this country. In color, the Herefords are a pale red, sometimes approaching to dun, with white faces or rather white heads and white legs. They are, by some, believed to be originally the same as the Devons, but they are now much heavier and much coarser, especially in the fore-parts. It is proper to say that there are some enthusiastic admirers of these cattle, and that they are

now being well advertised and pushed before the American public, and we do not deny that we have seen some magnificent individuals exhibited.

ITEMS.

The export of American dead meat for the six months just ended, including the hottest and most unfavorable period of the year, amounted to above five and one-half millions of dollars; the effect of which is sensibly felt in the home market. Improved cattle only are used in this trade. The price of thoroughbred bulls is lower than ever, and now is the time for wise men to buy and use them. The breeders, advertising in this Journal, have a number of yearling and two year old bulls for sale. We repeat, with emphasis, *now is the time to buy*. The active demand for improved stock of beef will induce breeders to castrate a large number of their bull calves after awhile, when the price of bulls will go up accordingly.

LEGAL ANALYSIS OF FERTILIZERS.

In reply to the Commissioner of Agriculture, we would state that the grounds of our opinion as to the valuelessness of analysis of commercial manures for the purpose of giving information to farmers are various, and we think sufficient. First. There is the delusion concerning the capacity of the analyzer who may or may not be a competent person. Second. There is the snare that any knave may lay for an honest company, by adulterating their product or emptying some of their bags and re-filling them with worthless stuff, against which villainy it is not in the power of any commissioner or analyst to protect themselves. Third. We know of no way to prevent a knavish company from obtaining the endorsement of the commissioner and his analyst, and substituting other stuff in the markets for what has been endorsed. It is said that extensive frauds were perpetrated under the endorsement of our own most learned and distinguished chemist. Fourth. The amount of plant food in a fertilizer may be great, and, at the same time, its agricultural value small. Refuse leather, for instance, furnishes a large amount of nitrogen to the analyst, but is of no value as a manure. Other examples of the same truth are not wanting. Furthermore, of two fertilizers, that which gives the best analysis may be of least value, because of inferior physical condition. To illustrate, gypsum ground no finer than coarse sand is of no value as an application to clover or other crop. The same gypsum ground to an impalpable powder and applied to the same crop gives great results. The same is true of bones and mineral phosphates; that is to say, their solubility or activity depends on the fineness of their mechanical division to a far greater degree than has heretofore been

generally supposed. We could, indeed, say a great deal more, but think we have said enough to explain what we meant when we said in a former number that the legal analysis of fertilizers was vanity of vanities, and we are willing to continue to risk our reputation for level-headedness on that statement. We do not underrate the importance of the office of Commissioner of Agriculture. We are upon the record in divers places as an advocate of the creation of that office; but we submit most respectfully and kindly that it is the business of every citizen to protect himself by ordinary prudence against fraud, and the farmer is no exception to this principle. It cannot be thought that any business firm of respectable standing would be willing to risk the loss of business, which would certainly be consequent upon the issuance to its customers of a fraudulent article. The facts above are sufficient to show that the commercial or agricultural value of a fertilizer cannot be estimated by analysis with any certainty of accuracy as to value.* It would, of course, be possible for the analyst to show clearly that a so-called fertilizer contained no plant food at all, and was therefore positively fraudulent. Yet we submit that such an article would only be issued by a nameless and reckless thief and adventurer; and that if the farmer is fool enough to neglect established and reputable business firms, and trade with such vagabonds, the State is by no means bound to protect him from the inevitable and perhaps just consequences of his own folly. We are writing in no captious or controversial spirit, but we honestly think this is a matter greatly misunderstood. We will submit one other remark before we leave the subject, and that is concerning the exaggerated reports from abroad as to the good accomplished. It is easy to say or to write that so and so is being successfully done in Germany, but it is with the utmost difficulty that such statements can be verified. It is very easy for an essayist or a speaker to wind up his advocacy of some hair-brained theory, with the triumphant assertion, "as has been successfully accomplished in Germany;" when it is altogether likely that such a thing has not been heard of in Germany

*As confirming this position, the following extract from a lecture delivered the 20th of April last, by JOHN BENNET LAWES, of Rothamsted, at Haddington, England, is submitted. No one will question Mr. Lawes's right to express an opinion in this behalf; he stands without a peer elsewhere in the world as an experimenter, and has had to do largely with artificial manures, every season, for the past thirty years:

"Although potash, phosphoric acid and nitrogen are the chief manure ingredients in farm-yard dung, in the manure from artificial foods, and in artificial manures, still the difference in form, in which these substances are met with, greatly affect their value. The present method of analyzing manures does not properly recognize these distinctions, and the valuations founded upon these analyses are altogether false and erroneous."

Farther: A chemist in this country who, for the last fifteen years, has examined, perhaps, ten samples of commercial manures to one by any other, not only accepts without reserve the conclusion of Mr. Lawes, but adds: "I go even further and maintain that not only the *form*, but (if I express myself right) the *company* in which these substances are offered, is of great importance."

or elsewhere. One example of the way they do things in Germany, "to our purpose quite:" we happen to know of a sample of potash-salt, officially stamped by the German Government agent, and analysis guaranteed by the great German chemist, which fell near 30 per cent. short of the guaranteed analysis. All is not gold that glitters in Bismarck's country either.

THOROUGHbred STALLION EOLUS.

We have received from Mr. R. J. Hancock, Charlottesville, Va., a card describing his thoroughbred stallion Eolus, by imported Leamington, out of Fanny Washington by Revenue. We are glad to hear of the introduction of such animals into Virginia. There is a growing demand for half and three-fourths bred horses for export at remunerative prices, and it is going to pay to breed such animals from sound, good sized, good tempered dams. Eolus is described as a dark bay horse, fifteen hands three inches high, and of splendid bone and muscle; white star, and both heels white behind. We especially prize the Trustee blood, and most especially in the line of the best son of Imported Trustee Revenue. The charge for the season to Eolus is put down at \$30.

STATEMENT OF EXPORTS.

The following table gives the exports of the leading articles named, from the United States, for the years ending respectively, June 30th, 1876, and June 30th, 1877, as furnished by the United States Bureau of Statistics:

Exports from United States.	Year ending	Year ending
	June 30, 1876.	June 30, 1877.
Bacon and Hams, lbs.	327,730,172	460,059,146
Fresh Beef, lbs.	49,210,990
Salted or Brined Beef, lbs.	36,596,150	39,155,153
Butter, lbs.	4,644,394	21,527,242
Cheese, lbs.	97,676,264	107,364,666
Lard, lbs.	168,405,839	234,741,233
Pork, lbs.	54,195,118	69,671,894

The figures exhibit an enormous increase in all the articles, and the development of a vast new trade in the case of fresh beef. We have not ceased to call the attention of the people of the South, for whom we write, in an especial manner, and most especially the people of Virginia, to whom, in this, their day of trial, we cling closer than a brother, to this great development of equal trade—a trade which must increase to limits which the most sanguine now stop short of in their wildest dreams. How shall we secure Virginia's share in this great business? The answer is

exceedingly brief and simple : Improve the quality of our products ; seize and improve our natural advantages, and the lead is ours. The stock breeders of Virginia, Kentucky, Ohio, Maryland, and other States, are offering the best specimens of the most valuable improved breeds of stock at very reduced prices. If the Northwest be allowed to monopolize all the advantages of this Providential opening, it shall not be because the readers of this journal have not had the matter set before them in the beginning and kept before them continually.

WALLACE'S MONTHLY.

Wallace's Monthly has just completed its second volume. It is a publication of high merit, discussing freely all matters of interest to horse-men. It has distinguished its brief career by a vigorous and well sustained attack upon the gamblers and blackguards who have so long hung about the turf. Its contents are continually improving, and it continually presents articles from the pens of the ablest and most respectable horsemen of the country. This publication is styled "An Illustrated Magazine, Devoted to Domesticated Animal Nature." Edited by J. H. Wallace, 170 Fulton Street, New York. We very cordially recommend it to the public, as well worthy of confidence and support. To professed horsemen, it is practically indispensable. Price, \$3 per annum ; single numbers 30 cents.

"NO MORE LUNK-HEADS."

From the *National Live Stock Journal* for September, page 383, we copy the following: "We want no more great, coarse, lumbering "lunk-heads," with gummy-joints and bones as soft and spongy as basswood." Just so. A horse fifteen and a half hands high, and weighing 1200 pounds, with clean, flat, hard bones, and good sound feet ; active, pointed, alert ears ; broad, expansive, intellectual forehead, with mild, clear, expressive eyes, is better than the gummy-jointed, lunk-headed style, and such a horse, not *well bred*, cannot be found. When this truth comes to be generally understood and acted upon, let it be remembered that we have preached from that text until it has become monotonous. Men must breed to a model, and that is the best model in which a horse can be made.

FIVE of Major Cowan's best Shorthorn cows have recently produced calves, by the Rose of Sharon bull Raleigh, the property of the Agricultural College. Four of them are cow calves, and very fine ones, including an extra roan cow calf from that grand old Golden Pippin cow Susan 4th. Major Bentley's two Illustrious cows, and Major Cowan's Susan 5th, lately bred to Raleigh, are safe in calf.

[For the Southern Planter and Farmer.]

SHEEP FOR VIRGINIA.

So many and such well-informed and experienced gentlemen have been handling the sheep question lately in your pages, that a modest young man feels more like begging off, than trying to throw any more light on the subject. But there is much every way to be said about sheep in Virginia, and it ought to be said; whether well said or not. "In a multitude of counsellors there is wisdom." Let each contribute what he can.

In the April number of the *Planter and Farmer*, Ivanhoe points out the true way for the delivery of the South from the domination of Northern capitalists and monopolists, as far as the cotton States are concerned, in a bold, frank, nervous style, that carries conviction along with it.

Sheep should be and could be to Virginia, what cotton is to more Southern States. Sheep are more easily kept and cared for than any other kind of stock. They give us in return for a modicum of attention and feed, a greater variety of products than any other animal. Let us consider what returns the sheep makes to the wise farmer and to a wise people.

First, in the food they consume, they are of great benefit, for there is not one green thing that puts forth its tender shoots of green in the Spring that the sheep does not eagerly nibble at; and thus we have our fields cleaned of the noxious and unsightly weeds and briars, &c., that would cost time, labor, money, to eradicate and keep from destroying the grass. Some farmers object to the closeness with which the sheep shears off the young grass—thus giving, say they, the land a bare and poor appearance. Yes, but the green that we do see after the sheep has cleared a field, is grass—not weeds, bushes, briars.

Then in their products. Ask them for meat, and comply with the conditions of the demand, and they give us mutton at any season of the year, fresh, tender, palatable, wholesome, nutritious—as much so as beef and far more so than pork and bacon, and certainly more easily fitted and brought into condition for butchering. Then, Spring, Summer and Fall we may enjoy lamb—away with oysters and turkeys, ducks and geese. But we are almost too poor in Virginia to eat lamb; and so we can send the lambs (male) North, and bring the money *back*—more of it than the sheep cost us last Fall, and still have our flock increased 25 to 50 per cent. by the addition of the ewe lambs.

Then comes the wool. This is the item; this we all need and must have. Then we should raise it; and when raised, let it be manufactured in Virginia. Now, let us consider this item; see what it means; what the sheep gives us in it, if we will only accept, take, appropriate, use all we have in it. Let our idle lands teem with sheep, and let their wool be manufactured at home in Virginia. What would this mean? Simply an enormous quantity of wool; simply vast manufactories; investment of capital in our borders in costly machinery, adding millions to the taxable and productive values of the State, and thus lightening the general burthen of taxation to all our people—employment to thousands of operatives, thus building up new and large towns, and furnishing a market at home for a large percentage of the various products of our soil and climate—mutton and lamb among them. Then, with better goods

made at home, see what this item of the sheep's products will save to our people. Three freights to Northern railroads and three commissions to Northern merchants. Freight North on wool, one; freight South on goods made of it, two; freight North on farm produce, three. Commissions—to merchants for selling wool, one; commission to merchant or traveling expenses of our own merchant going North for goods; commission of merchant North for selling our farm produce of other kinds. Commissions amounting to ten per cent. on the market value of the wool at the start. Put sheep enough in Virginia and all this will be changed; and enough *prime* sheep can be kept in Virginia to accomplish this, on lands that will not fatten a two-year old steer in six months. Consider what a vast stimulus to industry and energy all this money would be if kept at home and circulated among our own people. Let every man who owns a piece of land, own sheep also. Five or ten will furnish wool enough to make, or exchange at the nearest factory, all the woolen goods needed for his whole family. Don't be afraid of overproduction. There is in the thing itself an abundant and ample remedy—increased population.

R. N. S.

COL. R. J. HANCOCK, Overton, Va., has recently sold stock to the following parties: To B. F. Dowell, black colt, four years old, by Scathelock; to Dr. J. O. Pendleton, Overton, Va., chestnut mare, aged —, pedigree unknown, and brown colt, four years old, by Scathelock; to Henry Patterson, chestnut colt, three years old, by Scathelock; to James Garland, a black horse, five years old, by Florist; to Meredith Smith, a black mare, aged —, pedigree unknown; to R. S. Carter, Esq., Carter's Bridge, Va., a chestnut colt, and bay filly, four years old, by Scathelock; to Richard Hall, Howardsville, Va., a chestnut filly, four years old, by Scathelock; to Mrs. Norvell, Howardsville, Va., a chestnut colt, four years old, by Scathelock; to Thos. G. Behrendt, Columbia, Va., a black filly, three years old, by Scathelock; to Judge E. G. Bradford, Wilmington, Delaware, the bay filly "Melrose," four years old, by Melbourne, Jr., out of Hazlenut, by Imported Arabian "Massoud"—second dam, a Canadian mare; to Wm. Ellis, Overton, Va., bay filly 2 years old, by Scathelock; to Anderson Turner, bay mare "Rosa," 11 years old, by Hardware; to E. T. Warner, Wilmington, Del., the black horse "Overton," by Florist, out of Jenny, by son of Imported Havelock; and to John Alexander, Warren, Va., the red bull calf, by Queen's Breastplate, 27592, out of Melody 5th by Madrid. His bay horse, "Eolus," by Imported Leamington, out of Fanny Washington, beat several first-class horses while on the turf, and made the fastest third heat of two miles on record. He is also a fast natural trotter, and will, no doubt, greatly improve the horse stock of Albemarle and surrounding country.

Farmers ought to recollect that stock in winter should be well housed, with plenty of dry bedding. The farmer or stock-breeder who does not pay attention to this, deserves to meet with failure.

Editorial—Farm-Garden and Fruits.

CONDUCTED BY DR. THOMAS POLLARD, COMMISSIONER OF AGRICULTURE OF VIRGINIA.

This month in which we write, and about the work of which we write, is the eighth in the Roman calendar (from *Octo*, eight), but the tenth in our reckoning, and warns us that the end of the year approaches, and that the short, wet, frozen days will soon be upon us, and that "we must make hay while the sun shines." Though the end of the year approaches, the end of the farmer's work never comes, unless it be for a few days in our old Virginia, English Christmas, a time to memory dear, and particularly dear to our childhood's memory, and dear to us now for the sake of our happy children, in whom we are living over our bright days again, as we see them revel in their anticipated and realized happiness.

But to our work for this month, the most important of which is

WHEAT SEEDING.

A very judicious James river farmer, who was noted for his good crops of wheat, once remarked, that if he had his choice, he would sow all his wheat on the 10th day of October, as expressing his idea of the proper time for putting this grain in the ground. This would not be, however, so prudent, in a very large wheat raiser, such as we hear of sometimes in California and Texas, as his wheat would all ripen at once, and there would, of course, be loss from shattering. But there are few large wheat farms in Virginia—particularly under the new order of things—still large enough in some instances as not to have all our crops to ripen at once. The 10th of October is late enough usually to avoid "fly," and early enough to give time for tillering and spreading before the severe freezes. Too early seeding sometimes puts the wheat in danger of being killed in the joint by the late frosts of Spring. The farmer who designs seeding wheat must be up and doing now.

