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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., JUNE, 1868. Vol. II.---No. 6.

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What Shall We Do?

No. 2.

SHEEP.

(Continued from page 263.)

The exigencies of the season compel me to change the plan I had marked out in these essays. And as my effort is to serve my State rather than exhibit a systematic or symmetrical tract, I shall beg the reader to take for granted that I can show that we never can rely on negro labor; or on imported white labor, for some time to come; or that we can introduce American or foreign purchasers for our lands with speed enough to operate the desired relief as soon as it may be obtained in other ways, which yet by no means exclude, on the contrary, will aid, rather, the efforts to control and promote the labor and immigrant questions.

In looking at this subject, I find a most tremendous change in the relations of the proprietors of Virginia to land and laborer, by which change the laborer has become almost worthless and the land almost unproductive. My first enquiry has been, where can we find a parallel to our case; and if we find one, by what means did the sufferers become extricated from their position.

The friend who urged this task upon me suggested the source of information on this head, and I have consulted it: with what profit for our people is for themselves to determine. Referring to the Edinburgh Review, July, 1867, p. 23, for full particulars, I only state that in 1348–49 England was desolated by a plague known as the Black Death, which took off from one-third to one-half of the people, and a more than proportionate number of the laboring

classes, "effectually and permanently disturbed the relations between capital and labor, and those between landlord and tenant, and generally shook the very basis of society throughout the kingdom, and initiated a new order of things." The first result of this visitation was an immediate rise in the wages of labor. Previously land had been cultivated in various ways; by the land-owner himself, the gentleman farmer, through bailiffs, as by ourselves through overseers, working hired labor, by tenants on long leases, by tenants who paid fixed money-rents, or worked out their rents on the landlord's farm, and by cottars, serfs and the like. But it became no longer profitable to cultivate by bailiffs. "*Even the high prices of wheat were insufficient to compensate the advanced cost of labor.*" Then the plan was tried of leases, including live stock, seed and implements, just as some of us are doing now. After fifty years, that was abandoned. Then lands were sold in small parcels. Then came the contest, as in Wat Tyler's insurrection, between the peasants and the landed proprietors, ending in the victory of the peasants or laboring classes. During the century which followed that, the value of land continued throughout at its lowest point. And then, at the commencement of the sixteenth century, the rise in the value of lands commenced. Why? "*Because it required fewer hands and paid them better, the land-owners began very naturally to turn arable land by wholesale into pasture and grow wool* [*and mutton*] *instead of grain. Because feeding sheep paid them better than feeding such villein-tenants as still remained attached to the soil*, multitudes of these latter were from time to time uprooted, and, in modern phrase, 'ejected,' to make room for sheep, &c. Large tracts of country, one after another, were enclosed by hedges and turned into pasture." "*The freedom of the peasantry was not a one-sided bargain.*"*

We have been accustomed to think that wool and mutton-growing, the foundation of British husbandry and British power, has always been fostered by the British government. But it is a mistake. As early as the reign of Henry VII., Parliament began to pass acts to prevent the turning of arable land into grass. But it was of no use: for not the wit of man, but Infinite Wisdom had ordained a greatness which sprang, not from the brain of statesmen, but from what they regarded as a dire calamity. Once forced on them, however, they had the sense to see it, to push it, until now plain and

* I have not marked as quoted all that I have copied from this most instructive article.

mountain, hill and valley, fen and chalk, fat clay and lean sand, all support their woolly people. "The pastures are clothed with flocks, the valleys also are covered over with corn." Thirty-five millions of English sheep live on the eighty-five millions of English acres.* But it is not at home only that England rears sheep. The Cape of Good Hope, British India, Van Dieman's Land, Australia, all send wool to England. "At one time," says La Vergne,† "the people of England were very much afraid the gold discovery would cause an abandonment of the pastures; but these fears are a little calmed, and the sheep disputes attention even with the gold."

Now, let us prepare to consider our position by a comparison of our counties where the lands have been farmed on the mixed husbandry principle, and on the simple grain-growing plan. If any one county east of the Blue Ridge was run over, trod down, trampled upon, consumed and spoiled, as the lawyers say, it was Fauquier. Out of the whole sixty-nine, she bore the brunt. Yet she has, I think, gone farthest towards recuperation. How has she been enabled to do it? Her population was pretty nearly equally divided between black and white—about ten thousand of each; but while her area of improved land was only one-tenth that of the thirty-eight counties of tide-water, her live stock was worth one-seventh of theirs; she had nearly half as much wool, about a third as many sheep; she sold annually from five to seven thousand fat cattle; she beat the largest wheat-grower forty thousand, and the largest corn-grower seventy-five thousand bushels; and though her country is mountainous, she had a larger proportion of improved arable land than any of them. All this means not superior native fertility, for she has it not, nor superior market advantages; she can never have them; but it means *grass:* it means that she had the sense to adapt her agriculture to her circumstances. If all our counties had been in her situation, Virginia would not be the "slave State" she now is.

But the question now is, can we make our lands yield a revenue from any source not now availed of for this purpose; for though it may be too late to achieve our independence, there is still time for us to mend our fortunes and be in a position to exert an influence on our destiny and on the legislation under which we must live, most likely, for many years. I do not hesitate to aver, that we can succeed; and, in a reasonable time, by means of stock husbandry, and more especially by rearing sheep. I say nothing now of cattle,

* La Vergne, p. 15.

† La Vergne, p. 20.

hogs and horses, though I by no means intend to exclude them. But I prefer sheep to begin with, because they will give manure and will cleanse and ameliorate the soil, whilst they produce meat and wool—two sale crops—because they will thrive where other stock cannot, because they will stand ignorant and rough handling better than any other stock, because they can be more readily and cheaply obtained and more rapidly increased, and because the loss of one sheep will be only about one-tenth of the loss of one bullock.

Regarding manure and improvement of land as less attractive now than revenue, I shall treat only of meat and wool.

The improved or cleared lands of Tide-water contain - - - - - -	2,698,873 acres.
The improved or cleared lands of Piedmont contain - - - - - -	4,169,478 "
Total,	6,868,351* "

Before the war, these carried of sheep, estimating from the wool account, about 400,000, or one to every 17 acres. But I know by actual experience that some of these lands, by no means the best, can carry and fatten one to four acres, and from April until September, one to two and a quarter acres without interfering with the land in crop, or greatly curtailing its proportion. But let us say one for every five acres. That will give, for farms of five hundred acres, about the average size, one hundred, and two hundred for a thousand acres; or, for the whole region, 1,373,673 sheep, only about a third as many as the census allowed us before the war, and a fraction over what Vermont alone had in 1865. Now, take half for breeding ewes, 686,836, and allow 75 per cent, 515,127, of these to rear lambs, put the lambs at $2 50 per head—about $1,300,000, and add three pounds of wool for 1,373,673 sheep, at 40 cents—say $1,648,408, and we have an aggregate addition to our wealth of $2,948,408 (or $548,000 more than the present banking capital of the whole State) from this single staple, which will then be just beginning to develop itself.

But to bring the case nearer to each individual, I will now give the figures of my own operations in this line, with the following prefatory explanation: The fields on which my sheep were grazed contained one hundred and sixty-five acres, and had been limed in 1857 and 1858. This had been followed by corn, oats, wheat and

* Report Department Agriculture for 1864, pp. 22, 26.

clover, and twenty acres of one field was seeded in timothy. During the war, neither field had been mowed, and one of them was not grazed, very much to its injury. But the other and larger field, of one hundred acres, had its first and second crop of clover and everything else grazed into the ground by army horses and cattle, not fed meanwhile, beginning in 1862 and ending in January, 1864, until, in the fall of 1864, I could not, upon diligent search, find one plant of clover or other valuable grass on it. In 1865, it had comparatively no stock on it, and grew up into a good pasture of blue grass—*poa compressa*—herdsgrass and red, white and yellow clover, but overrun, as was the other field, with black and dew berry, and in some places with broom-straw, and in others with trumpet-flower—cowitch. In the summer of 1866, I managed to buy a flock of sheep from the Valley, by no means the flock I wanted, but the best I could get, and a smaller flock of excellent grade Southdown maiden ewes from Southwest Virginia. My rams were from the best Southdown and Shropshiredown flocks from the vicinity of Baltimore. It will be observed that I make no allowance for feed. The reason is, they had none of any value. I sell pretty largely of hay and sheaf oats, and the refuse trash of these, the corn-stalks from as much of my land as I could haul them from the field, and damaged corn, was all they could get. *These*, except the corn, would all have been hauled out as manure in any event, and *that* had absolutely no money value. But if it had, I would not charge it against the sheep, because, in my opinion, and that of all my neighbors whose attention has been called to the fact, every expense, except the purchase money, has been far more than repaid by the amelioration of the land. Neither is there any charge for shelter, because there was none. The Federal troops, encamped on my land *after* the surrender, had destroyed every vestige of fencing on my eight hundred acres, had broken up every tool and implement of a large and valuable lot, except two four-horse ploughs and the iron work of my Crosskill clod-crusher, and had pulled down one valuable brick building and stripped and gutted several others: things of which I do not complain—for I feel that the purpose was to exhilarate the "life of the nation," and to renew in me a love for the Union; and I was tenderly allowed to enjoy the gracious formality of a written "protection" and a guard—but which I only mention as an apology—for myself of course—and as a reason for the absence of shelter. The winter was uncommonly severe. My sheep yeaned in February and March, and in the latter month it rained or snowed twenty-eight days.

Here is the statement:

COST OF STOCK.

July 24,	174	Sheep purchased, at $3 30, - -	574 20
Aug. 7,	57	Ewes, grade Southdowns, at $3 50, -	199 50
Sept. 1,	3	Rams, Southdown, for - - -	100 00
			$873 70

SALES FROM ABOVE STOCK.

10 Mutton, $50; 43 Withers, $261, - - -	311 00
98 Lambs, - - - - - - -	420 00
40 Drafted Ewes, - - - - -	160 00
Pulled Wool and Pelts, - - - -	20 00
Wool, - - - - - - -	173 55
	$1,084 55

STOCK ON HAND.

48 Ewe Lambs, grade Southdowns, at $5, - -	240 00
121 Choice Ewes, at $5, - - - -	605 00
3 Rams, - - - - - -	100 00
	$945 00
Sales, - - - - - - -	1,084 55
Improvement in value of stock, - - -	72 00
	$1,156 55

132½ per cent. on cost—$7 per acre on 165 acres of land worth $60 per acre, or 11.67 per cent. on value of land.

This shows 132½ per cent. on cost of sheep, $7 per acre rent on land worth, before the war, by estimate, $60 per acre, or 11.67 per cent. interest on that valuation. But the land (whose contiguity to Richmond makes its special value) is generally a stiff clay—second low grounds of James river, as we call it, though eighty feet above the first low grounds—and ranks by no means as a first class soil. Many farms exceed, and still more equal it, in fertility; and rate, according to locality, from ten, fifteen, up to forty dollars per acre, and gaining proportionately on my per centage of rent. But really, as our lands possess no market value at present, *that* question is unimportant compared with *this* question: Can we afford the outlay for the sheep?

Comparing my profits with those of crack flock-masters in the North and West, *I find that in

Michigan they make - - - - -	77 per cent.
Ohio, - - - - - -	88 "
Iowa, - - - - - -	55 "
New Hampshire, - - - -	59 "

I omit the Pennsylvania case, because the figures call for 180 cts. per pound for wool, which proves either a mistake, or too much of an exception to be of any value as a standard. On the whole, I think my profits exceed theirs by double, and their lands will sell for double as much as ours; which gives *us* a four-fold advantage. But they must feed their sheep on grain and hay; and the Iowa flock-master charges his flock $1 18 per head for these, the hay at $5 per ton, the oats at 25 cents, and the corn at 30 cents per bushel. But we sell these articles at from two to four times these prices, and need feed none of them, except in the worst weather, unless we choose to appropriate to butcher's meat what he is compelled to give for subsistence. With him sheep are a direct, with us, a side product; wherein lies an immense difference: they are the hub of his wheel, but only a spoke of ours.

And how to graze our sheep. I have not, of course, been understood to say that every farm of five hundred acres will carry its one hundred sheep. I leave to every one the decision of that question for himself. But I say, generally, that that is a fair allowance for the average of Tide-water and the counties immediately above them, and *a fortiori* for the rest, assuming, in every case, that I do not speak of lands that ought never to have been cleared. As to our special grasses, I would mention for certain districts, or certain tracts within them, the common blue grass of the country, the *poa compressa* of botany, with a blueish tinge and a flattish stem, which many know only as a pest of the wheat crop. It is valuable for any stock, and forms the staple of my sod. It will do to begin with for those that have no better; and frequently it is much better to graze it with sheep than pay a negro to plough and cultivate it, merely to get rid of it. Next, either with, or independent of that, is the white clover. And for other soils, the wire-grass is admirably adapted.

Thirty-eight years ago my boyish attention was called to the value of this grass by "old John Roane, of King William," and I have watched it ever since. That it is a pest to the mere arable

* Report Department Agriculture for 1864, p. 183.

farmer, who thinks only of the plough and the hoe, I can well imagine; but in the more comprehensive view of mixed husbandry it should be considered a blessing. It is the Bermuda grass of the South, the doub grass of India, and on the sandy loams of Tide-water is invaluable to sheep. Whether it shall ultimately prove the best grass I cannot tell, for the others have not been sufficiently tested, but that it will stand drought better than any of them I do know. But the others can be tried, and, in my judgment, will succeed; for I have seen the genuine Kentucky blue grass growing in a cultivated field in the forks of Elizabeth river, within three miles of Norfolk; and as good hay as I ever saw was orchard grass, produced by the late Colonel Herbert, of Princess Anne, and exhibited for a premium at a fair of the Seaboard Agricultural Society.

A grass of very considerable value is the despised broom-straw. Almost any man will permit you to graze his broom-straw for nothing, and if it saves or rests your own land, you can well afford to herd sheep on broom straw. Men of observation know that, from the first of April to the first of July, it is a strong nutritious grass, and that as it gives way under the action of tooth and hoof, it leaves a better herbage in its place. It is fully equal to the wild grass of the prairies, and that constitutes an important resource with the Western shepherd.

That sheep will succeed on Tide-water, and in larger numbers than is commonly supposed, has been proved by Dr. John Prosser Tabb, of Gloucester, whose very satisfactory letter on the subject I shall publish in the July number of the *Planter*, rather than in this one, that it may have the undivided attention it merits, and because as in one point, and in one only, we differ, I wish him to have the full benefit of his statement.

If Australia with her climate can support millions of sheep and carry profitable flocks on vast areas, where they have no water, or next to none, for months, and where the ground is in many places so parched by summer droughts that the sheep, for want of better food, actually eat up the *snuff*,* into which the vegetation of the alluvial flats has been converted, and keep in good order, then we can raise them. If Dr. Tabb's land in salt water Gloucester, has carried one sheep to 1⅓ acres, and my land in Chesterfield, at the head of tide, has carried one to three-fifths of an acre, or, fairly

* Report of Department of Agriculture, 1864, p. 208.

speaking, one to half an acre,* then the question is settled, unless it can be shown that there is something peculiar in our soils, which I deny. Then the owner of five hundred acres of land and one hundred sheep, may, by as good management as mine, certainly get from wool and lambs or mutton, grown on a fraction of it, a rent of 82 cents per acre on the whole tract, or nearly 5½ per cent. on $15, its estimate value per acre, which now he cannot afford to cultivate, and is unable to sell or lease, and which is, therefore, through its depreciation and taxes, only a clog and burden upon him.

