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THE SOUTHERN

PLANTER AND FARMER

DEVOTED TO

Agriculture, Horticulture, and the Mining, Mechanic and Household Arts.

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

CH: B. WILLIAMS, - - - - EDITOR AND PROPRIETOR.
WM. L. HILL, - - - - GENERAL AGENT.

New Series. RICHMOND, VA., MAY, 1868. Vol. II.—No. 5.

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RICHMOND, VA., MAY, 1868.

Vol. II---No. 5.

What Shall We Do?

A friend, whom I greatly respect, has called upon me to answer the above question for the benefit of our suffering fellow-citizens. I fear he has been partial in his estimate of my fitness for the task, sanguine as to the influence I can exert, and too hopeful of the readiness of our people to work and think themselves out of the difficulties of their position. As to them, I do not altogether blame their present apathy, because it is not wholly unnatural. Temporary prostration must have been the recoil, where energies of body, heart and brain had been in a state of such prodigious tension for four years; and listlessness is ever the attendant of despair. No wonder, when expectations, which still seem so well founded to many, were so woefully disappointed; when there is so much of distress and perplexity in the present, so little of hope or help in our horizon, that we see men and women everywhere wishing they had never been born; that we observe not the exaltation of people who go down in a fight with their colors flying, but rather the utter despair of those who, having struck their flag after masts and rigging have been shot away, find, or think that they have surrendered to pirates who, hoisting the black flag, are about to make them walk the plank. And as to myself, if I think the case is not so desperate as that, and that we need not fare so badly if we will only work the ship, how can I help attempting to cheer these people whom I love so well; how refuse to make the effort, though it may prove a failure, when one of the wisest patriots we ever had tells me I owe it to them as a duty.

What fate may be reserved for us so long as we may be in con-

voy of our captors, no one, not even themselves, can tell. But we should, at all events, endeavor to comprehend our present position on the chart; and take, from a just consideration of it, what comfort we may. And though our course has been changed, yet ought we to study its bearings and do what we can towards making land; which, if not the port of our choice, has yet been selected for us by the will of Heaven.

Deeming that, then, the duty of the day and hour, I shall drop rhetoric and come square down to the facts of the case. Hitherto, the course of Virginia since the war appears to me to have been almost wholly an error, or rather a series of errors. We have looked too much to the past and too much to outside aid; too much to something that was to be as it had been, and too much to other things altogether external to ourselves: in a word, we have failed to study our relation to the present time and circumstances.

There is, I know, much to excuse this; those of us who were growing grey when the war commenced are hardly fit to take the lead in a new and wholly different order of things; and those who fought the battles of secession have no experience to light their path. Under the pressure of political environment, we had made our form of government more and more democratic, until both parties among us had gradually lost sight of old political landmarks, and "the people" who voted had come to demand mediocrity as the condition of their support. Hence we were, and are, without leaders; statesmen who might have retraced an error into which themselves had led us had nearly ceased to exist, or were compelled, with a very few exceptions to witness the triumph of stump speakers. I well remember that in all the speakers I heard in the Lincoln-Breckinridge-Douglas-Bell canvass, there was but one that discussed the principles of liberty which underlaid that contest; and I heard of only one other. But to excuse is not to justify; and I venture now to tell my brother farmers that we must think and act for ourselves, or we must let others think for us and act accordingly, or we must go to the wall.

Let us see what has been done so far, and with what result; or with what prospect of a result.

Four things we have heretofore attempted:

1. We have endeavored to restore our old relations to the Union.
2. We have endeavored to work negroes on wages.
3. We have sought to import labor.
4. We have invited immigration and tried to sell our lands.

And all these have failed, and must have failed, except in some

very few and partial cases, affording no relief whatever to the body of our people.

We should have known that reconstruction on the old basis was impossible, because civil liberty had departed and is not likely soon to return, though ultimately it must return; perhaps with earthquake convulsions. I do not wish to say more that may, in any sense, be called political, than is necessary to show where we should stand in reference to questions that have heretofore properly occupied much of our time and thoughts, to the exclusion of material interests. But I submit that it will not be amiss to invite reflection as to the fruitlessness of present endeavors, on our part, at least, to restore the spirit of liberty to the inanimate clay which we call The Constitution. In planning this communication, I had intended to include an episode on moral epidemics, and to show that the people of the United States are laboring now under a visitation of that kind; to recite a few other such cases, as they are recognized to have been palpable in the history of the world, and to show how American Democracy is but another of these. "For there is still a real magic in the action and re-action of minds upon one another. The casual delirium of a few becomes, by this mysterious reverberation, the frenzy of many; men lose the use, not only of their understandings, but of their bodily senses; whilst the most obstinate, unbelieving hearts melt, like the rest, in the furnace where all are cast in as victims and as fuel. It is grievous to think that this noble omnipotence of sympathy has been so rarely the Aaron's rod of truth and virtue, and so often the enchanter's rod of wickedness and folly! No solitary miscreant, scarcely any solitary maniac, would venture on such actions and imaginations, as large communities of sane men have, in such circumstances, entertained as sound wisdom."*

I had meditated to show how the crusades, the dancing mania of the middle ages, the spiritualism of this day, are all but varieties of this madness, which, recurring at irregular periods, had best be allowed to run their course, prudent men, in such case, falling on their faces until the sand-storm has passed over them. But having no time for such a theme, inviting as it is, I must content myself with a parallel case of political mania, as it has shown itself among the French people. Their revolutions since 1789 and 1790, when they first began to call themselves "a nation," and preferred Tom Paine's *Rights of Man* to Edmund Burke's *Reflections*, down to the present

* "Signs of the Times," by Thomas Carlyle.

time, are too familiar to be repeated; what we see now is that under the talismanic name of Napoleon and the dread of anarchy, the nation has become an Empire, and we hear her most philosophic statesman declare as follows:

“The history of the past affords but little light as to the means of resuscitation, because the principles of life within it are different from what they once were. Down to a recent period, the living and active forces of society were in the educated classes. When these had been persuaded, excited, and united in one conviction, the rest followed. Now-a-days * * * * they are, in reality, dethroned. The centre of social power, so to speak, has been gradually displaced, and at last abruptly changed. It now resides in classes which read nothing, or at least only read newspapers when they read anything at all. * * * * Don't tell me, then, that Voltaire, Rousseau, &c., overthrew by books powers far more durably established. They were surrounded by the upper and middle class, who believed in ideas; but these same classes now-a-days abhor and dread ideas, whatever they may be (as far as they are ideas), and think of nothing but interests. Moreover, these same upper and middle classes, whose ears were so open, were still the masters of society. When they were won over, all was done.

* * * * “The experience of seventy years has proved that the people alone cannot make a revolution. It does not become irresistible till a portion of the educated classes has joined it; and these classes will only lend their moral support or their material co-operation to the people when they cease to fear it.”*

Yet the French Empire is by no means in a decrepit state.

What we see in the United States is, to my apprehension, still worse for the cause of civil or constitutional liberty. We have for rulers the great body of the people, the masses, who cannot know, and refuse to learn, the difference between the educated classes and themselves; who, in fact, think common schools teach all that most men need know, especially for statesmanship, and who, from whatever cause, are as indifferent to, as they are ignorant of, the principles of genuine liberty, and “think of nothing but interests.”

Our own fruitless attempts to be once more recognized as the fellow-citizens of these people, when considered in all its bearings, should convince us that we can expect but little amelioration of our condition when restored, *unless we shall govern ourselves better at home than we were getting to do before the war.*

* De Tocqueville—in the *Edinburgh Review* for October, 1865.

What I would counsel, then, would be, dismiss these ideas of liberty; and let another generation, perhaps another age, make them of practical value. Or, to speak in a somewhat higher tone, let us rise, as we can, superior to these adverse influences, and be free in a higher and nobler sense. For "freedom depends on infinitely more complex influences than either the extension or the curtailment of the democratic interest. On the whole, institutions are much; but they are not all. The freest and highest spirits of the world have often been found under strange outward circumstances: St. Paul and his brother apostles were politically slaves; Epictitus was personally one. Again, forget the influences of chivalry and religion and ask, what countries produced Columbus and Las Casas? or, descending from virtue and heroism to mere energy and spiritual talent: Cortez, Pizarro, Alba, Zimenes? The Spaniards of the sixteenth century were indisputably the noblest nation of Europe; yet they had the Inquisition and Philip II. They have the same government at this day; and are the lowest nation. The Dutch, too, have retained their old Constitution; but no siege of Leyden, no William the Silent, not even an Egmont or De Witt, any longer appears among them. With ourselves, also, where much has changed, effect has no wise followed cause as it should have done. Two centuries ago, the Commons' Speaker addressed Queen Elizabeth on bended knees, happy that the Virago's foot did not even smite him; yet the people were then governed, not by a Castlereagh, but by a Burghley; they had their Shakspeare and Philip Sydney, when we have our Sheridan Knowles and Beau Brummel."*

And we, too, have retained our old Federal Constitution; and the same form of government shows us, at different times, Andrew Jackson and Andrew Johnson, P. P. Barbour and John C. Underwood. And that Supreme Court which, under John Marshall, was the guardian of all our rights, has, under the lead of Mr. Justice Chase, postponed the adjudication of a case of personal liberty until after the Presidential election! It may be bitter to feel that we have survived the liberties of our country, but if it be the fact, we ought to know it; and not waste our time in fruitless expectation or vain regrets.

But with many of us it is supposed that re-admission to the Union will relieve much of our present pecuniary trouble. I venture to differ; and suggest that the cause of that depends, in but slight measure, on the mere fact of our exclusion from the government.

* "Signs of the Times."

By law, the Secretary of the Treasury has power to limit the amount of banking capital in each State; and that power has not only been exerted against us, but also, as is loudly and discontentedly proclaimed, against the Central and Western States in favor of New York and New England, as the following figures show:

NEW YORK AND NEW ENGLAND—Present Population, 7,000,000.				
	1860.	1867.	Increase.	
	MILLION.	MILLION.		
Credit currency,	135	234		
Circulation,	73	173		
	Total,	208	407	199
OTHER STATES AND TERRITORIES—Population, 30,000,000.				
Credits,	43	152		
Circulation,	134	124		
	Total,	177	276	99

“In the first, population could have but very slightly grown. In the other, it had increased to the extent of many millions. Such has been the working of a system that is styled national; but that is not only sectional as regards the North and the South, but also as respects the Centre and the West as against the North and the East.” So writes Mr. H. C. Carey, of Philadelphia; and no wonder the West talks of repudiation. From the same authority, I learn that the actual quantity of paper money in circulation is not more than five hundred millions of dollars, or a little more than twelve dollars per head, though very unequally distributed, as I shall presently show. But in France there is a circulation of thirty dollars per head, and in England of twelve, notwithstanding their extensive use of credits instead of notes.

Our condition, in this respect, is shown by the following comparison of our banking capital in 1860 and 1868:

Free whites in Virginia (exclusive of West Virginia) in 1860,	691 867
Banking capital in 1860, in round numbers,	\$11,000,000 00
Banking capital, per capita,	15 89
Free whites in Virginia (exclusive of West Virginia) in 1868, estimated as follows: Population in 1860,	691,867
The average increase for 10 years, between 1850 and 1860, was 17 per cent. For 7 years, between 1860 and 1868, it would be 11 9.10 per cent., or	82.332
Deduct for losses in 7 years, 25 per cent.,	20 583
	61.749
Total gain in 7 years,	61.749
Add population in 1860,	691.867
	753 616
Supposed population in 1868,	753 616
Banking capital in 1868,	\$2,400,000 00
Banking capital, per capita,	3 18

But if we produced the same amount as before the war, or did the same amount of business, then double the amount of capital would be required, owing to inflation of prices and the high prices of foreign goods. And yet there was, as we all know, a deficiency of capital before the war. It is true, though the fact may astonish many, that there are five millions of gold of Virginia capital now held for safe keeping in the banks of England, where money is worth only two or two and a half per cent. But, if the times were peaceful and quiet, the owners of this gold would most probably operate with it in New York, to which the usury laws of Virginia had sent much of our capital before the war. Not counting that, therefore, and rating the present business of Virginia, excluding West Virginia, at one-third of its *ante bellum* amount, which was \$37,281,504, consisting of agricultural productions, including live stock, \$21,551,182, and of manufactures, mining, &c., \$15,730,322, we see a deficit of \$24,854,336; or if we rate the present business at one-half of the above aggregate, we see a deficit of \$18,640,752; which reconstruction will not enable us to make up.

Whether considered, then, as a restoration to civil rights in the Union, or as a means of regaining the material prosperity we have lost, I think its effects are decidedly over-estimated, though I certainly desire to see it.

The other errors, as I humbly presume to call them, I shall treat of in the next number.

Very respectfully,

FRANK G. RUFFIN.

Our Exhausted and Abandoned Lands.

WHAT CAN WE DO WITH THEM?

No. 4.

(Continued from page 221.)

In the last paper on this subject, the attention of the reader was called to the popular theory of ploughing in green crops as a means of fertilizing the soil. Having considered this, and, as I trust, come with me to the conclusion that it is only a comparative and inferior means of so doing, he is now requested to examine another opinion no less prevalent, but to all appearance equally unsupported by reason and facts, viz: That weeds are an evil which it ought to be the study of every farmer to exterminate as speedily and effectually as he can. But if he has read the preceding papers with any attention, he can hardly have failed to perceive that this theory is in di-

rect opposition to their whole spirit and tendency. What are weeds? All spontaneous productions of the earth, I reply, which do not answer as food for man or beast, and are of no profit to either of them in any way unless they can be used as manures. It is needless to be particular: every one knows what is commonly meant by weeds. They spring up, never before but always after the grain, provided that has been sown or planted at the right time. Thus spring-oats or spring-wheat is certain to get several weeks start of them; and, if the land is in a condition to be really profitable to the owner, so far to outgrow and overpower them, that in a very short time they cease to increase in size, are covered over, and lost to sight. So certainly is this the case, that in a crop of winter-oats or winter-wheat, where the grain has of course got a still greater start of them, a very large proportion of the seeds of weeds do not even sprout till after the crop is removed. The idea, therefore, that they injure the crop, seems to be a very fallacious one, provided it is heavy enough to be of any material profit; and it is equally obvious, that the better it is, the less injury they can do; for the more effectually, in that case, will they be smothered and kept down by it. What possible harm, then, can weeds do? Among wheat that will yield from forty to fifty bushels to the acre, or any small grain yielding in proportion, not one in thousands of them will attain more than an inch or two in height; so that they neither prevent any appreciable amount of produce, or become so intermixed with the straw in harvesting as to occasion the least injury or inconvenience. So far, then, as the cultivation of small grain is concerned—for the same facts will hold in the case of rye, barley or buckwheat—it is plain enough that the popular fear of these supposed enemies is quite groundless. On the contrary, weeds properly managed, are real friends—most useful servants. No sooner is the grain taken off than they start up, as if by magic, forming a dense covering for the ground, shielding it from the sun, sending down their roots in search of fresh inorganic matter and bringing it up to the surface, securing the dampness by which it is further increased, and, finally, depositing all their own material upon the surface as a manure for the succeeding crop. Is there any evil in all this? Is there not, in fact, much good in it? Why should a poor man go to the expense of buying clover-seed, at twelve or sixteen dollars a bushel, to do that which weed-seed, costing nothing, will do for him very effectually, though, perhaps, not quite so quickly or so well?

Whether, therefore, weeds are used as a green crop for ploughing under, which may be done, or reserved for what I have called the

fertilizing process through the autumn and winter, it is equally clear, as far as we have yet gone, that they appear to answer only a good purpose; and that instead of enemies, they ought to be regarded, at least in these low latitudes, as the best of friends. They become an annual source of manure without cost, care, or trouble—manure as valuable in proportion to quantity as almost any matter of the sort to be found—certainly, we should suppose, richer than wheat, oat, rye or buckwheat straw and chaff. Clover would no doubt be better; but then clover is costly. It costs much for seed, and it costs no little to put the ground in heart to produce it. It will not even germinate unless the ground is in good heart. The same may be said of all the imported or manufactured manures, and even of rich stable manure. They all cost money. The latter is valuable only in proportion to the richness and expensiveness of the grain and other food consumed in forming it. “The destruction of the poor is their poverty.” They have no means for these things. They have nothing to make a start with, and must depend on friendly weeds till they can afford something better.