It is presumed the fallowing is done, though in some sections, where drought has prevailed, we fear it is not. If the fallowing has been done early, the land must be re-plowed, better with a single plow, to prevent turning up the grass and sod, which has been turned under, and the drag thoroughly used if the ground is rough; if not, the wheat may be seeded and dragged and cross-dragged. There is some objection to having the land in too fine tilth, particularly in cold Winters, for the small clods left on the surface protect the wheat plant from the cold. For this reason, if it is found necessary to roll the land to compact it, as it sometimes is, for wheat likes a compact soil, then a heavy drag should be passed over the surface to rough it, and then the wheat should be seeded. We would never roll wheat land after it is seeded. The late *Mr. Edmund Ruffin*, who was a very successful wheat raiser, put his wheat in on a

rough surface to prevent Winter killing. With all the lights before us, we would put one and a half to two bushels wheat to the acre, varying with the time of seeding, size of the grains, and the quality of the land. As a general rule, we would prefer one and a half bushels. If the seeding is late, say last of October or first part of November, and the grain seeded is large, then we would put two bushels to the acre. *Mr. Hill Carter* (standard authority in such matters) advised, in the August number, 1874, of this journal, two bushels to the acre, on good land, and said that the thin seeding of England, which he had witnessed in a recent visit there, would not do here. Winter killing scarcely occurs there at all, while it is very common here. *Mr. Carter* also expressed the opinion that thick seeding prevented rust, but at the same time says it is not so favorable for securing a stand of clover and the grasses. *Mr. Carter* expresses the opinion that the want of lime in the soil is one great cause of the failure of the wheat crop so frequently. We suspect that the want of phosphate of lime—phosphoric acid and nitrogen being the first principles exhausted from soils—has been a more frequent cause of failure. At the same time, seasons and climate have much to do with the failure and success—as witness the present crop. Ours is not pre-eminently a wheat region, for the failures here on good land are very frequent. There is no doubt but what “phosphoric acid” is deficient in most soils, at least in a soluble form, and this and nitrogen are the great *desiderata* in the wheat crop. It may be, and it is very probable, that the imperfect crop of wheat for many years, has been permitting an accumulation of plant food for wheat, and that a favorable season has enabled the wheat plant to seize on and appropriate this accumulated food. We know that nitrogen accumulates in land when not cropped much, and particularly where there has been a good growth of artificial or natural grasses. The bones of all animals, and the seeds of all plants, have a large proportion of “phosphoric acid” in an insoluble form. Thus “phosphoric acid” accumulates in soils, as well as ammonia. Now, ammonia renders this insoluble phosphoric acid soluble, and thus may our opinion and theory be true, that “plant food” of wheat, on account of bad crops, has been accumulating in the soil. Phosphoric acid of the mineral constituents, most often required for plant food, is the sparsest, and the most locked up in an insoluble condition. Lime, ammonia and salt and sulphuric acid particularly, make it soluble. England, recognizing the necessity of “phosphoric acid” for wheat, applies it largely on the turnip crop, which is eaten from the fields by stock, and then the land is seeded to wheat. The constant cropping for wheat without returning the necessary ingredients for its growth to the soil in the “Genessee country” of New York, reduced the crop from more than twenty bushels to the acre, to eight or ten. The farmers were forced to change this, and by proper fertilizers and manures, we are told that they are

bringing their lands back to something like their original productiveness. As pertinent to this question, we introduce the following from the *Country Gentleman*:

Sheep and Turnip Husbandry, p. 440—"Are our wheat soils running out?" At the close of this truthful communication, it is asked, "What may we look for fifty years hence?" Sheep and turnip husbandry carried on as near to the system pursued in England and Scotland as the climate in the United States will permit, would rescue the soil from the exhaustion existing, but even this escape is rejected, and the dogs are allowed to be a bar to any recovery of fertility by such means, and Southern men in the cotton States persist in growing cotton without profit, and buying fertilizers, when the Commissioner of Agriculture in Georgia collected evidence that in 1873, while cotton paid nothing, wool gave a clear gain of 63 per cent. on the capital employed, after an average loss of 15 per cent. by the killing of sheep by dogs. The Southern States could all grow crops which would fatten sheep by feeding them on the land in the open air without shelter, and whenever a good fair trial of English sheep husbandry is made down South, some cute mind will invent means of shelter which will give the North a chance to follow suit.

Regarding the kind of wheat to sow, we think the farmer can scarcely do better than to sow the "Fultz." It is conceded to be the most productive variety thus far tested in the State, and what difference the millers may make in the price another season, will, we think, be made up in the quantity raised of this variety. The millers have recently "let up" on the Fultz, and the prices for this have been mostly as high as for the "Lancaster." Part of this rise may be due to the demand for seed wheat by the farmers, which shows that they generally intend to stick to the "Fultz." We mentioned in our September number, the experiment we made with "White Jennings," and the yield of forty-eight bushels, *i. e.*, at that rate per acre. We think this wheat should have a trial by the farmers, and we understand that some of them have been providing themselves with it in this section of the State, for seed. We intend to sow some of it.

Whatever kind of seed is selected, let it be as clean and free from impurities of all kinds, as far as possible. It is folly to sow indifferent wheat, as much so as to attempt to raise good stock from stunted, diseased parentage. It is poor economy for the farmer to save his own wheat for seed, unless it is really good. He had better sell it and buy good seed, even if the difference in price be doubled by doing so. It is also very unwise to sow wheat on poor land, without fertilizers of some kind, or on land insufficiently drained. After seeding, water furrows should be run wherever needed, and the plow alone will not answer for this. Follow with hoes or shovels, opening thoroughly, so that no water will rest on and sob the land.

WINTER OATS.—It is not too late to sow Winter oats. They will yield well, gotten in the 15th or 20th of October, if the land is tolerably good, but not so well as if gotten in earlier, particularly from last of August to last of September. We once raised a good crop (10,000 pounds on four acres), sowed on the 14th of October. In this instance,

unintentionally, only one bushel to the acre was seeded. One and a half bushels to the acre should be used sown as late as this. Try to get clean seed, for the Winter oat is generally filthy, and will foul the land, if filthy seed are used. All corn land had better be put in Winter oats than in wheat, for wheat does not come well after corn. It is a very certain crop if ordinary pains be taken, while wheat, with the greatest pains and on the best lands, is very uncertain. The present is the only good crop we have had for years. As before remarked, we think more forage crops and more stock should be raised, for there is no danger of the world being overstocked with meat, while the grain product of the world is constantly increasing; and by competition, induced by the rapid and cheap transportation of grain, our farmers are brought in the market with the rich and teeming lands of the West and of California, Australia, and even India now, and of all other countries. The thickly-peopled countries of Asia use almost entirely rice—consuming none of the cereals of the other parts of the world. The transportation of our meats to Europe will, for a long time, prevent any reduction in the price, and may result in an increase. As we have several times observed before, Winter oats had better be seeded in the corn standing, than to wait until the corn is cut down. This can very well be done with the single plow and cultivator, or one-horse drag. Some persons sow them at the last working of corn, using the cultivator to level the land and cover the oats; but, if seeded in July, there is some danger of the oats getting into joint, before frost, if it is a late, warm Fall. If oats are designed for market, it is safe to thresh them or bale them as soon as practicable, for they keep badly stacked out in the Winter, and if housed, are much depredated on by rats, which injure, too, very often, the stacks. They sell better, as is well known, towards the Spring.

GATHERING CROPS.—This is the month for housing many crops. The tobacco-raiser must look out for “Jack Frost,” if his tobacco is not already cut, and try to anticipate this great enemy of all late tobacco. The tobacco crop, from all accounts, will be a large one in Virginia. We have had cool nights, with heavy dews, which has tended to thicken the tobacco very much; and, more recently, we have had favorable ripening weather, which has tended to mature the crop rapidly. Besides the quantity, the universal opinion prevailing is, that for quality and gum, it will be greatly superior to the crops of 1875 and 1876. In Kentucky, the crop, on the 1st of September, as reported in *Harthill's Tobacco Circular*, Louisville, Ky., was reported good, though there were some conflicting reports as to quantity. In Indiana, the crop is reported as large. From Missouri, the reports were conflicting. From Maryland, the reports were unfavorable as to quantity, in consequence of great want of rain. Corn may be gathered this month, particularly if the farmer is in want of it for his hogs and horses, and wishes to protect

it from rogues. If not well dried, it should be put in pens and covered over from the weather. It must be fed to horses carefully. Fodder, if not put away, should be housed and stacked. *Potatoes, Irish and sweet*, should be carefully dug and put away. Irish potatoes are not difficult to keep. Sweet potatoes must be put up with great care. They must be dug in a *dry* day and put up dry. *The air must be carefully excluded*, as far as possible. They may be put in out-houses or in "Top Stacks," where the ground is dry. If in a "Top Stack," the place we adopt for the purpose, dig a hole three feet deep and as large as there is necessity for or as there may be room. Place *dry* "pine tags" at the bottom, lining the sides with the "pine tags" as the potatoes are put in. After filling the hole with potatoes, cover with the tags, then place on some boards, the joints being broken with other boards, cover these boards with "pine tags," and then with dirt. When potatoes are gotten out for use or market, they must be carefully covered as before. We are certain, if this plan is adopted (for we have tested it), there will be no difficulty in keeping this excellent and useful vegetable. We should have given a caution to handle the potatoes with great care, so as not to bruise them; and no cut ones should be put up.

HOGS must be put up now and freely fed, so that they may fatten before cold weather. If this is delayed, it will require nearly double the quantity to fatten them.

FALLOWING.—There will not be much time for fallowing this month, if the farmer has wheat to sow, and tobacco to attend to, and corn to gather. If he has not these things to attend to, then he will have some time for fallowing for corn and tobacco and potatoes the next year.

DITCHES may be dug in the dry weather, which occurs in this month, and old ones cleaned out. If covered drains are designed, this and next month will be favorable times for it. To those who wish to drain (and we wish to impress on farmers the importance of draining all lands the least wet), we advise by all means to use *tile*,* as it is much more effectual and cheaper in the end than other kinds—and cheaper in the beginning, or first outlay, than rock, even if that is on the farm. If an experienced hand cannot be gotten for the purpose, consult "Waring on Draining."

PREPARE TO SET OUT FRUIT.—And, indeed, strawberries and raspberries may be set any time this month, and fruit trees and grape vines, too, the last of the month and in November.

We have previously given a list of apples and pears and peaches and grapes which we thought best to plant, and will re-write the list for next month; and as the subscribers to the *Planter* get their numbers by the first of the month, it will be in time for planting these fruits. In the

* Mr. Atkinson, of Manchester, is manufacturing tile for draining.

meantime, as to apples and pears, we will advise *not to plant too large a variety*, and not to run after novelties. As to apples, most of the old kinds planted by our fathers are the best for this latitude. Very few of the Northern importations do well here. Many of the varieties of peaches succeed well in Virginia, but we think those raised from the stone are most hardy and longest lived.

As to strawberries, we know of no kind yet more prolific and better suited to market than the "Wilson's Albany." There are many new kinds brought forward. Last Spring we planted some "Monarch of the West," "Duchesse" (early) and "Duncan." The "Brandy Wine" raspberry (red) and "Mammoth Cluster" (black) are the most popular raspberries planted now in the vicinity of Richmond.

The following on the subject of the new varieties of strawberries we clip from the *Country Gentleman*, containing an account of the visit of Mr. Wm. Parry to the strawberry plantation of Mr. E. W. Durand, in New Jersey, and to that of Mr. Smith, of Connecticut:

"Fruit-growers and amateurs, who have raised a few varieties of strawberries, measuring from three to four inches in circumference, and thought them fine, might get bewildered here, among three thousand distinct kinds, many of them measuring six to eight inches around, and selected ones nine inches, weighing over two ounces each.

"Being prepared with tape line and rule, we could not resist the temptation to violate the injunction plainly posted up, not to handle the fruit, and measured numerous berries with the following results:

Great American, eight inches around, color deep red, good quality and very productive; Beauty, six inches, firm, handsome, excellent, and very productive; Pioneer, seven inches around, strong, vigorous grower, handsome, excellent and productive; No. 14, Centennial, five and a half inches around, firm and productive. This berry received the highest praise by the judges of the Centennial Exposition, for its exquisite flavor and fine qualities.

It would seem unnecessary to look farther for strawberries, yet, having started with the view of seeing the Crescent Seedling, we left Newark that night; retired early and woke up next morning in New Haven, Conn. About half an hour's ride in a horse car brought us to West Haven, where Mr. H. H. Smith kindly showed his two plantations of strawberries, some distance from the village where he resides. The Crescent Seedling, from its vigorous growth, abundant yield and fine appearance of the fruit, only showed that it was the principal variety grown there. Wilson's Albany, Charles Downing and some others which heretofore had been considered most profitable, showed their inferiority grown by the side of the Crescent Seedling, which has sufficient vigor of growth to crowd out weeds and grass and take possession of the ground. One block of half an acre four years old, that had already yielded four hundred quarts, was in fine condition, being clean and free from weeds and grass. We were informed by the proprietor that there had not been one dollar expended for manure or labor in cultivation since the first year it was planted, yet the vines were heavily laden with large, handsome, bright red fruit. The great points of excellence which give this variety the preference over others are, that the fruit is uniformly large, firm, bright red in color, carries well, and being very attractive in appearance, sells better than others ripening at the same time, although a single berry examined separately is not remarkable, being about four and a half inches around, yet a quantity of them together, in crates, or on the vines, is beautiful to look at. The plants are so strong and tenacious as to take possession of the soil and hold the situation to the exclusion of grass and weeds, and thus save a large portion of the expense usually bestowed on strawberries, which will make it a general favorite with large growers who cannot devote much time to nursing strawberries.

POULTRY EXHIBITION AT THE STATE AGRICULTURAL FAIR.

Our next Agricultural State Fair promises to be one of unusual interest. From present indications the exhibition of fine stock, horses, farming produce, implements, &c., will be a large one; and the additional attractions offered by the Executive Committee, will bring together a much larger number of persons than have ever been present at any previous Fair. It is, therefore, very important that the poultry fanciers, and others interested in the breeding of fine poultry, should send some of their fowls to the Fair. Let every one send one or more trios, so that we can make a good exhibit of chickens. Many fine specimens of fowls were shown last year at our Fair, and it is hoped that the exhibition will be even a better one this year.

All are invited to contend for the premiums offered by the Society. Those desiring to enter their fowls should address the undersigned, as all entries must be made at this office. Any information as to premium lists will be cheerfully given.

H. THEODORE ELLYSON,
Secretary Virginia Poultry Ass'n,
Richmond, Va.

Box 73.

Editorial—General.

AN EXPLANATION.

It has been suggested that the tone of the *Planter* is rather political than agricultural. Now, hen's nest grass and old field pines are indeed fruitful topics for discourse; but they are not "all of life" by a great deal. We deem anything, in fact, that affects Virginia interests as proper to be considered by us; and when we do consider them, we try and utter no uncertain sound. We regard the turn taken of late, in the discussion of the debt question, as of such vital concern to every man of us that, for the time, *all things else* must be subordinated to it.

We have observed that the people of Virginia, when properly informed, *never go wrong*; and this we stick to; and we are trying our best to present this proper information. We have no man to uphold nor party to serve; and never will.

It is an awful thing that any man anywhere should find any occasion that would justify his calling Virginia a thief; and when it is even whispered that she ought to get rid of her just debts, in any other way than by paying them, this occasion is presented, and we cannot gainsay it. Dishonesty can never be explained away; it is a stain that utterly refuses to be washed out.