Next comes the question how the sheep are to be obtained, and whence. I reply, where there is a will there is a way; and I do not like to anticipate that we can be baulked by slighter difficulties than have been surmounted by other people in a much hotter climate. If they give, not a languid, but an earnest and hearty assent to what I say, and determine that they *will* have the sheep, they can get them. Any man who means to *earn* apple-dumplings, can have them; any man who waits until it rains apple-dumplings, will be sure, as he ought, to find his plate upside down when the shower comes. Look at Australia. Just eighty years ago Botany Bay was settled. England meant to put her sheep-stealers and other convicts at the antipodes, and did it. It lies about six months from England, and, in addition to the British criminals transported thither, had a pleasant population of Negro and Malay savages, "cannibals all, or men without masters," as my friend, Mr. George Fitzhugh, would say—people who would almost as soon eat a sheep as a baby; and could steal it cheaper; and they did steal; they and the runaway convicts; then they had wild dogs to match. "The shepherd with his dogs has [or had] a moveable weather-tight box, in which he passes the night close by the fold, and near to which he kindles a fire, as well for his own comfort as to scare away the wild dogs."

The climate was hot and dry as Tophet. A few sheep from Bengal were provided for the convicts; these did well. Then followed importations of South Down and Leicesters, with manifest improvement. "The progress of the colony was nevertheless comparatively slow. In twelve years after the arrival of the first ship-load of convicts, there were but 6,124 sheep in the whole settlement." At that time they began to import a few Merinos from England. The experiment succeeded.

* In addition to the sheep, I wintered and summered sixteen head of horned cattle and two colts, and grazed ten horses on the pasture every night from May to August.

"The number of sheep in the next three years had risen to 10,157; in 1813 they had increased to 65,121; in 1817 they were 170,420; and in 1828 they amounted to 536,391."* In 1863, I estimate them on the basis of an article in the Report of the Department of Agriculture, 1864, p. 233, at 31,000,000. "In Van Dieman's Land," says Youatt, "they were multiplied sixty-fold in eleven years." And that is fast enough for our purposes. So in seventy-five years, the convicts, the Papuans, and their kin, the wild dogs, have given place to 31,000,000 of sheep! What produced the change? *The energy of the settlers, and the superior advantages of the country.* This answer covers all details. Was the cash paid for the sheep? Not always. In 1820, for instance, "181 Merino lambs were distributed among the settlers in the neighborhood of Hobart town, Van Dieman's Land. * * * No money was demanded at the time; but security was given for the payment of the sum at a certain after-period, when the settlers might have begun to reap the advantages of the speculation." In the same colony, where the parties were satisfied with each other, "sheep are [were] intrusted on *the thirds* by those who are the proprietors of many flocks, or whose other engagements will not allow them to give personal attention to their sheep. The arrangement entered into is generally this: "A. agrees to give B. 400 ewes, and to lend the rams. B. becomes responsible for the original number of sheep, excepting such as are lost by disease or accident. At the time agreed on the produce is divided, and one-third of the lambs becomes the property of B."

Mr. H. B. Hoyt, of Iowa, in a letter partly published in the Agricultural Report of 1864, p. 183, speaks of "the usual custom of letting sheep in Iowa. Take, for example, 100 head of ewes to be let for one year—the owner to receive one-half the wool and one-half the increase, the original flock to be returned," &c. These cases suggest a basis for similar transactions on our part. I think it better than to buy, even if we had the money, which we have not; especially if one or more parties in the sheep growing States can be induced to combine and to send a man to be jointly paid by buyer and seller—still better if the owner himself will come, or send his son—to look after the sheep; for thereby our inexperienced people will learn something of the management of sheep, and the owner will see for himself whether the enterprise should be carried farther.

* Youatt on Sheep, English Edition, pp. 183–192.

But a much stronger reason is that an inexperienced man will almost certainly be cheated by having a number of old, but more especially diseased, sheep, probably foot-rotted, put upon him. "Buy no sheep from New York State," says a valued friend of mine, and a most experienced sheep-breeder, "without a guarantee against foot-rot. I suppose upwards of 20,000 were sold in Loudoun and Fauquier from that State, and instead of the purchasers making money, they have met with heavy losses." "The sheep they sold our confiding people," says another correspondent, "were dreadfully diseased, particularly with foot-rot, which has brought sheep-grazing into discredit, and it is now abandoned, whereas it promised to be the prevailing system of the country. The few fortunate farmers who got healthy flocks, are pleased with the enterprise. I have done very well with mine." I do not mean to say there are no honest men in the business, but I know that there are as many knaves as there are in the horse and cattle trade; and we cannot distinguish them. The plan I propose, and I think it practicable, obviates that. If any one prefers to buy for cash by himself, or in a club, let an agent be selected. I think, when parties get ready, I can undertake to find such an one for them, if they will give me timely notice. I say *timely* notice. Every man ought to have his sheep by the first of September, if possible—the first of October at the very farthest; and they are cheaper soon after they are sheared. The agent I propose is a Virginian, a gentleman of high tone, well acquainted with the business, and who, if he can go at all, will charge but little, if anything, more than his expenses. His object will be to serve the cause, and not to make money.

What sort of sheep shall we get? Any sort, rather than none at all. Where from? Anywhere, rather than nowhere. The best plan, I think, is to get fine wool sheep as a basis, because 1st., they will stand rough usage better than any others; 2d. because if they fail to fatten themselves or their lambs, the wool will pay a profit on their keep; 3d. because they are the most abundant; and 4th, probably the cheapest. I say the cheapest, because the wool business is depressed. The United States exports no wool, and imports rather more than one-third her supply. Yet the tariff can be, as it has been, arranged by the manufacturers to suit themselves, operating, as they do, in combination with other interests, to control the legislation of Congress.

Our choice will be betwixt those and the mongrel sheep—the ordinary farmer's sheep—of Ohio, and some of the other Western States. The first sort will cost, delivered, not more than three and a half to

four dollars, the last—and best for us—about two to two and a half dollars in the West, with a dollar, or something more, for expense of delivery.

But either should be at once crossed with a larger and better breed, either of long wooled, such as Cotswold, New Leicester and the like, or, what is better, with the South Down; by all means with thorough-breds if they can be had, if not, with some good grade sheep of that stock, or failing that, then of the long wooled varieties. Keep clear of fine wooled rams, if you want to breed a mutton sheep. Why I think mutton sheep preferable, I will state in the next number of the *Planter*. "For the present, let this little taste suffice for our reader," as my Lord Coke hath it, with this advice in conclusion: If any gentleman wishes to invest in sheep, let him consult his neighbors, and combine with them. Let the thing be understood; and then let them act. "*Consulto; et ubi consolueris opus est* FACTI." And let them agree to be guided by the advice of some one capable of giving them practical advice, until they learn how to manage for themselves. A man of sense is glad to walk in leading strings until he has learned to step: otherwise he is like a timid baby, who sits upon the floor, or a headstrong baby, who bumps his head.

FRANK G. RUFFIN.

P. S.—As it is possible I may receive some letters inquiring into the details of sheep husbandry, I beg leave to say, in advance, that such inquiries will save me trouble and be better answered, by getting Mr. H. S. Randall's book, "The Practical Shepherd," from D. D. T. Moore, publisher, Rochester, New York, at the price of $2. I have not had the pleasure of seeing the work, but I know the author to be first-class authority on sheep.

Kentucky Blue-Grass and Stock-Raising.

Mr. Editor,—In compliance with your wishes, I will give your readers what I have been able to gather relative to "Kentucky blue-grass and stock-raising" during my brief visit to this part of the State.

As to the Appearance of the Country. The blue-grass districts of Kentucky are simply unsurpassed. The landscape is beautiful—not extensive; but its rich green, its blooming orchards, its well-built farm-houses on commanding eminences dotting the whole land, make the prospect exceeding fair. I had often heard of the green swards of blue-grass fields, but the half was not told me. Not only

are they beautiful in the distance, but right at your feet they are even more exquisite. The grass is knit together and matted into one vast unbroken sod that covers scores of acres like a cloth of velvet verdure. And this sward extends over fields and in forests alike; the latter more especially interesting to me. In the South, our woods are covered with undergrowth, dead leaves, or whortleberry bushes, and are therefore bare of grass, as all the surplus nutrition of the soil goes into their woody productions. But here the forests have no undergrowth, no whortleberry bushes, and no deposits of dead leaves; and the trees average from sixty to seventy feet apart. The consequence is, that the leaves (not numerous as with us) are blown away by the autumnal and winter winds that sweep unobstructed through these open woods; and the same winds that blow away the leaves, carry and scatter blue-grass seeds from the neighboring fields and fence corners. And hence the beautiful forest-swards that add so much to the Kentucky landscape!

As to the Character of Kentucky Blue-Grass. It is evidently indigenous to the soil, and flourishes with as much naturalness as the limestone waters gush from beneath limestone ledges. But though indigenous, it yet requires care and management to make it subserve the best interests of the agriculturist. All lands will grow up in blue-grass in three or four years without the sowing of a seed, if uncultivated. The seeds are light, and are carried by the winds. Wherever a seed or seeds fall, there springs up a tuft of grass, which seems to widen, propagating through its roots as well as by dropping, from season to season, its own seeds; and with others that are continually brought into the field and scattered from summer to summer, in three years' time there forms a closely matted sward that resembles a velvet carpet more than such fields of grass as we are in the habit of seeing east of the Blue Ridge. If the farmer would hasten his grass-growing, he simply does as you do in Eastern Virginia, sows his seed in September or March. But in case he sows, he mixes other seeds along with the blue-grass, such as clover, orchard grass and timothy. He argues that no one grass is the best for his stock. Although, after clover, the blue-grass is par excellence in its fattening qualities, yet the health and better development of the animal are promoted by dietetic variety. The blue-grass, however, in time will choke out all else; but in that case, if he cannot alternate his cattle with a clover field or a meadow of timothy, he ploughs under the sod and plants it in corn.

This does not apply, of course, to the forest. This latter is generally kept for winter and early spring pasture. In order to make

this pasture abundant and comparatively nutritious (for it does not at all equal in nutritious qualities the blue-grass of the field, in consequence of shade always lessening its strength,) he does not allow his woods to be grazed after mid-summer. The result is, the grass grows thick and tall, and the frosts and snows only blight the more bushy and overtopping blades, leaving the sod uninjured and vigorous, with growing life through the entire winter. As the snows recede in early spring, the cattle, sheep and hogs find pasture already grown to great thickness, if not to a great height, and by the time we of the South turn out our cattle to look out for green buds and green tufts, the Kentucky farmer has cattle fat enough oftentimes for the market.

Last night I stayed with a gentleman owning a farm in this county of three hundred and eighty-six acres; two hundred and twenty-five set in blue-grass, the rest in clover and in regular cultivation. Of these two hundred and twenty-five acres, one hundred are in woods; so he has not an inch of waste or unemployed land. One hundred and twenty-five acres, being field-pasture, are grazed in the latter summer and autumn months. The rest, as before said, is pastured in the winter and early spring.

The Uses that are Made of Blue-Grass. Of course, pasturage is its grand use to the farmer; for it is never cut, except for seed. Its hay qualities are not equal to timothy, orchard grass or clover; and this, with the difficulty of cutting it, renders it unattractive to the mower. But for all kinds of stock as green food, after clover, it stands unrivalled. The Kentucky farmer grows his cattle, horses, mules and sheep on its muscle and fat-imparting qualities; and even the hog, with a slit or a ring in his nose, is turned on the green sward to eat like a calf.

I have several times excepted clover in speaking of the excellencies of blue-grass as compared with other grasses. The reason is that it is now generally conceded that clover is the most nutritious grass that grows; and while it affords the best pasture and makes the best hay, it perpetuates the strength of the native soil and adds still more to its already extraordinary and native fertility. But as I am discussing only the specific subject, I will not take up space and time for agricultural interests not embraced under my commission.

Louisville is the grand centre of the grass-seed business. There you can get, at prices much lower than in the Eastern cities, any grass-seed needed. The blue-grass sells at about two dollars and twenty-five cents per bushel, fourteen pounds to the bushel.

As to Stock-Raising. Kentuckians are successful in every branch of this sort of husbandry. Here are the best horses, thoroughbred cattle and sheep, and crosses of hogs which used to make the Kentucky hog-drovers a noted and important class in the eyes of the Southern planter, ten years ago when he had plenty of money with which to lay in his pork and plenty of slaves to eat it. The Kentucky farmer turns all his farm productions, excepting wheat, hemp and tobacco, into fat and muscle. There are two classes of stock-dealers, the stock-raiser and the stock-trader. Sometimes the two are united in the same person. But I will describe them separately, the better to simplify the information I may be able to communicate.

The Stock-Raiser.—He furnishes himself with the best breeds that money can buy. He takes agricultural journals, keeps posted as to the improvements of stock, the combinations of breeds, and the best preserved or the best improved of the old and noted varieties the world over. He hesitates not to give several thousand dollars for a first class stallion, two or three hundred dollars for a first class bull calf, a hundred and fifty to two hundred dollars for a full blooded ram, and for dams in the same proportion. It requires large capital to conduct this branch of husbandry. Ten to twenty thousand dollars would not more than afford a first class farm in the blue-grass region an initiatory outfit of blooded stock. And the people seem to have plenty of money; at least, judging by the condition of their farms and their stock.

The Horse.—I do not think the draught horse is bred in Kentucky with much success. They have adapted the variety of their breeds to the demands of their market, and the South has ever bought only the fancy horse for the carriage or the saddle and the mule for the wagon and the plough. Both of these animals have obtained very great perfection on these blue-grass pastures and at these clover hay racks. This morning I witnessed the action of a half-blood Morgan stallion, three years old. He trotted a mile in nearly three minutes by my watch, though not in practice. His form and action were as near perfection as I ever saw in the horse-kind. This variety of horses seems to be in great favor in Kentucky. At six years old, the owner expects to realize three or four thousand dollars for him.

The Mules are larger here than draught horses are in Virginia and North Carolina. They are not the uncouth, ungainly animal which generally characterizes this hybrid in other sections. They have fine action, smooth glossy hides, symmetrical forms, well-shaped necks, and ears not so assinine as one might suppose.

The trade and profit in mules in years gone by was prodigious; and even now, with poor markets in the South, the Kentuckian can still realize in Pennsylvania, and elsewhere Eastward, a handsome consideration for his capital invested and care expended.

The Cattle are chiefly the native Green river breed, the full blooded Durham, or the cross. For milking purposes, the first and last named are preferable; but for beef, here, as in England, the Durham is the king of bulls. Wherever blue-grass and clover grow, there the Durham should ever be the leading breed. Cattle are now in great demand, and bring on the hoof eight cents, which is about fifteen or sixteen net. My host, last night, informed me that he had frequently put on Durham cattle one hundred and fifty pounds of flesh a month; at eight cents per pound, that is getting only twelve dollars per month for pasture!

The Sheep bred are generally Cotswold and Southdown, with the Infantado Merino to a limited extent. The friends of the former claim that the yield of wool, though commanding a few cents less in the pound than the latter, is so much greater in the aggregate than the yield from the Southdown, that, in consideration of the mutton being equally as good, if not superior, makes the Cotswold the best sheep that can be bred. The friends, however, of the Southdown claim that the mutton is sweeter, that the wool is finer, and the animal much hardier and less difficult to raise. Besides, its prolific qualities are far greater; often dropping twins, and almost invariably raises all she drops. And they also affirm that the Cotswold drops her lambs with greater difficulty; often dies in parturition; while the Southdown seldom has trouble. They also affirm that the Cotswold's long wool, hanging over on either side like hair, admits the rain that drenches the skin, and in winter freezes beneath the wool, and oftentimes results in the death of the sheep; while it is claimed that the wool of the Southdown drips the rain and dew as a roof or covering.

Sheep-raising, I am disposed to think, is not as profitable as the other branches of stock-husbandry in Kentucky. The dogs are too numerous, and then the farms are not large enough for great flocks, and the country is too level. Still, blooded sheep can be found in Kentucky equal to any on the Continent.