Yet who does not see that by continuing this poor man’s process, one may bring up his lands to almost any degree of fertility? For after all, what is manure? Is it anything more, in the common process of nature, than decomposed vegetable matter? Provided, then, there is enough of it, why is not one kind as good as another, especially when the amount applied is without cost of cash or labor? What is it that has kept up the fertility of the valley of the Nile for so many centuries—that still continues to keep it up, and doubtless will till the end of time? Is it not the annual deposit made upon the soil by the overflowings of that river? And what is that deposit? Of what does it consist? Is it anything more than the remains of decomposed vegetables also? And what good reason for supposing this better than the remains of other decomposed vegetables, throwing roots and grain out of the question? Is there any? Why is this matter, after having been swept by rains from the surface-soil of Ethiopia, Nubia and Abyssinia, drenched, and washed, and wasted at every inch of its passage for hundreds, perhaps thousands of miles, any better by the time it gets to Egypt, than that which may be deposited by the dying weed on our own plains and hillsides, if, instead of obstructing it, as we now do, we will only let kindly nature take her own course? It is true, the deposits of the Nile are brought from a distance. Whatever of organic or inorganic matter they contain, is so much positive addition to the richness of the soil, not like that of native weeds simply returned after having

been in part taken from it. In the one case, all is pure acquisition; in the other, it is only in part so. But, then, is not this last richer in proportion to its freshness? and may it not, in process of time, be made so abundant that there could scarcely be any means of disposing of it except in reducing it by fire? In this way, it is easy to conceive that fertilization might be carried on till one could almost fancy some of the beautiful personifications of Scripture were about being realized—that the whole land, gladdened by its recuperated strength and vitality, was putting on one universal smile—that the little hills and the mountains were shouting on every side, and the valleys and plains covered with golden ears were sending forth their notes of praise and rejoicing.

A case strongly in point occurs not half a mile distant. A small peach-orchard was planted some years ago by this neighbor on light sandy land. After coming into fruit, the trees did remarkably well for several seasons, bearing abundantly and maturing their fruit perfectly. At first, cotton or peas were planted for a few years among them without manure; but, finally, these were discontinued, and nothing more was done than ploughing the ground over every spring, and mingling the decaying weeds with it. For a time, the growth of these weeds was light, the ground being thin and unproductive, but it yearly became more heavy. At present, many of them every season attain nearly the height of a man's head, and the whole are as thick as they can stand; but what is particularly to the point, the ground has become so enriched by their annual deposits that the fruit, though very abundant, no longer matures as it used to do. Early in the season, it begins to rot and fall, and continues to do so till there is scarcely a peach left; as this fruit always will do, so far as my observation extends, where the ground is too rich for it.

It may be replied, this doctrine will not answer, at all events, with regard to corn, which, being planted at great distances, allows weeds full scope to grow and do their mischief. But it will be time enough to answer this when we come to consider the point whether it is not high time to weigh the value of the corn crop, cultivated as we are accustomed to cultivate it on our common light uplands, I do not believe it will stand the examination.

In gardens, weeds are always more or less of a pest; yet even there they are much more troublesome than they need to be. By a little care and management, the seeds sown may always be made to get the start of them. A few days soaking in water, very slightly warmed, will so accelerate the germination of beets, carrots, pars-

nips, etc., that they will come up before any weeds usually found growing among them. As soon as they become plainly visible, a few minutes' work between the rows, with a fine rake, will put any weeds beyond the power of mischief for a week or two. The young plants would require this much stirring of the soil, if there were no weeds. In this way, they may be kept down till the tops of the vegetables spread and meet together between the rows to keep them so. Such has been my own experience with them. They make no more work necessary than the ground ought to have if there were no weeds in existence. In any kind of cultivation I have ever attempted, there is nothing like stirring the soil. The oftener the better, even if it is done daily. Some lazy people may bless weeds that there is anything in their gardens worth having. Were it not for these, they would suffer every vegetable to become stunted and unhealthy by the hard crust of earth formed around its root or crown to the exclusion of the air.

Among other vegetables, however, planted at such distances that their tops do not meet across the rows so as to keep them under—along walks, borders, etc., weeds will be an annoyance. But what if they are? The garden is but a small spot any way, and is easily kept in order by a watchful eye and a prompt, diligent hand. The oftener the ground is run over, as already observed, with a light rake that will just loosen the crust formed by hot sunshine after a shower, the better. This work, necessary without any reference to them, will so keep weeds under, that the evil resulting from them will not bear being named or thought of compared with the vast amount of good they may be made to do in the field by their varied and useful ministrations.

T. S. W. MOTT.

Garden Farm, April 16, 1868.

Liberality in Farming.

In this art, and almost in this art alone, "it is the liberal hand which maketh rich."

Liberality in providing utensils is the saving both of time and labor. The more perfect his instruments the more profitable are they.

So also is it with his working cattle and his stock. The most perfect of their kinds are ever the most profitable.

In cultivating the earth, the condition of man's success is his industry upon it.—*Hon. Josiah Quincy.—Journal of the Farm.*

Tobacco versus Wheat and Corn.

WHICH CROP PAYS BEST?

Not long since, in looking over that "*great treasure-house*," the *Farmer's Register*, I saw in the April number for the year 1837, page 743, an article on "the expense of Tobacco culture, compared to that of Wheat and Corn," and while many of the figures must be changed, to meet the advance in the price of labor and in the prices now obtained for the respective staples that are mentioned above, as compared with the prices in 1837, still the main features in the article to which I refer remain unchanged by the lapse of twenty years. In the past, farming or planting in Virginia was looked upon more in the light of *a recreation than a business* by the landed proprietor.

Much of the time of the Old Virginia gentleman was spent in literary pursuits, in political life, in social enjoyment. His home was the seat of hospitality, where friends were entertained with a generous and hearty good will, that *always made them come again*, and each one felt, during his or her stay, that such intercourse was indeed "linked sweetness long drawn out."

Nor was this hospitality and generous mode of life confined to those only who owned broad acres and fine houses. Many a time have I rode up at nightfall to the humble home of the small farmer, who had perhaps only two or three rooms in his dwelling, only to be met with the same cordial "won't you 'light, sir," to be seated at a board abounding in good cheer, and shown to "the best room," where, tired out, I could soon lose my sense of weariness in a huge feather-bed.

The man who owned, either by inheritance or purchase, the broad acres, being surrounded by all things necessary to contribute to earthly comfort, had a general idea that if he could make each plantation support the force necessary to work it, and the number of idle negroes (old and young) quartered on it besides, and then have enough surplus left to pay taxes and buy a few more acres or another negro: that he must, in time, grow richer, or would at least leave his children rich. With this view of the case, what cared he for farming as *a business from which he could derive present profit*. "Land was cheap"—what cared he that ancestral forests were fading away before the axe of the destroyer, to make room for *plantation* and new ground—his large force must be employed in the winter months—" 'twas cheaper to clear land than to improve it;" and thus did he, year by year, cut and slay both timber and land. The

small farmer, in this matter, followed in the leading strings of his more wealthy neighbors. One and another would say, "If Squire Johnston, who works twenty picked hands, makes 'a big clearing,' me and my little gang must clear too," and so the work went bravely on, until now, Southside Virginia and North Carolina, throughout the Tobacco region, present a scarred and naked surface, *which demands* of the present and future generations a careful system of culture that shall renovate those waste places, cause them to respond generously to the toil of the skilled laborer; and thus, while bringing to life again a soil naturally productive, but *over-worked and badly fed*, our people will find themselves, like the soil, growing richer and stronger each year. I should have mentioned that there was one very essential difference between the small farmer and the large land-owner prior to the war, and that difference inures greatly to the benefit of the former at a time like this, while the small farmer did, so far as he was able, follow the erroneous example of the large planter, in clearing fresh land, instead of keeping in good heart land already in cultivation, necessity taught him that with a circumscribed purse, he must not only live within his means, but bestow personal labor and supervision in all his operations.

The consequence was, that while the one was rich in lands and negroes, he was proverbially poor in money; the other, frugal and laborious, expanded his operations gradually without a corresponding expansion of wants and expenses; year by year capital was laid by, and not unfrequently he became a money-lender and held mortgages on the estates of his richer neighbor. It is now a well-known fact that such men are meeting the difficulties of "the situation" with more success than any other class; the man who takes the lead in the row is the man who has thus far been able to control the most efficient labor, and to obtain, within the past two years, the most satisfactory results.

The foregoing glimpse of our ante-bellum farmers and planters serves as a sad reminder of our altered state.

The days of Old Virginia hospitality have perished, along with the hopes and fortunes of her people. No longer can they afford to live with open doors and entertain with the open-hand prodigality of the olden time; and while we hope that no amount of pecuniary trial or poverty *can* crush out the spirit of *true hospitality* that is indigenous to the Southern people, it is well for us to realize things as they are; to turn from farming as it was to farming as it is. Now, the man who does not farm or plant, *to make money*, fails in duty

to his family and his calling, and comes short of the example he *should set* to his own people. I believe farming the surest road to a *competency*, and even to *wealth*, that any man can travel in these days of trial, danger and doubt; to the young man especially, does it hold out great inducements. There is no business enterprise in which a young man can so readily engage *with limited means*; there is no business enterprise wherein a young man can reap a larger profit from the labor of his head and hands; *and above all*, there is *no other calling* that will do more to help us out of "the slough of despond" and place us on the high road to prosperity.

To farm or plant for profit, then, is the desideratum; and observation teaches us (as I have heretofore said) that one essential to success, is that the farmer shall be a working man. Not simply a daily laborer, who works mechanically, but one who economizes time and labor and never throws away licks. There are also two other essentials to success; not only must a farmer work now-a-days, but he must think and read. Strong muscles are desirable, but young farmers must remember that many an ignorant negro, and the meanest mule on his place, has more muscle than he has, and that without the direction of a mind well-stored with practical knowledge, all this muscle is either as so much dead matter, or worse, is actively employed in doing badly what ought to be done well. But, says one, who may chance to read the foregoing, "what has *all this* to do with the article in the *Farmer's Register*, mentioned when the writer set out." To this I reply, "much every way;" for if the writer of that article in 1837 thought it important *then* to count the cost of cultivating Tobacco, Wheat and Corn, and to bring down the credit balance in favor of each crop, so that his neighbors might see the comparative profit that would result from the culture of each, *how much more do these times demand such a course*. To bring the reader to this point, I have only chosen to take him by an *old road*, through old and well-worn fields, that he might take a farewell view of the past and an earnest view of the present and future.

Before entering into a calculation as to the present cost of growing Tobacco, Wheat and Corn, I will state the main points of difference between the calculation in 1837 and at the present time. Labor was then 30 cents per day; it is now a little over 60 cents per day. Taking the average price of labor throughout Virginia in 1866 (which was \$14 82 per month, including finding) as the basis, and estimating 270 days as a working year. E., in the *Farmer's Register*, estimates 4,000 hills to the acre—I estimate 4,500 hills

to the acre. He makes 64 days' time necessary to cultivate, house, prize and deliver the product of an acre, while my estimate of 500 additional hills in the acre will make more time necessary for the whole process.

E. estimates the carriage to market from a point 50 miles distant, while I take a point 142 miles distant. E. gives \$6 50 per cwt. for leaf, \$2 70 per cwt. for lugs, and \$1 per bushel for Wheat, \$3 per barrel for Corn, and \$6 per acre for fodder, &c., as the current prices in 1837, which are much below present prices.

On the other hand, he estimates 1,000 pounds of Tobacco, 25 bushels of Wheat, or 10 barrels of Corn, as the product of an acre of good land in his day, which is much above the average yield of good lands throughout the State now. For the sake of convenience, I assume his product per acre to be correct for shipping Tobacco, Wheat and Corn only—I charge as part of the cost necessary to *compel* such a yield, 300 pounds of fertilizer at market price. In his day, Fancy Yellow Tobacco, as a specialty, was unknown, and I therefore make a separate estimate for *that*, the lightness of the plant being known to cause the yield to fall much below 1,000 pounds per acre.

With these explanations, I now proceed to give an estimate of

THE EXPENSE OF CULTIVATING AN ACRE IN TOBACCO IN 1868,
TAKING THE LABOR OF ONE HAND 67 DAYS.

Burning 100 square yards for plants, hoeing, covering and manuring—four days' labor with one hand at 60 cts. per day,	2 40
Fallowing one acre—one day's labor with one hand,	60
To one other ploughing in the spring—one day's labor,	60
To making four thousand five hundred hills—7 days' labor,	4 20
To drawing plants, cutting off hills, and planting 4,500 hills—4 days' labor,	2 40
To one other ploughing—one day's labor,	60
To weeding—2 days' labor,	1 20
To first hilling—2 days' labor,	1 20
To one other ploughing—one day's labor,	60
To second hilling—2 days' labor,	1 20
To third hilling—2 days' labor,	1 20
To worming and suckering—4½ days' labor,	2 70
To topping and priming—one day's labor,	60
Amount carried forward,	19 50

Amount brought forward,		19 50
To cutting 4,500 plants, hanging on sticks and scaffolding— 5½ days' labor,		3 30
To cutting and hauling wood to fire one barn of Tobacco— 2 days' labor,		1 20
To firing the same—4 days' labor,		2 40
To striking down and bulking 500 sticks—2 days' labor,		1 20
To stripping 1,000 pounds of Tobacco—10 days' labor,		6 00
To re-hanging same—2 days' labor,		1 20
To re-striking, and packing in prizing order—2 days' labor,		1 20
To prizing and delivering at depot 1,000 pounds of Tobacco— one hand 7 days,		4 20
To freight from Danville to Richmond on 1,130 pounds gross weight, at 75 cts. per cwt.,		8 50
To one Tobacco cask,		3 00
To warehouse expenses,		2 00
To commission 2½ per cent. on gross sale of \$138 75,		3 47
To labor of one horse 10 days, and cost of keeping, at 75 cts. per day,		7 50
To 300 pounds of Phosphated Peruvian Guano, at \$80 per ton, or \$4 per cwt.,		12 00
		<hr/>
		\$76 67
To balance,		50 83
	CR.	
By sale of 750 pounds of Leaf Tobacco, of good Shipping quality, at \$15 per cwt.,		112 50
By sale of 250 pounds Lugs, fair quality, at \$6 per cwt.,		15 00
		<hr/>
		\$127 50 127 50
		<hr/>
By net profit of one acre in Shipping Tobacco,		\$50 83
Now, let us look at another calculation. Suppose the acre be cultivated in Fine Yellow Tobacco, and that the same amount of labor be expended and the same quantity of fertilizer be used, the case will stand thus :		
To total expense of cultivation, including fertilizers,		73 20
To commission 2½ per cent. on gross sale of \$225,		5 62
		<hr/>
		\$78 82
To balance,		146 18
		<hr/>
Amount carried forward,		225 00

Amount brought forward,	225 00
CR.	

By sale of 300 pounds Fine Yellow Leaf, at \$10,	120 00
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By sale of 300 pounds Medium Leaf, at \$25,	75 00
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By sale of 200 pounds Lugs, at an average of \$15,	30 00
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	\$225 00
	225 00

By net profit of one acre in Fine Yellow Tobacco,	\$146 18
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The above calculation shows a result but seldom attained in the actual experience of the planter, and to attain it the labor and expense is much greater than we have estimated. It is very safe to say that the average price obtained for Tobacco throughout Virginia and North Carolina for two years past does not exceed \$15 per cwt. The actual average for the crop of the two States in 1866 was \$15 44 per cwt; therefore, if we take the same estimate for the expense of cultivation and fertilizers, say

	73 20
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Commission 2½ per cent. on gross sale of \$150,	3 75
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	\$56 95
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To balance,	73 05
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CR.

