## FIVE BALES OF COTTON TO ONE ACRE.

Two or three years ago a prominent fertilizer manufacturing house of Atlanta offered premiums for the best yield of cotton and corn on one acre and five acres. In 1885 four of the leading contestants made 66 1-2 bales of cotton on twenty acres, an average of 3 1-2 bales of 450 pounds per acre. The names of four farmers, the amount of fertilizer used by each on the five cultivated by him, and the yield of lint obtained from the acres, were as follows:

| | Am't Fer. Pounds. | Yield Lint. Pounds. |
|---|---|---|
| George W. Truit, LaGrange.... | 3,600 | 7,898 |
| D. H. Ponder, Hampton..... | 3,500 | 7,557 |
| G. M. Davis & Son, Pope's Ferry, | 2,000 | 7,544 |
| R. W. Terry, Fairburn..... | 1,500 | 6,877 |
| Total on twenty acres..... | 10,600 | 29,876 |

Average per acre, 530 pounds of fertilizer; 1,493 pounds of lint cotton.

This result was considered so remarkable, that it was said by the farmers who were interested in the contest that it could never be beaten. It was badly beaten the next year, when the four leading contestants made the following record cn twenty acres:

| | Am't Fer. Pounds. | Yield Lint. Pounds. |
|---|---|---|
| J. C. Sims, Hogansville..... | 2,000 | 10,887 |
| R. G. Ray, Palmetto..... | 2,600 | 10,809 |
| M. C. Pyson, Palmetto..... | 3,200 | 10,793 |
| G. W. Truitt, LaGrange..... | 7,550 | 8,873 |
| Total on twenty acres..... | 15,350 | 41,322 |

Average per acre, 767 pounds of fertilizer; 2,066 pounds of lint.

The enormous yield of 1885 was thus increased 50 per cent. in 1886, the record of 66 1 2 bales on twenty acres being raised to 92 bales, or from 3 1-2 bales to nearly 5 bales per acre. These figures cannot be questioned, nor can their importance be readily over-estimated. Every farmer cannot raise 5 bales of cotton to the acre, nor even 3 1-2 bales, but if any farmer continues to raise one third of a bale to the acre, as is about the average, perhaps, throughout the South, the fault is plainly in his management, or lack of management, and not in the land which he neglects, and then blames for his own faults and failures.

In the contest which led to the results we have published, about two hundred farmers took part, the number being distributed, it is stated, throughout the three States of Georgia, Alabama and Carolina. The average yield obtained by the two hundred in 1885, was 732 pounds of lint to the acre, or more than 1 1-2 bales. The average obtained by the same number of contestants last year, was 960 pounds of lint to the acre, or considerably over two bales.

It will be noticed at once that the total increase from 66 1-2 bales, in 1885, to 92 bales, in 1886, obtained from twenty acres by the four leading contestants, followed a corresponding increase in the total number of pounds of fertilizer used. It would be a mistake to conclude from this fact, however, that success was determined or measured in any case by the amount of fertilizer applied. The largest yield obtained in 1886 from five acres was obtained by Mr. J. C. Sims, Hogansville, Ga., who used 400 pounds of fertilizer per acre; and the smallest yield obtained by any of the four leading contestants in that year, was obtained by Mr. George W. Truitt, of LaGrange, Ga., who used 1,510 pounds per acre. One ton on five acres gave Mr. Sims 10,887 pounds of lint. The whole cost of the fertilizer in this case was $30, and the cotton obtained was worth $902. Nearly equally good results were obtained by Messrs. Ray and Pyson, who used but little more fertilizer. Mr. Truitt applied nearly four tons, and did not reach as good a result by about 2,000 pounds.

Another conclusion to be derived from the record as a whole, is that the success obtained did not depend upon locality. Two hundred farms, scattered throughout three States, made an average of two bales to the acre, on five-acre patches. "This demonstrates," as the *Constitution* well says, "that the average lands throughout the South, taken anywhere and properly treated, will produce two bales of cotton to the acre, instead of one bale to three acres," as is now the rule, and that "no man has a patent on the process."