The Hogs in this State are noted all over the South. The Old Grazier is distinctively a Kentucky breed, and gets its name from its love of grass. But the variety is not thought as much of as formerly, and the old Berkshire is now being raised chiefly; but some farmers find the cross of this variety with the Chester White

to give a breed superior in size and in pork qualities to any other hog. His food assimilates with flesh more entirely than is the case with the Berkshire, while he enjoys his clover and grazes upon blue-grass with the same avidity that the Chester White drinks his slop.

The Stock-Trader must now receive some attention before I conclude this hastily-written letter.

He is generally a farmer with extra capital or good credit. Moreover, he must have abundant pasture for stock. The trading farmers in Kentucky usually deal in that species of stock for which they are better prepared. Some buy up young mules, others cattle, others hogs, a few only sheep. They buy young mules whenever they can pick them up. But cattle are commonly bought in winter and spring. Without any actual outlay, they pasture them on their grasses, turn them into their corn-fields when matured; and thus, with heavy feeding on the richest grass and strongest grain, it is not to be wondered at that they grow to be such large and well-formed animals.

Those who succeed best with mules or cattle shelter them well during severe storms, and always in the night seasons of winter. As soon as they purchase their stock, they begin to push them, salting them twice a week regularly, feeding them sumptuously on the best grass, and in winter on the best corn unpulled and unshucked, just as it grows in the field. This last plan, however, will be abandoned gradually. The scarcity of mills, I think, has something to do with this prodigal way of feeding, mules and cattle, corn on the stalk. Horse-power mills will eventually either grind the grain into meal, or cob and grain together into chop, on these grazing farms. It is now pretty generally conceded that two bushels of meal or chop will fatten an ox as fast as almost three bushels of the unbroken grain. And the time is not far distant when steam-apparatus will stand hard by the mill, and as the chop comes out of the grinder, the hot steam will dissolve its solid globules and make the food still better fitted to assimilate itself with the animal's flesh. But the extraordinary abundance of this country has made the farmers agricultural prodigals. Their true interests, however, will become more apparent as science unfolds the real nature of things.

Of one thing, however, I am well-convinced—that the foundation of all success in stock raising or stock trading consists in the abundance and the strength of food. Without good grass and plenty of it, and without an ample supply of corn, no farmer can hope to realize great gains from dealing in stock.

The Mules are driven to market at two and three years old,

chiefly during the autumn and winter, when the farmer has but little else to do.

The Cattle, however, go to the slaughter-pen at different times of the year, just as fast as they "reach about their best."

Hogs are bought generally fattened and ready for the knife, and driven South and East or killed and packed. When bought as stock hogs, they graze on the blue-grass and clover and follow the cattle and mules into the corn-fields, so that nothing may be lost.

As to sheep-driving, I think there are but few traders in Kentucky in this branch of stock-husbandry.

As to the Profits arising from either Stock-Raising or Stock-Trading. As to the former, it is only necessary to refer to the statements above made respecting the large prices paid for blooded animals, and to add that the demand far exceeds the supply.

As to the latter, it sometimes happens that stock-traders lose on money invested in hogs, but hardly ever in young mules and cattle, on which they put flesh or afford opportunities of growth. The rule is that prudent farmers, trading in stock of any kind, accumulate money very rapidly. And the best evidence of the great and certain profits of dealing in or raising stock is, that the Kentucky farmer is always ahead, even when commercial interests are failing and bankruptcy is threatening manufacturing communities. And he prospers, too, almost in spite of himself; for of all farmers I ever saw, he is the least frugal with the yields of his soil. The waste on a Kentucky place would almost feed the stock on a New England or Pennsylvania farm.

In my next paper, I will try to show wherein Virginia and North Carolina may be benefited by imitating Kentucky husbandry, and wherein not. I will also try to present to your readers reasons why Virginia and North Carolina should cultivate grass and raise stock; and will likewise mention the sorts of grasses best adapted to those districts; and the kind of stock-raising and dealing that would seem most likely to yield the fairest profits.

MARLOW.

Shelbyville, Ky., April 22, 1868.

A NEW FERTILIZER.—Boucherie, of France, has invented a process for subjecting the entire bodies of animals to the action of dilute hydrochloric acid, by means of which they are completely dissolved, including the bones, and converted into a uniform pulp, which is inodorous and can be kept for any length of time, to be applied when needed towards fertilizing the soil.

Our Exhausted and Abandoned Lands.

WHAT CAN WE DO WITH THEM?

No. 5.

(Continued from page 267.)

After cotton, tobacco and rice, Indian Corn, I presume, will come in on the list of productions as the next grand staple of the South. Some excellent rules for the cultivation of this truly noble grain were lately given by one of your correspondents in a communication of much value so far as it goes. The only objection to it that strikes me as particularly suggesting itself is, that it overlooks *in toto* what ought to be the prime object with every planter—the preservation, if not the positive improvement of his lands in any crop he may see fit to grow upon them. If I mistake not, Mr. Atkinson has not a word to say on this most concerning subject. In thus giving it the go-by in speculation, he has done just what ninety and nine men in the hundred of our Southern planters and farmers do in practice: they plant to the best of their knowledge in such a way as to get the last mite they can from the poor, overtasked land, without one moment's consideration of the question how it is to get a *quid pro quo* in return for its own generous bounty; how its strength and productiveness are to be kept up. This is the more unfortunate, inasmuch as this grain is, without a question, the great exhauster of our section. It always has been so, and always will be, until we can fall upon some method of raising it which shall, at least to some extent, counteract its ruinous effects. That, it seems to me, were an easy matter; though others might view the case in a widely different light.

At all events, the cultivation of corn will not answer in any system we may adopt for restoring our exhausted and abandoned lands. To try this upon them, would be very much like letting blood from a person with a view to restoring him to life and health, who, in the hands of some incompetent practitioner, had been brought to the point of death by a too liberal application of leeches. The truth is, the whole Southern country is now constantly, and has been for many, many years past, in the way of being Corned to death. One would think the planters and farmers themselves must be *pretty well Corned*, or they would abandon a course which, I trust, will presently appear to be so decidedly in conflict with the best interests of most of them. There has been corn on the brain all round, from the time that it first came into use of the Anglo-Saxon race. The disease, attacking the first settlements, has annually grown more

rife, till its victims are seen lying prostrate on all sides around, not in the dead and dying men themselves, but in their dead and dying acres. It is a fatal disease. No lands can stand a process so exterminating. Even the seemingly inexhaustible intervals of the West at last give way under it. If it is to go on much longer, we shall be without materials to fence up the acres that are not yet quite gone; and then the next thing will be to pull up stakes and raise the cry, Ho for Kansas, or some region nearer the setting sun. Is there no remedy?

Some fifteen or twenty years ago, a friend whom I happened to be with in Asheville, this State, requested me to go and look at a piece of corn grown by Nicholas Woodfin, Esq., of that place. As nearly as I can recollect, this corn was not on what is called bottom land. It was somewhere near the residence of Mr. W., on the outskirts of the village; elevated and partaking of the character of the soil around, which is not, as far as my knowledge extends, at all noted for its fertility. The crop, however, then near its maturity, was to me a perfect curiosity. Nothing short of ocular demonstration could have convinced me that such a mass of grain could have been produced on any land by any means whatever. I will not say it stood as thick as wheat; but this I can say with perfect safety, viz., that I could no more see through it, even by looking between the rows, than I could see through a field of the thickest set wheat I ever saw. I do not think the rows were more than two feet apart. At all events, they were so close that the blades and tops came together and intermingled just above the ears; while the stalks stood so close in the rows, that the whole formed a dense covering to the ground which no ray of sunbeam could penetrate, and beneath the shade of which every weed had ceased to grow or had died out. Of course I looked only along the outer edges of the field or lot. What was the condition of things more towards the centre, I do not know; but as far as I could see, every stalk had on it two large ears. Not a small one, as far as my observations went, that is, a nubbin, was to be seen.

Of course it has been my study to represent this case as truthfully as possible; but the lapse of many years and growing weakness of memory may have led me into some slight variation from the exact state of the facts. Should this article happen to fall under the eye of Mr. Woodfin himself, or that of the Rev. J. B. Buxton, of Asheville, and they observe in it any inaccuracy, I beg as a favor they will inform me personally of the same, and all due correction shall be made.

This, by the way, was not Mr. Woodfin's crack crop of corn, an account of which some year or two previously appeared in the papers.

How the ground was made to produce this crop, I do not know; yet I have not a doubt that it well-repaid the owner. There must have been upon it nearly, if not quite, a hundred bushels to the acre, which, at the time, would have sold for seventy-five cents a bushel. Now, it is well known that an over-dose of any kind of manure will destroy vegetable matter instead of promoting its growth; and I do not believe that seventy-five dollars' worth of manure of any kind could be applied to an acre without making it perfectly destructive to vegetable life. Just to think of a whole ton of guano applied to one acre!!! or seventy-five dollars' worth of stable manure!!! In brief, the preparation of the ground could not have equalled the value of the produce. There must have been a most liberal cash interest on the investment, to say nothing of the consequent improvement of the soil.

It is, then, possible to cultivate corn on uplands in such a way that it shall pay without exposing the land to the sun all through the burning hot season, and shall at the same time make the crop itself subservient, in some degree, to the preservation of the land, instead of exhausting its fertility, as it commonly does; and this is the way in which every man who has the means ought to cultivate it, and every wise man will cultivate it. The number of acres will be comparatively small; but that of the bushels or barrels of grain will be all the larger. The process will pay: will pay in the cash account: will pay still more abundantly in the preservation and actual improvement of the soil.

But what is the poor man to do? That is, after all, the question. It is the question not only in an individual, but in a national point of view; for the great body of our agriculturists are of this class. Yes, what are these to do? They must have corn; that is, they think they must; though it is very doubtful whether so great a quantity of it is necessary to them as they suppose. The truth is, they have positive need of very little corn. Enough to make bread for their own family consumption is all that is absolutely required. Horses will do better on oats. On this they will not go blind half as often, and with the addition of good hay, will keep in good case and do as much work. Hogs will thrive on oats wonderfully, and with clover, beets and carrots through the summer, and, in the fall, peas to top off on, will make as good pork at far less expense. In fact, everything on the farm may be fed and fattened without corn.

Now, six bushels a year, with the usual allowance of wheat bread, will more than supply every individual of a family. Supposing, then, that the family consists of six persons, all ages included, thirty-six bushels will amply supply them, which, with a very little painstaking in husbanding manurial resources, may easily be raised from a single acre. Is it not, then, obviously the interest of the small farmer to cultivate less of this grain and more of those kinds by which he can improve his lands instead of impoverishing and ultimately wearing them out.

Let us suppose that, instead of this, a person applies all his means, or as nearly all his means as practicable, to the corn-crop. We will say he has forty acres under the plough. Ten of these he sows in oats; five in wheat; five in the common *etcæteras* of rural economy, and twenty in corn. This will keep one hand busy enough the year round, and sometimes a little too busy; but we will suppose he manages to get through with it, except in harvesting, when some help will perhaps be required. We will not go into the calculation whether this course would pay. It would make this article too long, to the exclusion of more interesting and useful matter. The question is, would it not, in no great length of time, bring him to poverty? Only to think of it! half his plantation every year in corn without manure!! It certainly would do so even in rotating, as far as practicable, with the other cereals. For corn, unless managed after the manner of Mr. Woodfin's crop, above mentioned, is of all grains the most exhausting; because, planted in the ordinary way, it neither affords any protection to the soil, or makes any return to it. Cultivated even on the virgin soil of our naturally thin uplands, it must stand so far apart that the sun has free access and full play upon the surface from the planting to the very gathering of the crop. What is more, there can be no less than from three to four, or even five turnings up of the land in the course of cultivation, each of which exposes it to new exhaustion. Viewed in this light alone, the raising of this grain in these latitudes and in the way we are accustomed to manage it on our light lands, must be an impoverishing business. It must be so from its exhausting effects in these two particular respects, exposure on the one hand and preventing all kinds of return upon the other.

But is that the worst of it? I think not. The evils mentioned are only incidental. We now come to something direct and positive. What says Agricultural Chemistry about it? Let us see.

According to Sprengel, in every 100,000 parts of Indian corn, there are 1,312 parts of inorganic matter; and in every equal

amount of the stalks, there are 3,986 parts; making, together, no less than 5,298 parts taken from as much soil as would make 100,000 parts of the grain. Supposing a pound to the part, then, we have 5,298 pounds of inorganic matter consumed in the production of every 100,000 pounds of corn, which, at 60 pounds to the bushel, would amount to 1,636 bushels. That is to say—omitting fractions, for these calculations are never very minutely accurate any way—there is something over three pounds of inorganic matter taken from the soil for every bushel of corn; because, what goes into the stalks must of course be taken into the account. This, it is evident, must be a pretty severe tasking of the powers of any land under any circumstances; but particularly is it so, when there is evidently no means in connection with the crop of returning any part of that which is withdrawn, or of developing new supplies from the land's own resources. As it may be a satisfaction to the more scientific reader to go into particulars on this point, I subjoin Sprengel's table, premising, however, that the above calculations on my part are made in round numbers and without regard to fractions. Like most things of this kind, they are only approximations towards the truth; giving a general idea only, yet are sufficiently accurate for practical purposes. In every 100,000 parts of the grain, then, and in every 100,000 parts of the stalks of Indian Corn, there are—

	Potash.	Soda.	Lime.	Magnesia.	Alumina.	Oxide Iron.	Silica.	Sulphuric Acid.	Phosphoric Acid.	Chlorine.	Oxide Manganese.
Grain	20[illegible].	250	35	128	16	trace.	434.	1[illegible].	224	6.	trace.
Stalks.....	189.	4.	652	236	6	4.	2708	106	54.	8	20.

Professor Norton makes the case out still more unfavorable to the land. Taking the grain alone, for he has given no analysis of the stalks, he says in every one hundred parts of this there is a loss to the soil in phosphoric acid 49.2 parts; in magnesia, 17.5; in potash, 23.2; in soda, 3.8; in sulphuric acid, .5; in chlorine, .3; in lime, .1; in iron, .1.

If the man of small means will consider, in addition to the above, the expensiveness of cultivating corn, he will find new reasons for turning his attention to something of perhaps less immediate, but certainly of vastly more ultimate profit. To prepare the land by first breaking it up and then bedding it up; to plant it and to work

it properly after the corn is growing; requires an amount of labor which wears out the man and the beast about as fast as the grain wears out the land it grows on. Taking all together, it will certainly require no less than five or six goings-over with the plough; two or three with the cultivator; and one or two with the hoe; though these will depend much on the season. Then comes the gathering; then the shucking; then the housing; then the shelling; and, finally, the chopping down of the stalks with a hoe or hatchet, preparatory to ploughing for wheat, oats, or corn again. Is there anything in the shape of grain which requires one-half, one-third, or one-fifth of the hard work that this does? Now, labor is time, and time is capital. Besides, labor is expense. It involves wear and tear of man and beast. It involves, moreover, the expense of feeding them; the loss of the one hundred and one little things which might be accomplished by a diligent hand, and on which the support, the convenience, the comfort and the refinement and polish of a family so much depend, but for which there is no time in consequence of the ceaseless labor required by corn. Those who cultivate it extensively are forever in a hurry and never done, from the coming in of the year to the going out. It is no sooner gathered than one has to begin to prepare for it again. Why is it that we have so little in the way of fruits—no strawberries; no raspberries; no currants; no grapes; very often no apples; no peaches; no pears; nothing in the way of luxuries or delicacies on our tables, for which rich men in cities pay thousands, and which we might have for nothing? It is because there is no time; all our time is taken up with corn. If the farmer would adopt the wiser plan, and devote but a tithe of the time given to this grain to planting and looking after his orchards, he would, in a few years, get things around him that would yield him hundreds at almost no labor at all; that would pay him a hundred per cent. better in pork; in dried fruit for market; in green fruit for market; or, if his conscience did not forbid, in fruit turned into brandy. That would be bad enough to be sure, but it would be infinitely better than to make Corn and convert that into a means of poisoning his fellow-men.