By sale of 1,000 pounds Tobacco at \$15,	\$150 00	150 00
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We bring down a net profit of \$73 05 per acre as the average result throughout the two States.

Now, let us see what can be done with the same land cultivated in Wheat:

To seed for one acre,	3 00
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To one day's fallowing—one hand,	60
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To half a day's harrowing,	30
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To labor one horse 2 days, and keeping same, at 75 cts.,	1 50
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To cutting and shocking one acre of Wheat,	1 00
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To hauling to granary—one day's labor hand and horse,	1 35
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To threshing out 25 bushels Wheat, at 10 cts. per bushel,	2 50
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To 300 pounds Phosphated Peruvian Guano, at \$80 per ton, or \$4 per cwt.,	12 00
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To freight from Danville to Richmond on 1,512 pounds, at 35 cts. per cwt.,	5 30
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To commission 2½ per cent. on gross sale of \$62 50,	1 56
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	\$29 11
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To balance,	33 39
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Amount carried forward,	62 50
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Amount brought forward,		62 50
Cr.		
By sale of 25 bushels of Wheat, at \$2 50,	\$62 50	62 50
By net profit of one acre in Wheat,		\$33 39
We will next see the result of an acre cultivated in Corn (omitting cost of seed):		
To one day's fallowing,		60
To one day's ploughing for planting,		60
To one day's labor in planting,		60
To one day's ploughing at time of weeding,		60
To one day's work in weeding,		60
To one day's work in hilling,		60
To one day's work in ploughing,		60
To one day's work second hilling,		60
To two day's work saving fodder,		1 20
To one day's work saving tops,		60
To five cart loads Corn pulled and hauled to crib—2 days' labor,		1 20
To shucking out 10 barrels Corn and cribbing same—2 day's labor,		1 20
To labor of one horse seven days, and keeping same, at 75 cents,		5 25
To 300 pounds Phosphate of Lime, at \$3 per cwt.,		9 00
To freight from Danville to Richmond on 50 bushels Corn, 2,825 pounds, at 21 cts. per cwt.,		5 93
To commission 2½ per cent. on gross sale of \$50,		1 25
		<u>\$30 43</u>
To balance,		34 57
Cr.		
By sale of 50 bushels Corn, at \$1 per bushel,	50 00	
By sale of Fodder and Shucks <i>at home</i> , from one acre in Corn, say 1,500 pounds, at \$1,	15 00	
	<u>\$65 00</u>	<u>65 00</u>
By net profit of one acre in Corn,		\$34 57
In summing up the foregoing calculations, we find the following results:		
Net profit of one acre in Tobacco at, an average of \$15 per cwt.,		78 05
Net profit of one acre in Wheat,		33 39
Net profit of one acre in Corn,		34 37

Now, when we remember that in the Valley of Virginia one good hand will tend 30 acres in Wheat, 20 acres in Oats and 20 acres in Corn; while in Southside Virginia, $2\frac{1}{2}$ acres in Tobacco, 10 acres in Wheat, 10 acres in Corn, and 10 acres in Oats, is considered heavy cropping; and if we will look, too, at the value of lands in those sections of Virginia where the cereals and grasses are cultivated, as compared with the impoverished Tobacco region, it does seem to me that any thinking man must see the necessity of curtailing (that is all I advocate) Tobacco culture. All I ask is that our people give these matters careful consideration. These are not times when we must accept the dictum of tradition or custom, but must think and act for ourselves.

H.

An Imperial Farmer.

[From the Pall Mall Gazette.]

For some years past, the French government has charged itself with a number of agricultural experiments, many of them on a grand scale, and the cost of which have been defrayed by the State. It is quite true that with regard to certain of these operations the Emperor took the initiative; still it has become very much the fashion of late years to ascribe all the merit resulting from these various undertakings to his individual energy; and only a week or two since there appeared in the *Constitutionnel* a series of articles, giving an epitome of all that the State has done for agriculture during the present imperial *regime*, under the title, "Napoleon III., Agriculturist." It is from these papers that the following interesting particulars have been gathered:

In the very heart of France, and not more than one hundred miles from Paris, there was a barren uncultivated district known as Sologne, and which used to be commonly spoken of as a locality where the average term of human life did not exceed twenty or two-and-twenty years. This region, consisting of large plateaus of sand, which stretched afar like deserts, was covered with stagnant ponds and intersected with numerous rivulets, the beds of which had been long since choked up. Neither capital nor commerce had penetrated the outskirts of this desolate territory, when the Emperor purchased two of the most unprofitable domains belonging to it—namely, those of La Motte Beuvron and La Grillaire, the soil of which latter, covered for some depth with an impalpable sand, could only be made to produce wild sorrel. By the Emperor's direction, sea-pines were planted over the larger part of the domain, while those portions

which gave promise of fertility were thoroughly manured and cultivated with corn and various kinds of fodder. The land was then stocked with a large flock of sheep of the ordinary breed of the district, the manure from whom materially enriched the soil, and in a very short time La Grillaire was cultivated at a positive profit. The success of this experiment being unequivocal, it was determined to make Sologne a great centre of agricultural production. But before this could be accomplished, it was necessary to execute some important works to render the district more salubrious. These included the cleansing out of the watercourses, the draining off the water from the ponds, and the formation of a net-work of new roads. The Emperor entered into an agreement with the Compagnie du Chemin de Fer d'Orleans for the transport of agricultural produce at reduced prices, and the establishment of depots for its reception at the various stations. Sologne rendered salubrious, and the Emperor's example proving contagious, capital and commerce followed in the footsteps of the improvements which he had effected, and today this once barren and desolate tract of country is covered over with growing forests and fertile fields.

It was these results that decided the Emperor to enter upon further experiments, and to establish the extensive military camp he at that time contemplated forming in the centre of the vast uncultivated plains which stretch northwards of Chalons-sur-Marne. The Emperor fully understood the advantages to be derived in an agricultural point of view from this immense gathering of men and horses. He knew all that was necessary to obtain good harvests from the chalky soil of Champagne was to have it properly manured, and he established, therefore, in the neighborhood of the camp, at various points of this unfruitful plain, where the only signs of vegetation were a few straggling bushes, no less than fourteen farms, among which every day the manure of the camp was distributed. These farms were stocked with flocks of merino sheep, a breed which was found to thrive marvellously on the chalky soil of Champagne. The mode of cultivation adopted was to raise, first of all, a crop of grass, then one of wheat, and subsequently some kind of green crop suitable for fodder. The result was a complete success, and the flocks of merinos belonging to the farms of the camp of Chalons were mentioned in high terms of praise in the report of the international jury on the Billaincourt agricultural exhibition. The Emperor's next experiment was made at Vincennes, which, as every one knows, is an extensive military fortress, fully garrisoned, in the neighborhood of Paris, and around which are considerable

tracts of land, the surface-soil of which consisted, for the most part, of sand, thickly strewn with large flints. With manure from the adjacent fortress, this land has been converted into a rich vegetable soil which annually produces the finest crops. A herd of cows of the Flemish breed and a magnificent flock of Southdowns form the live stock of the farm, which, during the summer months, is a favorite place of resort with the Parisians. It is at this farm that extensive experiments have been made with the chemical manures in which M. Georges Ville is so ardently interested, and it is there, too, that M. Guerin Meunville has established an experimental nursery for the acclimatization of a new description of silk-worm from Japan. At the agricultural exhibitions and competitions which periodically take place at Vincennes, which is not merely an ordinary farm, but a regular school of experimental agriculture, all classes of inventors exhibit apparatus; and there steam-ploughing and threshing-machines and other agricultural implements, are constantly at work, while competitions between mowers and reapers are frequent.

The results obtained by the application of the manure of Chalons and Vincennes caused the Emperor to establish a small farm near Saint Cloud, at the foot of Mont Valerien, the fortress of which has a numerous garrison. When the Emperor purchased the land, it was used as a shooting-ground; the soil was heavy, but of good quality, and after being properly manured, produced any kind of crop. To-day this farm is in as high a state of cultivation as any in the department of the North. The most extensive experiment, however, made under the direction of the Emperor, was on an immense tract of waste land in the southwest of France, which, with its sands, its sea-pines, its stagnant ponds, and its general insalubrity, was a counterpart to Cologne. The Emperor purchased 10,000 acres of this land, and gave to the estate the name of Solferino, in commemoration of his Italian campaign, from which he had at that time recently returned. This bargain, consisting wholly of gray sand, was covered with heath, furze bushes, and pine trees. Then the furze and heather were partially cleared away and the soil manured so as to bring it under cultivation. The experiments, however, have been made too recently to have yielded any positive results. To attract agricultural laborers to this desert, the Emperor built a village, the larger number of houses forming which, are ceded rent free to those who occupy them. Attached to each house is a small garden and three or four acres of land, which the occupier, who has to do a certain number of hours' daily work on the impe-

rial estate, cultivates, with the assistance of his family, for his own advantage. After a certain number of years, these houses, together with the plots of land appertaining, are to become the property of those who occupy them.

Another point which has engaged the Emperor's attention is the completion of the system of highways in the agricultural departments of France. Railways had done much to open up new markets for agricultural produce, and at the wine-shops in the South you can no longer obtain as much wine as you can drink in the space of an hour for a couple of sous. Still new roads were wanting to give to the producer all the advantages of the larger local markets, and a few years since the State charged itself with the expenditure of twenty-five million francs for this purpose. Last year, too, a fresh credit was opened for the construction of cross-country roads, which should serve for the transport of manure, the harvesting of the crops, and afford a ready means of communication with the neighboring villages. Not only were the sterile districts of Sollogne, Brenne, Dombes, Doubles, and the waste lands of Brittany and Gascony pierced with broad highways, but in consideration of a grant proportioned to the expense the company of the Chemins de Fer du Midi was induced to open across the sandy deserts and forests a regular system of communication. The result has been to give largely increased value to the timber, bark and resin, which formerly, owing to the difficulties of transport, found scarcely any purchasers. As a part of the same plan, a railway has been formed traversing diagonally the entire table-land from Bourg to Lyons; and the company, for a fixed sum, charged itself with the drainage of all the ponds situated within a certain distance of the new line. Private individuals executing similar works received a government grant in proportion to the outlay they incurred, while to promote the drainage of marshes and damp lands generally a credit of 100,000,000 francs has been opened, which is advanced by the State on loan to landed proprietors willing to engage in these works of utility.

The grandest work of all, however, is the replanting of the forests and the returning of the pasture lands on the slopes of the Alps, the Cevennes, and the Pyrenees, which the mountain torrents menace with rapid destruction. The felling of these trees, the result of a thorough ignorance of the law which nature has provided for her own protection, dates as far back as the thirteenth century. The destruction of the grass on the table-lands of the mountains, caused by the sharp pointed feet of the flocks while grazing, is of far more recent date. To restore these forests was a difficult undertaking,

for the districts most exposed to the disastrous action of the mountain torrents are precisely those where the breeding of cattle forms almost the only pursuit. It was necessary to materially diminish the extent of the pastures, and consequently to reduce the number of the flocks. The first point, therefore, to be decided was whether the proprietors, whose pastures were about to be circumscribed, were entitled to an indemnity. The next question was at whose expense these works of restoration should be executed? Eventually, two measures were passed which determined that the replanting and re-turfing should be at the cost of the particular parishes and of the proprietors of the mountain pastures. When the latter are unable to bear the expense, the State charges itself with executing the necessary works, and on their completion receives one-half of the restored lands by way of indemnity.

Our Altered Circumstances Necessitate a Change in our System of Farming.

To the Farmers of Virginia: I am now an old man, and have been living and working upon this farm since 1831. It was sadly out of order when I purchased it; the fences rotted down; the fields overrun with the wild briar and bushes; the lands thoroughly saturated with water for want of ditching; the springs were so late and the frosts of the fall so early, that an old and valued friend remarked to me, on welcoming me to the neighborhood, that the seasons on Buckeyeland were too short for any crop except the grasses, and in a very few years, I had almost come to the same conclusion. My corn was often injured by the late spring and seriously damaged by the early fall frosts. I often commenced my wheat harvest after my mountain friends had finished theirs. The crops were very short, of grain, weighing only from 53 to 57 pounds per bushel. I was young, and full of energy and hope. I set in to ditching and improving, and in a few years my harvests were earlier than my mountain neighbors, my crops as large and of as heavy grain as any, and I have since sold more seed wheat than any farmer along the mountains from the Hardware to the Rivanna river. My farm was once pronounced by one of our very best farmers more like a Pennsylvania farm than any he had ever seen in Eastern Virginia. Thus my earlier and happier days were spent, fondly hoping, in my old age (in peace) quietly to enjoy the pleasing satisfaction of having made many spires of grass to grow where none ever grew be-

fore. But now: Ah, how sad the change which has so rapidly come over me and all I once so much admired! Now, at evening's reflecting hour, when I slowly and sadly walk up to the heights overlooking my once beautiful farm, from which, in by-gone and happier years, I could see the busy and productive motion of twenty-two faithful servants happily winding up their day's labor in their soul-cheering laughter and merry songs. What now do I see: The wild briar and broom-straw mournfully waving their advancing banners, denoting a wilderness to my fields and ruin to me. Gentlemen, such is the lamentable fact, plainly and loudly proclaimed all over our once beautiful and happy country. And ruin—total ruin—must and will be the early result of our ineffectual system of farming with the worse than worthless freed-labor, our only available resource at this time.

A change in our mode of farming must be made to suit our present sadly altered condition, or ere long dear old Virginia must and will be a wild wreck in hopeless ruin, and her once gallant, warm-hearted people be completely pauperized. Now, can't this change, to suit our present condition, be brought about? I think it can be done, if the intelligent farmers of Virginia will all set to work with a right good will. No one plan will suit every man, nor will it suit every part of our State; but suppose every man should determine to use his best judgment, and reflect well upon some plan, which he thinks best calculated to suit his own condition and locality, and write it out for the *Planter and Farmer*; the editor could select out of these numerous and varying plans, the very best (those rejected could be disposed of just as this should be, if any better article shall be offered), upon which the better informed farmers could mend and amend, until some good plan might and would be suggested, by which we all could be benefitted.

To begin: I will now give a plan which I have thought of adopting, unless some better shall be suggested. I am an old man, totally unable to look after my hands, as they are obliged to be looked after to save from heavy loss. I have some six hundred acres of cleared land—one-half flat—every acre of which can be thoroughly ploughed by a three-horse plough. I think of cutting off some hundred acres for yards, lawns, orchards, grass-plats and truck-patches—the remainder I propose to divide into four fields. I think of keeping six mules to run two three-horse ploughs, and of getting two first-class ploughmen. My plan is to select ten or twenty acres of the best land in the field for corn—prepare it thoroughly, manure heavily; and if worked in time, and as it should be, it would bring fifteen

barrels to the acre. The remainder of the field to be plastered. All stock to be kept off, and the next fall, winter and spring the whole field to be ploughed up and seeded in good time and style with one hundred and fifty bushels of oats, the thinner spots to be treated with one hundred pounds of bought manure per acre. Any poorer spots might be prepared and manured, and seeded in rye and grass in August. After harvest, all the oat-land to be nicely prepared and seeded in wheat and grass with guano. With my two teams, I could seed well and in time one hundred and fifty bushels of oats, one hundred and fifty bushels of wheat, and some rye. I would cut my grain and grass by horse-power (I thresh by water-power), and would have to hire in harvest hay-making and threshing, which could be much more readily done than by the year, as it would be a sort of frolic, and the laborers will work better for a short time than by the year. I would spread all the wheat, oat and rye-straw not needed for bedding stables and covering Irish potatoes, &c., upon the thinner portions of the fields seeded last spring in grass. In this way, the thin portions of the farm could soon be brought up along side of the best of the field. I would use all of my manures, not applied to corn and potatoes, by top-dressing the thin parts of my grass land. I have long considered an oat-fallow the best cleaner of lands and the best preparation for a good wheat crop, and top-dressing the best way to use our home-made manures, and I speak from long experience.