This would seem to be sufficient to put every farmer in the South to thinking, and to encourage them to try new methods in the management of their old fields, but there is still more to be told to the same purpose. The experiments were not confined to cotton production alone, and the results obtained in corn-planting were quite as remarkable as those already narrated. In 1885 a number of Georgia farmers contested for premiums offered for the largest corn crop to be obtained from a single acre. The entire acreage planted by three hundred farmers in that year averaged eighty-one bushels of shelled corn to the acre. In 1886 a larger number of contestants entered for the prize, and the average was advanced from eighty-one bushels to one hundred and two bushels of shelled corn to the acre. The premium was won by a farmer who raised one hundred and sixty-four bushels of shelled corn to the acre.

The lesson of these facts and figures is too plain to require to be stated in terms. He is no farmer who does not understand it and who will not know how to profit by it. It has been shown that by a little prudent outlay, and by the exercise of ordinary intelligence in the study and conduct of his business, a tiller of the soil in these favored States of the South "can get from five acres as much cotton as he has been accustomed to get from sixty acres," at a smaller cost of cultivation, and leave the remainder of his land to be devoted to other purposes.

It has also been shown that corn can be profitably raised at home, and these two facts, taken together, afford a sufficient answer to all the complaints that are heard year after year of the failure of agricultural operations in South Carolina and the neighboring States. The fault in nearly every case is with the farmer himself, not with the seasons or the land. Poor crops are simply the protest of a starved and justly indignant soil against poor treatment. The time will come, as we have said before, when, instead of proclaiming his renewed failures every year at the cross-roads and in the county towns, the farmer in South Carolina will be ashamed to acknowledge that he has failed, because of the confession, inextricably involved in such acknowlment, that he is only less intelligent than his neighbors.—*Charleston News and Courier.*

## ENSILAGE.

Complying with the request to give my experience with ensilage in connection with that of other farmers who have been using it, I will state that in the fall of 1882, I put up about thirty tons in a pit dug in the clay without any lining, which was fed the following winter to sheep, milk cows and beef cattle. I filled rapidly, weighted heavily, and had very acid ensilage, which the stock did not eat readily at first, but after a few days, most of them became fond of it. The effect on the sheep was especially beneficial, and the flow of milk from the cows was increased as was the production of butter. The next season I enlarged the pit, and built cement walls on three sides, leaving one end unwalled so that I could lengthen it if I continued to like it. My experience being favorable, in 1884 and again in 1885, I enlarged the pit, and in 1886 I deepened it, until now it will hold 100 tons. This was filled last year with corn raised for the purpose, cut when in the roasting-ear stage, and the pit was filled slowly. The corn was cut and allowed to lie on the ground for twenty-four hours, so as to thoroughly wilt; the filling was done on alternate days, so as to allow each layer to get hot before another was put on. By doing this, much of the settling was done before the pit was entirely filled, and I was enabled to get more into the same space. After putting in all the corn raised for the purpose, and there still being room, I went into the corn field where the corn was about ready for pulling fodder, pulled off the ears of corn without shucking them, and threw them into piles, and then cut down the stalks, let them wilt, and finished filling the pit with them. I put in about eight tons of this field on the top the pit, and then covered with plank and weighted heavily. The ears were allowed to lie in the field on the ground for about ten days, when, seeming well cured, they were hauled up, shucked, and fed to the fattening hogs. The corn was as sound and almost as plump as if just pulled. A little of it was put in the corn-house, and the only difference I could afterwards see between it and the corn afterwards gathered in the regular way, was that it was not quite as tight on the cob, and I suppose did not weigh quite as heavy, though I did not weigh any to test it. It was sound, dry, merchantable corn. In opening the pit, the ensilage was much less acid than any I ever put up, and had a very agreeable smell—something like that of the wine cellars when the must is actively fermenting in the fall. The only difference between that from the corn-field and the ensilage patch was that the butts of the large stalks, where they had begun to dry before cutting, were not eaten by my well-fed cows and beeves. I believe the cheapest ensilage we could make would be that from the regular field-corn after the ears are pulled off, at the stage when the tops are cut or fodder pulled, the stalk, fodder, &c., being made into ensilage, and the corn cured on the ground, were it not that about this time many of our farmers are busily engaged with all their hands and teams in hauling their grapes. The small loss in weight on the corn grain would be much more than made up by the increased value of the forage saved in this way. I got this idea from a letter from C. W. Garrett, of Enfield, N. C., published in the *Dispatch* December 25, 1885, in which the writer said that he had saved his corn and filled his large ensilage pits in this way very successfully for two years, and thereby saved the $800 he had been in the habit of paying yearly for hay. In feeding ensilage, I think it best fed in a mixed ration, that is, mixed with cut clover, hay and wheat chaff, or cut sheaf oats, and for milk cows and beef cattle, a mixture of bran and corn-meal, or bran and cotton-seed meal, or bran and cotton-seed meal sprinkled upon it. Corn in any shape is a one-sided food, abounding in carbohydrates and deficient in albuminoids. The reverse is the case with clover, hay and bran; and the grain of the the corn or South Carolina meal is needed for milk cows or beeves to furnish the oil or fat for butter, &c.