T. S. W. Mott.

All flesh is as the withering grass;
Its beauty like the fading flower;
From childhood to old age we pass;
And life is but a fleeting hour.

Clover and Some of the Bladed Grasses for Hay.

Mr. Editor,—When I last saw you, you complained that the farmers of Virginia did not perform their part of the labor due to the interests of the agriculture of the State, in furnishing to your periodical practical articles, based upon their own experience. I acknowledge that we are too guilty of this charge, and in order to be, to some extent, freed from the burden of this debt, I have concluded to give you my views and experience upon the cultivation of "*Clover and some of the bladed Grasses for Hay*," as the season for hay-making is at hand. An additional reason for writing this article is the fact, that frequent inquiries are made upon this subject through your journal, and often of the writer himself, who has for years given a portion of his time and labor to the cultivation of this valuable crop. It pays more for the outlay than any other which we can raise in Piedmont and Eastern Virginia; while, at the same time, we are improving and restoring our farms. True, the cost of seed, whether of clover or the bladed grasses, is considerable, yet too small to be regarded as an objection when compared to the large profit and comfort to be derived from the hay when well cured; and this can be much more easily done than many who have too long neglected its culture imagine. We are often met with the objection that our clover-hay, by the time it gets to the barn, is but little except stems, affording poor food for animals, and that either our soil or climate, or both, are unsuited to the culture of the bladed grasses. We admit that in Eastern and Piedmont Virginia, the lands are not equal, for grasses, to the more favored regions of the Valley, or the strictly limestone grass-land of other sections; yet, for all this, the hay-crop is believed to be more remunerative than anything else which we can grow, considered in relation to our proximity to market, whether we live convenient to the railroad, canal, or any one of the many navigable rivers in the Eastern portion of the State.

It has long been a burning shame to Virginia that, with a soil and climate sufficiently well-adapted to the growth of grasses well-suited for hay-making, we still allow our markets to be supplied by the more energetic labor from the North; and that now the quotations for Northern hay are higher than for our own in our own markets. While we neglect this crop, or carelessly cure and house it, and contend that a bulky article like baled hay or oats will not bear transportation, it is brought from the far North, along our roads, by our very doors, and carried into the heart of our State; indeed, the

writer has even known it carried to Lynchburg, which stands in a region of country, and upon a river, the lands adjacent to which and to its tributaries, could, with care and attention, be made to produce stores of wealth from this source alone.

To many, the views and suggestions here presented may be of little worth, since they may already be familiar to them, or not deemed worthy of their attention; but from the frequent inquiries upon the subject, we trust they may prove of some value to many of your readers; and we shall, at all events, have the satisfaction of feeling that we have attempted to comply with your request, to contribute something to the cause of agriculture—the one interest—upon which mainly the resuscitation of our people and State rests; and if we can indeed conclude that it is far more noble to cause the grass to flourish, and our beautiful hills and valleys to grow green, than it is to indulge in despair in view of the gloom which hangs upon our political horizon, we would do well.

Moreover, since our hands are tied so that we cannot toil in the field of politics, let us endeavor to work in those fields left open to us; instead of waiting for the tide of immigration, whether from the North or elsewhere, to come and sweep over our lands, let us rather go to work and make them grow green under our own hands; and now, that labor is so unreliable, let us direct it with judgment into this channel, where it will be required for a shorter period than for any other crop, and where it will be equally as profitable as in any other, if not more so; especially, because machinery has done far more for this branch of agriculture than for any, we might almost say all others which we can cultivate in this region.

The question is often asked, *What is the best time for seeding clover and the bladed grasses, and what the best method of doing so?* There are two principal times best suited, in our judgment, for this, and the choice between them is to be regulated by circumstances. The Fall is nature's own time for doing this work of seed-sowing, and when we can succeed in getting our lands fallowed in time to get our wheat sown by the last week in September, or the first week in October, we do well to sow our clover and grasses then, and thus enable the young plants to become sufficiently well-rooted to stand the frosts and up-castings of the land during Winter; and then, besides, should we from any cause fail in securing a sufficient stand, we can avail ourselves of the other proffered period, viz., in the months of February and March, when the land is well-cracked and opened by the freezing and thawing of that season, and before the Spring rains have come on, to close it again. We believe

that in seven years in ten, at least, the effort to secure clover by Fall sowing will be successful, provided it be sown by the time above designated. It will then not only attain sufficient strength to stand the changes of Winter, but it will be sufficiently vigorou to stand the parching hot suns of July, to which it is exposed when uncovered by the removal of the wheat, which causes much of the Spring sown clover to die. An additional reason, not to be disregarded, is, that the new crop, which should at all times be well-trampled immediately after harvest, affords good grazing to the stock. The one and only objection to this time of sowing, is the fact that the crop of wheat will, to some extent, be diminished by the tax of the clover upon the land, but this, we think, should not be regarded, in view of the advantages to be derived.

What we have said above of clover we have found to be true of the bladed grasses, except that, as these young grass plants are even more tender than the clover and even less able to bear the frosts of Winter and the heat and drought incident to the period of harvest, when the shade of the wheat is removed, they should be sown, if possible, early in September. There is an additional reason for this in the fact that the chinch-bug attacks the grasses as it does not the clover, when the wheat is removed, and unless the plant be well rooted and vigorous, it will die.

In this connection, the question naturally arises: *What quantities of seed should be sown to the acre, and how?* If only clover is to be sown, machinery will aid us much in saving labor, which should be the thought constantly present with the farmer at all times, but especially now, when it is so much demoralized. If the drill is used, the seed may be admirably distributed by it; otherwise, the simple and beautiful seed-box, suspended over the shoulders and worked with a crank, cannot be too highly recommended, as it can, with great regularity, be made to sow about a gallon—the requisite quantity to the acre.*

Where the grass seed are either sown alone, or mixed with each other or with clover, we prefer to mix them well together in about a bushel of some suitable substance, as sand, plaster, or leached ashes, and thus be enabled to distribute them uniformly over the land. We think there are great advantages in sowing mixed grasses, and when the expense can be met, it should always be done, since

* While much labor may be saved by sowing clean clover-seed by machinery, yet every good farmer should attempt to save his own clover-seed, and sowing them in the pug—as far as we know, it can only be done by hand.

the crop of hay is not only greatly increased thereby, but is of a superior quality, for all animals prefer the mixture.

Clover mixes best with orchard-grass, which ripens at the same time, and together they not only cover the land beautifully and more thoroughly than either would alone, but they cure more perfectly; and besides, when the clover, which is only a biennial, has passed away, the orchard-grass, which stands the heat and drought of our section better than any grass with which we are familiar, and at the same time is well-suited for either hay or pasturage, will occupy the ground and remain for years, adding beauty to the fields, food for animals, and fertility to the land.

Timothy, which, in this section, is found to be an impoverisher, since it, being devoid of a tap root, feeds upon the surface-soil only, and here is not enriched by the limestone disintegrations and the heavier dews of the more strictly grass-lands of the mountains and valley, should, in order to be perpetuated and made most remunerative, be top-dressed every year; and when another grass is to be added to it, the red-top or herds-grass should be selected as they ripen together, and while this latter is not equal, as hay, to many other grasses, yet it is well-suited to fill up the spaces often left vacant in the meadows.

For grazing purposes, some other grasses might be added to the above, but where the primary object is to secure the crop for hay, we cannot, from our own experience, recommend better mixtures than clover and orchard-grass, which should be sown at the rate of one gallon of the former to one and a half bushels of the latter, per acre. Timothy and herds-grass should be mixed in the proportion of one peck of the former to one and a half bushels of the latter, to be sown with the early wheat, in order to secure, according to our experience, the greatest success; yet, if it cannot be done at this time, it may be sown with the oats with a fair hope of success.

We now come to the time and manner of cutting and curing the hay. Upon this point, so much has been written by pens far abler than mine, that I almost hesitate to add anything except to call attention to the facilities given to the harvesting and housing of hay by machinery, and the preferred plan of curing incident thereto. The very full article upon the subject of "Clover-Hay," which appeared in a Virginia journal some years ago, from the able, experienced and lamented Ruffin, who always imparted interest to every subject which he touched, and gave out lessons of wisdom never to be disregarded by any practical farmer, is familiar to us all. For

every man who is willing to think, or wishes to improve in his profession as an agriculturist, remembers with interest all which came from the hand of that eminently sensible and practical farmer, who probably did more for the cause of agriculture in Virginia than any other of her sons. The chief point in this article of his was the advantages of shade-curing with the use of stakes, sharpened at each end, around which the wilted hay was heaped a few hours after the blades had passed along; where, in its own shade, it was allowed to stand until sufficiently cured to be housed. And where the ordinary mowing hand-blades are to be used at all, we know of no way by which more perfect hay can be made, yet, the labor incident to this plan is very great. But I propose to confine my remarks more especially to the manner of curing where machinery is used, and to compare the relative expense of handling this bulky crop by hand and horse-power.

When the attention of the writer was first given to the cultivation of this crop, the mower was not in use, and the plan then pursued was to cut with a number of hands using blades, which drew the swath together in rows all over the field, the upper surface of which became parched and crisp before the bottom was thoroughly wilted; other hands came along, probably the next day, and threw two of those rows into wind-rows, thus exposing another surface both to the sun and dew, and the rain if it chanced to fall; on the second or third day, this hay was thrown into cocks without stakes (although we afterwards found great protection to the hay in using them), where it was permitted to stand a length of time to be regulated by the weather, until sufficiently cured to be housed; and all this time exposed to the storms of wind and rain common, as we all know, at this season. The hay, if caught, had to be opened again, and again closed; and thus, after the heads and leaves were, in a great measure, lost—the labor being necessarily very great—an article of hay, of comparatively inferior quality, was at last secured. A good hand with a blade, in heavy clover, does well to cut three-fourths of an acre per day, and great additional labor required, as we have stated above, with the fork and rake, in wind-rowing, cocking, opening and re-cocking, perchance, before it is ready for the barn; thus making the cost of hay-making great, as well as uncertain.

Let us compare this plan with the method of harvesting by machinery. We have had a Buckeye mower in use for about eight years, and have gone over at least eighty or a hundred acres with it each year—it at present needs a little repair, when it will probably

be able to do *field-service* several years longer.* This can be managed easily by a sprightly boy sixteen or eighteen years of age, who will take pleasure in driving it, and can cut ten or twelve acres a day, provided the field has been previously cleared of obstructions; and thus the work of about fifteen hands is done, and better done, by a single boy. Each blade of hay, by this plan, falls exactly where it stood, and the sun and air strike each and all parts alike, and thus it all, at the same time, wilts sufficiently to be raked together speedily. While the hay, which thus lies so evenly spread, is consequently sooner ready to be housed in good weather, there is an additional advantage that, when the weather is showery, it sooner dries; but when thus left, evenly spread over the whole surface sufficiently to be rapidly raked up, piled and housed before it is caught by showers—hence, if the weather is uncertain, we prefer to let it lie as it falls from the mower to having it raked, which should not be done when wet either from dew or rain. But not in the old way, by hand-power, is this raking effected, for the horse or dumping-rake here comes into play, and performs its part as a labor-saving machine, scarcely second to the mower itself, about six hours after the mower, if the weather is warm and dry; a boy with a mule and this rake draws the hay into rows, the rake filling and discharging itself in rows around the field as it is drawn along. So soon as the field has been thus drawn together in rows, the same hand turns and runs *with these rows* and draws the hay into heaps, or small cocks, where it is ready for the wagons, the bodies of which should be about eighteen feet long and six feet high, and thus able to carry about 2,500 or 3,000 pounds. *Two* men in the wagon should receive it from *three* upon the ground, and the party be followed by a single hand with a rake "to gather up the fragments so that nothing be lost." This force is a complement, and with good forks, will load the wagons expeditiously. When taken to the barn, *a hoisting fork* should be used for lifting it upon the bulk, and thus again much labor saved over the usual plan of handling with hand-forks. The hay now should be well sprinkled with salt or lime, layer by layer, and left to stand. When the barn is wide and close, the hay cannot be housed with safety as early as where it is narrower or not closed upon the sides.†

* While we speak of the merits of the Buckeye, we would not be understood as underrating several others, as McCormick's, Wood's, Kirby's and others of deserved celebrity.

† It is very desirable, in building hay houses, to have them so arranged that the wagons can drive through the centre of the house, so that the load may be

The great object with all good hay-makers is to remove it from the exposure of the field as early as practicable, and where the weather is favorable for this purpose, it may be safely housed in a narrow bulk in the usual open hay house by the end of the third or fourth day from the hour of cutting, if well-sprinkled with salt or lime, or, probably better, with both.

The same remarks will also apply to the curing and management of the bladed grasses, or mixed hay, though they will probably not require exposure to the sun so long before housing. We are satisfied that no other crop which we can make will yield so well, with the small amount of labor, as we have shown this to do; while, at the same time, the land steadily improves, and abundant pasturage and Winter food are afforded to animals. Good land, well-set in clover, or clover and orchard-grass well-mixed, yields from one and a half to two tons per acre, which should net about one dollar per hundred in this section of Virginia, or should the price be deemed, at any time, insufficient, the hay may with profit be fed to horses and cattle, and thus a large amount of valuable manure be secured, as well as excellent beef and strong and thrifty working animals.

But we fear, Mr. Editor, that we have already run our article to too great a length, and so, craving your pardon, we express the hope that to you, and to all of your readers who will throw the mantle of charity over the imperfections of this article, beautiful garments of red, blossoming, green clover and waving grasses may be strown over your washed and washing hills and naked valleys, and that your fields and farms, instead of passing into the hands of strangers, may long remain to you and to your Virginia sons.

M. S. R.

Fertilizers.

Mr. Editor,—The question of vital importance to planters at the present time is—how they may produce the greatest quantity with the smallest expenditure of money and means. This would naturally lead to the consideration of the best and most economical manures to be used in the production of our crops.

I propose to give you a few thoughts on the subject of fertilizers, and sincerely hope some of your able and scientific contributors may

taken off with far less labor on either side, and also be spread over a larger surface, and thus enabled to cure more rapidly and evenly also. This passage also affords a most excellent covered place for baling in the Winter and in hot weather.

be induced to follow up the subject, giving us the benefit of their experience both with the old and the artificial manures.

First, I would notice lime. As a manure, its use is chiefly confined to Europe and America. Although found abundantly in Asia and Africa, it seems to have been used only for building purposes. In the United States, its use as a manure has greatly increased during the last half century, since the impression of its durability and permanency as a fertilizer in the soil has become general; and I believe it is now conceded by the most scientific and successful farmers, that "lime is the basis of all good husbandry." Some contend that it is a manure in itself—others, that it becomes one only by its action on the vegetable or organic matter already in the soil, decomposing and converting it into food for the growing crop. I believe it to be a manure in itself, and a permanent one; and that to its agency alone we are to look for the regeneration of our worn-out and impoverished lands.