By this plan, I could keep but little stock at first during winter, as the straw should be spread over the grass-lands and well-plastered, and a small dose of lime, say ten or fifteen bushels per acre, which I think enough for a single application; in the last of May or first of June, if the grass would justify it, I would purchase a few poor young horses, or cattle, or sheep, which would fatten by a little salting, and sell them off in the fall, which, I think, would pay much better than raising and winter-feeding. Upon this plan, I think the grain would pay better than the stock business now, when Wandering Sambo claims so large a share of all eatable stock. I would raise only a few good hogs for home use, and keep them up within protecting distance. By this course, I could better secure myself from a yearly loss. My farm improved and crops greatly increased, would require less labor, and the wandering freedmen will have rapidly disappeared from our midst, and the wild briar and broom-straw will have ceased to threaten our total ruin.

This I offer as the best I can now do, fondly hoping some other more practical farmer will so improve upon it as to give us, through

the *Planter and Farmer* some far better plan, by which we all can rapidly rise from our present despondent condition.

With best wishes, Mr. Editor, for the highest success of your most excellent paper, which every farmer should take and write for, and peace, happiness and prosperity to our dear old mother of States,

GEO. C. GILMER.

P. S.—This plan I deem the best for me, while labor is so very unreliable; and until I can get all my fields clean of the briar and broom-straw, and get them well-taken in grass again, I should endeavor to get the lot manured for corn fit for a first-rate meadow, and permit it, and all other good grass-lots in the field, to remain for mowing. By this course, we would require so much less labor, our wandering freedmen would soon have to look out elsewhere, and our lands would so rapidly improve, that in a few years our whole country could be made so attractive that all who would could sell for good prices. The portion of my farm I have been working shows this day as high a state of improvement as it ever did, and by this plan I will be able to work so much more, and thus improve it all the more quickly, and thus enable us to induce the very best class of immigrants to come into our State; and, in a few years, we may fondly hope to see Virginia again the first State of the old Union.

Then let us all arouse and determine to do all we can to achieve this so desirable object. It can be done—it must be done—if we will just resolve to do it. Arouse, then, dear brethren of the plough, all, all depends upon us; and we now have no politics to squander our talents and waste our time on. Then let us all resolve to apply our whole mind, soul and body to the accomplishment of this great object. It is due to our God, to our country and to ourselves.

G. C. G.

SUPPOSED EXPENSE OF MY PLAN.

2 hands' wages—\$200 each,	400
Board of each, \$100,	200
6 mules—finding, wear and tear,	600
150 bushels seed-oats, at 50 cents,	75
5 tons bought manures,	400
150 bushels seed-wheat, at \$1 50,	225
10 tons bought manures,	800
Extra hire in harvesting, threshing, &c.,	250
Amount of expenses,	<u>\$2,950</u>

CREDIT BY

100 acres in oats—2,000 bushels,	1,000	
100 acres in wheat—1,500 bushels,	2,250	
20 acres in corn—240 barrels,	1,200	
100,000 pounds hay,	1,000	
Total amount,	5,450	
Expenses,	2,950	
Profit,	—	\$2,500
The oats ought to bring 3,000 bushels,	1,500	
The wheat ought to bring 2,000 bushels,	3,000	
The corn—15 barrels per acre—300 barrels,	1,500	
The hay,	1,000	
	—	7,000
Expenses,		2,950
At this estimate, there would be a profit of		\$1,050
and as to the land, who can tell its vast improvement?		

G. C. G.

Near Charlottesville, April 22, 1868.

White Labor and the Tenant System.

My Dear Sir,—I have read with much pleasure the very sensible and practical communication of Mr. Washington, in your April number, on “Small Farms, White Labor and the Tenant System,” possibly the more, as it accords in some degree with speculations of my own, in a hasty communication, made by request, to the *Whig* sometime in October, 1865. Several intelligent and well-informed gentlemen (Scotch) have concurred in the views presented in that letter so far as they go. And from information obtained by a somewhat extensive correspondence, as Commissioner of Immigration, and otherwise, I am satisfied that families of the agricultural peasantry of Great Britain might be advantageously settled on many farms in Virginia, to the great advantage of the proprietors and themselves—allotting to each family a good cabin, with five or ten acres of land for their own cultivation, upon which they could subsist themselves, supply skilled labor, the men, the females and larger children excellent domestics, and in harvesting and light work, all would be glad of employment at moderate wages. In their own country they pay rent for inferior accommodations to what we could give them. With a small rent here, or with none, and fuel without

charge, the transition to them would be regarded, and be, in fact, independence.

The English, Irish, Scotch and the Welsh, the latter for mining, and especially for working the extensive slate quarries, would be an invaluable addition to our industrial population; and although they might not bring much money with them, would increase the aggregate wealth of the State to an extent which cannot now be fully estimated.

The class of tenants *for the large estates*, which I had in view, are all men of more or less capital, some of them quite wealthy, and would bring with them their sons, and a large addition of agricultural labor. And the operation of the system would bring into the State a considerable amount of money to be invested in the purchase of lands.

I have not time, even if I felt competent, to discuss the subject in all its most important bearings upon the general interests of our mother State and her people; but I do most earnestly hope that those who can, will address themselves to it earnestly, looking to our mother country as the source of the most desirable supply of emigrants for Virginia. I enclose, as you request, the extract from my letter to the *Whig* in October, 1865.

Very respectfully, yours,

WM. H. RICHARDSON.

April 25th, 1868.

EXTRACT.

“The recent overthrow of our system of agricultural labor imposes upon the landholders, particularly of Virginia, the absolute and urgent necessity of determining at once how that labor can best be replaced, not only with reference to themselves, but to the great interests of the State.

“The public papers inform us that there is a vast emigration to this country from Great Britain and the Continent of Europe; but the English, the Scotch and the Irish, because of the identity of language, are the people for us. The climate and soil of Virginia, unsurpassed on this Continent, and her geographical position, offer advantages to the honest and industrious emigrant, far beyond the free lands of the far West, and superior, it is believed, to any that can be found elsewhere.

“With such of these as may not wish, or have it not in their power to purchase land, let the tenant system, as it exists in England and Scotland, be introduced into Virginia—particularly upon, and commencing with the large and *rich* estates. Every intelligent tenant

might be expected to bring with him a reliable class of well-trained laborers, who, with himself, would constitute an invaluable addition to our industrial white population, of orderly, "law-abiding men." The benefits which might reasonably be expected from such a system, would be speedily diffused and exert a most salutary influence *generally*, but *especially* upon that class of our native white people who have owned few or no slaves, and who ought to be more intelligent cultivators of their own lands than they are now or ever have been.

"As regards the comparative operation of the tenant system (so to speak), let us take, for illustration, an estate upon the upper valley of James river of fifteen hundred or two thousand acres. Upon such an estate there was often a negro population of fifty, sixty or seventy in number—sometimes more—with not above fifteen or twenty effective laborers or 'working hands'—the residue consisting of women and children, and elderly men and women, many of whom, though very well able to do some work, and if they had been white people would have been obliged to do it, had none required of them by their owners, and did none.

"Now, suppose the estate to be clear of the negroes, and cultivated by such a tenantry as by proper efforts the proprietor can readily obtain, what would be the difference in results to himself and to his children in profit and in comfort, and to the State in the scale of an increased population, intelligent, frugal, industrious, and capable of estimating the value of civil liberty?

"I entirely dissent from those who advise the proprietors of large and valuable landed estates to sell off their property in small farms. Lands sufficient for all emigrants who desire to purchase and have the means, may be purchased almost anywhere in Virginia. But let the large (many of them ancient) estates be preserved entire, and let the proprietors take measures for setting them with such a tenantry as can now be readily obtained by proper exertions, and who can doubt that mutual profit and mutual comfort, to both landlord and tenant, will be the result, and great good to the general interests of the State?

"Negro labor, where there exists no power to enforce the performance of their contracts, cannot now be relied upon, and it is too probable never can be.

"Virginia is yet in many things almost an empire, possessing agricultural capabilities, yet to be developed, of incalculable value, not to speak of her mineral treasures.

"Passing by, for the present, the great Valley and the valleys of

the rivers east of the Blue Ridge, let us take the Piedmont region, as remarkable for its salubrity as it is for fertility in some parts and barrenness in others. It is needless to speak of the former portion; but of the latter, the barrenness is only, it is believed, for the present, since the worn out tobacco lands have a recuperative power, which, in skilful hands, can, and it is hoped, will yet be developed.

“Who that has passed along the canal and railroad has failed to observe the galled and gullied hills in Amherst and Nelson counties, which seem to be utterly barren and irreclaimable? But this is not so, as here and there some ‘oasis in the desert’ proves, as I have seen myself.

Having, in the month of April last, enjoyed the hospitality of Mr. Zachary Lewis, of Nelson county, for more than a week, I had an opportunity of seeing what enlightened industry can effect in that region. There, upon hills which had been galled and gullied in the olden time, until they seemed to be incapable of production, every acre upon the rolling or hilly surface of a large farm was covered with fine crops of small grain and grass, not one unproductive spot visible, excepting, perhaps, only the homestead, which comprised quarters for sixty or seventy negroes of all ages.

“Put an English or Scottish tenantry upon the apparently barren hills of Nelson, Amherst and other counties in the range of the tobacco growing region, and what would be the result? Probably the introduction there of sheep farming, with heavy crops of turnips to be fed off upon the plan of folding by means of moveable hurdles, thus consuming every particle of the turnip crop, and in a short time enriching the land. I am not sufficiently informed to speak positively as to this mode of improvement, and the estimate is consequently rather conjectural than positive, but certainly the men who have thriven upon the Scottish hills, can scarcely fail in Virginia. We need not follow the lambs, the mutton and the wool to market, but let us glance over the entire Piedmont region from North to South, a very large portion of which is already rich enough for any agricultural enterprise, and it is easy to estimate what would be produced from it by an intelligent and industrious tenantry. Reference has been made to sheep husbandry only, but that same Piedmont region can easily produce every *bale of hay*, every bushel of *Irish potatoes*, every pound of *butter and cheese*, for which there is a demand in the markets of the tide-water region of the State and south of it—much of which has hitherto come, and is now coming from the North. At this time butter commands, in the Richmond markets, fifty to seventy-five cents per pound. Northern

hay in bales is plentiful, and I recollect seeing it, some years ago, more than one hundred miles above Richmond for feeding the packet boat horses.

“If we pass beyond the Piedmont region into the Great Valley, which is now penetrated by the canal and railroads, what limit can be fixed to its capacity for the production of grain, flour, fat cattle, horses, sheep, swine, indeed all that the East and South require from a soil unsurpassed in fertility.

“Let us hope that the next Legislature will give early and earnest attention to this most important subject. But let not the landholders of the State wait for the action of *any body*. Let them be wise in time and act immediately for themselves and their own best interests.

Excuse, if you please, this hasty and imperfect effusion—very far short, as I feel it to be, of the magnitude and importance of the subject.

“Very respectfully,
“WM. H. RICHARDSON.”

An Experiment in the Use of Salt.

For the crop of 1867, we were compelled to plant in Tobacco a piece of land, in regard to which we feared three things:

1st. Clover: it was clover very thickly set, which had not been grazed.

2d. The cut-worm: it was very rich and full of vegetable matter.

3d. Spotting: it was wet and level—very hard to drain.

We applied about a bag of ground alum salt to the acre in March.

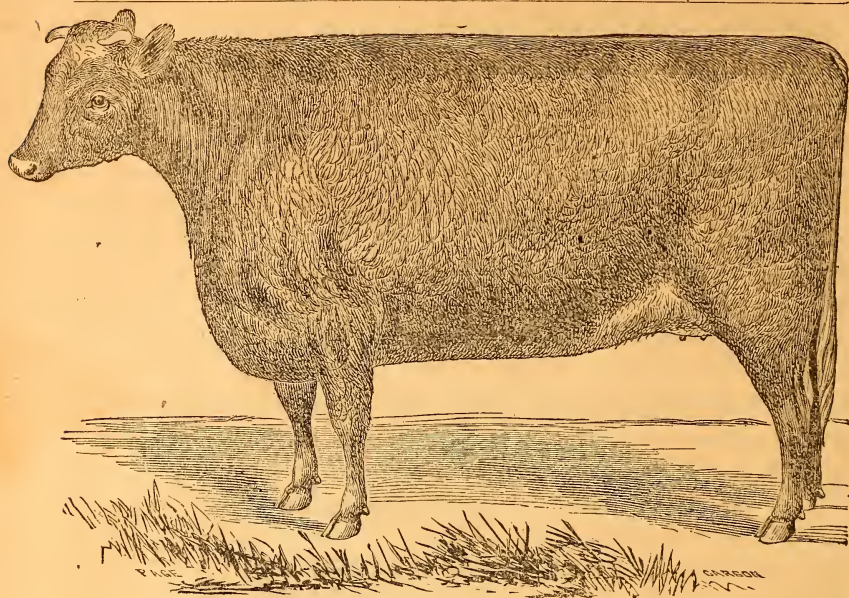
We did everything else we could. By ploughing, high hilling and draining, we kept the clover down. Did the salt help?

We were not troubled with cut-worm.

The spotting was not as bad as in other parts of the crop, where no salt was applied, because we did not expect to be troubled with it. How much credit must we give to salt?

S. A. S.

OUR success in life generally bears direct proportion to the exertions we make; and if we aim at nothing, we shall certainly achieve nothing. By the remission of labor and energy, it often happens that poverty and contempt, disaster and defeat steal a march upon prosperity and honor, and overwhelm us with reverses and shame.



EUGENIE,

Owned by H. G. White, Esq., Framingham, Mass. Got by "Brother Jonathan 2d," 2570, out of "Ada," by "Earl of Warwick," 465, etc., etc.

Corn and Hogs.

From carefully conducted experiments, by different persons, it has been ascertained that one bushel of corn will make a little over ten and a half pounds of pork gross. Taking the result as a basis, the following deductions are made, which all our farmers would do well to lay by for a convenient reference, that—

When corn sells for $12\frac{1}{2}$ cents per bushel, pork costs $1\frac{1}{2}$ cents per pound.

When corn costs 17 cents per bushel, pork costs 2 cents a pound.

When corn costs 25 cents per bushel, pork costs 3 cents a pound.

When corn costs 33 cents per bushel, pork costs 4 cents a pound.

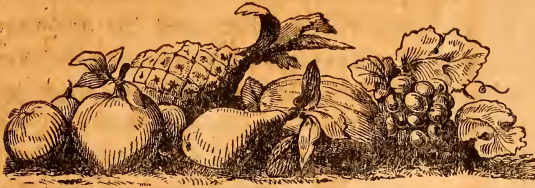
When corn costs 50 cents per bushel, pork costs 5 cents a bushel.

The following statement shows what the farmer realizes in his corn when sold in the form of pork:

When pork sells for 3 cents per pound, it brings 25 cents per bushel in corn.

When pork sells for 4 cents per pound, it brings 32 cents per bushel in corn.

When pork sells for 5 cents per pound, it brings 45 cents per bushel in corn.—*Journal of the Farm.*



Horticultural Department.

Virginia Horticultural and Pomological Society.

At a regular monthly meeting of this Society, held at the office of *The Southern Planter and Farmer*, on Monday evening, the 13th April, the subject under discussion being "the general culture and treatment of apples," Franklin Davis, Esq., opened the subject with the following able essay, which is sustained by his own experience and practice for years past. He handles the subject well, and gives much information that will be gladly received by our readers. The remarks of the gentlemen who followed him were to the point, and this first discussion of our Society may be pronounced "a decided success."

At the monthly meeting in May, John M. Allen, Esq., will, according to appointment, give us his views on "the culture of the grape."