One of the greatest benefits derived from the moderate use of ensilage is the effect upon the health of the animals during the long, cold spells in winter when they are apt to become costive. In 1885, before opening my pit, I lost one sheep, and had two others sick, the weather having been cold and the ground covered with snow some ten days. In a short time the dung of the sheep ceased to form round hard pellets, and became soft and stuck together as when they are on the grass, and the two sick ones got well. The same effect was produced on the cattle and the horses. It must, however, be fed to horses in moderation, as one of mine taught me, by having a bad case of colic.—M. H. MAGRUDER, in *Fruit and Grape Grower.*

[FOR THE PROGRESSIVE FARMER.

## MAD DOGS.

Every summer we hear of mad dogs in different sections of our State. Many of our citizens know so little about hydrophobia that I copy the following from *The Farmers' Veterinary Adviser*, (By Prof. James Law) a book that should be owned by every farmer:

SYMPTOMS IN THE DOG.

Any sudden change of habits, or instincts—dullness, restlessness, watchfulness, tendency to pick up and swallow straws and other small objects, to lick a stone or other smooth cold objects, to rub the throat or chops with the fore paws, silent endurance of pain, rubbing or licking of a scar, the seat of the bite, liability to sudden passion and attempts to bite at sight of another dog or cat, may be looked on as very suspicious, if rabies exist in the country. Soon the characteristic howl is omitted. The voice is hoarse, low and muffled, and there is one loud howl followed by three or four more successively diminishing in force and uttered without closing the mouth. Some dogs appear unusually fond of their owners and fatally inoculate them by licking their hands and face. Others turn the head and eyes as if following imaginary objects, and snap as if at flies. Barking without object, a constant searching or tearing of wood, etc., to pieces, a seeking of darkness and seclusion and a disposition to resent disturbance or a pilgrimage of several days' absence from home are among the most common pecursors of the disease.

*Furious Rabies.* Following some of the above symptoms, there is a redness and fixed glare in the eyes, squinting, rolling of the eyes after fancied objects, more frequent howling, and increasing irritability with a tendency to worry all animals that come in their way, the respect for, and immunity of former friends being lost in the violence of a paroxysm. The victim can no longer rest, but undertakes long journeys at a slouching trot, ready to fly at all that cross his path, especially if they make any noise or outcry. He may die during one of these journeys or return dirty, careworn and sullen, with the rapid glare in his eye and ready to resent any interference. Each paroxysm of violence or wandering is followed by a period of depression and torpor proportionate to the preceding excitement, during which dark and seclusion are preferred, though any disturbance will arouse to violence. From the fourth to the eighth day paralysis sets in, first in the hind limbs then in the jaw and the whole body, the certain precursor of approaching death.

*Paralytic Rabies.* In this case paralysis with dropping of the lower jaw is shown at the outset, and gradually extends to the whole body. The animal cannot bite, eat, or drink, rarely barks and dies early.

*Lethargic (Tranquil) Rabies.* Palsy of the jaw is less marked, but there is complete apathy, the patient remaining curled up in one position, and is not to be roused by any effort. He becomes daily more emaciated and dies in ten to fifteen days.

In addition to these typical forms there are others holding an intermediate place. The furious form is especially common in bull dogs, hounds and the less domesticated varieties, the paralytic and tranquil in the house and pet dogs.

*Popular Fallacies.* I name these because of the evil results of entertaining them. 1. Mad dogs have no *fear of water (hydrophobia).* On the contrary, they swim rivers, and plunge their noses in water without hesitation. 2. *Appetite is not lost,* only depraved, and the stomach after death is found to contain an endless variety of improper objects. 3. There is rarely *froth at the mouth,* though saliva may run from it when the jaw is paralyzed. 4. The *tail is not carried between the legs,* but is rather held erect during a paroxysm. Recoveries are so rare as to be questionable.