Some time since, I read an interesting experiment bearing on this point—its permanency—made by Mr. Watson, an Englishman. He had a lot of one hundred and sixty-six acres, which grew little else but heath. To this lot he gave a good top-dressing of lime, which he states totally eradicated the heath—producing herbage of luxuriant growth and good color, annually showing the action of the lime; and, furthermore, that after the expiration of fifteen years, the effects of this one top-dressing are distinctly perceptible, showing a marked difference in this lot and the adjoining fields of precisely similar soil. Lime certainly improves the quality and quantity of all the crops we cultivate, and we all know how exceedingly difficult it is to grow leguminous crops with any degree of success without the aid of lime, unless calcareous matter already exists in the soil. It is a never-failing fertilizer of grass-land, and not only improves the quality of grasses sown, but seems to bring out superior grasses that have lain dormant for the want of proper auxiliaries to germination. Every farmer has observed this in regard to white clover. I know it improves the *quality* as well as the quantity of clover or grass; for cattle will graze an acre of plastered clover, leaving the whole field untouched so long as that plastered is tall enough to crop. All lovers of good mutton can attest the superiority of that raised on limed pastures. Good authorities say the most economical mode of applying lime is as a hydrate, because it may be more generally and impartially distributed over the land, as well as for certain chemical changes it undergoes in the process of pulverization. I have always been an advocate for lime as a manure in

some form, either the phosphate, carbonate, or sulphate, but the sulphate, Plaster of Paris, I believe to be the best and most economical of all the manures. The lump is six dollars and a half per ton, while the fine ground is only twelve. Generally, the 1st of March I sow broadcast on my clover-fields one bushel per acre, which doubles the crop, and this, when turned under, of course doubles the quantity of vegetable mould for the land—thus laying a good foundation for succeeding crops. For corn, it is indispensable—three-quarters of a bushel to the acre. I drop into the bud of the young corn, just after weeding, and I think it more than equal to one hundred and fifty pounds of Guano to the acre.

The phosphate of lime, I know, is considered by many superior to the sulphate; but being less abundant, the price is higher, and consequently not within the reach of a certain class of our farmers. It is the principal mineral integrant in bone manure. England has many vessels engaged in the bone trade, carrying bones from various parts of the world to England to be ground for manure. When Mr. Hornby first commenced grinding bones, he distributed the dust gratuitously, there being no sale whatever for it; but the following year he sold eight thousand bushels. Farmers have seen the decidedly beneficial results from its application. Again, I would say that I believe lime to be the best of all the Fertilizers, and possessing the great desideratum—cheapness—and all the money we expend in lime stays here, enriching our own people—that paid out for Guano enriches a foreign government. Of Peruvian Guano, I must confess I am not a warm advocate—though I am open to conviction. While I do not believe that everything that stimulates is followed by exhaustion, yet my experience has led me to believe that crops stimulated by Guano, subjected to drought, suffer much more severely than those on which any other manure has been used. In Peru, it has been used from time immemorial, and still ten millions of pounds are used yearly. It is also stated that in certain districts Indian corn is raised in the proportion of three hundred to one where Guano is used, while without it only fifteen to one can be produced. Yet we must remember that the system of agriculture in Peru differs materially from ours; while the climate is arid, yet the country is intersected by canals and works for irrigation, and at stated times, or when needed, the crops may be thoroughly irrigated. And in England, where Guano is in much favor and immense quantities are purchased, the atmosphere is humid and a drought is almost an anomaly.

We possess neither of these advantages—no appliances for irri-

gation and little humidity of atmosphere—while we are subject to constantly recurring droughts. We use Guano at a risk—the question, then, is, can we afford to pay eighty dollars per ton for a manure of doubtful success? It is still a mooted question whether or not it is a permanent Fertilizer—or if all the benefits are not obtained the first year.

The decomposition of vegetable matter in the soil is so rapid and complete, that observation has led me to believe that Guano lessens the adhesive properties of the soil, making the land more liable to wash; the sand and clay separating more readily, gulleys are more apt to form. We have just the reverse of this from the use of lime.

I am disposed to give preference to some of the artificial Guanos. Their composition, I think, would be more uniform. By examining tables of analyses, we find the composition of Guano by no means uniform. Of fifteen analyses made by a distinguished chemist, no two were identical. Perhaps after all, the greatest benefit we have derived from Guano has been in introducing artificial manures better suited to our soils, crops and means. I would call the attention of your readers to one of these that I can particularly recommend, "The Chesapeake Phosphate," prepared by Isaac Reynolds & Sons, of Baltimore. Its base is Nevassa Guano, and it contains 80 per cent. of bone phosphate. I am giving it a fair and thorough trial this year, and I hope its use, in conjunction with plaster, may add some *weight* to the hitherto light net proceeds of farming.

J.

Creek Farm.

Immigration—County Colonization.

Mr. Editor,—As "Domestic Agent of Immigration," I have, in the last few months, received a great many letters and visits from prominent gentlemen throughout the State, but mainly from the Tidewater and South Side counties, anxiously inquiring what can be done to induce white people in large numbers to settle in Virginia? I am sure this is one of the most interesting topics just now engaging the attention of some of our most thoughtful men, and I am led to believe, from the number of letters written to me on the subject, that I will be rendering public service to state through your columns, what has been attempted and what I hope will soon be more successfully accomplished in this vitally important movement.

The State has not appropriated one dollar to aid immigration. Last fall, after the election for the Convention, I thought the result

would lead to a general desire to employ white labor, and at my own expense I organized an agency in direct communication with the New York Board of Commissioners of Immigration, and with a branch in Philadelphia, which would have enabled me to meet a demand for 1,000 laborers per month at wages ranging from $10 to $15 and board. Inquiries by the hundred poured into my office, but in the space of three months less than one hundred actual orders were made and supplied. This satisfied me that the farmers and planters of Virginia were not yet prepared to incur the increased expense, and make the radical change, involved in the substitution of white for negro laborers on their farms and plantations; and after a faithful experiment, at a loss of nearly $500, I reluctantly abandoned the business of attempting the introduction of more laborers, and resolved to direct my efforts to *colonization.*— In this I am encouraged to believe great success will be achieved by persistent effort, and the earnest co-operation of land owners. If there be those who think more might have been accomplished, I beg them to remember that thus far it has been a work without remunerative or pecuniary assistance from any quarter, and that I have only been able to devote to it the time and limited means I could spare from my more strictly private business.

I am satisfied that rapid and extensive Colonization of European small farmers is practicable in nearly every county of Eastern Virginia, and in some portions of the South West where lands are abundant and cheap. Already half a dozen counties are moving in the right direction. Certain conditions are indispensable to success. These I will briefly state.

1st. Enough land for a small colony, say 10,000 acres at least, must be offered in one locality—It need not be actually in one body but must be sufficiently compact to afford neighborhood and social advantages to the settlers, who will want churches, schools and mechanics of their own within easy distance of their homes.

2d. The lands must be offered at low and attractive prices, and for the larger part of the purchase money a credit of one, two, three and four years must be given, the settler paying interest annually and securing the debt by a lien on the property. It is only in this way that we can compete with the cheap lands of the West in attracting foreigners to our State. We will make money in the end by selling a part of our vast unproductive territory at rates so low as to insure their settlement; for density of population and increase of labor will rapidly enhance the value of the residue to a price not now thought of by our people.

3rd. The inducement above stated must be presented directly to the European emigrant in his own country, so as to fix his destination before he starts across the Atlantic: and the information must reach him in a way and through channels that will command his implicit confidence, and when he acts upon it and comes here, he must find that he has not been deceived, so that every letter written back to the father-land will be an appeal to the writer's friends to join him in his new and prosperous home.

4th. Every facility must be afforded to the emigrant from the time he bids his friends farewell in the old country, to speed him on his way to his future home. He must be brought directly to our own Virginia ports and thence transported at the least possible cost, and in the shortest time, to his destination.

Do all this and tens of thousands of families, with means ranging from $500 to $5000, can be brought here every year, till our State becomes as populous and wealthy as New York or Pennsylvania.

Now can this be done without further legislation and without aid from the state treasury? I answer confidently, yes. It will require money, and a good deal of it too to carry on the work efficiently. Our people cannot furnish it, but *I know it can* be commanded to any amount required, but only on the terms that large sums of money are supplied for any of the ordinary practical purposes of life; that is perfect security to its fortunate possessors and tempting *profit* from its investment. These terms our landholders can safely, wisely and advantageously offer, and they will be immediately accepted, the money will be furnished, and the whole machinery of Colonization will be put in motion.

The plan proposed to me on behalf of capitalists in the North and in England is briefly this: That in any county, where from ten to fifty thousand acres of land can be spared for settlement, the owners shall meet together and form an association or company, and each member bind himself in writing to put in so much land. After the requisite quantity, say a minimum of ten thousand acres, has been subscribed, let the association appoint three appraisers acquainted with the several tracts or parcels, to fix the price at which it is to go into the joint stock, and thus determining the interest of each individual in the whole. When this is done, apply to the Judge of the Circuit Court of the county for a simple charter of incorporation, such as he is empowered to grant under the title of "The ——— County Land Company." Issue common stock to each landholder to the amount of his land as ascertained by the appraisers. Let the charter provide for the issue of a *preferred* stock

not exceeding, say one dollar per acre on the company's land, guaranteeing 6 per cent. dividends from the date of issue, and secured on the entire property of the company, and not to be sold for less than par, and redeemable in five years; and for the redemption of this stock a sinking fund of one-fifth of its amount per annum to be created from the proceeds of land-sales, either in money or bonds of purchasers. The holders of this stock to participate *pro rata* with the holders of the common stock in all net profits realized from the sales of lands at prices above the original valuation. This preferred stock can be immediately converted into money at or even above par, and thus supply the means for surveying and dividing the lands into small farms; for preparing accurate maps and descriptions of every parcel or small farm to be sold; for defraying the expenses of advertising and of agencies at proper points in Europe, and of a central office in Richmond, charged with the general business of the company abroad. The Richmond office should be so thoroughly organized and managed as to enable the foreign agents to rely implicitly on all information emanating from it, and guarantee to the emigrant in Europe a literal and exact compliance with every representation made or engagement entered into. Therefore, one general office or agency in Richmond should transact the business of all these county companies abroad, as a matter of economy to them, its expenses to be paid, as above stated, out of the funds arising from the sale of preferred stock, but the amount to be fixed by a uniform rate of commission on all actual sales, so that each county company would only have to bear its just and equitable proportion of these expenses. It is difficult to say even approximately what would be the cost of such an organization, but in a rough way I would estimate 5 per cent. on the amount of sales as sufficient to defray all the expenses of this central agency and its correspondents abroad.

This central agency should have the appointment of a general treasurer—say a respectable banker—from whom bond and security should be required by each county company in an ample sum, to insure fidelity. The central agency would of course manage the whole business of transportation, so as to secure to the immigrant the lowest practicable rates.

As each county company would endeavor to sell its lands in such a manner and at such prices as, in the first place, to speedily induce the settlement of at least half of them, and then to realize a profit from the enhancement of the residue, its local board of directors should alone designate the parcels of land to be sold, and fix

the price, and, subject to their control, the agents should sell.

Dividends of moneys received, after deducting expenses and the sinking fund, should be made quarterly or semi-annually to the stockholders.

To satisfy land-owners that their lands are not to be tied up in these companies, it should be provided in the charter or by-laws that after two, or perhaps three years, any land-owner may withdraw his unsold land by refunding the dividends he may have received and paying the company a stipulated per centage on his lands withdrawn, to cover expenses it may have sustained in surveying and advertising, and enhancement of value from company outlays, &c., and have his stock cancelled. It might also be provided that stock, to a certain amount, would be receivable in payment of, say the two last instalments of purchase money. This would create a market and demand for it amongst the colonists who might have spare money to invest in that way, both to their own advantage and the convenience of the original land-subscribers.

In some minds there are objections to joint stock companies. I think they are admirably adapted to the purposes here aimed at. However, these ends might be attained by conveying the lands to trustees for the same general objects, to be clearly defined in the conveyance. The main difficulty would be to find gentlemen willing to assume the trouble and responsibility of so long a continuing and important a trust.

One thing, however, is perfectly clear, that mere individual effort can accomplish nothing of much public importance in this vast field of vital interest to our State. There must be organized, harmonious, active association and co-operation amongst a large number of our people. This will give strength and vital power to the movement. Let the lands be put in liberally, in the manner suggested, and the capital to do the rest of the work speedily and thoroughly can be had immediately on the terms mentioned.

Isolated immigration will be a slow process. We must sooner or later adopt some plan that will dot the State over with *colonies*. These will be nuclei around which population will settle, and radiating from these fixed points, will rapidly fill up the sparsely settled portions of the State. Northern farmers will come into the Valley, Piedmont and Northern Virginia, as they are now doing, but it will be some years before that wave of population will reach Tide-water and the Southside. Not so with the European tide. The cheap lands and balmy climate of these sections, when they are once

known to and appreciated by the people of Western Europe, will attract to us a large proportion of that tremendous stream of human life and energy that is pouring into this country every year from abroad. Two or three leading men in every county can "put this ball in motion." It is already started in several counties, and I believe will meet with a success that will amply reward the public spirit and patriotism of those who are pushing it forward.

J. D. IMBODEN.

Mr. G. C. Gilmer's System of Farming Reviewed.

Mr. Editor,—The communication of Mr. G. C. Gilmer in your May number is instructive, but not without errors, and after thanking him for the good, I hope he will accept my objections to some of his estimates and views.

He says he owns a farm of 600 acres of cleared land, one-half flat, of which he will "turn 100 acres into yards, lawns, orchards, grass-plats and truck-patches," the remainder he will "divide into four fields."

Thus he will divide his 500 acres into fields averaging 125 acres, which he proposes to work with six mules and "two first-class ploughmen," and make a "frolic of the harvest of the seeding of 150 bushels each, Wheat and Oats, and the saving of 100,000 pounds of Hay, with *day labor*. He wants but 10 to 20 acres of Corn, which "should bring 12 to 15 barrels per acre," say 240 barrels Corn. If 8 barrels average is realized and 40 acres planted, it will be profitable, and a crop cultivated between seeding the Oat-crop and harvesting Wheat, and a little "frolicking" of hands engaged with Wheat and Hay-crop, will finish the Corn-crop, "two first-class ploughmen" and their mules brought to July.

The Wheat and Oats, *if made*, will be to *deliver*, the Hay to haul to a market, or such part as may not be consumed by stock.

Mr. Gilmer is too liberal-minded to lay out work suited only to his grass-inclined farm; yet, if his theory is adopted, there will be a scarcity of Corn in the country (each farm only producing for home use); too many "truck-patches" for the market, lawns without sheep and calves, orchards without labor to gather the fruit, yards unadorned and gardens uncultivated, *unless* he keeps up his "frolic" most of the year, and finds better hands to frolic with than falls to the lot of Farmers in these days of degenerate labor, or, as a Yankee would say, "help."

Remedy.—The farm, as divided by Mr. G.: make more Corn, all the grain and Hay *you can*, and, in addition to two good plough-teams, have two yoke of oxen, own a few brood mares, or as many as practicable, and the less mules, breed from the mares working to suit their condition and the wants of your crops, care well for the colts the first Winter, graze them, if need be, in Summer in fields inclining to "sedge and briars," and in Fall and Winter on your meadow, having access to a rick or stack of Hay, or feed it to them on knolls in racks, moved occasionally as needed, better still if built on low axles, with wheels made from a gum-log bored out, and of home manufacture.

Thus, in a few years, the farm will be stocked with horses at an imperceptible cost, and the mule-dealer will not be so much in demand.

With *good* cows, and a *respectable*, or, better, a full bred short-horn bull, in a few years the farm would be stocked with cattle, and the same of sheep and hogs (commencing with *good breeders*).

The oxen could be produced on the farm, and when they shall have worked faithfully and done most of the heavy hauling of the farm for from four to six years, they will be worth more to fatten than when first put in the yoke at three years old. "Two ploughmen" will create work for a number to follow, and a 600 acre farm of cleared land must have the labor, if Mr. G.'s estimated crops are to be realized.

The stalk-fodder, shucks, chaff and straw of grain-crops fed in Winter on the sod-fields, would Winter a number of stock-cattle in addition to the calves of from 5 to 20 cows each year.