The present incumbent of the Presidency of the Virginia State Agricultural Society, wishing to put the debt of the Society where it would carry a minimum rate of interest, addressed a house in England, whose dealings with our people have covered a hundred years, on the subject. They answered that, under ordinary circumstances, they would have no objection to furnishing the money; but as a question appeared to exist in Virginia about the propriety of her meeting her honest obligations, they did not feel justified in venturing any more of their money in that quarter. *And it will not stop there.*

If to give devoted attention to this matter makes us political, then we will be political to the best that's in us. If the foul and damning disgrace of forswearing our manhood *should come*, no man can point to the *Planter* as having had any hand in it.

Col. EUBANK, of Bath, gives us words, on this question, that makes our heart glad. That metal has the true ring :

"I am unalterably opposed to a forcible compromise. It will be repudiation, and repudiation will result in ruin to our State. It would destroy confidence, depress business, demoralize our people, humiliate the good, utterly annihilate our State pride (a sentiment without which no State can exist), and cost many times as much as it would to pay the debt."

OYSTERS—WHAT OF THEM?

"Thomas Kinsett, the late Baltimore oyster-packer, left \$2,000,000."

This is a significant item; especially to Virginia-born men who say that their debt ought not to be paid. Mr. KINSETT, like other oyster-packers in Baltimore, undoubtedly got the bulk of what he packed from Virginia oyster-beds, and these oyster-beds are *purely a State property*. Now, what right had he, or any other man, to enjoy this State property without paying for it? And why have we not seen that nobody should enjoy this State property without paying for it? There's the rub; why haven't we? What would be the public judgment on a private individual, who owed money, and had ample means to pay what he owed, if he plead, as an excuse for non-payment, that he allowed other people to steal away his property without any effort on his part to prevent it? Why, that he would have to pay the last cent of his debt, if it took his shirt; and he would not be getting more than his deserts if he had nine-and-thirty, well laid on his bare back to boot. Does not this picture resemble painfully the State of Virginia, in the matter of her oyster-beds? They add millions to Baltimore's wealth, year in and year out, and there has been no one to interfere at all with the quiet working of this gold mine. Virginia has always been noted for her liberality; she gave to the United States, without other compensation than insult, all her Northwest Territory, and it was not a trifling estate; she gave of her blood freely to defend New England firesides; and for what? That she might be made the victim of the spoiler; and he didn't do his work half-way. But to the oysters; what right has any man to talk of State poverty when he has a single asset unused that ought to yield a million to the public revenue a year? France has her oyster-beds, and she makes them pay; and has always made them pay. Yet we find good people who say: "Oh, yes, but Virginia is not France; France pays her debts; we are more advanced; we don't want to pay ours; so let the oyster pirates have a good time." They certainly have had a good time.

If we say that we *do* want what these oyster-beds will yield, but believe the collection of any revenue from them to be impracticable, will we put the privilege up to the highest bidder? *That's the test*. We will find bidders enough, and at a price that will astonish us. Let then the brave man who shall champion the oyster question, at the next session of the Legislature, press this issue at once; either levy a tax and enforce its collection, or farm out the privilege to somebody who *will pay for it*. It *must* be made to pay one way or the other. The late decision of the Supreme Court of the United States has divested this matter of *all* embarrassment.

It is worse than folly—it is childish—to go about begging for broken-victuals, with a house full of good things, but no effort put forth to make them available.

Virginia, in such a plight, is an engaging spectacle indeed. It is enough to fill with bitter indignation the dry bones of those men whose name and fame have filled this Commonwealth with glory.

OUR HOME VOLUNTEER TROOPS.

“There are few things more in contrast than the treatment of the volunteer soldiers in the North and that of those in the South. Here they present the spectacle of a small and straggling body of men, neglected by the State, under poor discipline, and left almost entirely to their own sweet wills and devices. They receive no encouragement and little recognition from the State they serve, though the city with kind compassion gives them a sufficient pittance to enable them to shelter themselves from the weather. Nor are the citizens more generous. The business men who happen to have clerks or other employees in the volunteer service, look blacker than a westerly squall if asked to let one of their employees “get off for parade.” and say they’ll be d—d if they’re going to stand any such nonsense. So we have all hands against us, and this is the way we are treated by those whose lives and property we would defend were trouble to come. No, we haven’t the right feeling among us. A volunteer soldier is looked down on by the aristocracy, and we have not that class of men in our ranks which we should have.

“There is no doubt that the few soldiers there are in Richmond exert a great moral influence. We have passed through a time of strife and turmoil elsewhere, with perfect peace to ourselves, but it may not be always so. The rule is now, a small standing army, but a perfect military organization in each State, so that at an hour’s notice we could have an army that would be of fully sufficient size to enable us to hold our own against most anything that came. What a lovely contribution Virginia would make to the combined armies of the States!”

The above appeared as a communication, some time ago, in the *Richmond Enquirer*. We are sorry the writer did not observe better temper in dealing with this important matter; we are not aware, indeed, that we have any class who claim to be “the aristocracy.” The *personnel* of our volunteer companies appear to represent, as they should, *all* classes of our citizens.

This is not the only matter in which Richmond men appear to be indifferent; but it is not real indifference; all employers are so put to “to make both ends meet,” in these hard times (and the hard times have been a long season on us), that they have very little leisure to think of anything outside of their immediate business. There is the trouble, and until we get better off, most matters that are not things of direct daily concern will fail of the attention they deserve. And yet, looked at properly, if there is one thing more than another that appeals especially to their interest, it is the provision of proper protection to their business and their homes, through well equipped and disciplined white volunteer troops. It will not impair the quality of a clerk, for instance, if he becomes a good and trusty soldier; and instead of objection on the part of the employer, he should extend to his employee all reasonable encouragement to do his whole duty in this behalf. But we must be patient; things will come right after awhile.

It is true that we in the South do not stand in the same jeopardy that constantly confronts the North. Our negro element will ever constitute a break-water against storms such as have lately swept over that region. As oil and water do not mix, so black and white do not combine. Still emissaries may be sent South, as they were in July last (in which they miserably failed), armed with authority to incite such elements as they might find inflammable to revolt, when some trouble may ensue. It is well, in such a contingency, to have a body of men who know how to handle ball-cartridges with address, *and to handle them at once*. These riots, being destructive of all law, it is merciful to the actors in them to quell in the most summary manner; frenzy is never cured by a blank cartridge.

There is no conflict between capital and labor. As the productive power of

the country increases, the nearer will the consumer of all goods get for his money the actual cost of producing the article. Competition regulates the margin of profit, and competition becomes, from year to year, more intense in every department of business entering into the economy of society. Labor, being the essential element in production, must fluctuate in price in proportion to the measure of the competition; the alternative ever presented to the employer is to meet the market or close business. It is as absurd to talk of a conflict between capital and labor, as it is of a conflict between the head and the hands of a man. Either without the other is utterly helpless; and it is astounding that the men of good sense, who constitute the bulk of the working class, should permit the shallow, loud-mouthed fools, who claim to lead them, to turn their heads from what is their manifest and only interest, namely, *to hold work as long as work can be had*. We have no right to consider ourselves superior to the savage of the forest except we submit cheerfully to the restraints of law; for this is the very essence of civilization.

This fostering of military organizations in our midst, being a duty, our people should not, as we have urged, withhold from it their countenance. In the cities, we need both infantry and artillery; in towns infantry alone; and in the country cavalry (infantry there would be impracticable). Each county should have its well-mounted and well-armed troop.

So circumstanced, we shall probably enjoy always profound peace.

A WORD ABOUT THE MATTER OF MONEY.

The United States will be known in history as the great financial experiment station; and it enjoys the special peculiarity of having experimenters who are always raw hands. Like everything, in a governmental way, in that remarkable country, it is held, in practice, that an apprentice is more efficient than a master workman; and there is nothing its people are so fond of paying for as the pleasure of blunder-making. Nobody knows, from one Congress to another, exactly how things stand. The poor *Financial and Commercial Chronicle* man is kept in a perpetual stew. He finds his living through his ability to sound the deeps of finance; but unfortunately, with the twisted state of affairs he has had so continually to encounter, matters will keep on growing worse and worse in spite of the revival he so persistently sees in the eye of "the near future."

We have lately had a "Banker's Convention." It was quite largely attended, and by many most respectable gentlemen. The drift of the work was in the direction of the contemplated resumption of specie payments in January, 1879. They are under the impression that, because *the law* sets the day for resumption, therefore, it can be done, whether the country is able to do it or not. The experience of other countries appears to have availed little to teach them wisdom. It is recorded of England that she reached this goal in 1819 at a cost described in the following: "All who had land, labor, or produce to sell, or contracts to fill, were placed at great disadvantage. Creditors, that is, the wealthy capital-holding class, gained greatly, except where their debtors were absolutely ruined. Mills stopped, land fell in price, labor was thrown idle, and in peace men suffered more than the calamities of war." France, on the other hand, lets things adjust themselves, fortifies herself at all points, works her paper money so that it stands on exactly the same footing (it pays all dues, public and private), in the business of the country, as coin, and then resumes. Although the Bank of

France has a coin reserve of nearly 2,300,000,000 of francs, and has been "flush" for years, still resumption will not take place till next January.

Our ears have been incessantly assailed, for a long time past, with the cry of "irredeemable paper-money;" and how that, in consequence, these "rags" were at a fearful discount as compared with coin. It is still "irredeemable," and yet 103 cents in this wretched paper money will now buy 100 cents in gold; and it is highly probable that, imports continuing to decline, 100 cents in this paper will, before long, buy 100 cents in gold. Some good people have insisted on considering gold, since the war, as proper to be called money, when it has never been anything but merchandise—pure and simple; and was needed only because import duties had to be paid in it. When imports were heavy the demand for it was correspondingly heavy, and, like everything else, having a certain limit in quantity, when the demand exceeded the supply the price went up. In like manner, as the call for this merchandise has declined, its price has declined with it, so that we find now it is hardly worth anything above its face in paper. Money is neither more nor less than a contrivance by which, under the law, debts may be paid. No medium has yet been devised that is universal in its operation; indeed, it is astonishing what a "local" thing money really is. Gold will not pay a debt in India, China or Japan, but silver will; silver will not pay a debt in England or Germany, but gold or paper will. Silver, gold or paper will pay a debt in France; and so on. In every case it must have the stamp or authority of the country *in which the debt is due*. American gold will not pay a debt in England except as bullion rated] at the standard of the British sovereign; and thus we may go around the whole circle.

If the United States had done as France did, made its paper receivable for everything, government dues included, and not bought more abroad than she had products, other than gold and silver, to pay for (including the interest on her bonded debt held there), there is no reason why she should not have fared exactly as France has, namely, had a currency that was convertible at will into specie, whether she had declared for resumption or not. Statutes have their place in these matters; but they move rather under the operation of unwritten laws, and are governed by the interests and desires of the people.

Men will speculate irrespective of the fact whether the medium of exchange is coin or paper. If they are rash they will suffer; if prudent, they will accumulate. In coin-paying times we had panics and disasters, and with the utmost regularity; and we will probably continue to have them as long as men shall live in the world.

There is one very ugly element that cannot be ignored in the resumption business; we refer to the thousand millions of our bonded debt held abroad. That is a huge pile of money; and things may, at any time, take such a turn in Europe as would render it necessary for the holders of these bonds to realize on them. Coming back in a greater volume than would be used naturally to pay for our goods, when our exports were in excess of our imports, things would become at once panicky, and all business interests, without warning, put to the strain. Now, all this we ought to avoid; and it could be avoided if we continued for several years longer to export more than we import. In that time enough of our bonds would find their way back to make the remainder held there no necessary bugbear to us. Up to January, 1879, we have no possible means of accumulating enough coin to declare resumption. The hoarding interest in the country, and it is by no means small, would, in all probability, at once turn their hoard of paper into coin, on the ground that resumption would not last long,

when they could turn it back, in due time, to paper, and probably secure a little margin on the transaction, paper, in the meantime, still remaining unfit to pay import duties.

We want no resumption laws; certainly not as yet. Let the business of the country take its own course; and give us no more of the twaddle about "an honest dollar in money for an honest day's work." When the dollar we have now will, as it does in practice, buy as much of the necessaries and luxuries of life as the "honest dollar," why need we "hone" so after that honest dollar? In Confederate times, it took five honest (gold) dollars to buy ten yards of calico, worth, when calico was plentiful, nine-pence a yard. If we keep on selling more than we buy, we will have all the coin foundation we desire for our paper; until then don't let us abuse our paper further than to grumble that there is not enough of it, and there has not been enough, at any time during the last ten years in the South, to make the wheels of our business run easy, except at a rate of interest that no people ought to pay for the use of money.

P. S.—Since writing the above we observe a tendency in the North towards a really lively Fall business. The banks are gathering in their money lent "on call," at low rates, on stock collaterals, and say legitimate business is able to take it at good rates. During the dearth in business prevailing for the last two years, circulation was surrendered by the National Banks, over the country, to the extent of many millions of dollars. More than this, bank stock being so unprofitable as an investment, a large volume of it was expunged, the owners sending their money where it would earn more. With the little revival of business now apparant, the bank people are already apprehending a tight money market as the Fall advances. As four per cent. Government bonds are low, the banks will, of course, buy them and restore their circulation to the extent needed by the demands of the business community, and thus prevent any painful tightness. This is the plain path to relief.

FISH CULTURE.

This comparatively new industry is making good progress. All the States adjacent to Virginia have organized Fish Commissions. Maryland preceded us. West Virginia, Kentucky, Tennessee and North Carolina have followed suit. North Carolina, like Georgia, makes the Fish Commission a branch of the Agricultural Bureau—thereby justly recognizing it as of equal dignity—because it is designed to increase the quantity of healthful food for the human family. All the first five States named have some waters in common with this State, and their Commissioners express the hearty wish to co-operate with us in every effort to promote the common good. By the Potomac and its tributaries, we are in connection with Maryland and West Virginia—by New River also with West Virginia; by the Big Sandy and its tributaries with Kentucky; by the Clinch and Holston with Tennessee; and by the Chowan and Roanoke and their tributaries with North Carolina. Next to the Potomac, this latter connection is the most important to us. The tributaries of the Roanoke rise in the Alleghanies and flow for hundreds of miles through Virginia, and could be rendered the finest fish streams on the Atlantic slope. The Black Water, Nottoway and Meherrin, tributaries of the Chowan, water an extensive district—whose people would rejoice to see them well stocked with fish. We are highly gratified to hear that the North Carolina authorities promise every aid in removing obstructions from the

Chowan and lower Roanoke, and when the gallant Governor of the Old North State sets out to do a thing, he very rarely fails to accomplish his object.

But it was with reference more particularly to the operations in Maryland, that we propose to speak at present. The last report of Commissioner Ferguson (for 1876), which we have read with great interest and satisfaction, presents highly gratifying results, which place his State abreast of the foremost in this department of industry. He was enabled to achieve these results by a liberal appropriation by the Legislature (\$10,000 per annum) and invaluable aid from all the railroad and steamboat corporations in the State. He received in addition a liberal pecuniary contribution from the city of Baltimore, with which he constructed in Druid Hill Park one of the most conveniently arranged hatching houses on the continent. That establishment is an ornament to the city and an object of attraction to all visitors. It has occurred to us, that Richmond, which has a proper site for such an establishment, near the new reservoir, might wisely imitate the example of Baltimore. The place referred to is now an eye-sore, but under the plastic and artistic hands of Col. Cutshaw and his indefatigable lieutenant (Hunt), it would speedily become one of the most charming spots in the vicinity of the city. We will not dwell on it as a source of revenue. The hackmen can scent that in the distance. But no one thing would tend more to excite and diffuse an intelligent interest in fish culture throughout the State. And the location is well suited to experiments in hybridizing fresh and salt water fish, and adapting the latter to fresh water.