MR. PRESIDENT,—The subject before this meeting for discussion being the culture and general management of apple orchards, I will offer a few remarks pertaining thereto, not that I think they contain anything new or more than is already known to every one here, but in the hope that they will open the way to a general discussion of the subject by wiser and better informed heads.

The apple, we must admit, stands at the head of the list in the catalogue of valuable fruits; it is a fruit for all seasons, and almost all countries, soils and situations. The long time it can be kept in a green state, and the many uses to which it may be applied, together with its capability of withstanding long distances of transportation, make it an item of considerable importance to the commerce of our country. Not only in our own towns and cities do they find a market at very remunerative figures to the grower, but a demand is already created abroad for products of our orchards; large quantities of American apples are annually shipped to Eng-

land and other foreign countries. The Newtown or Albemarle Pip-pin, as it is usually termed here, will command a higher price in the London and Liverpool market than any other apple; large quantities are annually sold in New York for shipment to these and other European markets, and the prices obtained for the choice ones is almost fabulous. With this taste created and the demand established, it is an easy matter for us to reap advantages from it. The limits of successful culture of this apple are very circumscribed, yet we have a considerable scope of territory in which it finds a congenial home. Nowhere perhaps in the country does this apple flourish better than in the Piedmont region of our own State, and there it can be grown to great profit, as well as many other sorts. But successful apple culture is not confined to this section alone; East and West of it they do well; tide-water Virginia can and does make it a very remunerative crop, as many of her people can tell you. Then looking upon it in a pecuniary light, is it not advisable for us to give it all the encouragement we can as a means of building up the shattered fortunes of our people? There need be no fear of overstocking the market; the demand is ahead of the supply, and the increasing population of our large cities, as well as towns and country, together with the more general use of this fruit, will tend to better prices than have heretofore been received. Our humble opinion is, that whoever plants an apple orchard of properly selected sorts, and takes care of it, lays the foundation for a sure and handsome income. In selecting a site for an orchard, we may say that it is generally conceded that a southern or eastern aspect is to be preferred; yet some contend that a northern slope is best. Our observation has not convinced us that there is any material difference in the product on either of these exposures. Perhaps in the Northern States it may be best to plant on a southern or eastern slope, that the fruit may have the full benefit of the sun, and that the wood may mature earlier, so as to be better able to withstand the rigor of their winters. On the other hand, in the southern portion of our country, where protection from the scorching rays of the sun is desirable, a northern aspect may be best; the sun's rays striking obliquely upon this slope, does not have the same force as when striking direct, as they would upon a southern exposure; but while it may make but little difference which of these exposures we choose in this latitude, there are serious objections to planting in low narrow valleys, especially if there should be a running stream of water through them. In these low and sheltered places the atmosphere becomes heated from the solar rays during

the day time, which causes vegetation to start earlier than in elevated or more exposed situations; then when the cooling influence of radiation has lowered the temperature of the surface of the earth, the air in immediate contact becomes chilled and heavier, and finding its way into the valleys, will often show a difference of several degrees of temperature, and as this approaches the freezing point, then comes the danger from frost. We have frequently seen the foliage of trees killed up to a certain line of elevation along the side of a hill or mountain, while above that line all escaped unhurt. This matter of elevation is not, however, a question of much importance except to those living in a hilly or mountainous country. Let the soil be a well drained one, either naturally or artificially so, and then we can hardly plant amiss. Almost any soil that will grow good crops of corn will produce fruit also. It is useless for us to attempt to point out any particular character of soil that would be preferred above all others, for one variety seems well adapted to this, and another to one of a different quality; for example, the Winesap flourishes best in a light sandy loam; no where does it produce as abundantly or as well developed fruit as in a soil of that sort; while the Pryor's Red must have a strong clay loam to develop its good properties and make it profitable to the grower.

We do not attach as much importance to the preparation of the soil before planting as many do, depending, as we do, more upon the cultivation afterwards; yet we would not discourage a thorough preparation of the soil previous to setting, for so far that is very good; but no matter how well the land may have been prepared, nor how well the trees may be set, if they are neglected afterwards they cannot flourish; give them diligent, unceasing attention. Every farmer knows how to make his corn grow, and every gardener knows what his cabbage needs to insure a good crop; if we apply the same principle of cultivation to our young apple trees, we would have no difficulty so far as cultivation is concerned; this is essential to the vigorous and healthy growth of a young tree. When the land cannot be cultivated, a mulching of a few inches in thickness will be found to answer the same purpose; it should be applied over a space embracing the whole area occupied by the roots. Whatever material is used for the purpose should be applied thick enough to prevent weeds and grass from pushing through it. Where mulching has been used for a few years, it will be almost necessary to continue its use, as in that time the roots will be found to occupy a space near the surface, as we see the trees in the forest where the leaves have been allowed to remain. To discontinue the

mulch and resort to cultivation of the soil, it would be found that that could not be done without serious injury to the roots; they would, too, be more exposed to the severe midsummer droughts that so often prevail here, while we think that a good mulch, if continued, would obviate the necessity of stirring the soil; yet, in consequence of the many difficulties in the way of using it on a large scale, we would advise the alternative of frequent stirring of the soil during the season of growth; this should be shallow, say three or four inches in depth. If this is continued from the time of planting, the roots will seldom find their way so near the surface as to be disturbed by the cultivator. While the trees are yet young and most need cultivation, some crop that requires summer culture might be allowed to occupy the space between them, provided the fertility of the soil is kept up by a generous application of some fertilizing agent. No crop, however, should be allowed to grow near the trees, nor within the area that the roots occupy. Low hoed crops, such as potatoes, peas, beans, melons, &c.; corn and tobacco, may also be grown with benefit to the orchard, but they draw heavily from the soil, especially the latter, from the date the trees are planted until they attain a size sufficient to bear a fair crop. Our object should be to make wood. We are very well aware that the wood-producing and fruit-producing principle are antagonistic, yet we cannot have much fruit until we have gotten a good supply of wood; it is therefore seldom desirable that a young tree should produce fruit, for it is always done at the expense of its growth. Different varieties of the apple seem to require different periods of time for reaching the fruit producing state, but it is expected that all, sooner or later, arrive at that point. While young, the pores are open or unobstructed, the circulation of sap is free and rapid, and the tendency is to form leaf buds; when older, the circulation is not so free or easy, and being retarded from whatsoever cause, the natural tendency is to form fruit buds. This is why dwarfed trees are more prolific than those on free stocks. The apple is made dwarf by budding, or grafting on the Paradise stock, the pear on the quince, and the cherry on the *Cerasus Mahaleb*, &c. These stocks being of a more diminutive growth than the species worked upon them, check the descending flow of sap, and it is then formed into fruit buds. We may induce a young tree into early bearing by lacerating the branches, or by bending down their ends during the growing season. As we said before, anything that tends to check the growth of wood will tend to fruit-producing. In nearly all instances where the habit of growth of the tree is upright, it will be more

tardy in reaching the productive state than those of a horizontal or drooping character.

Pruning, next to the cultivation, is the most important matter in the management of the orchard, but it is so often performed by inexperienced hands, and those who have but little idea of the principles that should govern the operation, that it is a question with us whether there is not really more injury incurred by an injudicious use of pruning instruments than would be experienced by no pruning at all. Before we begin the operation we should know our subject; we should know what is needed, and how to accomplish the desired end. To train a tree properly, we should commence while it is quite young; different varieties require different pruning; and we also believe that trees in different latitudes require different training. In the North they require sun and light; in the South, shade, to protect the stems and roots from the scorching solar rays; but in either section we deprecate the practice of training trees up four, five, or six feet before they are allowed to branch; this leaves a long stem exposed to the sun, frost, and wind, and a host of insects that prey upon the bark and wood, besides the deleterious consequences arising from sudden changes of the atmosphere. It is a very common thing to see these stems injured from these causes in a way that soon destroys the whole tree. Let them branch close to the ground: they will grow twice as fast as when trimmed up as high as a man's head; they will be more vigorous, and less liable to diseases and the attacks of insects; besides, they will always be found able to support themselves, never needing the support of a stake. While I think that some of the innovations made upon nature's laws may be, and are to our advantage, yet in the matter of training trees that are planted in the open field we might profit by patterning a little more after her. See how strong and sturdy each tree will grow when left to itself; it throws out its branches strong and numerous on every side, and with this abundance of branches will be found a corresponding supply of vigorous roots penetrating the soil in every direction in search of food. When we cut off a branch we strike an indirect blow at the roots. It will be found that the tree that has the fewest branches will have but few roots, and vice versa; this is demonstrated to us in our nursery operations in thousands of instances. It is also found that the side of the tree that has the most branches will also have on the same side a larger share of roots; this is obvious, as one is directly dependent upon the other; destroy the roots, and we destroy the tree; remove all the branches, and with them the leaves as they appear for a few

times, and it will share the same fate. The greater part of the food for the tree is drawn from the earth through the roots; this substance, then, in the form of sap, passes from the roots through the stem into the branches and leaves, then undergoes a preparation, commences its return, and in doing this is gradually absorbed or deposited in its course, forming the substance of the tree. When the leaves are all far removed from the tree, as is the case when the tree is trained with a long naked stem, this process naturally goes on much slower, and the returning sap becomes in a great measure absorbed before reaching the lower part of the trunk and the roots; this causes the tree to become top-heavy. As the trees grow by a circulation of sap from the roots to the leaves and back again, it follows that the nearer the leaves are to the roots the more rapid this circulation is accomplished, and the faster growth proceeds. No sap is of any consequence in the formation of wood until it has passed into the leaves and there been elaborated, the roots themselves being formed by deposits of this prepared sap returned from the leaves. Among the many other advantages of low-headed trees is that the fruit is less liable to be blown off than on tall, long branched ones, that would be swayed to and fro by the wind; the fruit is also more easily gathered, less liable to bruising when dropping off, besides the branches so shade the ground that little or no cultivation will be needed near the tree, and this will save it from many a rude bruise from careless ploughmen.

In training trees in this way, it is necessary to begin in the early stages of growth. As they generally come from the nursery they are not in the best condition for low training. It is the too common practice with nurserymen to trim their trees up too high, and also to plant their trees too closely in the nursery rows to allow a proper development of branches. I, as a nurseryman, plead guilty of this error; and while I am aware of its being wrong, I must at the same time endeavor to please my customers; and until they learn that it is better to have a tree with all its branches, we must continue to take them off. The longer trees stand in the nursery rows, at least after the second year's growth, the greater will be the difficulty in training them properly after transplanting. We would begin with trees say two years old, and prune off the ends of the branches, and head back the leader say to one half of last year's growth, having an eye at the same time to giving it a symmetrical shape; but for the loss of roots in removing the tree this pruning would go on farther than to rightly proportion the head; then an annual watching will be necessary. We would not advise pruning

further than to cut out branches that cross or appear to crowd each other; by careful watching this will always be attended to while the branches are small. The taking off of large limbs should be avoided, and we think small shoots along the branches, except the water sprouts should not be disturbed. Many sorts, amongst which are the summer Sweet Paradise, Gravenstein and Dominie, grow with such open heads as to preclude the necessity of scarcely even cutting out a branch. Nearly all these will need will be to keep them in shape by occasionally stopping the ends of straggling branches. After the trees have attained a condition to bear full crops, but little trimming will be advisable farther than to remove all dead branches. Neither should long neglected old orchards be severely pruned; better to let the large limbs remain on rather than take them off at the risk of premature decay of the tree; and, as before stated, we believe there is more harm done by excessive or injudicious pruning than would result from no pruning at all. As for the proper season for pruning, this depends almost entirely upon the object sought. If we wish a more vigorous growth of wood, prune between the cessation of growth in autumn and the re-commencement of the same in the spring; if we prune for inducing the formation of fruit buds, let it be done during the season of growth; this weakens the growth, and fruit buds are then formed instead of wood buds; this severe pruning or pinching checks the flow of sap, and the more it is checked in its circulation, the more likely it will be to produce fruit buds. The theory is, that in this slow circulation that the sap is subjected to, it becomes more completely elaborated in the tissue of the tree, and is therefore better adapted to the formation of fruit buds. Now if we want to produce fruit buds, we can prevent a free circulation by bending the branches down, or making incisions around the branch; but if we wish to develop a vigorous growth of wood, we give it a vertical position, or prune back to two or three buds; the sap being concentrated in these, makes a strong shoot. To direct the sap from the vigorous to the weak parts, cut off all the superfluous shoots on the strong ones early in the season, and let them remain on the weak ones as late as possible; the fewer young shoots there are on a branch, the fewer leaves there will be, and the less sap will be attracted to that part. We should bear in mind that leaves are essential to the growth of a tree, and should be careful to not divest it of an undue portion of them. Every leaf that is removed from a tree in the growing state tends to lessen its growth; hence the necessity of allowing the young side-shoots to remain on weak parts. Pinch the

strong shoots early in the season; this will check the flow of sap in that part, and turn it to the weaker ones that have not been pinched.

In pruning bearing trees, we should keep an eye on fruit buds; in the apple, these are generally on short spurs distributed along the branches. In the apple as well as the pear, these are generally formed two or three years previous to bearing. For the first two or three seasons, they produce but a rosette of leaves, continuing to lengthen. After they have fruited, they generally branch, and, if properly managed, will continue to bear fruit for many years. The trees in a fruitful condition will be found covered with these spurs on all parts, except the young shoots. This is, however, different in the peach, apricot, and nectarine, and they require a different mode of pruning. They bear their fruit upon the shoots of one season's growth, and the most important fruit branches on these trees are the most vigorous shoots of the last season's growth. These contain both fruit and wood buds, and in order to insure an annual supply of these important shoots, it is best to cut back during the winter and early spring, say one-half of the last season's growth of each branch. The number of fruit is lessened, but the remaining portion will be so much improved by this process of thinning that it will more than compensate for the trouble. And by this contraction of sap, a much more vigorous growth of branches will be formed, and these, possessing a good supply of fruit buds, will add greatly to the chances for a crop of fruit the next season. But this mode of shortening is not applicable to the apple and pear, when, as we said before, the most important fruit buds are found upon the spurs along the branches of the older wood of several years' growth. After an apple tree has reached a good bearing age, we do not think it well to prune farther than to remove branches that cross each other and water-sprouts, and pinch the ends of straggling or rampant shoots, so as to maintain a desirable shaped top, and to direct or attract the sap from one part to another; and it must be remembered that winter or early spring pruning will promote a vigorous growth of wood. While summer pruning or pinching lessens the growth of wood and adds to the fruitfulness of the tree, by careful attention to stopping by pinching such shoots as are drawing too much from other parts, a proper proportion may be established, and but little other pruning will be needed.

In conclusion, we cannot but urge upon our people the importance of the cultivation of the apple as a source of profit; and, with a soil and climate so well-adapted to its growth, we have everything

to encourage us in the enterprise. The few orchards of importance that are now yielding crops in this State bear evidence of the profits that await all who will bestow upon them the necessary attention. We are familiar with one orchard in this commonwealth comprising about forty acres, that, in 1866 netted its owner over \$2,700. In 1867, the same orchard produced a crop valued at \$7,000. A farmer, in another district, informed me that his orchard of about two acres, last year netted him \$600, besides what he used for home consumption. And I learn, from what I deem a reliable source, that the apples produced in Niagara county, New York, the past season, were sold for over \$510,000—over half a million of dollars. Now, suppose we had a few counties in this State producing apples to that extent which might easily be brought about, would we not soon feel the salutary effect of it in our pockets? But as one of our Pomological sages has written, "It is not, however, merely as a source of income, that the cultivation of the finer fruits become profitable—the family which is at all times supplied with delicious and refreshing fruit from its own gardens, has within its reach not only a very important means of economy, but of real domestic comfort."