These cattle, not "poor horses or sheep," can be bought each Fall and Winter, and if three years old or upwards, Winter them on the abundance of forage; next Spring and Summer, graze them on the rough grass-fields and market them in the Fall, or if desirable, keep back those *suited* to grain-feeding that Winter, and market in Spring, having fed on cut Hay and sheaf Oats and Corn-meal, and stalled in bad weather if practicable, bedding them with leaves or straw and making a quantity of manure for Spring use.

At the same time, a fine flock of sheep may be raised; the wool, a cash article, and the lambs and mutton not less so.

From the cows a handsome revenue will be derived by the housewife in butter and pork from waste milk, whilst the Farmer adds hogs to make pork enough for home use, and to spare more or less, dependent on "the situation" of freedmen.

Farms not *adapted* to grass, and the less suited to stock, must be

conducted to suit their peculiarities, having a bright eye to producing all the grass and Hay practicable, and feeding Hay liberally to stock on the farm in Winter and Spring.

Where there is stock to winter and sod-fields on the farm, the cattle should be fed on the thin knolls with stalk-fodder, straw, shucks and chaff, and with the old grass of last season; they will do far better than when confined in barn-yards on similar forage, with shelter to protect them.

Localities and farms differ so much, it is not practicable to follow the practice entire of a farmer near you, but grass-farms or land suited to grasses, may be soon made profitable; but much depends on the distance products must be hauled to a market, if not fed on the land; and if, when marketed, they will net one dollar for Corn in the crib and one dollar for Hay in the stack, as Mr. G. estimated; whilst his minimum prices and quantities may be exceeded, *far more likely* they will not be realized; and though it is laudable to strive for good results and improvement of farms, let not the hopeful Farmer be too sanguine of realizing my friend Gilmer's "P. S." figures.

S. W. Ficklin.

Fertilizers will not Pay.

A large number of wiser and better farmers than I have ever claimed to be boldly make the above assertion. The assertion depends, for its correctness, on circumstances.

If, to an acre of land that has yielded tons upon tons of produce until it is exhausted, they give seventy five or one hundred pounds, or even one hundred and fifty to two hundred pounds, and expect a crop equal to that grown on the best acres of new-ground in the State, the assertion may hold good, that fertilizers will not pay.

But if, on the other hand, he will apply four or five hundred pounds, or even more, to the same acre for three years in succession, after that time, less will be required each subsequent year until filth makes it necessary to change the crop and put to clover or grass. The crops in the meantime, with tolerable seasons, will be very fine, and his land grow richer every year. The farmer who persists in the small application is striving constantly to get his money back and get a stand of clover, but he very often fails in both. Suppose a would-be wise man should change the site of his garden every year for ten years, would he have a richer or better garden thereby at the expiration of the time? Suppose the manure ap-

plied to the ten new gardens had been put on the same for ten years, how would the crops compare? Or suppose one-fourth of the quantity of manure had been applied yearly to the same garden, how would the crops on the tenth new garden and the old compare? More than twenty years since, a Pennsylvanian purchased a farm in Shenandoah county, Va. His first crop of wheat was five bushels per acre. He kept the same field in wheat, adding everything he could get at that day to fertilize it, until he made it produce forty bushels per acre. What he applied doubtless increased the filth rapidly. The Phosphates (we should use no other fertilizer we have to pay money for except *Plaster* and *Lime*) of our day are better for continued cropping than home-made manure, for the reason that weeds do not follow so rapidly.

I am a ruined Confederate and cannot set the example suggested, but, at the same time, I am sorry to find so many falling out with manufactured fertilizers, when it is plain to me that they, and not the fertilizers, are at fault. I use Phosphates freely on Potatoes, Cabbage, &c. I also used it on Corn and Oats last year. I applied two hundred and fifty pounds to one-fourth of an acre for Cabbage last spring; but for the worms, it would have paid well. I also used it in the hill with all sorts of crops. I have now my supply for spring use. Thus, you see I practice what I preach about as nearly as most preachers do.

I. I. HITE.

Arrington Depot P. O., Nelson County, Va.

The Northern Neck of Virginia.

[In our April number, we published an interesting article by the Hon. Willoughby Newton, on "the geographical situation and peculiar advantages for settlement of the four counties—Westmoreland, Northumberland, Richmond and Lancaster," which constitute the lower part of the "Northern Neck of Virginia."

"The soil" of these counties is described to be "a sandy loam, with a clay foundation approaching to redness, is easily tilled, and, when improved, produces heavy crops of corn, wheat, cotton and tobacco, and is particularly adapted to clover, timothy and orchard-grass. It is, in fact, a natural garden-soil, and, by well-directed industry, may be made to produce, in abundance, all the crops, whether of grain, fruit, roots or GRASSES (*not 'grapes,' as erroneously printed on page* 206, *Southern Planter and Farmer*), known to the temperate regions."

The following interesting and valuable article is an appropriate sequel and adjunct to that of Mr. Newton, and traces out the description and advantages

which the remaining portion of the Rappahannock valley below Fredericksburg offers for settlement to emigrants seeking homes in Virginia. It has been ably and carefully prepared by Major Kelly, Editor of the *Virginia Herald*, in which paper it was originally published. "It is," says our friend who sent us this article, "the best means we now have of resuscitating our noble old Commonwealth to attract to it an intel igent population; especially of manufacturers, who will find everything they need in Fredericksburg; and as its population grows, the surrounding country will find a market for its many products."]

FREDERICKSBURG AND ITS SURROUNDINGS—THE RAPPAHANNOCK VALLEY.

The man of energy desires to know the best field for his enterprise, where the life-blood flows warmly, and where business can be pushed with advantage.

The man of wealth seeks after comfort, and the place where the elements combine uecessary to that end.

The man of small means, where honest effort will meet with its reward, and where subsistence and rents are to be had upon moderate terms.

The invalid, that land whose genial breezes fan the cheek into the flush of youth; a clime so temperate that health may be restored and life prolonged: where living may be enjoyed without the bilious fevers and agues of the South and West, and free from the consumptions which desolate the North.

To such, and all others desirous of acquiring homes in this highly favored latitude—free from the frigidity of the North and the debilitating heats of the far South—with a climate neither too hot nor too cold; with short winters—in a vicinity surrounded by a fruitful soil; a water-power with capacity sufficient for the energy of tens of thousands; with a population noted for its morals and esteemed for its hospitality; a bill of mortality that shows a better record than any other city or town in the United States of its size and population; where property is cheap, and first-class store-rooms to be had at from $300 to $600 per annum; where pure, life-imparting freestone water is to be had at the door; a market that affords the best oysters of the world, and the finest fish, and wild waterfowl in season; with fine male classical schools, and the very best of female seminaries: With such advantages, we may safely challenge any other quarter of the world, and actively enter the canvass of competition for immigration.

Fredericksburg and its vicinity was once the active sphere of GEORGE WASHINGTON. This was the home of his childhood, and

here is the resting-place of his MOTHER. Fredericksburg is classic ground. Turn where you may, it is full of historic import.

Whilst we hope to benefit ourselves by a freshly-acquired immigration, we none the less believe each one will consult his own material interests in joining destiny with us. We propose, then, offering in detail, some of the advantages and inducements which Fredericksburg and the Valley of the Rappahannock hold out.

LOCATION.

Fredericksburg is beautifully situated upon the banks of the Rappahannock river, which is navigable for steamers and sailing craft. It is at the head of tide-water; 92 miles from the mouth of the river, where it disembogues into that great inland sea, the Chesapeake bay; and 13 miles from the Potomac river. Fredericksburg is within 15 hours' travel of New York, 3½ hours of Washington city, and 3 hours of Richmond—equi-distant, 60 miles from both the two last named cities. It is surrounded by gently sloping hills. To the south and southeast a large and fertile valley greets the admiring gaze. Nature and art have united in giving this place rare inducements for manufacturing, trade and commerce. An enterprising population ought, soon, to make it one of the largest river towns on the Atlantic coast.

NATURAL ADVANTAGES.

Among these may be classed—

1. The salubrious climate.
2. Character of the farming lands.
3. Productions of soil.
4. Accessibility (by water) to market.
5. Productions of our rivers.
6. Value of timber lands.
7. Adaptation to fruits, &c.
8. Mineral lands.

These we will now examine as briefly as may be, in order to an intelligent apprehension of their value:

Farming Lands.

The valley and bottom lands of the Rappahannock cannot be excelled in productiveness for cereals and many of the choicest varieties of fruit, whilst the high lands are generous and remunerative under kind treatment. Immediately in the vicinity of Fredericks-

burg, the red clay, loam and gravel predominate. Along the rail-road leading to Richmond, the light clay soil and loam appear. No large fields of sand or sandy loam are to be seen, being found nearer the sea-coast—hence, a majority of the land is easy to cultivate. Much of it is naturally rich, and retains fertilizers a long time.

The farms along the Rappahannock (as well as in most of the counties bordering) are generally large. This offers inducements to men having means, or small communities of farmers in the North, of purchasing large tracts. In the one case, as an investment, it will prove remunerative to buy and divide into smaller tracts. In the other, a whole neighborhood may migrate and make the purchase; the land be divided and comfortable homesteads established without the loss of olden-time associations. The community may have its own schools, teachers, and all of former home comforts. In many cases fruit is growing—the lands cleared up and in good tilth—fencing up—buildings erected; all of which is very different from pioneer life in the far West. And what is of equal, if not of primary consideration, free from the miasmas and diseases incident to a newly-settled country.

Com. Barron on one occasion said he had traversed the best portions of the earth, and after a careful examination of their agricultural merits, he had arrived at the conclusion that some six or seven of the Tide-water counties of Eastern Virginia could contribute more to the luxury and comfort of man than any other portion of the habitable globe.

The Climate, &c.

We have a climate happily exempt from "the protracted winters and cold of the North, and the uncomfortable and parching heat of the South. It is the golden mean between extremes, and combines a large share of the advantages regarded by many as peculiar to distant latitudes. Near the mouth of the river, fig-trees are capable of producing two crops to maturity in a year; while every fruit grown in Maine flourishes here, if properly planted and cultivated. The cotton-plant of the South and the timothy-grass of the North here find their respective boundaries. The same, too, may be said of persimmons and cranberries, apples and figs, currants and peanuts, plums and sweet potatoes. In no other climate does the peach, pear, quince and vine attain a more perfect development. Nature encourages the farmer, the gardener, the orchardist, with equal bounty. The record of the rain-guage, for half a century, shows that injurious droughts are rare indeed; while the thermome-

ter tells of lengthened seasons for the abundant growth of every agricultural staple and every horticultural luxury.

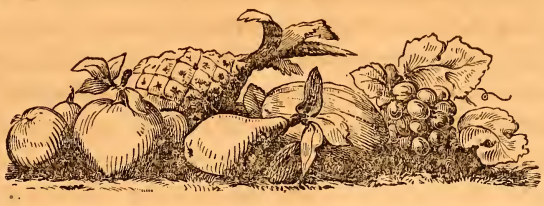
"If the soil were more generously rich, the water would be less pure and salubrious, and the country comparatively more unhealthy. Happily, the land is not overcharged with decaying vegetation. The air, away from stagnant streams (which are not common), is remarkably pure, and the water all that can be desired of this important element of universal consumption."

The Productions of the Soil.

Wheat, corn, rye, oats, tobacco and potatoes—sweet and Irish—are our staple products. Our wheat is sown in the Fall, and is not killed out by our severest Winters, as it frequently is in the West, where, in many cases, Spring wheat only is seeded, which is almost uniformly of an inferior quality. The wheat of this section sells for from 25 to 50 per cent. more than that raised on the new lands of the West. Corn is easily cultivated, and yields very profitable returns. Irish potatoes yield largely. Sweet potatoes are indigenous to our soil, and their size and flavor are unequalled in the world. Rye and oats can be raised abundantly, with but little care and attention. Tobacco yields large returns for the amount of land in in cultivation, bringing from $300 to $500 per acre. Barley and Hemp have never been grown in this section, and we are not prepared to say with what anticipated results their cultivation might be entered upon. The soil and climate are both admirably adapted to the Hop, as is evinced by the flourishing vines in town and country. As the season is so much earlier than either that of the North or West, they mature the more rapidly, and may be put on the market several weeks in advance of the production of the sections alluded to. The natural growth of Sumac has been an article of considerable manufacture, and Fredericksburg supplies more of this article for the trade than, probably, all other sections of the United States combined.

[We are compelled, by want of space, to defer the publication of the remainder of this interesting article to our July number. The second part will treat of the following particulars, viz: Access to Market; The Fisheries; Mining Lands; Timber; Fruits; Acquired Resources, such as Internal Improvements, Water-Power, Manufacturing Establishments, Value of Products, Business Pursuits of our People, &c., &c.]

"Keep aloof from quarrels; be neither a witness nor a party."



Horticultural Department.

Meeting of the Virginia Pomological and Horticultural Society.

This association held its regular monthly meeting last evening, May the 4th, at the rooms of the *Southern Planter and Farmer*, on Main street, when Captain J. M. Allan read an interesting paper on the culture of the grape, which was listened to with marked attention by the eminent horticulturists present. This subject, so interesting to Virginia land-owners was farther discussed by Messrs. Gilham, Worth, Johnson and others. The question mainly considered was, what varieties of grapes are peculiarly adapted to the soil and climate of Virginia.

MR. ALLAN'S ADDRESS.

Within the last few years, grape culture has received a new impetus on this side of the Atlantic; and the increasing interest manifested on this subject by the people of Virginia bids fair to give her prominence among the wine-producing States. Her soil, her climate, the diversified topography of her surface, ranging from sandy plains to more than Alpine heights, where the lowland Scuppernong and the highland Catawba may each find its own peculiar home, point to a glorious and prosperous future, when her hillsides and her valleys shall team with the fruit of the vine—when the not far distant day arrives, in which the tide of immigration shall turn from the cold and barren rocks of New England, and from the pathless and marketless plains of the West, to seek in the genial climate of our Southern Atlantic States that comfort and luxury which no other section affords, then may we anticipate an era of prosperity seldom if ever equalled in the annals of the world.

Nothing will so readily induce immigration from Germany, France, Spain and Italy as the prospect of being able to cultivate the grape successfully; and, on the other hand, we need nothing so much as

this very class of labor and capital to develop the production of wine.

But while all this is true, and may be anticipated, there is a present duty incumbent upon those who already enjoy these advantages, viz: To see to it that we put forth every exertion to lay at least the foundation upon which this superstructure is to arise.

The first, indeed the essential thing to be done is to acquire and disseminate information. Our people need to be taught even the simplest rudiments, and it behooves this society, standing as it does the single representative of the great horticultural and pomological interests of the State, carefully to digest and promulgate practical information; not theories, but details of useful import, such as all may easily understand and follow.

Having this in view, let us this evening enter upon the discussion of the general culture of the grape, with an honest endeavor to arrive at the best methods, without any regard to favorite theories or the requirements of so-called science; for true science explains phenomena as we find them, but does not demand that facts shall conform themselves to scientific theories.

The first point in order, then, is: What location and soil should be selected for a vineyard? On this subject a vast deal has, we think, been unnecessarily written. There is little use in telling one who has nothing but flat land to seek a hillside, and vice versa.

The question is: Will grape-vines succeed and yield well in any location? And to this we answer, yes. True, some of the more delicate varieties, such as Delaware and Rebecca, require peculiar soil and exposure, but a sufficient number of the hardier and more productive kinds, such as Norton, Concord and Clinton, will succeed well in any locality.

It is not a question of location, nor of soil, but of drainage, and wherever you find land that, either naturally or by artificial means, is susceptible of thorough draining, such as will carry off the water from the roots of the vines and keep the land from becoming sour and heavy, then and there you have a site for a vineyard.