Mr. Ferguson succeeded in hatching 1,144,000 California Salmon eggs in the Winter of 1875-'76, of which quantity, he distributed to waters in this State 78,400 in the Shenandoah, 16,000 in the Occoquan and 32,000 in Goose creek, besides a large quantity in the Potomac and its other tributaries. Of Shad, he hatched 4,600,000 and bids fair to surpass all other States in the propagation of this particular and unsurpassed fish. He encountered the same difficulties, which we hear our Commissioners, operating in similar waters, have experienced, and which for want of funds, they have not been able to overcome, as Mr. Ferguson has done. The two main objects in shad-hatching are: a sufficiency of spawn, and safe boxes for hatching the eggs. Mr. Ferguson found, as has been found here, that in the wide waters of our rivers, Mr. Seth Green's boxes are liable to be swamped by the high winds and waves which frequently prevail, and the eggs thereby, if not lost, are exposed to the hazards incident to natural propagation.

In the quiet nooks and recesses, not exposed to the wind, where alone hatching can be successfully conducted in our broad rivers, "the motion given to the eggs is rather by the up and down motion of the boxes, as they dance on the swell of the waves, than by the passing current. The inclined bottom of the box (Green's), under these circumstances, tends rather to crowd and pack the eggs in the lower edge, than give them the required circulating motion, and keep them in suspense." He therefore greatly modified the apparatus, and adapted it to the circumstances under which he had to operate.

For procuring eggs: As shad spawn mainly between sundown and one o'clock at night, it is important to have means of collecting eggs from several shores and the gilliers. To meet this requirement, the Maryland Commissioner purchased a small steamer, by which he can move quickly from one fishery to another, gathering spawn from the ripe fish as the large seines are hauled, and by means of an apparatus erected on her decks, transport the eggs from point to point, while they

are being matured, so as to visit all shores within eight or ten miles. The report says :

“The apparatus we refer to consists of a tank with five distributing pipes, which connect with the bottoms of five conical vessels, hung on frames so arranged that the vessels retain their perpendicular, notwithstanding the rocking of the boat ; in these tanks, the shad eggs are placed ; the reservoir tank is supplied with water from overboard by an independent steam tank-pump, which can be kept constantly going, whether the steamer is in motion or at anchor. The water is passed from the reservoir tank to these hatching vessels, and as it enters at the apex of the cone and runs out at top, the eggs, being of little specific gravity, are kept in constant motion, and held in suspense by the current of the water.”

“We can keep in this apparatus several hundreds of thousand shad eggs for a day or two, until we reach the central camp, when they are deposited in the hatching boxes, in which they remain until they are matured.”

This apparatus was only an experiment the last season, and though imperfect, demonstrated its value. It strikes us there is the germ of something great in it, which may be vastly expanded, and which will make shad-hatching safe and at the same time on a great scale.

No doubt in the progress of time many new devices will be invented more certain in results and at the same time cheaper. But in the meanwhile, not only energy and intellect are needed, but money also. In looking over the appropriations made by the different States, we find the amount appropriated in Virginia next to the smallest on the list. This is an injustice to this new industry, in the future of which, no State has a greater stake than Virginia.

We cannot urge too strongly upon our people the formation, at all points in the State, of fish and game protective associations. An interest in this direction will induce an interest in fish culture. These associations need not involve a cent of expense outside of that at the Capital, and there money is needed only for printing, postage, and the annual gathering during Fair week. Will not our public spirited men see to it that they are formed? Rivers well stocked with fish form an item in our resources so manifestly important as to need no explanation.

A VERY IMPORTANT SOURCE OF WEALTH.

“The foreign demand for American fruit is now so great that Europe and Australia will take nearly all the fruit, fresh and dried (dried peaches excepted), which the United States can land in their markets in good condition. Since last October England has taken 396,000 barrels of apples from that country, and it is estimated that she will take an average of 15,000 barrels per week. The working classes of Germany and the workingmen and miners of Australia are the chief customers for American dried fruit abroad, but the poor people of England and Russia buy to a limited extent. As long as dried apples can be exported from New York at five, or even seven, cents a pound, the workingmen of Europe and Australia will buy all that can be spared. The business of exporting fruit is one that has been chiefly built up since 1865. In the eleven months ending July 1st, the fruit exported amounted in value to \$2,831,000.”—*Pall-Mall (London) Budget*.

So feeble are the responses to many of our suggestions, looking to widening the field from which to draw our income, that we sometimes think we are rather annoying than otherwise. However, being a good work, we will persist in it; for drops of water, falling on even the hardest rock, will in time wear it away.

The item we quote above is too important to pass over unconsidered. Europe and Australia constitute a customer, no matter in what direction, too gigantic to

be neglected. And has the good LORD put anywhere on the earth's surface such perfect ability, in the fruit line, as we find existing in the Southern country?

People living away from the lines of transportation would not be able to market much fruit in the green state; but dried fruit they could manage admirably; and there is always a good market for it, provided it is produced in quantities sufficient for buyers to look after it. We, in Virginia, do not give the attention to dried fruit that we did once; we fear the young housewives are not as thrifty as their mothers were. It is an excellent thing for the good woman, through the sale of these minor articles, to secure the wherewithal to keep the house going, and leave the staple crops of the estate subject to no burden but taxes. [When our State Government is remodelled through a new Constitution, we expect to see this latter burden very materially lightened.]

The folks in North Carolina sell immense quantities of dried fruit of all kinds. What is the result? Buyers from abroad do not wait to be sought, but come there early in the season and make their contracts. All this, like the gathering of sumac, puts money in the hands of many a poor soul who, without this resource, would be badly off indeed.

The season is now approaching when fruit trees can be set out. It will not do to confine our operations to fancy affairs in this line; like all other petted things, they cost more than they come to. Besides, the limit of consumption of such fruits is very contracted, because only rich people are able to enjoy them, and CRÆSUS is not to be found in these days in every neighborhood. We want standard fruit; something that is good in itself, and capable of being produced at a price that everybody can share it. A big trade in anything admits of small individual margins of profit; but the aggregate tells, and tells largely.

Our Virginia Pomological Society should count its members by the thousand. What farmer can afford to be without the information it is able to procure and furnish? If he can, he is happier than most men in Virginia. Let Mr. LEIGHTON write the strongest appeal it is in his power to construct; we will publish it gladly, and urge it to the best at our command. Thinking men read the *Planter*, and the appeal will not be in vain.

“PRIMINGS.”

“As the new crop of tobacco will be soon seeking market, it is not amiss to say a word or two on the subject of “primings.” Of late years it has become more and more a habit of planters to strip, cure and ship their primings. The result is loss rather than profit. The planter receives a little money, generally very little, and to do it he robs the land of what should go to enrich it, while the primings coming to market in large amounts discredit all grades of tobacco, beginning with the lugs, and are counted always as part of the stock on hand to the certain discount of tobacco prices. There are, for example, now held here many hogsheads of old primings, worth less than \$1.50 per hundred, and they are all counted in the stock as much as if they contained high-class tobacco.

The Primings, in short, are worth more to the planting community when left upon the ground, than when shipped to encumber the market and depreciate quotations.”

In all which the *State* newspaper is exactly right. We can conceive of no folly equal to the saving of primings. Being thin and papery there is always risk of burning the barn down in curing them; and when cured they are about as profitable as GRATIANO'S reasons, which were “as two grains of wheat hid in two bushels of chaff; you shall seek all day ere you find them; and when you have them they are not worth the search.” It is no trifling matter to know that primings count from 1,500 to 3,000 hogsheads in the Virginia tobacco crop. Out of

the way, our good low-grades would come in, and command a paying price. A more perfect illustration of the penny-wise and pound-foolish policy cannot be found than in the saving and marketing of this worthless trash. They are good, very good, as manure, and we do hope all of our friends in tobacco production will put them there, and only there.

THE MOFFETT PUNCH.—The opposition, in the courts, to the patent covering this contrivance, having been disposed of, the little bell is heard now throughout the land; and we are delighted that it is. All other well-managed countries raise their revenue in this way, and there is no reason why it should not work as well here. It falls on no necessity, but is wholly dependent upon the option of the payer; he may drink or not as he pleases; but indulging let the drink be spiced with the tax; it will not hurt him. The bill needs amendment so as to make the gallon buyer pay as well as the buyer by the drink. It is a novel proceeding in the eyes of our people, but the novelty will soon wear off, and instead of MOFFETT being cursed for his pains, not a few, in their gratitude, will deem him worthy of an enduring monument. We are sorry he is a bachelor.

It is simply folly to say that this tax will injure the liquor business. Times may be so hard as to curtail clothing and other necessary things, but stimulants men *will* have. It has been said that a law promulgated, taking away the Briton's mug of ale, would destroy the English Government in twenty-four hours; and we believe it.

RE-ADJUSTMENT.—The *Danville News* makes this observation:

“Look around you and see who is talking of re-adjustment.

“We venture to say that nine men out of ten who advocate re-adjustment are insolvent and do not pay twelve shillings a year towards the State debt.”

Is this a fact? If doubted, a census should be taken in each neighborhood to prove whether it is true or false. It is a very important inquiry; and if it is really a fact, the bare statement of such a fact ends the clamor at once.

When the Kansas-Nebraska business was agitating the people of the country, a certain individual, after “the Judge” and “the Major” order (*i. e.*, greatly obliged to you for an invitation to drink, and would accept gladly, at any time, a ten-cent-piece), was wonderfully concerned about the effect this agitation would have upon the value of *our* public lands. Likewise, some days ago, in a neighboring town, a man was observed, with a great crowd around him, discoursing upon the awful business of having to pay *our* State debt. An old gentleman, and a very heavy tax-payer withal, went to see what was the matter. He asked the speaker: “My friend, how much do you contribute, or have you ever contributed, towards this debt?” He answered: “Don't I have to pay my poll-tax; and that's a dollar a year; I can't stand it.” We think the census above proposed would exhibit *several* of these eminent and tax-ridden patriots. It is a fact that the heaviest tax-payers, as a rule, are the men who insist upon standing to the last copper of the debt. The reason is manifest: with credit and character lost, the thing on which they pay their taxes would be valueless.

AMUSING.—It is certainly amusing to the last degree, to us outsiders in the South, to see how hard that despicable thing, called the Republican party, dies. A thing reeking with fraud, corruption and general villainy (and the Republican party stands without a parallel in history in that line) could not last forever, even in the North, and that is saying a good deal. Some of the poor souls who

still cling to it had a Convention in New York, several days ago, and the presiding officer gave vent to the following sore lamentation: "The clouds which obscure the horizon are black and threatening, and the friends of freedom [oh!] have good cause for doubt and despondency. The chief cause of discouragement is found in the perilous situation of political affairs in the South. * * We behold the Republican organization in nearly every Southern State, demoralized, paralyzed, and politically crushed out." Now, if there is one thing, more than another, that our Southern folks thank God daily for, it is this very state of affairs described by that Republican JEREMIAH. As far as the Southern country is concerned, that carpet-bag excrescence has been lopped off forever and ever.

THE AGRICULTURAL AND MECHANICAL COLLEGE.—The Governor has appointed the Hon. WILLIAM MILNES, JR., of Page county, to take the place in the College Board made vacant by the decease of Col. ARMSTRONG, of Rockingham. The appointment is most admirable, and we congratulate the Governor on it.

MR. MILNES is a native of Lancashire, England, and is an accomplished mechanician and mining engineer; and is prosecuting interests in Virginia second in magnitude to none anywhere in the State. He is the manner of man we want to come to Virginia. We want no indiscriminate horde to curse our borders; our traditions must be preserved, and this can only be done by a gradual absorption of good people.

ANOTHER SPECIAL PREMIUM.—We learn that the ENTERPRISE COTTON BAGGING MILL, of Richmond (T. W. McCANCE, Jr., proprietor), offers to the State Fair at Raleigh, N. C., for the best bale of cotton exhibited, a special premium of a full roll of the cotton bagging manufactured at their establishment. The bagging produced there is so superior that though, as compared with other makes, it is quite new in the market, the factory is run to its full capacity to fill the orders.

There is no reason why this Southern enterprise should not command the patronage of the Cotton State people; indeed we see that it is doing it. Patience and the resolution to succeed are working wonders for our people in the South. Contemplating what they *have done*, there is no room for croaking, but rather for the most sincere thankfulness. Every new effort made by our folks to take care of themselves fills our heart with joy. We therein show that we are men, and not dependents.

NORTH CAROLINA STATE FAIR—WHAT "PUSH" HAS DONE.

Quite early in the Spring, Col. HOLT, President of the North Carolina (State) Agricultural Society, began to move in connection with the Fair to be held this Fall. His energy is simply boundless, and when he undertakes anything it is to win; and he always wins. He induced several public-spirited gentlemen to act with him in purchasing the Fair Grounds at Raleigh and putting up the necessary buildings. The work was done, in the name of the Society, but these few gentlemen became individually bound for the cost. The debt they thus assumed in 1869 will be wholly liquidated this year, and the Society become the possessor of a property of great value in itself and benefit to the State at large. So we see what can be done, even in hard times, through the will of a few determined men. As we said, the work this year was started early, and it has known no flagging since. They have, with one accord, worked like beavers, and they will witness

a result that will make glad the heart of every man in that good old State. We copy, in the following, the poster, or hand bill, sent out through the State, by the Society. It speaks for itself :

THE STATE FAIR FOR 1877!

THOS. M. HOLT, President.

C. B. DENSON, Superintendent.

To the Farmers of North Carolina :

The next State Fair, to be held by the N. C. Agricultural Society, at Raleigh, N. C. on OCTOBER 16TH, 17TH, 18TH, 19TH and 20TH, 1877, will be the most memorable gathering of the products and of the citizens of our State ever held in our borders. Every county of our broad Commonwealth will be represented by her agricultural products. Of this we are fully assured ; and the farmer will take the front rank, where he belongs, if he chooses to do so. Let our cultivators of the soil come in their might, and take part in the grand revival of industrial art within our good old North State.

\$9,000 WORTH OF VALUABLE PREMIUMS WILL BE GIVEN AWAY, of articles of great merit and value, donated by our friends throughout the Union. Agricultural Implements of all kinds, Seeds, Books, Crockery, Furniture, Silver Ware, Musical Instruments, Dry Goods, Boots, Shoes, and a great variety of useful and valuable premiums of hundreds of articles of all styles of goods. For particulars, address the Secretary for Premium Lists.

The attractions of the Fair will be unusual.

A PARADE OF THE VOLUNTEER TROOPS OF THE STATE

will take place, and a grand review by Gov. Z. B. Vance and Staff.

FINE RACES, from the best Trotting Stock of the South ; Presentation of a Flag to the Fayetteville Independent Light Infantry, by the State Agricultural Society ; Grand Display of Machinery in Operation ; Superb Collection of Paintings and Fancy Work, from the Female Schools and Colleges.

THE COMMISSIONER OF AGRICULTURE WILL MAKE A SPECIAL EXHIBITION OF THE AGRICULTURAL AND MINERAL SPECIMENS FROM EVERY COUNTY.

Bring your Wheat, Corn, Cotton, Tobacco, Oats, Hay, Potatoes, your fine Horses, Cattle, Sheep, Hogs, your Butter, Honey, Home-made Clothing, Fruits, &c. Bring your little ones that they may see this outpouring of the wealth and skill of their native State.

Fares on the Railroads will be very low—certainly not over one-and-a-half cents per mile, and perhaps less. Charges for freight on articles exhibited will be returned on the arrival home of the goods or animals unsold.

For further information, or full Premium List, write to

C. B. DENSON,
Secretary and Superintendent N. C. Agr'l Society,
RALEIGH, N. C.

We would not be speaking what is in our heart if we did not say that we wished old Virginia could enjoy even one-half of the "push" that has brought about this happy result in North Carolina. We put off the work until a month or two before the Fair opens, and then people have not time sufficient to prepare for it what they would like to exhibit. The State Agricultural Society, like any other business, should be before the public the year through. Only one rousing effort, like that in North Carolina, would not only expunge the debt owed by the Society, but leave something over for premiums such as should be offered.