An influence is thus introduced of an exalted character; a tendency is directly exerted towards the improvement of the manners of the people; every addition to the attraction of home has a salutary bearing on a rising family of children; the difference between a dwelling with well-planted grounds and well-furnished with every rural enjoyment, and another where scarcely a single fruit tree softens the face of blackness and desolation, may, in many instances, and to many a young man just approaching active life, serve as the guiding influence between a useful life on the one hand, or a roving and unprofitable one on the other; between a life of virtue and refinement, from early and favorable influences, or one of dissipation and ruin, from the overbalancing effects of a repulsive home. Nor can any man, even in the noon or approaching evening of life, fail to enjoy a higher happiness with at least an occasional intercourse with the blooming and loaded trees which his own hand has planted and pruned, than in the noise of the crowd and tumult of the busy world.

FRANKLIN DAVIS.

Richmond Nurseries, May 6, 1868.

At the conclusion of Mr. Davis' most interesting essay, Mr. Allan remarked: While fully coinciding with the greater portion of the very interesting and instructive essay just read by Mr. Davis, he

felt constrained to object to the impression which was likely to be created by what had been said concerning the preparation of the soil for an orchard. He (Mr. A.) thought that thorough preparation of the soil by ploughing and subsoiling was not only of prime importance, but essential to success with the orchard. Nor did he think that constant cultivation of orchards was desirable. He preferred mulching the trees well and putting the orchard down in grass. If the ground had been well prepared, and care was taken to prevent the grass from closing around the trees, this was the best method. It was better to cultivate, however, than to let the grass close around the trees or grow tall. He also called attention to the point now in dispute among scientific horticulturists as to whether the theory of ascending and descending sap was correct.

Dr. Johnson thought that much importance should be attached to planting and training trees in such a manner that they should be their own protection against the direct rays of the sun during our hot summers. Also, that our orchard grounds would be much benefitted, and require but little cultivation if the trees were planted sufficiently close and permitted to grow in such a way as to thoroughly shade the ground. He also remarked, incidentally, that, though fruit-growing was our "manifest destiny" in Virginia, we must not expect to attain great results at once. Much time would be necessary to determine what portions of the State were best adapted to the various kinds of fruit. It was hoped that the information disseminated by our Society would save many persons from costly and vexatious experiments ending in disappointment.

"Always be Planting a Tree."

Considering the cost, and small amount of labor, there is no one thing that so amply repays as the planting of a tree. Well-grown, it becomes always an object of beauty, a source of joy to the owner and his family—a pleasure to visitors and to the residents of a neighborhood—adds an appearance of increased value to the premises—improves the general effect of the scenery—becomes a protection from cold winds—reduces the severity of the temperature—enhances the rental value of a residence—often more admired than the most costly building; and, finally, can never be viewed without a thought of the supreme creative Power which "doeth all things well."—*Horticulturist.*

An Olitory Medley.

“Once my *garden* took up half my care,
Other business claimed the minutes I could spare.”

Mr. Editor,—In reply to your invitation to supply an article for your May number, I contribute the following olio, relating to many matters of interest connected with *gardening*, which, although it has been always considered an important part of domestic husbandry, has recently become of far greater concern to the people of the Southern “*districts*” than it ever was at any previous time.

I desire it to be understood that I write particularly for the benefit of the ladies, those excellent housewives of our Southern homes, who have this department of household economy under their special charge, and who, intent on relieving their husbands of as many cares as possible, deny themselves of even some of the comforts of life; and, refusing to be “indulgent of their ease,” rise early, and

“Cheered by a sense of duty, leave the bed,
When living embers on the hearth are spread.”

To all such, these desultory lines are dedicated; and if they shall tend, in any degree, to lighten their toils or to render their labor more productive, I shall be richly rewarded.

The first thing to be done towards *good gardening* is to have the land coultured or spaded *very deep*. I prefer the first named instrument for this service. This should be done in *the fall* of the year; and as soon as broken, the land should be raised into *high hills*, in order to render it more pervious to the winter’s frosts and to protect it from the rains of that season, the water of which will more readily pass off, by which the usual super-saturation will be avoided, and thus the ground will be far dryer and lighter, and so earlier and better fitted for cultivation in the spring. In the management of a stiff clayey soil, this is *indispensable*.

Those who have never tried it will be amazed at the result of the experiment. They will find that their land will be “in order” at least ten days sooner than that of their next-door neighbor, who follows “the fashion of his fathers” and allows his soil to be soaked and sobbed through the winter.

To prepare for sowing your seed, cut down the hills with a hoe, so as to level the land; then *coulter or spade it deep*, as before. For early vegetables, the rows should be laid off as nearly “*east and west*” as the surface of the land will allow. Raise ridges five or six inches high, rake them *on the south side (not on the top)* so as to give them an inclination of about forty-five degrees: open the

drill *near the bottom of the ridge*, so as to give the seed, and the tender plant when it shall have sprung out of the ground, the protection from the north wind which the ridges will thus afford, and you will be surprised to see how much sooner it will make its appearance and how much faster it will grow, than if left without this protection.

All of the earliest sowings should be managed in this way.

The character of the vegetable to be raised should be regarded. Those which have *no tap root* should be planted *very low*, though not covered very deep; whilst such as have this root should be planted *on ridges*.

To insure very early tomatoes, cucumbers, cymilins, and such like, select the seed of the earliest varieties and plant in hot-beds *three inches apart each way*; when about to transplant, take the plants carefully up with a garden trowel, having previously made the bed thoroughly wet, so as to make the earth adhere to the plant.

In this way, you remove much of the dirt with each plant; and if carefully done, they will grow off in their new home without being at all retarded by the removal. Should the sun be very hot, the plants should be sheltered for two or three days after being transplanted, by having grass or weeds thrown over three or four short sticks placed around them.

Much economy may be practiced in the cultivation of gardens, which those who are straitened in their land limits would do well to consider and to practice. As a proof of this, let me say that I often grow *four crops on the same square* in one year, having three of them growing at the same time. I sow peas in rows four feet apart, planting Early York cabbages three feet apart between the rows. Between each of these, I plant *late cabbages*.

When the pea-vines are removed, I plant a row of celery in the place from which they have been taken; or two rows of beets, salsify, turnips or the like—all of which have done well—none of them interfering with any of the others.

When you have plants of any kind large enough to set out, never wait for "a season;" but, having laid off the ground and marked the places where the plants are to be set, make holes five or six inches deep with your planting-stick and fill them with water, taking care *not to let any fall on the surface*, by which the land would be baked around the plant on the appearance of the sun. Allow time enough for the water to be entirely absorbed before you insert the plants, which should be pressed *very lightly* around the roots, and

they will grow off more readily than if planted when the land is thoroughly wetted by rain:

The above hints are the result of an experience of many years of close attention to gardening—in which I took great interest as long as the facilities were left me for prosecuting my operations to my satisfaction.

Now, however, it may be said that “Othello’s occupation is gone;” for when the Southern Confederacy *went down*, my gardener *went off*, and the “wards of the nation” have such a penchant for *garden-palings* that I find it impracticable to keep my grounds enclosed, and so they have gone to waste, waiting for a brighter day to come, when, I trust, we will be enabled to do better than at present. I have lost none of my fondness for the occupation, which I regard as one of the most interesting and *refined* in which man or woman can engage.

I comfort myself with the reflection, that although

“You may break, you may ruin, the vase if you will,
But the scent of the roses will hang round it still.”

Nor am I without hope that the vase itself will yet be restored whole as before, and adorned with like precious flowers as once gratified and delighted all who came within the range of their influence.

As all practical suggestions are valued according to the authority by which they are sustained, and as I do not desire that the above shall be over-estimated, I attach my name, and will be thankful if all your correspondents will do likewise.

TH. P. ATKINSON.

Danville, Va.

Strawberries.

Mr. Editor,—In compliance with your request, I give you the reasons that induced me to cultivate largely this, the earliest and most delicious of our fruits:

1. Because it is the earliest and most delicious of our fruits, in my judgment.
2. It matures, in our latitude, when we have the most abundant rains. Ordinarily, the harvest of it is over when the drought sets in.
3. It stands drought as well as clover or black-eye pea.
4. It stands the winter as well as wheat or clover.
5. It recovers from the heat or drought of summer in the fall

rains, and puts on strength for the severest winter and next spring's crop.

6. The bloom is rarely forward enough to be damaged by the frost, and never wholly killed by the latest frost. This has been my observation for ten years.

7. No insect will attack it.

8. No rogue can steal it. The best eye cannot distinguish a ripe one from a green one the brightest moonlight night; while the sense of feeling is too tedious a guide for patience or profit; besides, this sense will as likely select a half ripe as a ripe one; and, while you are gathering, you are guarding, in the day-time, from morn till eve.

9. Almost every other crop has drained our soil of its appropriate nutrition, and the strawberry is a capital succession.

10. With the proper fertilizers, proper cultivation, and the best varieties, it is the most profitable investment in horticulture in Virginia.

11. It is impossible to exceed the demand in the country for this fine fruit.

12. You can transplant from March till December.

LEO. ROSSER.

Oak Hill, near Richmond, April 16, 1868.

N. B.—I extract from my Horticultural Diary a statistical statement of the Strawberry Harvest in the vicinity of Richmond for seven years past, which may prove of interest to growers of this fruit:

1861.	Harvest began	May 11th,	closed	June 14th.
1862.	"	" 17th,	"	18th.
1863,	"	" 23d,	"	13th.
1864.	"	" 21st,	"	11th.
1865.	"	" 6th,	"	May 31st.
1866.	"	" 15th,	"	June 5th.
1867.	"	" 18th,	"	15th.

L. R.

Pear Blight.

Ed. So. Planter,—Is there any remedy for fire-blight in the pear tree? Or, rather, has the cause of it been discovered? For, if its origin is known, there may be some chance of providing a remedy; otherwise, very little. Experience has proven that Mr. Downing's theory of frozen sap will hardly do. The electricity theory is no

better, if as good, and I am slow to accept Mr. Meehan's idea that the blight is caused by a fungus, unless he will explain why other fruit trees, such as cherry, plum and apple, are not affected by the same.

It seems to me that if the pear-tree will absorb fungi, the cherry and apple will do it also. What think you of it? Have you any theory on the subject? And what remedies do you use?

M.

We prefer to let Mr. Meehan speak for himself concerning his theory of fire-blight. We confess that our mind is still unsettled—with, however, a bias in favor of the fungus. If we properly understand this theory, it is that a parasitic fungus germinates in the bark of the pear-tree, grows around the stem and destroys the circulation of the sap. Why it is found only on the pear, we cannot say. The only remedy of which we know is the free use of the knife as soon as signs of decay are perceived. This is not always successful, but it is the only thing worthy the name of remedy yet discovered.

NORWOOD, Craven County, N. C., }
 March 30, 1868. }

Editor Southern Planter and Farmer,—During the month of February, I planted twelve barrels of Irish potatoes on ground that was old, but in good heart and heavily manured with stable manure. I expect to get these potatoes into market about the latter part of May or early in June. And the ground now occupied by them, to which I shall add about ten acres of new-ground, I propose to plant in potatoes for November digging.

The information I desire is this: Will spring potatoes, dug in June, and as seed, recommitted to the ground within two or three weeks, produce the same season?

If matured, I have no doubt they would, but how, if immature; as early potatoes usually are?

Last year, not caring to run the risk, I ordered my potatoes (30 barrels) from New York. I propose to save this outlay, if it be possible, this year.

If you can give me the desired information, you will greatly oblige

Your subscriber and friend,

E. M. WILLIAMS.

We would advise our correspondent, under no circumstances whatever, to plant new potatoes. Even if they were all well matured, which it is hardly possible for them to be, in time for summer planting, it would be almost throwing away the chances for a moderate crop to plant them in the same ground the same year—worse than that the same month—that they had been grown upon.

The tendency to degeneration in the potato is greater, perhaps, than in any other vegetable; especially is this true in the Southern States; and our experience is, that whenever a good crop is desired, the only safe way to secure it is to procure seed from another section, the North being preferred.

We know of no surer method of hastening this natural tendency to deterioration, than by planting new tubers; and it would take a very few years of such treatment totally to eradicate the potato.

In some portions of Virginia, the Peach Blow variety seems to be an exception to the above rule, and home-grown seed may be used, but never the same season in which they are raised.

“Wine Plant.”

The following has been handed to us by a Philadelphia “Subscriber.” Extract—*Weekly Tribune*. American Institute Farmers Club—New York—meeting, Tuesday, March 3, 1868.

RHUBARB WINE.—The Club unanimously adopted the following resolution:

Resolved—By the Farmers Club of the American Institute, “that the selling of common rhubarb or pie-plant, in its different varieties, as a *Wine Plant*, is an attempt to deceive and to defraud the people of this country.”

Mr. Carpenter. I am glad this resolution has passed, but it is not strong enough. This wine plant is more than an imposition. It contains none of the properties of wine, and it is injurious. Hundreds of barrels are brought into this city (N. Y.) and sold at from twenty-five to fifty cents per gallon, and is used to adulterate other wines.

A. S. Fuller. I am glad to see this subject introduced—other miserable wines have been encouraged. We have had quite enough of Portugal grapes that grow on the Hackensack river.

Dr. Snodgrass—Was glad the Club had taken the initial step towards condemning these wines, and he hoped the day would come

when they would unanimously protest against the exhibition of all alcoholic liquors.—*Gardener's Monthly*.

[We had thought that this ridiculous humbug had long since exploded in the Northern States, and had hoped never to hear of it in the South, but we learn that parties are travelling over this State and North Carolina, giving most marvellous accounts of the profitableness and usefulness of rhubarb for wine.

If any of our readers are disposed to invest in it, we suggest to them as preferable the common dock weed, which would, we think, make a wine far superior to the rhubarb, at a smaller cost. Indeed, we see no reason why sheep-sorrel might not be used for the same purpose. The whole thing is a grand swindle.—ED. SO. PLANTER AND FARMER.]

Wine—A Mode of Making It.

[We clip the following from an exchange. It will be valuable to many of our readers who, from a few vines, wish to make wine for home consumption. as it is a simple and economical method.—ED. SO. PLANTER AND FARMER.]

I do not profess to be posted in the methods of wine manufacture—not even with any method. But I have lately become acquainted with a mode adopted by one of my neighbors, which I propose to report to your readers, and leave them to decide upon its value and the correctness of the reasoning which induced him to adopt it. The method and reasoning are these, as far as I can state them:

The ripe grapes are first mashed in a tub or vat, where they are allowed to remain till active fermentation ensues. They are then *drained*—not pressed—for a given period. The liquid thus obtained is carried to the cask intended for it, and allowed to continue its fermentation through a syphon. This first drawing he calls his first-class, or No. 1 wine.

He next adds to the grapes, still in the tub, water and sugar, in quantity, as he says, sufficient to give the mass as much sugar as it had in the beginning. This he also drains off, after fermentation, and places in another cask, to be treated as the first. This makes his No. 2, or second quality of wine.

The grape mass is still to undergo a similar process for the third, and in some cases the fourth time; draining, not pressing, each time. This makes his third class of wine and vinegar.

Now for the theory, if I can succeed in stating it. Nature, in the process of ripening the grape, has only prepared a portion of the juice for wine; while that retained in the pulpy or cellular por-

tion has yet to be disengaged or set free by fermentation. His theory is, that this fermentation disengages it; and draining is preferable as a means of separating it rather than pressure, which brings out the pieces of the skin and harder substances.—*Horticulturist*.

Shipping Strawberries.

To our correspondent who complains that his berries did not reach market in good condition we hardly know what to say. We certainly cannot explain it without more of the details than he has given us, though there are many reasons why he *might have* failed even with the best boxes. The boxes may not have been properly packed in the crates, or sufficiently well filled, to prevent jostling; or the berries may have been too ripe, or of some variety that will not bear transportation.

The boxes used by him (those made by the American Basket Company) are among the most approved now in use, but the "Beechen" basket, though higher priced, is preferred by most of our small fruit-growers in this vicinity, as being neater and more durable.

Messrs. Allan & Johnson, of this city, inform us that they are now ordering largely of both kinds for persons who experimented with them last year.

We think we can assure Mr. H. that if he will grow the *right kind* of strawberry, say "Russell" or "Wilson," will gather them when not too ripe, and pack the boxes tight enough to prevent their shaking about, he may send them hundreds of miles and be sure of their reaching their destination in good condition.