That gentle slopes and southeastern exposures are preferable, will not be denied, but that they are essential is a mistake.

So with soil. Light porous ones are best, but the grape will grow in any soil that is or can be made deep, loose and dry.

Much more important than location is the *preparation of the soil.* And yet, even here much injury has been done by instructions and directions more lengthy and difficult than wise or true. The idea so widely diffused a few years since, that trenching or (as was the

case in many instances) the turning under of a good surface-soil to bring to the top a miserably stiff sub-soil, was necessary, is gradually disappearing, and we hope will soon be entirely discarded.

Our experience has been that the best preparation of the soil is deep ploughing and deeper sub soiling. Penetrate as deeply as possible with both plough and sub-soil plough, and if this is well-done, the want of trenching will never be felt. Nor is it expedient to have the soil too rich. If the land be poor, stable manure or bone-dust should be used in sufficient quantities to put it in good heart; but high fertilization is not desirable, as it stimulates the growth of the vine at the expense of both quantity and quality of the fruit.

Planting is a simple operation, and with one caution we pass it. Be careful not to plant the vines too deep; keep the upper roots near the surface, so as to give them the benefit of atmospheric influences. This is the normal condition of the grape-vine. The roots of wild vines are always found near the surface.

The distances at which vines should be planted will depend upon the varieties. Six feet apart each way for slow growers, and eight feet for vigorous ones, are fair distances.

Before planting vines in the vineyard, they should be pruned closely, leaving but three eyes, of which only two should be permitted to grow. The only summer treatment requisite the first year, is the destruction of weeds. During the first autumn, the stakes should be put in or the trellises erected; and by all means use trellises instead of stakes, as on these the sun and air have much freer access to the fruit. They cost a little more at the outset, but the superiority in the quality and yield of even the first crop from vines trained in this way over those grown on stakes will more than repay the extra outlay.

Where timber is abundant, wooden trellises are both economical and desirable; but near large cities, or in sections destitute of timber, strong wire makes a good and handsome trellis. The only objection to wire is that it is more liable to rub the bark off the vines than wood; and, although this is true to a certain extent, still experience has proven that the injury, if any, is not serious. Whether wooden laths or wire are used, the posts should be set not more than eight feet apart.

At the same time that the trellises are erected, or during the ensuing winter, the vines should be pruned, leaving no more than three eyes of the last summer's growth. The season for this pruning continues from the cessation of the growth of the vine in autumn until the rising of the sap in the spring, but care must be taken not to

prune in very cold weather while the wood is frozen. It is equally important to have the vines pruned before the sap begins to flow freely, so as to avoid injury from bleeding.

The treatment the second summer will depend, to a great extent, upon the system of training adopted. For general vineyard culture, we prefer to train but one shoot in an upright direction, and after it has reached the second rail or wire, say three or three and a half feet from the ground, pinch off the end and thus develop four lateral shoots, to be trained along the first and second wires or rails; these, in their turn, to be pinched off when three feet long. The two shoots coming out from the other eyes left at the base of the vine may be layered down and made profitable in the production of young vines which, in the fall, are taken up and the cane pruned back to two eyes. This system of training is recommended for the sturdy and vigorous-growing varieties, such as Concord and Norton.

For more delicate growers, like the Catawba and Delaware, it is better to permit two canes to grow, training them along the lower rail or wire, and making these canes the base from which to grow future fruiting wood.

During the second summer, the soil, if not heavily mulched, should be frequently stirred with the cultivator and the weeds kept down.

The third season care will be required to have the vines properly summer-pruned. As soon as the bloom-buds are sufficiently developed to be distinguished, the vines should be carefully gone over and all the shoots pinched off just beyond the last bunch, excpt the shoot or shoots left for bearing canes the next season, and these should always come from the spurs left at the base.

This pinching of the bearing shoots checks the sap from pushing the growth of the vine, and causes it to develop the fruit. The practice some adopt of thinning out the leaves to admit, as they say, light and air, is injurious. If there is too much wood, cut it off, and that which is left will be benefited, as also will be the fruit, but don't take away the lungs of what is left if you wish it to be healthy and vigorous; for no given quantity of wood produces more leaves than it requires to feed it.

To enter into a full discussion of all the methods of pruning would be neither admissible nor expedient on an occasion like this. The better plan is to try to arrive at correct principles, and then the application may be left to the good sense of the vine-grower, who alone can judge of the peculiar circumstances and condition of each individual case.

What, then, are these principles, the practical working of which has already been hastily sketched?

According to Loudon, the objects to be obtained by pruning "are to shorten the wood to such an extent that no more leaves shall be produced than can be fully exposed to the light; to stop all shoots produced in the summer that are not likely to be required in the winter, pruning at two or three joints, or at the first large healthy leaf from the stem where they originate; and to stop all shoots bearing bunches at one, or, at most, two joints beyond the bunch."

This is the sum and substance of grape-pruning, and the reasons for it are plain.

Too much foliage prevents the light and air from reaching the fruit; therefore, prevents the production of leaves by shortening the branches, but do not impair the vitality of the vine by stripping the leaves from the branches.

All wood not needed for fruiting either the present or ensuing season, is a useless drain upon the energies of the plant; therefore, remove such as soon as it begins to grow, and thus concentrate the sap in what is useful, either the fruit or the canes for the next year's fruiting.

When fruit-branches are permitted to grow, they of course divide the sap with the fruit; therefore, pinch them off just beyond the bunches, and all the sap will be taken up by these, thus increasing and hastening their development.

Now, let these principles be borne in mind, and there will be little difficulty in applying them to individual cases.

It would be both interesting and profitable to consider some of the diseases and insects to which the grape is liable, but we fear the bounds properly assigned to a discussion like this have already been transcended, and with a few suggestions concerning varieties we close.

For wine-grapes, Norton and Concord should be mainly planted. They thrive everywhere. In some sections, the Catawba still succeeds, and in such, it should be planted.

For table use, the Delaware and Catawba are the standard varieties, but it is well to plant a few of all the newer kinds.

In recommending the Norton and Concord as the leading wine-grapes for this State, no disparagement is intended of other, and some of them exceedingly useful varieties. But both of these are vigorous growers, abundant bearers, and are entirely free from disease.

The Norton is indigenous to Virginia, and here attains its highest

perfection. Its wine stands at the head of the list of red wines on this continent, and takes the front rank in Europe.

What we need now are good wines that can be sold at low prices; in future years, we may find it profitable to produce light and fancy brands, but our farmers are too poor to produce, and our people too poor to purchase such at present.

The profits arising from this branch of industry are large; few, if any crops give so rich a return; but patient labor and perseverance are absolutely necessary to success. The vineyard must be closely watched and carefully attended; and unless you are willing to undertake this, 'twere better not to plant it.

But to those who are willing to study, to labor, and cheerfully to wait and watch, there is a promise, not only of a rich pecuniary reward, but a higher and nobler enjoyment, which can only be found in the study of and association with nature in her often mysterious, but ever fresh and generous workings.

REMARKS OF MR. WERTH.

Mr. Werth desired to say a few words in regard to one of the grapes named, as a standard variety, by Mr. Allan in his admirable essay.

Mr. W. alluded to the Concord. He was amongst the first to introduce this grape into this and other Southern communities; and so favorably was he impressed with its merits, that he distributed it gratis as far from home even as Georgia and Alabama before and during the war. So that his predilections had been all in favor of that grape. But, giving it full credit for its hardiness and its adaptability to all soils and locations, and its regular and very heavy crops of beautiful and excellent fruit, he felt constrained to acknowledge a grave doubt whether it is capable of producing a wine that will sell.

Extensive correspondence and consultation with parties out of Virginia, and a sample of wine from the cellar of an expert, who is a strong patron of this grape, had led Mr. W. to entertain this very unwelcome doubt.

Being unwilling, however, to discard a grape of such valuable characteristics, Mr. W. had determined for himself, and recommended to others, to seek a grape that contains a full proportion of saccharine (which the Concord lacks), and ripening with this grape, may add, by admixture in the press, its *quality* with the Concord's extraordinary *quantity*.

He had thus far adopted the Iona, Creveling, and Rogers No. 4,

as the result of his consultation, with what he deemed excellent authority, as associates for the Concord; and proposed to extend the list until the desired end should be secured, as he was very confident it would be.

Mr. W. considered this a matter of serious importance to grape-growers, who cultivate for wine, as he very much feared we should find an improvement of the Concord must, by such means, to be indispensable to its maintaining an important position in our vineyards.

Something, it is true, may be hoped for in a probable improvement in the wine, as there has been in the fruit, produced under a Southern sun; but Mr. W. hoped we would multiply our chances of success, with this deservedly popular grape, by searching out a fitting associate.

REMARKS OF DR. JOHNSON.

Dr. Johnson thought it sheer folly to be guided by the opinions of amateurs or professional vineyardists at the North in the selection of varieties for planting in this State. Giving them credit for entire honesty of purpose, their opinions were of no value, because they had had no experience with regard to our climate.

The varieties most desirable in their section were only second-rate here.

We must prove all the new varieties before investing largely in them. The Iona had, so far, proven a failure in the North, and, as yet, it had not succeeded well here.

The Concord did much better in Virginia than anywhere else, so far as he had been able to judge; and, although not making a first-class wine, still was exceedingly profitable. We must be careful of high-sounding and widely-advertised novelties.

He thought the discussion was not taking its proper channel, and would call the attention of the Society to the fact that grape-culture, not wine making, was the subject before them.

REMARKS OF MR. J. M. ALLAN.

Mr. J. M. Allan thought the Society ought to recommend only such kinds as had proven their adaptability to this section.

So far, none but the Norton and Concord had been perfectly successful. No doubt others might be, but they must be tested; and until they were thus proven, the Society ought not to recommend their general culture.

He thought the Ives promised well for hardiness and productiveness, but would only make a moderate wine.

Feared the Iona because of its parentage. It was claimed by Dr. Grant to be a seedling of the Diana—others said it was from the Catawba. Both these varieties were liable to disease, and worthless in Tide-water Virginia, and he feared the Iona was no improvement.

Pomological Authority.

The fact that fruit-growing is just fairly taking a start in this State will explain the total absence of pomological books edited by home authors; but, at the same time, this very fact only renders it the more necessary to exercise caution in the use of works originating in other sections.

We would not be understood as condemning the many excellent books edited and published in this country, but would impress upon our readers the fact that the directions for culture, the selection of varieties, and the methods of pruning recommended by Northern, Western and Eastern horticultural writers, cannot be successfully followed in the Southern States.

Especially is this true of the selection of varieties usually found in these works.

Very few of the varieties of fruits best adapted to the North and West are of any value here; climate, soil and seasons must control these.

The difficulty which presents itself is, how, then, are our people to know what to plant? With no competent authorities on the subject, must they grope their way through years of experimenting before they can arrive at correct knowledge? To some extent, they will have this to do; but much may be saved by consulting and abiding by the advice of the nurseryman with whom you deal, provided he be a home-man. The recommendations of dealers in other sections cannot be relied upon; not that they are dishonest, but because they lack just what our people lack, viz., experience; and while they produce and send out none but the best fruit for the sections in which they live, still they are not competent to recommend varieties for other localities, save as they do it in the light of authority, of which, as we have already said, there is very little for this section.

What, then, are our people to do? We reply:

1st. Use every exertion to produce native varieties.

2d. Disseminate good ones already produced.

3d. Foster your county and State societies.

4th. Keep careful notes of all successes and failures, and ascertain, as far as possible, the causes.

5th. Encourage, by pen, money and influence, home journals.

Let each individual do these, and, with astonishing rapidity, we will have an authoritative horticultural and pomological literature, as well as save ourselves much disappointment and loss.

Turnips for Feeding Stock.

Probably the best argument that can be adduced in favor of turnips as food for stock is to be found in the fact that in Great Britain they are universally grown for this purpose. If, in the British Isles, where hay can be produced in the greatest abundance, and where the science of farming has been much more highly developed than in any other part of the world, these be extensively cultivated, it certainly seems reasonable that we should find them profitable in our State, the tide-water portion of which has not yet been very productive of grass. 'Tis true we have fodder and oats as a substitute, but these are not claimed to be equal to hay.

The average yield of turnips (Ruta Baga) to the acre in England is about twenty-five tons, or twelve hundred bushels. Now, if only one-fourth of this quantity can be produced on our lands, we have six tons of these against one ton of hay, that being above rather than below the average yield of the latter in this portion of the State.

The cost of cutting and curing an acre of hay may be estimated at three dollars—that of growing an acre of Ruta Bagas at six dollars. Statistics prove that three tons of turnips are equivalent in nutritive matter to one of hay, and with these data, the farmer can make his own calculation as to the relative profit of the two crops.

All this has reference solely to the advantages of turnips for fattening purposes. Add to these the other recommendation found in the milk-producing properties of these roots, and there is no doubt but that every farmer should plant at least enough to feed his cattle during the late winter and early spring months.

The white and yellow Ruta Baga, yellow Aberdeen, and Devonshire Greystone turnips are the kinds best suited to stock, and may be cultivated alike, either broadcast or in drills. The latter method is preferable.

They should be sown from the tenth to the last of July.

Land newly cleared and burnt over, or old pasture-grounds,

ploughed during the summer and well manured and ashed, will produce the best crops.

When well rotted stable manure or wood ashes cannot be procured, use superphosphates, as they answer better than Peruvian guano.

A New Process for Conserving Figs.

Editor Southern Planter,—It may, perhaps, be of value to your journal to be informed of a new process to make the fig-crop of importance.

The Chesapeake shores, eastern and western, are prolific of figs of every variety—large, small, white, brown, black—equal in saccharine matter and flavor to those of Smyrna and Italy. The islands, such as Tangier, Watts, Smith, Sikes, Deil, Half-Moon, Fox, and all the head-lands of creeks on the bay, produce them spontaneously, without cultivation, and in vast quantities.

Heretofore, they have not been a fruit for the markets, because the climate did not admit of drying them. Now, it is proposed to take them when fully ripe, skin them, and stew them in porcelain-lined kettles to a "*mamalade*," without sugar—none needed—and when in the *state* of half-dried paste, dried in wooden trays, roll them out into what is called "*fig-leather*," like apple, pear, peach, or quince-leather, rolled in browned flour and spices.

This leather, baked, may be kept as long as the Smyrna fig, and is more luscious.

A gentleman, to whom Watts island belongs, now of Jersey city, proposes this new mode of conserving the fig. It will add largely to the value of the Chesapeake shores and islands.

ENTERPRISE.

To Protect Vines from the Attack of the Lady Bug.

1st. Dip a couple of small pieces of cotton cloth, say about six inches by two, in coal-tar, and place them on each side of the vine about three or four inches from it, and it will drive them off. If the tar should dry up, and there is any appearance of the bug, renew it. I did not lose a plant last year.

2d. Make strong whitewash, and with the brush apply to the hill. This is highly recommended *North*.

Strawberry Exhibition—Va. Horticultural and Pomological Society.

The monthly meeting of the Executive Committee of the Virginia Horticultural and Pomological Society was held on Monday evening, June the 1st, in the rooms of the Society in the Purcell building, Main street.

Present—Col. Gilham, President, Mr. Wm. H. Haxall, Dr. Johnson, Capt. Dimmock, Mr. I. S. Tower, and the Messrs. Stansbury and Bruton as exhibitors. The subject before the Committee was the comparative merit of standard strawberries, from observation and practical test. The following varieties—upon the vine and in baskets—were exhibited:

VARIETY.	EXHIBITOR.
McAvoy's Superior,	Mr. Stansbury.
Russell's Prolific,	Allan & Johnson.
Wilson's Albany,	Colonel Gilham.
"	Messrs. Stansbury & Bruton.
Agricultural,	B. F. Wilson.
Stansbury's Seedling,	Mr. Stansbury.
Peabody's Seedling,	do
Wilmot's Seedling,	Mr. Bruton.