Although we have only a month yet in which to try ourselves, our people must not hold back, but give the Fair their very best service.

Our manufacturers and tradespeople must come to the rescue with special premiums of all kinds, and we hope they will. Of course, these things could have been worked better had a little more time been given them, but even now they

can do something, and that something should not be left undone. If the spectacle in North Carolina this year will have the effect to stir us up next year, we will be thankful. What others can do, we ought certainly to try to do.

If we had Major HITCHKISS to prepare a collection of our resources such as Prof. KERR has gotten together, at Raleigh, of those in North Carolina, we would see something that would surprise us, and make us, at the same time, ashamed that any man born in Virginia could have so far gone astray as to countenance a movement, the effect of which is not only to destroy the value of these resources, but put on our name and fame the blot of dishonest dealing.

We observe, with pleasure, that our State Agricultural Society has its hand-bills out too.

TUCKAHOE FARMER'S CLUB.

The Tuckahoe Farmer's Club met last month at the suburban residence of Hon. CHARLES E. WORTHAM, our Senator for Henrico county and Richmond city. Mr. Wortham, we believe, is one of the oldest members of this famous Farmer's Club. When we say one of the oldest, we do not imply that Mr. WORTHAM is decrepid or old in any sense of the word; on the contrary, he is considered one of the most active and important members of this Club, as the records of the Society will show. And we believe the community is indebted to him for the present road law, which enables the Supervisors of the county to employ convict labor in repairing the public roads, immediately around the city, which are a disgrace to the entire community.

Mr. WORTHAM has faithfully represented the interests of the city and county in the Senate, and has specially commended himself to the cordial support of the farmers of Henrico county and the State generally, by his interest and devotion to the farming interest. We are glad to know that he gives no uncertain views as to the debt question. He being a heavy tax-payer, knows what repudiation means to property holders. We hope to publish, at an early day, the report of Mr. WORTHAM'S farm by a committee.

Mr. WORTHAM'S entertainment of the Club was well worthy of the dignity of the occasion; where were assembled some of our most worthy representatives of Henrico county and the city of Richmond.

The subject of "fodder pulling" was discussed, *pro and con*, and we think those in favor of pulling blade fodder were much in the majority.

Prof. Puryear (Civis) was elected President; J. A. Lynham, Vice-President; Channings Robertson, Recording Secretary; Dr. Michaels, Corresponding Secretary.

We wish we had space to speak more at length of the meeting; and, in future, we will depend on the very able and competent Corresponding Secretary.

A FACT.—The matter we have to consider, in connection with the State debt, is not the *principal*, but the *interest*. The moment we can arrange to provide for the interest promptly, there will be no difficulty in arranging about the principal. The State's creditors have never been importunate about the latter at all; nor have they been indisposed to treat with us concerning it. We can get all the time we want on the principal by standing manfully to the interest; and with any prudent management at all of our resources, we have demonstrated that we may, in a variety of ways, provide comfortably for that. *Don't let the demagogues blind you.* The State's credit is more to her people than the political prospects of any man or set of men.

ENCOURAGING.—The several Commercial Agencies in the United States issue (each) a paper every Saturday, setting forth the names of the business firms in the United States and Canada that have failed during the previous six days. We have access to several of these reports every week, and have for a long time, been struck with the scarcity of failures in the South, as compared with the North, and that too after allowing fully for the difference in volume of population. There could be no more perfect index than this, of the improving condition of our section; and it certainly gives us pleasure to chronicle the fact.

FINE YELLOW TOBACCO SEED.—Our esteemed friend and correspondent, Maj. ROBERT RAGLAND, of Hyco postoffice, Halifax county, Va., writes us: "Without an accident I will have ready, in the Fall, a lot of the finest tobacco seed ever grown. My tobacco crop this year is as fine as I ever produced, both in leaf and fibre." Every body in Virginia and North Carolina knows the standing of the Major, as a tobacco planter; and no one better than ourselves. His tobacco seed are produced only in the crown shoot of the blossom, the lateral sprays being cut away. This throws the whole power of the plant into the seed, and gives, as a result, the best of its kind. Our friends in need, in this way, have in him a first-class resort.

THE GROWING CROP OF TOBACCO.—It is said by "old stagers" that the crop of tobacco, grown this year in Virginia, will be finer in quality than anything we have produced since the war. The season for it to gain body and ripen has been all that could be desired. This information fills us with thankfulness.

Foreign markets are loaded with "non-descript" leaf, which nobody wants to buy; but it will have to be closed out at something, and room made for tobaccos that are desirable. We see, indeed, no reason, the quality in general being so good this year, why a large crop should not be taken at paying figures.

QUERY.—What has become of Col. HOLLIDAY, the Conservative nominee for Governor? The tax-payers of Virginia want to know badly. The time has come when he *must* speak out, on the vital issue now agitating the State, or count on a position utterly barren of any influence.

Mr. V. S. LUCK, N. C., writes: "Will you please inform me where, in Virginia, I can purchase a thoroughbred Jersey bull, and some good thoroughbred Jersey cows? Will thank you for any information you may have on the subject."

[We refer you to the advertising columns of *Planter* for the names and addresses of some of the best breeders of the Jerseys in this country.]

JOHN RANDOLPH OF ROANOKE.—Our brother, P. BOULDIN, Esq, of the *Danville News*, has completed his work entitled "*Home Reminiscences of John Randolph of Roanoke*," and it is going through the press. The first edition will number 1,000, of which 600 have already been subscribed for. Mr. BOULDIN has been many years collecting the material for this work, and it will form a contribution to Virginia history of which we will all be proud. It will contain 300 pages, and be furnished at \$2 on delivery. We need only, we know, mention the matter to our friends to secure their names at once as subscribers. Mr. BOULDIN'S address is Danville, Va.

PLOWS.

We would advise all wanting plows to send their address to Messrs. WATT & CALL, Richmond, and receive their Catalogue and Price-List of their celebrated Watt Plows, which have been greatly improved, and are now as near perfection as it

is possible to arrive at. They do not expect you to keep their plows if you are not satisfied with their work after a thorough test. After trials by the most practical farmers the past season, they are pronounced equally superior in every kind of soil and for any kind of work. Many who have been induced to buy newly introduced plows, say they have been compelled to lay them aside, either because of their choking on foul land, great expense of points, not turning some kinds of work properly, leaving an uncut strip between furrows, or other defect, and take the Watt, which is always ready for any work that a plow can do. These plows are in use from New Jersey to Texas, and of the many thousands daily in use, we believe all give satisfaction.

Scarcely a day passes that the firm are not in receipt of letters from all sections expressing the greatest satisfaction given by their plows. We note in particular the experience of our friends in the Valley, and in the red lands of the State.

In this connection, we copy the following from the *Rockingham Register* :

"THE WATT PLOW.—Messrs. Watt & Call, manufacturers of plows in Richmond, Va., sent a two-horse plow, with cast-iron point, a two-horse plow with wrought-iron share, and one for either two or three horses, with wrought share, to this county on trial.

The plows were thoroughly tested the 7th of April, on a piece of land belonging to George Chrisman, Esq., which had the heaviest coat of coarse grass on it we ever saw plowed under. The three-horse plow did its work admirably, turned land smoothly and nicely up hill, covering the grass well without choking, and pulverized the soil well; no plow could have turned better; the draft was light while cutting a deep, wide furrow for a three-horse plow. We pronounce it a number one three-horse plow.

One horse was then taken out, the plow changed according to directions to a two-horse plow, which is done in a few minutes. It did its work equally as well as a two-horse, as it had done as a three-horse plow, with certainly no more, and in our judgment, rather less draft than either the Bradley or Root two-horse plows. The point of the share to this plow never needs any hammering down as it wears off, to make the plow run deep enough, as the depth is at all times regulated by the length of the beam from the mould-board to double-tree, which can be done in a few minutes, thus relieving the team from carrying any of the weight of the plow upon its hips, as is often done when the plow runs too deep.

We also consider this a number one two-horse plow, and cordially recommend it either as a two- or three-horse plow, to all farmers who desire to do good plowing with ease to the team.

The plow made only for two horses was also thoroughly tested. While it turned under this heavy coat of grass without choking, it is too light for heavy sod on our stiff lands, but we think it would be a good plow for light, smooth land, as the draft is light and it never chokes."

DAVID BEAR,
SAMUEL LONG,
JOHN HOPKINS RALSTON,
GEORGE CHRISMAN,
WILLIAM VINES.

Rockingham Co., Va.

Your plow is the thing for this Summer's fallowing.

H. M. MAGRUDER.

Charlottesville, Va., Sept. 12th, 1877.

I have used the three-horse Watt Plow O and P, and the two-horse K and L for several years. I regard the O and P the most perfect plow I ever saw. The only objection that I have to the K and L plow is, that they are not heavy enough for the strong Valley horses, and in the stiff clay soil we have in the Valley. I consider the Watt Plow better than any plow I have ever used, for the following reasons: It is perfectly adjustable; pulverizes the soil better; is lighter draft; lays the land higher, rendering it more friable upon application of the harrow.

Staunton, Va., Aug. 1st, 1877.

E. A. FULCHEB.

GREEN SPRINGS ACADEMY, LOUISA COUNTY, VA.—In another column will be found an advertisement of this school. It is hardly possible to find a more beautiful section of Virginia than that around the Green Springs, some ten miles south of Gordonsville. The Green Springs Academy is surrounded by a refined and intelligent community. Dr. C. R. Dickinson, the principal, will be aided by faithful and competent assistants. Boys and young men will be received into the family, and furnished with everything necessary to their comfort. Two physicians reside at the Academy, and attend, without charge, upon the pupils when sick. Parents and guardians who wish to place their sons and wards where they will be most tenderly cared for, at very small cost, would do well to place them in the care of Rev. C. R. Dickinson.

VIRGINIA LANDS.—Dickinson & Chewning, Real Estate Agents, 1115, Main street, Richmond, Va.

We copy the following from the *Religious Herald* of this city.

This pamphlet of 24 pages contains much valuable information in regard to farms in this State for sale. Persons wishing to invest in such property could not do better, we judge, than send for a copy of this pamphlet. The low price at which Virginia lands are now offered is surprising, but to us it is a greater wonder that capital does not seek such investments. Why should a man risk losing his money by putting it in stocks of any kind when he can buy the best lands in Virginia for less than half what they brought in the market until of late years, and at less than one-third of what they must soon be worth, if there should be any early return of prosperity to the country.

Dickinson & Chewning have remarkably good advantages for selling city and country property. The senior member of the concern, Dr. L. R. Dickinson, owns and edits the *Southern Planter and Farmer*, the best agricultural journal in the South, while Mr. Chewning is as full of enterprise and push as any man in Richmond. And, what is better than all, the standing of this firm is such that those who have dealings with them need not fear being imposed upon. Our friends at the North, who are thinking of investing in Virginia lands, may rest assured that their interest will be safe in the hands of these gentlemen.

RICHMOND PRICES CURRENT.

OCTOBER 1, 1877.

TOBACCO—Bright Lugs, \$5a\$15; Bright Leaf, \$10a\$60; Dark Lugs, \$3a\$6; Dark Leaf, \$6a\$15.
 WHEAT—Market more active. We quote Fultz and Lancaster Prime to Choice, \$1.55a\$1.60; White Prime to Choice, \$1.55a\$1.60.
 CORN—68a70c. per bushel for white.
 CORN MEAL—75a80c. per bushel.
 OATS—New, 40a42c. per bushel.
 FLOUR—Fine, \$4½a5; Superfine, \$5½a\$6; Extra, \$6½; Family, \$7½a8½.
 BEANS—White Navy, none offering.
 PLASTER—Ground, \$8 per ton.
 PEAS—Black Eye, none offering.
 LIME—Rockland, \$1.05a\$1.15; Virginia, \$1a\$1.10.
 HAY—Virginia Timothy, \$1.a\$1.05; Clover, 85c.
 FEATHERS—40c. for live goose.
 SUGARS—9½a10½c. for Refined Yellow; Cut Loaf, 12c.; Refined Standard A, 10½a11c.; Standard B, 10½a10¾c.; Extra C, 10½a10¾c.
 COFFEE—Rio, 19½a22½c. for good to very good; Laguayra, 21a22½c.; Java, 27a29c.
 MOLASSES—Common, 27a30c.; Porto Rico, 55a55c.
 BACON—Hams, 13a15c.; C. R. Sides, 10c.; Shoulders, 9c.
 WOOL—Washed, 30a33c.; Unwashed, 28a25c. for choice.
 COTTON—10a10½c. for low middling.
 BUTTER—Common, 10a12½c.; Good to Choice, 20a28c.
 SALT—Fine, \$1.75a\$1.85; Ground Alum, \$1.10a\$1.15.
 LARD—Country, 10a11c. per lb.
 POTATOES—75a80c. per bushel.
 BEESWAX—27c. per lb.

HIGH-BRED AND TROTTING STOCK FOR SALE AT FAIR-LAWN STOCK FARM, LEXINGTON, KENTUCKY.

I offer, at private sale, eighty head of High-bred Trotting Stallions, Colts and Fillies from one to five years old, most of them sired by Almont, who has sired more winners of contested races than any trotting stallion of his age that has ever lived.

Fairlawn is strictly a *Breeding Farm*, with seventy Highly-bred Trotting Brood Mares used for breeding, with the noted Trotting Stallions Almont and Cassius M. Clay, Jr., in use as private Stallions.

The Southern States should diversify their industry and the breeding of highly-bred stock, for which their soil and climate offer peculiar advantages—should be largely engaged in, and will constantly pay large profits if properly conducted.

Liberal terms of payment will be given responsible parties.

For Catalogues, which give descriptions and pedigrees of the stock and *lowest prices*, or other information, apply to

WM. T. WITHERS,
Lock Box 392, Lexington, Kentucky.

feb—1y

HOUDANS A SPECIALTY.

SIX YARDS TO SELECT FROM.

As a Table Fowl, Unequaled. As a Layer, Unexcelled.

Fowls.	Prices.	Chicks.	
Single Cocks,	\$4 to \$ 8.	Single Cockerels, \$2 to \$ 5.	
Pairs,	7 to 14.	Pairs,	5 to 10.
Trios,	10 to 20.	Trios,	8 to 15.

I have one of the finest collections in the country, and am continually improving it.

Birds delivered free of charge at Orange C. H. or Fredericksburg, Va.
WM. L. BRADBURY, Montclair Stock Farm.

sept—

Orange C. H., Va.

IMPROVED STOCK.

Thoroughbred Shorthorn Cattle, Merino Sheep and Berkshire Pigs bred and for sale at very moderate prices by

S. S. BRADFORD,
Aug-1y *Culpeper, Va.*

ALDERNEY

HEIFERS and COWS FOR SALE.

Served by a

REGISTERED JERSEY BULL.

Aug-26 **B. H. JOHNSTON,**
Alexandria, Va.



The largest and most complete Stock of Fruit and Ornamental Trees in the U. S. Priced Catalogues sent as follows: No. 1, Fruits, with colored plate, 15 cts.; plain, 10 cts. No. 2, Ornamental Trees, e. c., with plate, 25 cts.; plain, 15 cts. No. 3, Greenhouse; No. 4, Wholesale, and No. 5, List of New Roses. **FREE.** Address,

ELLWANGER & BARRY, Rochester, N. Y.



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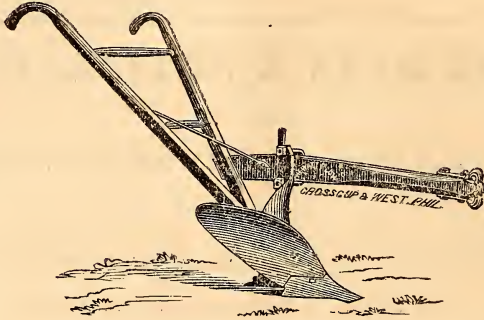
FARMERS USE THE WATT PLOW!