Cultivation of Pear Trees.

B., Baltimore County, Md., says: I, last fall, planted out a small orchard of pear trees, and want to cultivate them according to the best system. The ground, last year, was heavily manured and subsoiled to the depth of some fifteen inches, and planted in potatoes. After the potatoes were dug, it was again well ploughed, and the trees planted early.

Now, will you tell me—1st. How *you* would proceed if they were your own? 2d. Have you on hand a number of your *Monthly*, in which you explain fully your method of cultivating trees in sod—if so, I will send on and get it.

We should seed the orchard down to grass this spring. If they were planted originally with the view of cultivating between, and of course set very wide apart, plant another lot so as to make double the number, and give the whole piece up to the trees. Be careful not to let the grass *grow long* about the young trees, or it will take away *the moisture*, which the young trees ought to have. Cut down the grass several times a year, and this will do it. Let your trees branch very low, and they will soon keep the grass down for themselves. Top dress occasionally to maintain the fertility of the soil. This is the whole system in a nut-shell. It is not "our" system. When a boy, we could not but note the superior health of trees in pastures, and on lawns which were regularly mowed, over those grown in vegetable gardens where the soil was constantly dug about the roots; and all we have since said has been only this and nothing more.—*Gardener's Monthly*.

Cabbages.

* * A good and rather stiff loam is best adapted to Cabbages. They require a considerable portion of manure if the land is not naturally rich, or if they are cultivated as a part of a regular rotation. The cause of failure is generally in the careless manner of planting. * *

The ground having been well prepared, and being in good heart and tilth, the plough should open a deep and narrow furrow. The plants having been carefully taken up without breaking the fibres of the roots, the tops should be cut off to about two inches from the crown; then from a basket where the plants should be carefully laid, dip the roots of each plant in a pail of moisture formed by mixing rich mold with urine to the consistency of soft mud, dropping the plants in the furrow two feet apart. A slight push will cause them to adhere to the fresh soil, and this treatment will seldom fail. The repeated use of the plough between the rows is necessary for the growth of the Cabbages as well as highly useful to clear the land. By this mode of cultivation much labor is saved, and if the ground has been well-prepared and sufficiently manured, an astonishing weight of solid food for cattle is obtained, which, in my humble opinion, is far preferable to any of the root crops. The best sort to plant in the field is the large red, or the Scotch Drum-head Cabbage.—G. W. N., in *Mirror and Farmer*.

Enquiry Answered.

Editor of Planter and Farmer,—Allow a subscriber to recommend to your correspondent *Watermelon*, from Prince Edward, the use of charcoal—powdered very fine and sprinkled over the plants as soon as attacks from insects are observable.

He does not know that it will prevent the ravages of the Lady-bug, but for all other insects that feed upon young and tender plants, it is “dead-shot.”

He does not recollect ever having seen the “Lady-bug,” and hence knows very little of its character and habits, but feels confident that great benefit may be derived from its use. Your subscriber has applied charcoal, prepared in this way, to cabbage-plants when *apparently destroyed* by small bugs, and has invariably found that the bugs would disappear immediately and the plants assume a vigorous and healthy appearance. He prefers applying while the dew is on the plant, in order that quite a large proportion of the coal may remain on the plants.

Will *Watermelon* try this, and give the *Planter and Farmer* the result?

As rains frequently wash off the charcoal almost as soon as applied, one application may not be sufficient, and therefore careful watching is necessary to determine whether a second or third may not be needful.

SUBSCRIBER.

HORTICULTURAL PATENTS.—*S.* says: I notice that a patent has been granted to one Mr. Vermilga, of Dayton, Ohio, for an “Invigorating Composition for Fruit Trees,” consisting of

3 lbs. sulphate of copper,
1 lb. sulphur,
1 oz. saltpetre,
 $\frac{1}{2}$ lb. iron filings.

Judge Cadwallader, of Pennsylvania, has decided that want of novelty is fatal to a patent-right. There is no novelty in the above—all of the items, and in about the same proportion, have been used to “Invigorate Fruit Trees,” by those of old time. The taste for horticultural patents is a curious one. Why not patent the use of dead monkeys for pear trees? Dead hogs have been tried, but monkeys would be a “novel” idea.—*Gardener's Monthly*.

Household Department.

Bees.

To Editor of *Southern Planter and Farmer* :

DEAR SIR,—Ill health and pressure of engagements have prevented me from preparing an article on Bees for your May number, as you request. In lieu of such article, I send you some articles on the subject, published in the *Charlottesville Chronicle* last year, which I can fully endorse. I mark such changes as to adapt them to your paper.

In my own apiary, I use the Langstroth hive. I prefer it as improved by Mr. Richard Colvin, of Baltimore. I have a model hive bought of Mr. Langstroth himself, but Mr. Colvin's are far better made, and his improvements I think valuable.

I assume that no one acquainted with the present state of Bee-culture would be content to use any hive which did not employ movable combs, the essential feature of Mr. Langstroth's invention.

Yours, very respectfully,

WM. DINWIDDIE.

LANGSTROTH ON THE HONEY-BEE. Third Edition. J. P. Lippincott & Co. Philadelphia: 1865.

PATENT-OFFICE REPORTS FOR 1863 AND 1865—Department of Agriculture—Articles on Italian Bees and Bee-Keeping.

We think it well at this time to lead our readers aside from the dreary prospects of our political condition, to contemplate the more pleasant subject presented in the volumes which head this article. Whatever else our conquerors may take from us, we suppose they will still leave us the privilege to *work*; and it is an object with all of us to find a field of labor which shall be pleasant as well as profitable. Bee-keeping seems to embrace these requisites in a remarkable degree. We believe that our readers in general are not aware of the great advances which have been made in this science in the last twenty years. These advances are, in great measure, due to two clergymen, one the Rev. Mr. Dzierzon, of Prussia, the other the Rev. L. L. Langstroth, of this country, who have greatly extended our knowledge of the subject by scientific discoveries made by ingeniously constructing the hives of the Bee so as to place the whole life and work of these wonderful insects under the eye of the patient and enthusiastic observer.

The essential principle in the structure of their hives, adopted nearly simultaneously by both these gentlemen independently of each other, is this: that each sheet of honeycomb must be kept separate from each other, and capable of being easily removed, exchanged, and replaced. This end is attained by bars or slight frames to which the combs are so attached as, in Langstroth's hives, not to touch the side, bottom, or top of the hives, allowing the bees free passage and ventilation in every part.

It will be at once seen that hives so constructed give the greatest facilities for inspecting their interior. Enthusiastic observers have made such use of these facilities, that hardly an important point in regard to the nature and habits of the Bee now remains obscure. The result is that Bee-keeping more than any other branch of rural economy, is regulated by well-defined and clearly-established laws, and may be conducted with almost perfect certainty of success.

Mr. Langstroth's book is a complete manual of Bee-keeping, illustrated with numerous cuts, putting the young Bee-keeper in possession of the most accurate information in regard to the whole subject, and explaining every point in the structure of his hives, even to giving exact bills of the lumber required in their construction. It will richly repay perusal to any intelligent person, whether he proposes to keep Bees or not. We design to give a rapid summary of some of the more important conclusions reached, as the simplest means of making our readers aware of the present state of the science.

In every healthy hive of Bees at the time of swarming, there are found three kinds of bees—drones, worker-bees, and a queen. The drones are the males, the queen is the only perfect female in the hive, the workers are females imperfectly developed.

The queen is the mother of the whole colony. Her fertility is prodigious. In full season she lays from one to three thousand eggs per day. From sixty to one hundred thousand Bees are often reared from a single queen in one season.

The impregnation of the queen is the result of her meeting with a single drone once for life. The drone perishes in the act. It takes place on the wing high in the open air.

The eggs of an unimpregnated queen will produce drones only. Those of an impregnated queen will produce drones or workers at her option. The workers under some circumstances lay eggs. These produce drones only. The worker bee emerges from its cell a perfect insect in twenty-one days from the deposition of the egg. Queens are hatched from worker-eggs by one of the most wonderfu

and beautiful processes in all natural history. The partitions of three contiguous cells are removed by the Bees, and in their place is constructed a single cell very much like a pea-nut in size, shape, and appearance. This cell they supply with peculiar food, called the royal jelly. The queen emerges in sixteen days from the deposition of the egg. When bees lose their queen by accident, or when they purpose to swarm, they raise from one to a dozen or more queens. In case of swarming, as soon as the first of these young queens is ready to emerge from her cell, the old queen leads out the swarm. The first queen which emerges instantly proceeds to destroy the others yet unhatched.

The queen lives about four years; the workers one year; the drones only a few months.

Bees may be easily tamed, so that instead of rushing at you in anger when you open their hives, they will greet you as a friend and come up to feed from your hand.

By the aid of movable combs natural swarming can be dispensed with entirely, or you can regulate it within such limits as you may desire, so as to prevent the losses which often result from excessive swarming and from the running away of your Bees. These combs also enable one to strengthen weak swarms, or to combine several swarms with the utmost facility, and in general to manipulate these fiery insects with an ease and familiarity that is astonishing.

The formidable sting of the worker-bee is only too well known. The drones have no sting. The queen has a most powerful sting, but no amount of teasing, squeezing or provocation can induce her to use it against you. She reserves it exclusively for mortal combat with other queens. For an account of a most extraordinary combat of this kind, see Langstroth, pp. 205-7.

The affection of the workers for their queen is very noticeable. They open the way for her with all deference as she passes through the hive. When she stops, they cluster around her, caressing her from every direction with their antennæ, offering her honey, and giving every evidence of unmistakable affection. When they lose her from any cause, their grief is frantic. They rush through the hive in every direction, sometimes suddenly stopping when they meet, crossing their antennæ as if to interrogate each other, then as suddenly rushing on through and out of the hive, scouring the whole neighborhood in search of their mother, the whole mass pervaded with the deepest sorrow, indicated by a plaintive wail touching to hear. When you have caused this trouble by a temporary removal of the queen, it is most beautiful to see their joy if you re-

turn her to the hive. Those nearest her instantly change their note to the characteristic contented, happy hum, which is caught up and carried on until every Bee in or out of the hive is brought in and clustered around the queen. Sometimes those favored with nearest access embrace her with such ardor and persistency that she is literally *hugged to death*.

We are not surprised that some of our friends have expressed to us a doubt whether these results of the investigations of Langstroth, Dzierzon, and others, are really true. It seems incredible to many that so much should be known with such accuracy about the mysterious recesses of a Bee-hive. We can only advise such persons to see one of Langstroth's hives, with the latest improvements, to convince them that to those who use these hives the whole life and work of the Bee is laid open to observation.

The introduction of movable-comb hives marks an era in Bee-culture both in Europe and in this country. "The general diffusion of the Italian Bee," says Dzierzon, "will form as marked an era in the Bee-culture of Germany as did the introduction of my improved hives." Dzierzon introduced these Bees into Germany in 1853. Several attempts were made to introduce them into this country, but not with success until the year 1860. The previous use of movable combs had prepared the way for their rapid diffusion. The Patent-Office Reports for 1863 and 1865 give full particulars of the management of these Bees, whose superiority it seems was celebrated in the days of Virgil. (Georgicon Lib., IV. 98.) Dzierzon, we learn, now cultivates this variety of the Bee exclusively.

We extract some remarkable statistics from the Patent Office Report for 1865 as to the working of these Bees in Iowa:

"In the summer of 1863 I had but two stands of Italian Bees, and these not pure. One of these stored 110 pounds of honey, besides giving three swarms. The other gave two swarms and stored 96 pounds of honey. All the swarms filled their hives, and some of them stored honey in boxes. I had, the same season, 56 hives of common Bees, but not one of them stored a pound of honey, though a part of them were divided. That was the poorest honey-season ever known in this section." "In the summer of 1865, I averaged from nine Italian colonies 119 pounds each. The best of these shows the following record in my journal: One free swarm, taken from it the 20th of May; 136 pounds of honey taken in boxes; stored by the swarm, 80 pounds; from the swarm there came a swarm, August 15th, which filled its hive and partly filled

two boxes. Thus we have 236 pounds of honey, besides two large swarms, from a single hive! The same summer I had 30 stands of common Bees, which I prevented from swarming, yet with no increase from them. I obtained only 1,655 pounds of honey, or an average of about 56 pounds of honey to each. The largest yield from any was 96 pounds."

"In 1865 I had an average of 93 pounds from six Italian colonies, all of which were divided once, and much disturbed by taking brood from them to rear queens. During the same time I did not take a pound of honey from any colony of common Bees, though I divided them all, and gave each an Italian queen."

"I claim that facts like these are conclusive."

And so they seem to be to us also. This great superiority of the Italian Bee is due mainly to two facts. It is greatly more prolific, and it has a longer bill than the common Bee, which enables it to gather honey from flowers which the common Bee cannot reach, e. g. common red clover., from the first crop of which, it is said, the Italian Bee gathers honey in dry seasons when the flower is short, and from the second crop of which it gathers honey at all seasons.

Accurate measurements give no difference in the size of the cells of the Italian Bee as compared with those of the common Bee. Their bodies are somewhat longer, their strength and agility so superior that in every encounter they overpower the common Bee.

In appearance, the Italian Bee is beautiful. The body is more tapering than that of the common Bee, which gives it a very graceful appearance, and it is conspicuously marked by bright, golden bands encircling the abdomen.

Its most remarkable characteristic, however, is its gentle disposition. A sheet of comb covered with them may be taken from a hive, and not one of them will fly at you, or ever leave its place, but patiently and gently undergo any length of examination. Nor will they use their stings unless pressed or wantonly irritated.

STRAWBERRY SHORT-CAKE.—Mix some dough precisely as you would for biscuit; bake in one cake, on a round tin. When it is baked, split it open and butter it well. Have your berries prepared with sugar, and cream also, if you like; pour them upon the lower crust of your cake and place the upper one over them.

J. T. H.

THE SOUTHERN PLANTER AND FARMER.

RICHMOND, VIRGINIA,

MAY, 1868.

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PAYMENTS.

Subscriptions—in advance. Advertising—annual—quarterly in advance. All others in advance.

Editorial Department.

Error Corrected.

In the beautiful poetic gem, '*The Violet in the Snow*,' which we published in the April number of this Journal, the first line of the fourth stanza is so marred by the printing of "hue" for "here," that we call the attention of our readers to it, that they may make the correction.

"And then I saw the moral here," is the correct reading of the line referred to.

To Our Subscribers.

From the commencement of the new series of the *Southern Planter* to this time, there has not appeared upon its pages a single paragraph which even a latitudinarian can construe or torture into the semblance of a dun; and we had fondly hoped to be spared the mortifying necessity of breaking the run of this record. But, "who planteth a vineyard and eateth not of the fruit thereof? or who feedeth a flock and eateth not of the milk of the flock?" If, then, the laborer is, indeed, worthy of his hire, why, all we have to say, for the present, is, "muzzle" not "the mouth of the ox that treadeth out the corn."

We have a word to speak to some of the subscribers of *The Farmer*, whose names were transferred to the list of the *Planter and Farmer*, and who, after receiving, some two, some three, and some even four numbers of the consolidated Journal, have *naively* (not to draw too fine a point by spelling it with a k), returned the last number sent them, without at all seeming to remember that every number they retain costs us a shilling. Why don't they return all, upon the obvious principle of justice, which was recognized by the Jewish mother, who, when her son was unfortunately killed at some public exhibition, approached the manager and thus addressed him:

"Sar! I be's de moder of de poor Chew lad
Dat meet misfortin here so bad.
Sar! I mus haff de shilling back you know,
As Moses haff not seed de show."

Helps for Those who Desire to Write for this Paper.

The Board of Trustees of the Illinois Industrial University have issued a general Circular to the Farmers of that State, propounding, among others, the following inquiries, which we commend to the attention of our readers as suggestive of many important topics upon which they may profitably employ their pens for the benefit of our Southern Farmers. These inquiries are as follows:

“Location of Farm.—What is the location of your farm; its distance from market town or shipping point?