The award of superiority in flavor was given to Russell's Prolific; in size, to Peabody's Seedling; and in the size of plant, to McAvoy's Superior.

A basket of Wilson's Albany that had been gathered a week was still in good flavor and condition.

The specimens of the varieties present were all unusually fine, and the difficulties of selecting the most meritorious were multiplied by the excellencies of all. It is hoped, however, that the conclusions of the Committee may prove of general value to those engaged in strawberry culture.

Weight vs. Measure.

The following extract from the *Prairie Farmer* is commended to the attention of our readers. We have too long suffered from the great injustice of buying and selling fruits and vegetables by measure; and now that the culture of these is claiming so much more attention, let us, at the same time, take steps to inaugurate a better standard of both quantity and quality, by which to barter them. We hope our Horticultural Society will take action upon this impor-

tant subject, and develop some plan by which the desired end may be obtained:

"SELLING BY WEIGHT.

"There is nothing more easy of demonstration than that the selling of the small fruits—strawberries, raspberries, blackberries, etc.—by measure, is unjust both to growers and consumers. Indeed, it is so plain that no demonstration is needed. The true way to do this selling is by weight, the same as grain, wool, hops and other products of the farm are sold.

"Indeed, we believe the principle should be extended to all fruits and vegetables, and even to eggs. Such is the custom established in Paris and other continental cities, and it gives universal satisfaction. There is not the least propriety in selling the large eggs of the Brahma, Dorkings, etc., by the dozen, for the same price that is paid for the diminutive eggs of the natives, Creoles, Spanish and others, and there is still less propriety in demanding the same price from the consumer.

The farmer who sells his potatoes, big and little together, by measure, always gets less than his product is worth, for it is altogether likely that the retail dealer will assort them when they come into his hands, and, after picking out a large number of small ones, the large ones will measure precisely as much as the whole lot did together; and he has a large lot of small potatoes to speculate upon. True, the farmer may do this for himself, and if he is to sell by measure, it is greatly to his interest to do it.

"In either case, the consumer suffers by it. If sold by weight, both at wholesale and retail, every purchaser would get just what he paid for.

"Again, there could be no fraud in using small barrels or boxes for fruit. The resolution passed by the State Horticultural Society, viz., "That it is to the interest of both the fruit-grower and the consumer that all fruits and vegetables be sold by weight instead of by box, basket or bushel," is the beginning of a movement that we hope will be kept up until the present unjust system is done away with. It may be that some enactment, municipal or State, will be necessary to bring about the result, but this can only be done by a determined agitation."

"Do not in prosperity what may be repented in adversity."

"Money is the servant of some men, and the master of others."

Protecting Melons from Bugs.

Mr. Editor,—In your April number, "Watermelon" asks for a remedy to protect melon, cucumber, &c., from the depredation of bugs. I saw a recommendation last year, but too late to try it, to sow a circle of radish-seed around the hills. The bugs are said to prefer these, which we can well spare, while the garrison within is gaining strength. I shall try it, and hope others will do the same and report results. E. T. T.

"*Editors Country Gentleman*,—It is a serious question to many gardeners, how to protect their melon and squash vines from the ravages of the striped bug. I have the true remedy, and cannot too emphatically urge your readers to try it. If one ever tries it, he will never abandon it, and will never again fear the ravages of this pest. For out-generaling this insect, truly 'cotton is king.'

"Take the very best quality of cotton-batting, tear off as thin flakes as possible, and place them over the plants, putting a small stone or piece of dirt on each corner to keep them from blowing away, and you may rest assured that your plants are impregnably protected from the attacks of the enemy. I say use the best quality of cotton, for you can pull this out much thinner; therefore, it is cheaper and better. One pound is sufficient for one hundred hills at least.

"The sooner it is put on after planting the better, for oftentimes the bug begins his ravages on the first appearance of the plants. I have had a fine patch of melons untouched in the morning; during the day, an army of bugs has lighted upon them, and before night they were all destroyed. If you do wait until the enemy has commenced operations, see to it that you drive them all away from the hill before you cover the plants.

"I have tried the paper remedy, recommended by the *Country Gentleman*, and though it has kept off the bugs, it has caused the plants to grow pale and spindling. On the contrary, the cotton, being spread very thinly over the plants, admits the sun and rain, and, acting as a mulch, causes the plants to grow more vigorously than those uncovered, even if untouched by the bug. As the plant grows, the cotton expands, until at last the plant, getting too stout and tough to longer fear its enemy, breaks its bands and runs forth to bear its fruit.

"No longer cease to plant the delicious melon, for fear that its greatest enemy will destroy your plants, but spread cotton over them and rest in peace, being assured that they are safe.

"I have tried many remedies, and know this to be the best. I say to you try it, and, like me, you will be convinced that, for this purpose, 'cotton is king.'"—Jas. T. Van Wyck, *in Cultivator and Country Gentleman.*

New Hamburgh, N. Y., April. 1868.

Recipe for Ink Used in Writing on Zinc Labels.

One drachm of powdered verdigris (acetate of copper). One drachm of powdered sal ammoniac (muriate of ammonia). Half a drachm of lamp-black and ten drachms of water.

Mix the ingredients in a two-ounce phial, and shake it every time before using it, afresh, and from time to time while using it.

Rub the zinc quite bright just before using it, either by scraping with the edge of some sharp instrument or by means of sand or glass-paper. The ink acts afterwards as a better mordant than without this precaution, and of course the writing is more durable.

Grapes Before the Pennsylvania Horticultural Society.

Mr. Knox exhibited a fine collection in October, of some of the least generally known. We give the following descriptions from the pen of Gen. Negley:

Adirondac.—Growth slow, badly affected with mildew; one of the least promising in both vine and fruit.

Iona.—Enamored with the pen-pictures of this variety, I anticipated seeing a vine of unusual vigor, with fruit surpassing all the older kinds. In both these essentials I was disappointed. It was very liable to mildew, though of stronger growth than the Delaware; bunches of medium size; ripens late; not uniformly better than a prime Catawba.

Israella.—This is another variety which Mr. Knox should muster out of service. It is not equal to the Creveling in flavor, or so productive as the Hartford; ripens later than either.

Maxatawney.—Bunches medium, compact, not shouldered; earlier than the Anna. Berries tender, without pulp, sweet and juicy; color a light greenish yellow flushed with amber, scarcely equal to the Rebecca in quality, but a more vigorous grower and worthier of general cultivation.

Allen's Hybrid.—A sweet, delicious white grape, liable to mildew, and not sufficiently hardy for exposed situations.

Cuyahoga.—Greenish white, worthless.

Martha.—Truly a white Concord, fully equal to its parent in hardihood, fruitfulness and vigorous growth; foliage of a deeper green, more enduring; bunch below the Concord in size; berries nearly equal to it; color a transparent greenish-white, with a golden tint; skin thin, flesh juicy and sweet, with a little of the aroma of the Concord. It is a superb and highly attractive white grape, one that promises to bestow credit upon the skill and enterprise of its introducer to public favor.

Ives.—I am agreeably disappointed in the characteristics of this variety. The fruit is large; earlier than the Concord; juice rich, and, to many, palatable; vine robust, hardy and productive; promises to be a valuable wine-grape.

Alvey.—Vigorous grower, though not as robust as the Concord; foliage luxuriant and enduring; vine productive; bunches and fruit below medium, but larger than the Clinton, which it resembles in color; fruit ripens uniformly in the season of the Concord; flesh juicy, vinous, melting, delicious; when expressed, has a beautiful magenta tint. The Alvey has commendable qualities either for the table or wine. For the latter purpose, it will soon become a favorite.—*Gardener's Monthly.*

Plunging Plants.

In setting pots of plants outside the green-house for the summer, we have found that when embedded in sand, fine charcoal, or even tan-bark, their health and vigor were greater than when the pots were just set upon the surface-earth. It is the general practice to set the plants from the house out on the north side of the building, and to occasionally give water; deviating from this course, we have found our plants more vigorous and healthy in autumn, when again to be returned to the house by selecting a place where the morning sun would reach them, and where some tree or building would throw on them a little shade at noon, and then arrange them by placing a board six inches below the level of the ground, and setting the pots on it, to prevent roots working into the soil and to secure certain drainage; then, after placing the pots, filling between them with fine charcoal, if obtainable; next to that, sand; and next to that, tan-bark or saw-dust.—*Horticulturist.*

THE SOUTHERN PLANTER AND FARMER.

RICHMOND, VIRGINIA, ... JUNE, 1868.

Editorial Department.

Original Communications.

Mr. Ruffin desires to notify our readers that he prefers answering through our pages—except in special cases—any inquiries that may be addressed to him in relation to his series of articles now in course of publication in the *Southern Planter and Farmer*. He does not mean thereby to discourage such inquiries; on the contrary, he invites them; but simply for the reason that he has neither time nor health to justify the attempt to maintain a promiscuous correspondence, he prefers to answer inquiries in the manner above indicated.

The style and staple of these articles are such as, we are sure, will *command* attention, but we would, nevertheless, bespeak for them a careful and critical examination. They are prepared with a generous and self-denying devotion to the welfare of Virginia and the South, *as a labor of love*, and we hope the public acceptation of his labors will be in correspondence with the ardor and intelligence with which they are and will be prosecuted, and the resultant benefits equal to the patriotic aspirations of the writer.

In this connection, we take occasion to congratulate our readers, and to thank the generous contributors, for the large amount of practical, instructive, original matter which will be found in the present number of our Journal. The Economy of Sheep Husbandry, by Mr. Ruffin; The Blue Grass and Stock-Raising of Kentucky, by Marlow; Our Exhausted and Abandoned Lands, No. 5, of a valuable series of articles, by the Rev. T. S. W. Mott, who has earned the cognomen of the poor man's friend; Clover and Some of the Bladed Grasses for Hay, by a practical farmer of long experience; Immigration and County Organization, by General Imboden; two articles on Fertilizers; and Mr. Allan's admirable address and the discussion following, comprise an amount of seasonable, practical and instructive matter rarely to be found in the pages of a single number of an agricultural Journal. "Let us take no step backwards." Let our kind and public-spirited contributors continue their disinterested and valuable labors. They will find their reward in the gratitude of our people, and lay the editor under obligations which any words at his command can but feebly express.

Correspondence of Southern Planter and Farmer.

Editor Southern Planter and Farmer:

After a few words on private business, our correspondent says:

"Allow me to congratulate you as editing and publishing the best Monthly of this character for this State, or District, or Territory, or, if you will pardon me, Plutonian region; or, indeed, any other State, North or South—now known and read by me. The original matter in the *Planter*, both editorial and corresponding, is of an high order, and *so* congenial; altogether free from catch-penny-ism axe-to-grind-ism, and for that matter, all other isms, obnoxious.

"Except the hiatus from June, 1861 (on the cover of which number I observe in pencil, 'stopped here by the war,') to January, 1868, I have read and *paid for* every number of the *Planter* from Chas. Botts' first number, January, 1841, to the present day, and have them now all on my shelves, and trust you will be able to continue its publication and I to pay for it the short number of days to be granted me. It and the *Whig*, to which I have been a subscriber for thirty years consecutively, are to me as household gods; both ever faithful to the Virginia planter and farmer in sunshine and shade, and should we not be so to them? Last year, however, the *Whig* tried us sorely, politically, and but for my knowledge of their hearts—derived from a life-long acquaintance—I never could have tolerated McD.'s and S.'s heads. Too much rubbing-of it-in, though, by the Radicals, rubbed off the dirt they had thrown on them, and the bright metal blazed out, and they shine now as true as steel to all the sympathies of the grand old Commonwealth.

"When called on in August, 1865 to renew my subscription to the *Whig*, I protested and feared my inability to pay, broken up and ruined, as I conceived we all were. 'Never mind,' says S., 'if you all are ruined, so are we, and *we will all go down together*.'

"I cannot but conclude, dear Planter, that in flinging your sails to the breeze you mentally uttered the same sentiments.

Very respectfully and truly yours, M."

"*Nelson County, May* 26, 1867."

Harrowing Wheat in the Spring.

We have heard of but one person who has tried the experiment recommended in the March number of the *Southern Planter and Farmer*, with a view to ascertain the advantage or disadvantage of harrowing wheat in the Spring. He reported, about the 20th of May, that the beds of wheat harrowed "were twice as good as those which were not harrowed." He also related an instance which occurred several years since of the astonishing effects of harrowing a pet lot of one acre by a neighbor who, finding the wheat so nearly eradicated by the winter's frost as led him to despair of the crop, determined that he would sow his clover-seed, and harrow and cross harrow to secure a good crop of clover without the slightest expectation of benefitting the wheat, and when the operation was completed, there was not a spire of wheat to be seen; yet, when the time of harvest arrived, he reaped a magnificent crop.

Commercial Report.

RICHMOND, VA., June 1, 1868.

During the month just closed a fair amount of business has been transacted in general merchandise. There is an absence of anything like buoyancy in trade, but a steady demand has been created by the presence of country dealers; and when we consider the pecuniary condition of our people, and the limited scale on which prudence dictates that business should be conducted, we do not think our mercantile friends should be dissatisfied or complain at results.

There is increased activity in the Tobacco market, and within the past few days prices have decidedly improved. We give below a comparison of quotations:

	June 1, 1867.	June 1, 1868.
Common Lugs, light weights,	$2 50 @ 4 25	4 50@ 5 50
heavy weights,	4 75 @ 6 00	6 50@ 7 50
Good Lugs,	6 50 @ 7 50	8 00@10 00
Bright Lugs,	10 00 @25 00	10 00@22 00
Fancy Lugs,	27 50 @40 00	25 00@35 00
Common Leaf,	8 00 @10 00	8 50@11 50
Medium Leaf,	10 50 @12 50	12 00@13 00
Good Stemming,	14 00 @18 00	14 00@18 00
Good Shipping,	14 00 @17 50	15 00@17 00
Fine Shipping,	18 00 @22 00	18 00@21 00
Good Manufacturing (including sun-cured),	14 00 @25 00	14 00@28 00
Bright and Fancy Wrappers,	35 00 @100 00	35 00@100 00

From the Circular of our friend, P. H. Gibson, Esq., we extract the following statistics:

"The following table comprises an accurate statement of the inspections of hogsheads in the State during the month of May, inspections between 30th of September last and 1st instant, and stocks in warehouses of the State on the 1st instant:

	May Inspections.	Inspections since September 30, 1867.	Stock on Hand. For Inspection.	Inspected.
Richmond,	3 998	13,874	1,301	3,118
Petersburg,	1,693	5,871	532	1,339
Farmville,	68	161	51	
Lynchburg,	1 140	2 910	168	360
Total hogsheads,	6 899	22 816	2 052	4,817

Richmond inspections to 1st June, 1867, were 9,481 hogsheads. Inspections in the State for year ending September 30, 1867, were 43,778 hogsheads."

WHEAT.—Transactions light, and but little stock to come forward. We quote White, $2 60@2 82; Red, $2.50@2 70 The near approach of harvest is watched with much anxiety, and the weather of the past few days has encouraged the presence of rust in wheat.

We hope for a bountiful harvest, but must confess to serious apprehensions; while we write, a gentleman from Goochland county, who has recently traveled through the valley of the upper James river, informs us that "the prospect in this region is *gloomy*. Much of the wheat is winter-killed, and the crop, altogether, is miserable." Will not our friends throughout the country give us, as early as possible, a report of the result in their respective sections after harvest?

CORN is in demand. White, $1.14@1.15; Yellow, $1.15; Mixed, $1.15.

OATS—85@90 cents.

RYE—$1 72½.

FLOUR—Country Family, $14.50; Extra, $13; Superfine, $12.25.