AND YOU WILL BUY NO OTHER.

THE CHEAPEST MADE.

UNEQUALLED IN EVERY ESSENTIAL OF

Strength, Durability, Ease of
Draught, Ease to Plowman,
Perfect Pulverization
of the Soil.



Complete Burial of Weeds, Grass,
&c., Simplicity of Construc-
tion, Entire Freedom
from Choking.

Wherever tested by the side of any other they are pronounced

THE BEST FOR ALL PURPOSES.

They are guaranteed to work in SANDY, CLAY and HARD LAND, in SOG, STUBBLE or WEEDS of the heaviest growth, with LESS DRAUGHT THAN ANY PLOW IN USE, AND WITHOUT CHOKING.

THEY LEAVE NO UNTURNED SOIL!

Making some fifteen different numbers, we are prepared to furnish any size wanted. If you want a Plow that pulls easy to the team, works easy to the plowman, does its work well, covers up all vegetation, and DOES NOT CHOKE, get a WATT PLOW.

We do not ask you to buy these Plows on the strength of what we or others say of them. We only ask a trial. Test them to your satisfaction, and if they do not do what we claim, return at our expense, and price will be refunded.

We warn you not to be deceived by Plows claimed to be an IMPROVEMENT on the Watt Plow. Get none but the Watt, each of which has our firm-name branded on the beam. The attention of those who have used our Plows is called to our new sizes, recently constructed.

To meet the constantly increasing demand, we have erected a manufactory and warehouse,

Nos. 1518 and 1520 Franklin Street,

Five doors below our old stand, to which we have removed. In addition to Plows we have Plow Castings of all kinds, Corn Shellers, Feed Cutters, Harrows, Cultivators, &c., and Farming Implements generally, to which the attention of those in want is called. We offer these on best terms.

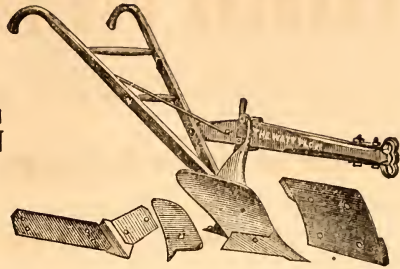
Catalogue and Price List sent to any address.

THE ONE-HORSE WATT.

The Best Combined

TURNING & CULTIVATING

PLOW.



Meeting all the wants of the planter for the preparation of the land and cultivation of the crop, without the use of any other implement and without the complications of useless attachments.

Especially adapted to the Corn Grower.

Equally adapted to the Tobacco Grower.

Invaluable to the Gardner.

Particularly adapted to the wants of the Cotton Planter.

UNSURPASSED AS

A Turning Plow, Sub-Soil Plow, Row Opener, Cultivator, Pea-Nut Digger, Cotton and Tobacco Scraper, Cotton Sweep.

TRY OUR No. D & E--Weight 35 Pounds.

This is the cheapest and lightest draught plow made, and in proportion to size, will do more than any plow in use, either of our own make or any other. One man can pull it with ease. We have just completed patterns for a larger sized mould board and point for this plow, and its capacity is greater than ever.

Has four different sizes of mould boards and will throw as small or as high a furrow as is desired.

We have now ready as an attachment for this plow

A Solid Steel Dickson Sweep

of a very beautiful pattern. It is attached to standard, removing point and mould board; and as the land slide remains on the plow this Sweep will run steadily and not slip sideways, thereby endangering the plant. We furnish them of different sizes, and at very low prices. This attachment forms an implement of great value for keeping down the grass in corn and vegetables, simply shaving over the surface of the earth without touching the roots of the crop. As a grass and weed killer it has no equal.

This SWEEP was not out in time for this present season.

No. A & B Jr., MEDIUM ONE-HORSE,

WEIGHT, 42 POUNDS.

A & B, No. 3, FULL SIZE ONE-HORSE,

WEIGHT, 48 POUNDS.

These two sizes of plows are used throughout the South, having been in use for a long time.

The Points, Slides and Mould Boards of either of these A B Plows fit the other.

We furnish three different kinds of points—one *very thin and light*, for loose, light land, free of stumps and rocks. Some of our friends will use no other point but this, since we began to make them this season. The second size is the regu-

lar point for general work, and is always sent out unless the others are specially ordered. The third size is a *wide* point for cutting a very wide furrow, and is used with the large No. 6 mould for doing two-horse work.

There are also mould boards of seven different sizes. The smallest is numbered "cultivating;" then Nos. 1, 4, 2, 5, 3, 6 respectively. Fastening on by but one bolt, they can be readily changed; thus increasing at the will of the plowman the capacity of the plow, and adapting it to different circumstances of soil, depth and width of furrow.

These Three One-Horse Plows are either of them the Best Cotton Plows in Use.

Those who use them say they throw up the best bed. and opening it with small mould board makes the best preparation for planting cotton of any plow they have ever used.

TWO, THREE AND FOUR-HORSE PLOW.

From 58 Pounds Weight up to 150.

For fallowing, for Turf, for Lands having heavy growth of Trash these Plow are unequalled. They will turn under out of sight the worst growth of weeds and vines, running any level and with light draught; requires no effort to keep them in place; the heavier sizes running the entire length of the furrow without a hand being near them. They have been tested in every kind of soil and have been proven to be adapted to any, heavy or light, working, with as complete satisfaction in heavy upland as in river bottoms. Our Three-Horse Plows have been worked to Two-Horses and are pronounced to pull no heavier than Two-Horse Plows of other patterns.

We solicit a trial of any size we make. Test it to your satisfaction, and if it does not prove to be all we claim for it, return at our expense.

IMPORTANT TO FARMERS.

Read this Carefully.

The enviable reputation won by the WATT PLOW, and the demand created for castings by its general introduction, has induced unscrupulous manufacturers to make our castings; these spurious castings are of same general appearance and pattern as the genuine, and are calculated to deceive any farmer, but are made of *inferior metal* and *fit badly*. We deem it necessary to inform you that GEORGE WATT is the patentee, and that

We are the Sole Manufacturers of the Watt Plow and every part thereof, including the *standard* or *helve*, *point*, *slide*, *turning* and *cultivating moulds*; and any parties manufacturing these castings, or any part thereof, do so without authority from us.

For the mutual protection of our patrons and ourselves, and to prevent them from being deceived by bogus castings, we have registered in the Patent Office



A TRADE MARK,
OF WHICH THIS IS A REPRESENTATION, AND
CAUTION

All parties not to buy or sell castings for our PLOWS without this trade mark being thereon. Persons using or dealing in or infringing an article are just as liable as a manufacturer of them. We trust our patrons will hereafter use no castings for WATT PLOWS that do not bear this trade mark. We guarantee them to be of first quality metal, to fit and to be well chilled. Our castings are made in our own foundry, under our personal supervision; and as we make no castings but plow castings, our aim is to make the best that can be made. We ask your support and that you will take no castings for our PLOWS that do not bear our trade mark. You will find them the most durable and the cheapest you can buy.

WATT & CALL,
1518 and 1520 Franklin Street, Richmond.

W. C., VIRG. MIDLAND & G. S. R. R.

JOHN S. BARBOUR, RECEIVER.

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On and after Saturday July 14, 1877, Passenger Trains will run as follows:

SOUTH BOUND.	EXPRESS.	MAIL.	ACCOMDN.
Washington.....le	2 10 a. m.	8 15 a. m.	6 50 p. m.
Alexandria.....	2 40 "	8 40 "	7 20 "
Gordonsville.....	6 18 "	12 45 p. m.	a 11 55 "
Charlottesville.....	7 05 "	1 50 "	Conn't to
Lynchburg.....ar	10 05 "	4 50 "	Richmond
Danville.....	1 05 p. m.		& Hunt-
Dundee.....	1 12 "		ington.
NORTH BOUND.	EXPRESS-	MAIL.	ACCOMDN.
Dundee.....	10 20 a. m.		Connect
Danville.....	10 27 "		C. & O.
Lynchburg.....	1 45 p. m.	9 45 a. m.	East &
Charlottesville.....	4 25 "	12 30 p. m.	West.
Gordonsville.....	5 13 "	2 00 "	7 30 a. m.
Alexandria.....ar	8 58 "	6 05 "	7 25 "
Washington.....	9 25 "	6 35 "	7.55 "

All trains daily on main line.

The EXPRESS SOUTH bound connects at Lynchburg for the West and Southwest, and at Danville for the South, South East and South West.

The MAIL south bound connects with C. & O. East and West, and at Lynchburg for the South and South West; at Manassas for Strasburg, except Sunday.

For WARRENTON 8 15 a. m. daily, and 6 50 p. m., except Sunday.

GORDONSVILLE LOCAL leaves Alexandria 2 35 p. m. Tuesday, Thursday and Saturday. Leave Gordonsville at 4 45 a. m. Mondays, Wednesdays and Fridays, arriving at Alexandria at 2 30 p. m.

FRONT ROYAL ACCO. leaves Washington 4 30 p. m., Alexandria 4 58 p. m. Saturdays only, arriving at Front Royal 8 40 p. m. Leaves Front Royal 4 40 a. m. Mondays only, arriving at Alexandria 8 17 a. m., Washington 8 45 a. m.

North bound trains make close connection with Balto. & Ohio and Balto. & Potomac trains to Baltimore, Philadelphia and New York, and to all points North and Northwest.

The Mail has Parlor Cars, and the Accommodation train Sleeping Cars through, without change, to White Sulphur Springs; also through Sleepers, without change, between Philadelphia and New Orleans, on the Express.

Through tickets to the South and West and to all THE VIRGINIA SPRINGS at lowest rates. Special excursion tickets at low rates by the Front Royal Accommodation.

S. SPENCER, Supt. Transp'n.

J. M. BROADUS, G. T. A.

THE PLACE FOR YOUR BOYS!

If you wish to put your son where he will be tenderly cared for,

SEND HIM TO THE

Green Springs Academy.

FOR PARTICULARS, ADDRESS,

Dr. C. R. DICKINSON,

oct—1t

TREVILLIAN'S DEPOT, Louisa County, Va.

EXPERIMENT IN FERTILIZERS MADE BY W. H. HOLMAN, Esq., GRAHAM, N. C.

Acre No. 1, 200 lbs. Sea Fowl Guano.
 " " 2, 200 lbs. Powhatan Phosphate.
 " " 3, 625 lbs. Lee's Prepared Lime.

All costing the same, say \$5.50, put on the land.

Each acre was cut and threshed separately.

The acre No. 3 was an orchard with about two dozen fruit trees, which Mr. H. thinks made a difference of several bushel. The result was that No. 3. yields 5 bushels wheat more than either No. 2 or No. 1, notwithstanding the fruit trees.

I regret that Mr. H. did not give the number of bushels each acre produced.

Respectfully,

A. S. LEE.

OPIMUM Habit Cured

A Certain and Sure Cure. Large reduction in prices. A trial bottle free.

Mrs. J. A. DROLLINGER,
 La Porte, Ind.

(formerly Mrs. Dr. S. B. Collins.)
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GRAND TRIUMPH IN HORTICULTURE! GLORIOUS RESULTS OF A USEFUL LIFE. CLIMAX ALMOST REACHED.

FELTON'S NEW BERRIES.
 Cinderella and Continental Strawberries; Early Prolific and Reliance Raspberries. The four best bearing, the best carrying, best selling, best paying market berries. Illustrated Circular and Price-List giving the history and full description, free to all.

GIBSON & BENNETT,
 Nurserymen and Fruit Growers,
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GOLD

Oct

HOLBROOK PLOW CO'S

(Circulars Free.) New Swivel Plows, 1, 2 & 3 horse, avoid dead and back furrows, and have peculiar advantages over all other Swivel Plows. Prices low. 5 Chatham Row, Boston, Mass.

Oct

AGENTS WANTED FOR

The American Statesman.

A Political History of the United States, exhibiting the origin, nature, and practical operation of constitutional government in this country; the rise and progress of parties, &c., constituting an Encyclopedia of American Politics. Over 1,600 pages. Price, \$5. Address for terms,

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A SOUTHERN LADY OF EXPERIENCE, taste and discrimination, and now a resident of New York City, WILL MAKE PURCHASES of all kinds of Dress Goods, Millinery, Children's Wear, Books, Music and Musical Instruments, (Pianos a specialty), Furniture, Carpets, &c., *without commission from the person ordering.* Circulars, containing full particulars, with references of the highest order, sent free, on application enclosing stamp. Address Mrs. MELEN MAKER DECKER,

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Mrs. DECKER is a widow who lost her husband in the Southern Army. We can confidently recommend her to our patrons.—L. R. D.

BERKSHIRES FOR SALE.

I have some good Berkshire Pigs of different ages, and two Berkshire Boars twelve months old, for sale. Prices moderate. Address

Dr. THOMAS POLLARD,
oct—tf Richmond, Va.

YADKIN HILL STOCK FARM.
Brown Leghorns, (J. Y. Bicknell and Dr. Bussey Stock), 1877 hatch, three to six dollars a pair. Plymouth Rocks, 1877 hatch, fine plumage and good size, five to six dollars a pair. White Turkeys, six to fifteen dollars a trio. Berkshire Pigs, ten dollars each. Half Ayrshire Calves, thirty to sixty dollars each. Will exchange any of above poultry and stock for good Seed Wheat, Oats and Rye.

H. C. PARROTT,
KINGSTON,
North Carolina.

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C. WEST & SONS' ALADDIN SECURITY OIL,

THE BEST HOUSEHOLD OIL IN USE.

Warranted 150 Degrees Fire-Test.

WATER WHITE IN COLOR.

Fully Deodorized.

WILL NOT EXPLODE

HIGHEST AWARD

AT
Centennial Exposition

For Excellence of Manufacture
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Endorsed by the Insurance Companies.

Read this Certificate—One of Many.

HOWARD FIRE INSURANCE CO. OF BALTIMORE, Baltimore, Dec. 23d, 1874.—Messrs. C. West & Sons, —Gentlemen: Having used the various oils sold in this city for illuminating purposes, I take pleasure in recommending your "Aladdin Security Oil" as the safest and best ever used in our household. Yours truly,

[Signed] ANDREW REESE, President.

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Try it, and you will use no other.

Oct-6 t

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The Largest, Grandest and Most Complete Exhibition in the World.

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A GRAND DISPLAY OF

PLANTS AND FLOWERS,

Pomological Products and Vegetables,
will take place

OCTOBER 3D TO 5TH.

Large Premiums offered, and special inducements to Exhibitors from all parts of the country.

For Premium List and further information, address the Manager.

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oct—1t



THE
VIRGINIA
WINE
AND
CIDER MILL

Is superior to any MILL now made, and more sold annually in this market than of all other kinds combined. It does not grate, but thoroughly crushes every fruit cell, insuring all cider the apples will yield. Send for Catalogue.

CHARLES T. PALMER,
july—tf **No. 1526 Main St., Richmond, Va.,**

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CHARLOTTESVILLE WOOLEN MILLS
SAMPLE CARDS

Are now ready for mailing. Our assortment embraces

TWENTY-FOUR PATTERNS.

Merchants desiring samples, will please address,

CHARLOTTESVILLE WOOLEN MILLS,
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Largest and most complete Gallery in the South. Has taken the premium for best photographs at every State Fair since the war.

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THE GREAT CLOSING-OUT SALE.

STOCK MUST BE REDUCED.

Prices Reduced so as to work off Stock.