“Soil.—Character of surface-soil, as to depth, color and consistency; of sub-soil, whether clay, sandy or gravelly; with varieties of plants and trees growing spontaneously?

“Size of Farm.—Number of acres in your farm; number in cultivation; number in woodland or wild pasture; division of fields; rotation of crops?

“Cultivation.—When was your farm first put in cultivation; kind of crop taken off; to what extent does the soil seem exhausted by cultivation; have you used manures, and if so, with what results; your experience in deep ploughing and its effect on soil and crops; best ploughs or other implements for breaking up ground?

“Grasses, Clovers, etc.—What do you find most suitable varieties for pastures and meadows; mode of seeding and quantity sown per acre; largest and average yields of meadow lands; average number of live stock of different sorts pastured per acre; experience in top-dressing meadows and its effects; stage of growth at which grasses, etc., are best cut for hay; implements preferred for hay-making?

“Grains.—Best varieties of corn, wheat, oats, rye, barley, buckwheat, etc., that have been tried in your neighborhood; the best time and method of preparing ground for each of the small grains; time and method of planting or sowing; drills, sowing-machines or planters that you have tried and found best; best harrows and rollers; cultivation of corn, with the kind of implements used; experience, if any, in cultivating wheat by horse-hoe, or otherwise; time of cutting up corn; method and implements; time of cutting small grains; reaper or header employed; practice in shocking, stacking or putting small grains in barn; largest average yield; insects and diseases and methods of subduing them?

“Root Crops.—Best variety of Irish and Sweet potatoes, turnips, beets and carrots; time and method of preparing ground; mode of planting; method and means of cultivation; largest and average yield; methods of digging and keeping; cost and value as compared with grain crops for feeding; insects and diseases?

“Legumes.—Best varieties of peas and beans; their management; cost and value as feed-crops?

“Textile Plants.—Your experience with flax, hemp and cotton; best variety, method of planting, cultivating, etc.; value as a farm-crop?

“Ground Plants.—Pumpkins, squashes, watermelons, etc.; management; cost and value as a field-crop; insects and diseases?

“Miscellaneous.—Hops, broom-corn, sorghum, onions, chickory; growth, management and value as a farm-crop?

“Orchard Fruits.—Apples, pears, peaches, cherries, preferred varieties for various purposes; preparation of ground; planting, cultivation, and pruning;

gathering and keeping of fruit; packing for market; fruit-houses and cellars; value of orchard products as a farm-crop; insects and diseases?

“*Small Fruits.*—Grapes, currants, gooseberries, blackberries, raspberries, strawberries; varieties preferred; mode of preparing ground; planting, cultivation, pruning, draining and gathering; value as a farm-crop; insects and diseases?

“*Live Stock.*—Cattle, horses, mules, sheep, swine; breeds preferred; breeding of each; rearing and training; dairy management; fattening of animals; wool-growing; management of manures; diseases?

“*Other Domestic Animals.*—Poultry, bees, silk-worms, etc.; best breeds; rearing and management; diseases?

“*Rural Architecture, etc.*—Houses, barns (for hay and grain and different kinds of stock), root and fruit houses, etc.; the materials preferred; best arrangement for economy of labor and comfort.

“*Fences.*—Material preferred; cost per rod and cost of keeping up hedge, board and rail fences; value of hedges for protection; is it cheaper to fence out stock than keep up?

“*Capital.*—Capital per acre required for good farming?”

Rodunda Island Guano.

We re-publish, by request of Mr. Newton, the following letter from the *Richmond Enquirer and Examiner*; and, as Messrs. Crichton & Son have the right to expect to be heard in reply, we anticipate their request to that effect by annexing it below as we find it in the same paper of a later date:

“LINDEN, WESTMORELAND COUNTY, VA., }
THE HAGUE P. O., April 11, 1868. } .

“*To the Editor of the Enquirer and Examiner:*

“I have received a number of letters, from time to time, making inquiries in regard to Rodunda Island Guano. To these letters I have returned civil replies, explaining my connection with the article. To-day I have received three additional letters, and have seen the editorial in your paper referring to me by name as recommending it. Permit me to save myself the labor of further correspondence by publishing a few lines in your paper. In 1866 I determined to make a number of experiments with various fertilizers in corn. For this purpose, I purchased several, and was gratuitously furnished others through my agents in Baltimore. The land was measured and the experiments carefully made, with a view to report results to the Agricultural Society. The results were so unsatisfactory that I made no report of the experiments.

“In reply to inquiries by Messrs. Crichton & Co., who had politely sent me a barrel of Rodunda Island Guano, I stated all the circumstances; regretted very much the failure of the experiments, and expressed the opinion that our Farmers would have to manufacture their own composts. I proceeded, however, to say what was literally true, that although none of the experiments were successful, that the Rodunda Island Guano, at half the cost, had produced quite as much effect as any of the fertilizers. The season was dry, and the failure may possibly be thus accounted for. My letter was not intended for publication, although I should have had no objection to publishing it entire.

When I saw the use made of the extract in the advertisement of Messrs. Crichton & Co., I wrote to them that it was calculated to mislead, and I wished it omitted in their future publications. They promised to comply with my request, but although stricken out of some of their notices, it has been continued in others, and has involved me in quite an extensive correspondence. I should be happy to see all fertilizers successful, as the improvement of our lands is greatly dependent on bought manure, and I have no disposition to do injustice to any of the dealers in them. The Rodunda Island Guano may be a very good manure, and worth trying, but I am unwilling that any one should engage largely in its use on my recommendation.

WILLOUGHBY NEWTON."

"BALTIMORE, April 18, 1868.

"To the Editor of the Enquirer and Examiner, Richmond, Va.:

"SIR,—We have just seen in your paper a communication from the Honorable Willoughby Newton, with reference to his opinion of the Rodunda Island Guano, as communicated to us in a letter from him, dated April 3d, 1867.

"The article referred to does us so much injustice that we ask permission to make the following statement in your columns.

"On the publication of Mr. Newton's letter, he wrote us, requesting that unless we published his *entire* letter, to withdraw his certificate. We addressed the following in reply:

'BALTIMORE, May 2d, 1867.

'Willoughby Newton, Esq., Linden:

'DEAR SIR,—Your respected favor of the 1st instant is at hand, requesting us to withdraw the certificate, under your name, of the value of Rodunda Guano. We regret that you should complain of the publication of your note to us. It was for the very purpose of obtaining from you a *candid opinion* of its value, that at the suggestion of a friend we sent you the Guano.

'Your letter was too long to publish *in extenso*, (and such things are expensive in our 'monthlies,') but we cannot see, on careful perusal of it, that we perverted, distorted, or 'misled the public' by the extract.

'The words published are *VERBATIM ET LITERATIM*—not mutilated, but the sentence is perfect as written by yourself.

'We did not think it necessary to publish the commentary on fertilizers in general, nor the fact that 'you thought of engaging largely in the manufacture of fertilizers.'

'Our only intent and purpose being to attract the attention of Farmers to a *new, valuable and cheap Guano*, (not a manufactured fertilizer,) believing you would agree with us, that Farmers have been, and are, paying unjustified prices for manures.

Very respectfully, yours,

WM. CRICHTON & SON.'

"A few days subsequently, a son of Mr. Newton was introduced to us by a mutual friend in our city; we exhibited to him the letter and response. He stated he saw nothing objectionable in it, and handing him the original, desired of him to give it to his father, (supposing he had not retained a copy of it,) and if, upon perusal, he found any departure from the strict text and context, we would withdraw it from publication. We have never heard from Mr. Newton to this day.

“Mr. Newton did not state to us ‘his letter was not intended for publication,’ or we assuredly would have considered it a breach of courtesy to do so. Our sole object in sending him the Guano for trial was for the *very purpose* of obtaining from his long experienced and practical knowledge an opinion of its merits—and this he did by saying what he now reiterates, ‘that the Rodunda Guano, at *half the cost*, had produced quite as much effect as any of the fertilizers tried at the *same time*.’

“If ‘the season was dry, and the failures of others thus possibly accounted for,’ may we not ask, was not the full effect of Rodunda equally hindered from the same causes?

“We sincerely regret the annoyance Mr. Newton has been subjected to in the labor of replying to the numerous letters received upon so interesting a subject to the Farmer; and further, that he has found it necessary, ‘at this late day, to question the accuracy of his own report upon the results of a Guano which has, in the past two years, (since his experiment,) earned for itself a reputation equal to any fertilizer ‘costing double the money.’

The analyses and reports of Professor David Stewart, M. D.; Dr. James Higgins, late State Agricultural Chemist of Maryland; the opinion of Peter Warwick, Esq.; Hon. W. S. McPherson, Superintendent of Agricultural Bureau of Maryland; and the numerous highly respectable names published by us of well-known Planters and Farmers of Maryland, who have used it on all description of crops, and the sale of upwards of 3,000 tons during the aforementioned period, sufficiently attest the value and estimation in which it is now held, and confirm the valuable opinion expressed by Mr. Newton in the early introduction of the Guano.

“Practical results are worth more to the Farmer than all essays, formulas, and theories. Upon PRACTICAL RESULTS we are quite willing to rest the character and value of the Rodunda Guano. We beg to assure Mr. Newton, since the publication of his name is not agreeable to him and no longer necessary to the introduction of the article, it shall not appear in our future publications.

“If the letter of Mr. Newton is still in his possession, we cordially invite its publication *in full*, at our expense.

Respectfully,

WM. CRICHTON & SON.”

We insert with pleasure, as an act of courtesy due to Dr. Gaillard, the following notice, but not without the deepest regret that in the mutations of human affairs the city of Richmond should be so great a loser by the removal of a citizen whose fine talents, professional accomplishments, moral worth and social qualities had rendered him an ornament of our society and secured to him the respect and esteem of so many warm friends.

We tender to Dr. G. our cordial wishes for his prosperity in his present and all future engagements:

“Dr. E. S. Gaillard, editor and proprietor of the *Richmond Medical Journal*, Va., having resigned the Professorship of General Pathology and Pathological Anatomy in the Medical College of Virginia, and having accepted a similar Professorship in the Kentucky School of Medicine, the Journal mentioned will hereafter be published at Louisville, Ky. The title of the Journal will be, *The Richmond and Louisville Medical Journal*.

"The following gentlemen have become Associate Editors of this work: Professors G. S. Bedford, New York; T. S. Bell, Louisville, Ky.; J. C. Cabell, University of Virginia; S. E. Chaillé, New Orleans; S. C. Chew, Baltimore, Md.; J. J. Chisolm, Charleston, S. C.; S. H. Dickson, Philadelphia; F. H. Hamilton, New York; J. M. Holloway, Louisville, Ky.; L. S. Joynes, Richmond, Va.; Z. Pitcher, Detroit, Michigan; Lewis A. Sayre, New York; Alfred Stillé, Philadelphia; T. Gaillard Thomas, New York; W. H. Van Buren, New York.

"All communications should be addressed to E. S. GAILLARD, M. D., Locked Box 29, Louisville, Ky."

Ober's Tobacco Compound

Is a new preparation, offered this season for the first time, and for which Mr. Ober asks a fair trial. Knowing that Tobacco extracted annually much lime, potash, etc., etc., from the soil, he has striven to supply these in such quantity as to sustain and promote the growth of the plant.

The high personal character of Mr. Ober is the best guarantee we know of that his work has been well and faithfully done, and that he will not knowingly deceive the public.

Death of Joseph Jackson, Jr., Esq.

At a meeting of the Virginia Horticultural and Pomological Society, held at the office of the *Southern Planter and Farmer*, on Monday evening, the 6th instant, on the announcement of the death of Joseph Jackson, Jr., Esq., (the recording secretary of the Society,) the following resolutions were offered by Wm. L. Hill, and unanimously adopted:

It having pleased Almighty God to remove from our midst, by the hand of Death, Joseph Jackson, Jr., Esq., the honored and useful Recording Secretary of this Society, we deem it a duty as well as a privilege to give expression to our appreciation of his worth, and the loss we sustain in his demise: Therefore,

Resolved, That while we recognize and submit to an All-Wise hand in this dispensation, we feel that this Society has lost in Mr. Jackson one of its earliest, most active, and efficient members—one who was ever zealous in its behalf, and ready to sacrifice personal interest for its advancement. As a faithful officer of the Society, as a practical horticulturist and pomologist, as a good citizen, and as a personal friend, we deplore his loss.

Resolved, That a copy of these resolutions be sent to his bereaved family, with assurance of our earnest sympathy, and that copies of the same be furnished the city papers and the *Southern Planter and Farmer* for publication.

Book Notices.

THE NEW ECLECTIC for May comes to us with an exceedingly interesting table of contents. It should be in every Southern household, and at the low price of \$4 per annum, is within the reach of many who *ought to*, but do not take it.

Address Lawrence Turnbull and Fridge Murdoch, Editors and Proprietors, 49 Lexington Street, Baltimore.

The National Publishing Company, 26 South Street, Philadelphia, announce that valuable work, **THE WAR BETWEEN THE STATES—ITS CAUSES, CHARACTER, CONDUCT AND RESULTS.** By Hon. A. H. Stephens, of Georgia.

They want Agents for it throughout the country generally.

no back cover which we received
THE GALAXY. The May number of this handsomely illustrated monthly has been kindly sent us as an exchange, and we are glad to see that it is sustained by some of the best writing talent in the country. The price is \$4 per annum in advance.

Address, Messrs. Sheldon & Co., 498 and 500 Broadway, N. Y.

THE LEADER. This spirited and most ably conducted weekly, which we noticed as forthcoming in our April number, has been received, and is fully up to the standard claimed for it in the Prospectus put forth by the Publishers. It is filled with original matter, strong editorials, spicy correspondence, good stories, etc., etc., and is offered at the low price of \$3 per annum.

Address *The Leader*, Baltimore, Md.

R. H. ALLEN & Co.'s CATALOGUE OF AGRICULTURAL AND HORTICULTURAL IMPLEMENTS is a most valuable pamphlet, filled with illustrations and descriptions of the latest and most improved implements now in use in this country.

The price is \$1, but its value to any practical farmer or horticulturist far exceeds its cost.

Commercial Report.

RICHMOND, VA., May 1, 1868.

Within the past two weeks, there has been more activity in general trade, many country merchants being in the market for Spring stocks of goods; but there is a perceptible falling off in receipts of produce, owing to the fact that the Farmers throughout the country are busily engaged in seeding crops and getting ready for Tobacco-planting. Under light receipts, the Tobacco market is well-sustained, and we give below a comparison of quotations:

	May 1, 1867.	May 1, 1868.
Common Lugs, light weights,	\$2 50 @ 4 25	3 50 @ 6 00
heavy weights,	4 00 @ 6 00	5 00 @ 7 00
Good Lugs,	6 00 @ 7 00	7 50 @ 9 00
Bright Lugs,	10 00 @ 20 00	10 00 @ 14 00
Fancy Lugs,	22 00 @ 40 00	15 00 @ 25 @ 40
Common Leaf,	7 00 @ 9 00	7 00 @ 8 00
Medium Leaf,	10 00 @ 12 00	9 00 @ 10 00
Good Stemming,	13 50 @ 17 00	12 00 @ 15 00
Good Shipping,	14 00 @ 17 50	13 00 @ 16 00
Good Manufacturing (bright),	15 00 @ 25 00	16 00 @ 25 00
Bright and Fancy Wrappers,	35 00 @ 125 00	30 00 @ 100 00

Not having heard from two points in the State, we are compelled to omit the inspections this month.

WHEAT—We quote Prime Red, \$2.70; Prime White, \$2.80

CORN—Prime White, \$1.10; Yellow, \$1.11.

OATS—40 cents.

RYE—Scarce, at \$2.

FLOUR—Country Family, \$14.50 @ 15; Extra, \$13 @ 13.25; Superfine, \$12 @ 12.50; Fine, \$11 @ 11.50.