Black Silks at 60, 75, 85, 90c., \$1.25, \$1.35, \$1.50, \$1.75, \$2, \$2.25, \$2.50, \$2.75, and \$3 per yard;

Wide Black Lining-Silk at 35c. per yard worth 75c.;

Gray-and-Black Striped Silks at 70c. worth \$1 per yard;

Black-and-Blue-and-Brown-and-Black Striped Silks at 75c. per yard worth \$1;

Brown-and-Black Striped Silks at 90c. per yard worth \$1.25;

Black-and-White Plaid Silks at 75c. per yard worth \$1;

Black-and-White and Black-and-Gray Striped Silks at 75 and 90c. per yard worth \$1 and \$1.25;

Gray-and-Black Plaid Silks at 90c. and \$1 worth \$1.20 and \$1.30;

Colored Figured and Striped Grenadines at 5, 6 $\frac{1}{4}$, 8 $\frac{1}{2}$, and 10c. per yard worth more than double the money;

Black Striped Grenadines at 12 $\frac{1}{2}$ and 16 $\frac{3}{4}$ c. per yard worth 20 and 30c.;

Black Iron Grenadines at 20c. worth 30c., at 25c. worth 40c. at 30c., worth 50c., per yard;

Handsome Lawns at 10, 12 $\frac{1}{2}$, 20, and 25c.;

Jaconets at 15c. per yard very handsome styles;

Calicoes at 5, 6 $\frac{1}{4}$, and 8 $\frac{1}{2}$ c. per yard—all less than the wholesale prices;

Knickerbocker Printed Cambrics at 11c. per yard—cost 11 $\frac{1}{2}$ c. by the case;

Domestic Gingham at 8 $\frac{1}{2}$, 10, and 12 $\frac{1}{4}$ c. per yard worth 12 $\frac{1}{2}$, 15, and 16 $\frac{3}{4}$ c. per yard;

Wash-Poplins at 6 $\frac{1}{4}$ c., Plaid Poplins at 8 $\frac{1}{2}$ c., Striped Delaines at 12 $\frac{1}{2}$ c.,

and a general reduction in all kinds of Fancy Dress Goods for ladies and children;

Double-Width Black Alpacas at 25, 30, 35, 40, 45, 50c., and up to \$1.25 per yard;

Chinese Grass-Cloth at 6 $\frac{1}{4}$ and 10c. per yard worth 10 and 16 $\frac{3}{4}$ c. per yard;

Australian Crepe at 45, 50, 60, and 75c. per yard, worth 25c. per yard more; this is the cheapest mourning goods manufactured;

Bargains in Cashmeres, Tamises, Bombazines, Delaines, and other Dress Goods suitable for mourning;

Lace-Striped Victoria Lawn at 12 $\frac{1}{2}$ c. worth 20c. per yard;

Checked Muslins at 18 and 25c. per yard worth 30 and 45c.;

Real French Pique at 25c. per yard reduced from 75c.;

Genuine Turkey-Red Table-Damask (or Wine-Cloth) at 75c. per yard worth \$1; extra qualities at \$1 and \$1.25 per yard worth \$1.25 and \$1.75;

Goods sent by express C. O. D., or upon the receipt of the cash or its equivalent. Parties ordering goods to be sent by mail will please enclose sufficient to pay the postage.

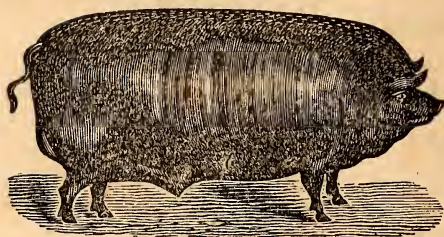
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1017 AND 1019 MAIN STREET

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PURE BRED ESSEX PIGS,
CHOICE
L. AND D. BRAHMA,
WHITE LEGHORN,
B. B. GAME CHICKENS,
and White Holland Turkeys.

july-

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SAUL'S NURSERIES, Washington, D. C.

The undersigned offers a fine stock of the following at low rates :

PEARS—Souvenir du Congress, Pitmaston Duchess, and other new sorts, &c.; a heavy stock of fine trees.

NEW PEACHES—Alexander, Amsden June, &c.; also the fine, new late varieties.

FRUIT TREES—Of all kinds; an extensive stock, viz: Plums, Cherries, Apricots, Apples, suitable to the South, &c.

GRAPE VINES—Strawberries, Raspberries, &c.; new sorts.

EVERGREENS—New Ornamental Trees, new Shrubs, &c., Small Signs suitable for Nurserymen, as well as large stock in great variety.

DUTCH BULBS—Large importations direct from the leading growers in Holland; First Quality Bulbs, Hyacinths, Lilies, Tulips, &c.

New and Rare Greenhouse Plants, Winter Blooming, &c.

PELARGONIUMS—A large stock of the new choice varieties.

NEW ROSES—Duchess of Edinburgh, Perle des Jardins, &c., with an immense stock of finest varieties grown in pots or open ground.

NEW WISTERIAS—New Clematis, Geraniums, Primulas, &c.

Catalogues mailed to applicants.

sep-3t

JOHN SAUL,
Washington, D. C.

PURE HIGH GRADE FERTILIZERS.

ETIWAN GUANO,
ETIWAN POTASH CHEMICALS
FOR TOBACCO,
ETIWAN
Dissolved Bone.

ANALYSIS GUARANTEED. WARRANTED PURE.

MANUFACTURED BY
Sulphuric Acid and Superphosphate Co.,
CHARLESTON, S. C.

W. A. JAMES, Esq.,

Dear Sir:—I have used your Dissolved Bone on Tobacco, equal quantities to the acre, with other standard guanos, which cost twenty dollars per ton more than the Bone. I have left it to my neighbors, and they all agree with me that the tobacco on which the Bone is used, is equal in size and superior in color. I am so well pleased with your Bone that I shall try it on wheat this fall.

HANOVER Co., VA., Sept. 24, 1876.

EDWIN VAUGHAN.

HENRICO Co., VA., February 1, 1877.

Wm. A. JAMES, Agent,

In regard to the use of your Etiwan Dissolved Bone, it gives me much pleasure to state that I used it on Tobacco the last season and was much pleased with the result. During the growing season the tobacco kept a rich dark green, and at cutting time was at least 10 *per cent.* better than that grown with other fertilizers, costing 60 *per cent.* more than yours.

Yours truly,

G. D. GILLS.

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WM. C. BEE & CO.,

General Agents,

Or

Adger's Wharf, Charleston, S. C.

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FOR SALE BY

WM. A. JAMES, Agent,

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Cor. 12th and Cary Sts., Richmond, Va.

Peruvian Guano Guaranteed.

By this Brand is designated *Pure and Genuine Peruvian Guano*, in which the lumps have been crushed, stones (when found) and all other impurities, removed:—it is, therefore, sold in *purser condition* than when landed from *Peru*.

Put up in bags of 200 pounds each, on which the *guaranteed analysis* is printed, and the *retail price* per ton of 2,000 pounds clearly marked.

The retail price is fixed according to the analysis, at the following rates, which are considerably below those adopted by Inspectors of Fertilizers in this country, or the trade in Europe, thus making the Guaranteed Peruvian Guano the **cheapest Fertilizer in the world.**

For Ammonia	17½c.	per pound.
“ Soluble Phosphoric Acid	10c.	“
“ Reverted “	8c.	“
“ Insoluble “	2c.	“
“ Potash (as Sulphate).....	7½c.	“

NONE GENUINE unless put up as above and bearing the following Trade Mark of the undersigned, Peruvian Government Agents in New York, and Lead Seals—on which the Monogram of the Trade Mark is stamped—attached to the extremities of the twine with which the mouth of the bag is sewn, to guard against adulteration.



As a specimen of Analysis and Price of Peruvian Guano Guaranteed, we give those of two cargoes, now on sale, respectively designated **A and B.**

CARGO A. PRICE MARKED \$56.

Ammonia.....	6.80	per cent.....	\$23 80
Soluble Phosphoric Acid.....	3.80	“	7 60
Reverted “	11.50	“	18 40
Total available Phosphoric Acid.....	15.30	“	
Insoluble Phosphoric Acid.....	3.00	“	1 20
Potassa.....	3.70	“	5 55

Estimated Retail Price.....\$56 55

The commercial value of the above Guano is \$79.40 per ton, at the rates lately adopted for valuing fertilizing ingredients, by Hon Thomas P. Janes, Commissioner of Agriculture of Atlanta, Georgia, and State Inspector, Prof. Wm. I. Land, Chemist of the Department of Agriculture, which are as follows:

For Ammonia.....	18½c.	per pound.
“ Available Phos. Acid, (Soluble and Reverted).....	15½c.	“
“ Insoluble Phosphoric Acid.....	4½c.	“
“ Potassa.....	6½c.	“

Thus, the commercial value of the above Guano is fully 42 per cent. in excess of the selling price, \$56 per ton.

CARGO B. PRICE MARKED \$70.

Ammonia.....	11.50	per cent.....	\$40 25
Soluble Phosphoric Acid.....	5.40	“	10 80
Reverted “	10.00	“	16 00
Total available Phosphoric Acid.....	15.40	“	
Insoluble Phosphoric Acid.....	1.70	“	68
Potassa.....	2.30	“	3 45

Estimated Retail Price.....\$71 18

According to the rates adopted by the Agricultural Department of Georgia, already referred to, the commercial value of this Guano is \$93.83 per ton, consequently, 34 per cent. above our selling price, \$70 per ton.

We invite Agriculturists to test the value of Commercial Fertilizers by our Standard, and to compare the result with their selling prices.

Liberal Discount Allowed to Dealers.

For further information, Circulars, &c., apply to

HOBSON, HURTADO & CO.,

BELLEVUE STOCK FARM.

LARGE ADDITIONS FROM THE BEST HERDS AND FLOCKS
IN ENGLAND AND AMERICA.

The large additions, both by purchase and otherwise, to my supply of Improved Stock, enables me to offer a quality of stock rarely found in our Southern States, or that is seldom equaled, and never surpassed even by the most distinguished breeders at the North. I offer fine specimens of

SHORT-HORN BULLS & HEIFERS,

bred from my Premium Cows, and the magnificent Bates bull, 5179 Fidget's Oxford Twelfth, 23152, now at the head of my Shorthorn herd

Berkshire, Essex and Poland-China Pigs

From my best Imported and Premium Sows (some of which have never been beaten in the show-ring), and the get of first-class Premium and Imported Boars. My Berkshires are from the best herds in England. My Essex from the importations of Harris, Thorne & Brown, of New York; and my Poland-Chinas have just been received from the best breeders in Illinois.

SOUTHDOWN SHEEP.

My Southdowns are from the best importations, and crossed with Imported rams. My crop of lambs of this year are the finest I ever saw, and by a ram bred by Mr. Cornell, of New York, he by a ram imported by Col. L. G. Morris, of New York.

Dark Brahma, Houdan and White-faced Black Spanish Fowls, \$ 6 per pair.

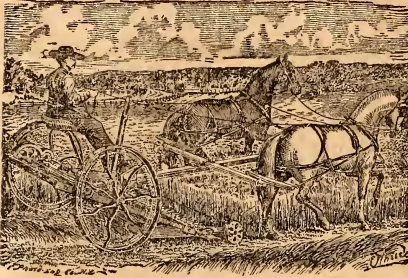
Don't send North for stock, when you can get the same already acclimated from me, and save transportation charges. My motto is to keep up with the improvement of the age; and I do not intend that anybody shall excel me. Fair dealing and satisfaction in all cases! For my new Catalogue, just issued, with pedigrees, prices and other information, address

A. M. BOWMAN,

feb—1y—Aug

Waynesboro, Augusta co., Va.

Wilber's Direct Draft EUREKA MOWER.



CUTS SIX FEET

WITH

LIGHTER DRAFT

THAN ANY FOUR FOOT SIDE

CUT MOWER MADE.

Farmers save TWENTY-FIVE PER CENT. in gathering their HAY CROP by using the

EUREKA MOWER.

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131 Main Street, Lynchburg, Va.

General Agents for Virginia.

THE MARYLAND

Fertilizing & Manufacturing Co.

Are Prepared to Furnish Farmers with their

"AMMONIATED SUPER-PHOSPHATE,"

A Complete Manure for ALL Crops.

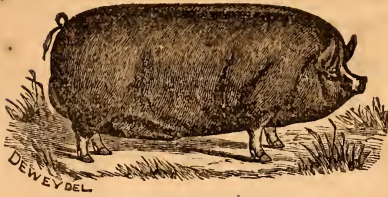
ALKALINE PHOSPHATE,
Dissolved Phosphate.

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CO-OPERATIVE STOCK FARM,



HEADQUARTERS

FREDERICKSBURG, VA.

We are now prepared to fill orders for

HERD BOOK JERSEY (ALDERNEY) AND AYRSHIRE CATTLE AND CALVES, COTSWOLD, LEICESTER, SHROPSHIRE AND SOUTHDOWN SHEEP AND LAMBS—HERD RECORD BERKSHIRE SWINE, AND ESSEX FROM BEST IMPORTED STOCK—AND FOR ALL THE LEADING VARIETIES OF LAND AND WATER FOWLS AND EGGS FOR SETTING FROM SAME.

Every effort has been made, and no expense spared in securing the best specimens of Stock, selected in person at the Centennial, and from herds of the most prominent Northern breeders, and no other "Headquarters" of Improved Stock in the South" succeeded in securing more premiums in the various classes than were awarded to

OUR STOCK

at the last Virginia State Fair. We sell at LESS than Northern prices, and

GUARANTEE SATISFACTION,

and would refer all to the WHOLE COMMUNITY in which we live, as well as to all our patrons in this and most of the Southern States, as well as those in some of the Northern States, whom we have supplied with Stock which we always endeavor to make our best advertisement. Address

A. P. OR M. B. ROWE.
Fredericksburg, Va.

july-

CHESAPEAKE OHIO RAILROAD.

RICHMOND, VA., June 1, 1877.

On and after SUNDAY, June 3, 1877, passenger trains will run as follows:

	MAIL.	EXPRESS.		MAIL.	EXPRESS
Leave Richmond.....	8:45 A. M.	8:45 P. M.	Arrive at Millboro'.....	5:29 P. M.	5:00 A. M.
Arrive at Louisa.....	11:50 A. M.	11:25 P. M.	Arrive at Covington....	6:55 P. M.	6:20 A. M.
Arrive at Gordonsville..	12:30 P. M.	12:00 P. M.	Arrive at White Sulphur.	8:15 P. M.	7:40 A. M.
Arrive at Washington... 6:00 P. M.	7:35 A. M.	Arrive at Hinton.....	11:20 P. M.	9:35 A. M.	
Arrive at Charlottesville.	1:25 P. M.	12:50 A. M.	Arrive at Kanawha Falls.	3:30 A. M.	12:40 P. M.
Arrive at Lynchburg....	5:00 P. M.	10:50 A. M.	Arrive at Charleston....	6:05 A. M.	2:42 P. M.
Arrive at Staunton.....	3:30 P. M.	2:50 A. M.	Arrive at Huntington...	9:00 A. M.	5:00 P. M.
Arrive at Goshen.....	5:08 P. M.	4:38 A. M.	Arrive at Cincinnati.....		6:00 A. M.

Accommodation train leaves Richmond daily (except Sunday) at 4:00 P. M., and arrives at Gordonsville at 7:45 P. M., making connection with train for Washington.

Mail train between Richmond and Hinton runs daily (except Sunday); between Hinton and Huntington runs daily, stopping at all regular stations.

Express train runs daily, stopping at Hanover, Junction, Noel's, Trevillian's, Louisa, Gordonsville, Charlottesville, Staunton, Goshen, Millboro', Covington, and all regular stations west of Covington.

Mail and express trains connect at Gordonsville for Washington and the North, and at Charlottesville for Lynchburg and the South.

Express train connects at Cincinnati with trunk lines for all points in the West, Northwest, Southwest, and at Richmond with the Richmond and Danville, and Richmond and Petersburg trains for all points South.

Sleeping-cars run on night trains.

Mail train arrives at Richmond at 5:30 P. M.

Express train arrives at Richmond at 6:30 A. M.

Accommodation train arrives at Richmond at 8:15 A. M.

Through tickets sold and baggage checked to all principal points.

For rates, information, &c., apply at Company's offices, and 826 Main street, Richmond, Va.

CONWAY R. HOWARD,
General Passenger and Ticket Agent.

W. M. S. DUNN,
Engineer and Superintendent.

Aug-17

SOLUBLE PACIFIC GUANO.

THIRTEENTH YEAR.

We again offer this standard, trustworthy Guano to planters and farmers as having stood the test of Twelve Years' use in our State on all varieties of soils, and in good and bad seasons. The fact that its reputation is better and the demand for it greater than ever before is, we think, conclusive proof of its excellence, and that it is sold at a price which enables the Planter to make a handsome profit by its use.

Every Bag is **GUARANTEED** to be of **STANDARD** Quality.
ALLISON & ADDISON'S "STAR BRAND"
Complete Tobacco Manure.

This preparation, made by ourselves, is of exceptionally high grade, and is intended to be a **complete** fertilizer for tobacco. It is carefully prepared of the purest and best materials known, and so proportioned as to make the best crop the soil and season will admit of. It has been in successful use for many years, and has met the unqualified approbation of nearly every planter who has used it, the general report being "it is all you claim."

We solicit a trial, if but a single bag, in competition with any other fertilizers.


ALLISON & ADDISON'S "STAR BRAND"
Flour of Raw Bone.

WARRANTED PURE.

We have a supply of this standard pure bone, prepared expressly for use on Tobacco and Corn. It will be found quick in action and lasting in its effects.

THIS BONE is not equalled in fineness and purity by any other bone on the market. We **GUARANTEE** it in **EVERY** Respect.

We think one or the other of these fertilizers will be found exactly adapted to every quality of soil, and a trial will show that they have few equals, and no superiors.

 These fertilizers are for sale by our agents throughout Virginia and North Carolina, at Richmond prices, with drayage and freight added.

ALLISON & ADDISON;

Ap—tf

Richmond and Petersburg, Va.

RALEIGH,

(Rose of Sharon).

Breeders of high-bred Short-horns will do well to avail themselves of the services of this magnificent young bull at twenty-five dollars a calf. Good care taken of cows at one dollar and fifty cents per month; but all risks entirely with the owner.

I have a constant apprehension, that some Kentucky man will offer a price for this animal which we cannot decline. Address

N. BERKELEY,

Farmer, Virginia A. & M. C. Farm,

Blacksburg, Virginia

feb—tf

WELDON STOCK FARM,

PULASKI COUNTY, VA.

SHORT HORN CATTLE

of the most improved sorts, embracing representatives of Young Mary, Josephine and illustrious Families. The latter from the herd of Abram Renich, Ky., who used the bulls of this family upon his Rose of Sharons and *vice versa*, until there is no essential difference in the blood of the two families.

American Short Horn Record.

STOCK FOR SALE.

SOUTHDOWN SHEEP

Bred from Webb Stock and from recent importations from the Peerless Merton Flock of Lord Walsingham, Eng. The latter are comprised of the pick of the lot imported in May, 1876—sent to this Country as specimens of the Flock, and a part of the lot imported in August for exhibition at the Centennial, including some of the First Prize Sheep at the Royal Agricultural Society's Exhibition, July, 1876.

OXFORDSHIRE DOWN SHEEP

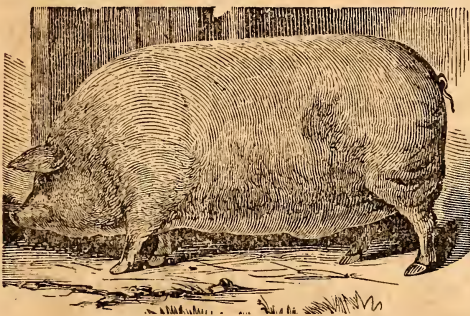
Comprised of those selected in England and imported for me in May, 1876, by T. S. Cooper, of Pennsylvania, and of the First Prize Pen of Yearling Ewes at the Oxford Agricultural Show, 1876. These Sheep are very large and heavy, and have splendid fleeces of wool.

Purity in Breeding and Individual Excellence Guaranteed.

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Premium Chester White, Berkshire and Essex Pigs, bred and for sale by GEORGE B. HICKMAN.

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BERKSHIRE SWINE,

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The Swine are bred directly from recent importations, and from the stock of Maj. J. T. Cowan, and A. M. Bowman, Esq. At the head of the Shorthorn herd is the Bates Bull, Raleigh, bred by Maj. Cowan; sire and dam both bred by Abram Renick, of Kentucky, and both of the celebrated Rose of Sharon family. This Bull is believed to be equal in breeding and quality to any in the State. The cows are from the herds of Messrs. William A. Stuart, George W. Palmer, and John T. Cowan, and are animals of good pedigrees and excellent qualities. Stock will be sold at prices and on such terms as will enable farmers to obtain them. Correspondence invited.

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THOROUGHbred AND GRADE JERSEY CATTLE, BERKSHIRE,
ESSEX and POLAND-CHINA SWINE,

GAME FOWLS AND BRONZE TURKEYS.

My Stock were awarded first premium in every class contended for in 1874-75 by the State Agricultural Society, and in 1876 by Culpeper and Lynchburg Societies. They are bred from *Imported Stock*, and are equal to the best to be found.

Prices moderate. Satisfaction guaranteed. Address
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BERKSHIRE PIGS

Two months old \$10 per pair.

CRANBERRY VINES,

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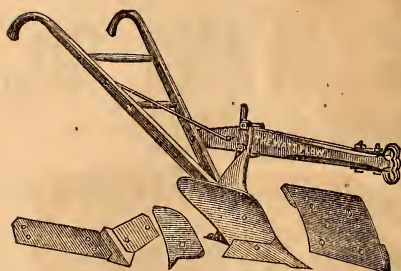
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In every essential of Strength, Durability, Ease of Draught Ease to Plowman, Perfect Pulverization of the Soil, Complete Burial of Weeds Grass, &c., Simplicity of Construction, Entire Freedom from Choking.

The WATT PLOWS are adapted to either light, sandy, or heavy clay soil, and, making some fifteen different numbers, we are prepared to furnish any size wanted. If you want a Plow that pulls easy to the team, works easy to the plowman, does its work well, covers up all vegetation, and does not choke, get a Watt Plow. We only ask a trial. Test it to your satisfaction, and if it does not do what we claim, return it at our expense, and price will be refunded.

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We are Sole Agents for this Celebrated Gleaner.

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REAL ESTATE AGENTS AND AUCTIONEERS,

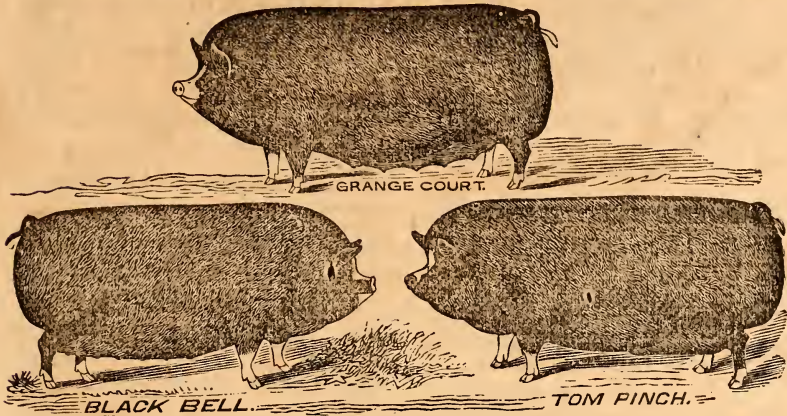
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near the city, also farms in every section of the State of every variety
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THE LARGEST AND BEST HERD OF **IMPORTED BERKSHIRES** IN THE SOUTH.

From the pens of the most celebrated breeders in England, Messrs Heber Humfrey, Capt Arthur Stewart and Russell Swanwick.

I have now on hand, and offer at reasonable prices, a beautiful lot of Pigs from my **Imported Sows**, bred to the most celebrated boars owned by the above-named distinguished breeders. Also a number of *Choice Pigs* out of my **Thoroughbred Sows**, by first-class boars, as good as any offered by any breeder in the North or South.

Will sell several choice Berkshire Sows in pig to **IMPORTED "TIM PINCH,"** and two boars, "Gen. Scott" and "Gen. Johnson," now ready for service, and suitable, in breeding and points, to do credit to any herd.

I also offer a few *Choice Animals* (young bulls and heifers) from my superior herd of

A YRSHIRES,

Many of them prize winners, and selected from the best breeders in America and Scotland. Also,

PURE BRED ESSEX PIGS,

And

Thoroughbred and Grade Jersey Cattle.

I have just added to my herd

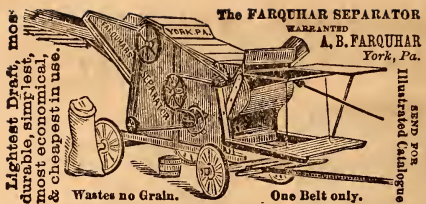
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Son of Old Lady Liverpool (Sallie 6th) and by Smithereen.

Special attention is called to the fact that I am breeding from *three boars* and *fifteen sows*, and can furnish pigs not related on either side, which, in my opinion, no other breeder in the State can say.

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THOROUGHbred AND HALF BRED

HORSES,
Pure Shorthorn Cattle & Berkshire Pigs
For sale. Address

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I am breeding thoroughbred Poland China and Essex Hogs, Bronze Turkeys, Light Brahmas, White Leghorns, White-faced Black Spanish and Dark-crested Ducks, all carefully boxed and delivered at depot, with feed for destination. Satisfaction guaranteed.

Bronze Turkey Eggs, \$3 50 setting 12. Light Brahma Eggs, \$2 00 setting 15. White Leghorn Eggs, \$2 00 setting 15. White-faced Black Spanish Eggs, \$2 00 setting 15. Dark-crested Duck Eggs, \$2 00 setting 15

Eggs for hatching carefully boxed and delivered at Express office. For further particulars address

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\$55 per \$77 a Week to Agents. Samples free.
P. O. VICKERY, Augusta, Me.
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Your name printed on 40 Mixed Card for 10c. STEVENS BROS., Northford, Conn

\$66 a week in your own town. Terms and \$5 outfit free. H. HALLETT & Co., Portland, Maine. jan-1y

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ANNOUNCEMENT TO THE TRADE AND THE PUBLIC GENERALLY

I have erected, in connection with the James River Brewery, an establishment for the bottling of LAGER BEER, ALE AND PORTER, and am now prepared to fill all orders in quantities to suit customers.

Having adopted the latest and most important improvements in the manufacture of these healthful beverages, (recommended by the medical profession) I can furnish as good an article as can be found anywhere, at the lowest prices.

All GOODS delivered to any part of the city and to all depots, free of charge.

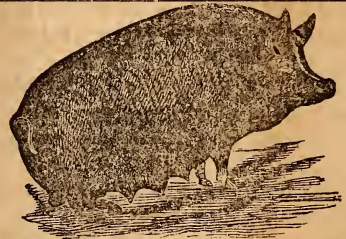
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Cotswold and Southdown Sheep

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BERKSHIRE AND ESSEX PIGS.
My Cattle, Sheep and Hogs took many first premiums at Piedmont, Lynchburg and Richmond Fairs. All bred from the most noted and fashionable strains of Prize Winningstock. Selected with great care from the best herds in the United States. Send for price list. Address
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1000 bushels Virginia Winter Oats (raised in the latitude of Richmond) in new grain sacks of two bushels, weighing 70 pounds, at \$2.50 per sack.

These Oats are as hardy as wheat, and are an especial acquisition at the South, affording pasturage throughout the winter, succeeded by an abundant yield of grain. They should be sown early in autumn, the earlier the better.

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FOR THE

WHEAT CROP.

A Complete Revolution in Fertilizers!

The Lowest Priced proves to be the Best!

It Prevents Smut!

I have not heard of a single complaint of Smut where it was used. Whereas, on the same farm, and from the same Seed, the Crop was materially injured where it was not used.

When properly used, its results are superior to fertilizers costing four times as much!

I have the results from farmers from the Tidewater and Piedmont sections of Va., and from various sections of North Carolina, showing its superiority over other costly fertilizers for **heat**.

Jno. B. Davis, Esq., President of the Planters National Bank, has been using it by way of experiment for the last two seasons, and is so well pleased with its results on all his crops, especially on the various grasses, that he says he will use it altogether this fall in preference to any other fertilizer.

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☞ Send for Circulars containing certificates as to its results on the last crops of wheat.

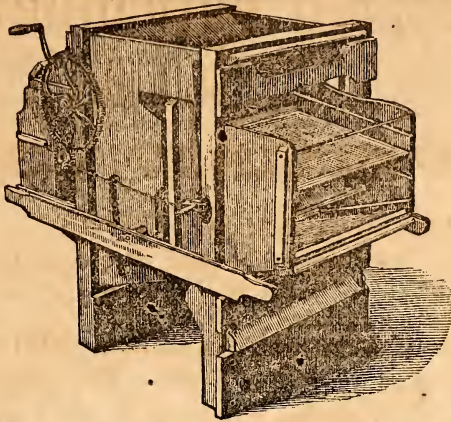
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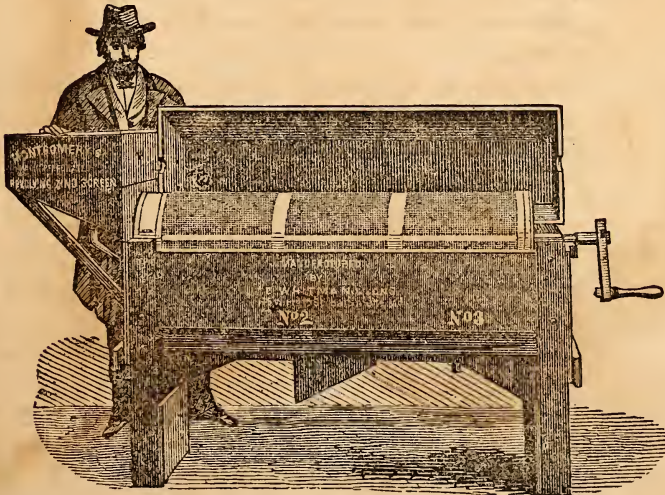


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For Cleaning Seed Wheat. Sow no more Cockle or Small Grains.



This machine is acknowledged by all who have used it, and all who have seen it work, to be the most simple and complete machine which has ever been invented for preparing wheat for seed. It gives the largest and heaviest wheat for seed; is suitable for all kinds of wheat; takes all cockle out; does its work speedily, and takes only two men to work it.

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Grain Separator, Cleaner and Bagger

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Impartial judges at all the State and County Fairs, where it was thoroughly and practically tested in competition with other leading machines, always agreed that it was more simple, more easily understood and operated by those unskilled in machinery, more portable, threshing as much and yet cleaning better, with less power and more comfort to hands, than any other Thresher and Cleaner in use—besides *selling for less money*, according to capacity.

It requires but little time setting up and starting. Being mounted on wheels, it can be hauled about the farms or on ordinary roads without danger of detriment. The draft is light, the capacity large, and it never chokes unless the wheat is very wet, in which case it should not be threshed.

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NOTE.—By comparison you will find the prices of this machine to be less, according to capacity and quality, than any other machine. Other combinations may be made at corresponding prices, but we mention only those most recommended.

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"I desire greatly to see so Conservative a journal as the Planter and Farmer widely taken in North Carolina, and wish you a hearty God speed."

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Chemical Fertilizer Manufacturers,
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Are now preparing the following popular brands of fertilizer for the wheat crop, containing all the essential elements necessary to the growth of that important crop :

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An article especially prepared for wheat, and sold on satisfactory terms to Grangers. Endorsed by the patrons who have used it for the past four years.

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