*Treatment* (unsatisfactory).

*Prevention.* When bitten, at once check the flow of blood from the part, in the limb by a handkerchief or cord with a piece of wood through it twisted tightly around the member a little higher than the wound,—in other parts by sucking, or by cutting open the wound to its depth and squeezing or wringing as if milking to keep up a free flow of blood, soaking it meanwhile in warm water if available. Drinking liquids to excess will also retard absorption. But as soon as caustics can be had apply them thoroughly to all parts af the wound, making sure that its deepest recesses are reached. The compression by handkerchief or fingers should not be relaxed until this operation is completed. A hot skewer, nail or poker, serves admirably, and if at a white heat is less painful. But oil of vitrial, nitric acid, caustic potassa or soda, butter of antimory, chloride of zinc, nitrate of silver, blue stone copperas—indeed any caustic at hand should be employed at once—cauterize thoroughly, though some time has elapsed since the bite, as absorption does not always take at once."

Many of the citizens of this and adjoining States believe that summer developes hydrophobia in the dog, and a few that the "dog days" may have something to do with it. Yet investigation has proven that dogs are more liable to it in winter than in summer—in Northern than Southern latitudes. Many citizens believe in the "virtue of the mad stone" a species of "cunjure" that relieves the imagination, but has no effect on the disease. In some localities the people look every summer for the mad dog scare—and every dog that gets sick or "acts curious" is looked upon with suspicion—not unfrequently the cry of mad dog is raised, and if the dog attempts to save his life by flight, the neighborhood becomes so alarmed that a "stranger within its gates" would have to confess that "the wag" who defined hydrophia as "a disease that seizes men and impells them to kill dogs" had "builded better than he knew." 'Tis true, man cannot take chances in regard to mad dogs, but information in regard to hydrophobia ought to relieve many of constant fear.

In conclusion, let me urge all farmers who have any regard for their stock, to get a copy of the *Farmers' Veterinary Adviser.* It is the most valuable work of its kind that I know of, and any man of ordinary intelligence can understand it.

NOTES FROM ENDERLY.

## COMMON SENSE AGAINST MULE MUSCLE.

As we farmers pride ourselves a great deal in the gift or faculty of common sense, can we not learn a great deal, with an opening mind, from comparatively small things in themselves? A teamster with his ten or twelve mules, loaded with as many thousand pounds of freight. At the signal from the driver, and the jingle of the bells, each mule plants his feet in the ground, and the load moves like a thing of life. Now these same mules, hitched to an ordinary gang plow, turning over in fine shape ten or twelve acres a day, will exert a power for good. But take these mules, and hitch them to the same plow in a circular form, and what is the result? Each mule pulls with the same power and willingness that he did before, but each is laying out his strength independent of the other, and pulling in a different direction. The result is, wear and tear of material, and lost power and time.

This seems to be the day of association, co-operation and corporation. It seems that the farmer is almost the last person to call to his aid this immense power in the management of his domestic economy.

When the farmer shall be brought to a full realization of the immense power and benefit of the three words, "association, co-operation, and education," then will he be given the proper station that he is entitled to among his fellow-men.—*Daniel Flint, Past Master California State Grange.*

## THE TOBACCO OUTLOOK AGAIN

### Based on the Short Acreage for the Present Year.

By careful investigation the *Journal* finds that its estimate of four weeks ago in regard to the acreage for 1887 is correct, and that the highest average for this year's crop cannot reach over 60 per cent. Many parties were apprehensive that, at the last moment, the farmers would put in a full crop, but when we made our estimate we took into consideration the fact that the planters of North Carolina and Virginia were *actually unable* to plant but little over half a crop of tobacco this year. Our surmises were correct and the point our manufacturers and speculators have to remember now is that full 40 per cent. of an average crop of the weed will be wanting next fall and winter on the warehouse floors.

And how will this affect the tobacco business? is asked on every side. It will simply have the effect of putting the trade in a perceptably better condition and nothing more. Our tobacco men need not look for any great advantage in prices, for the world already has a year and a half supply on hand. We believe the tobacco grown this year will be of a decided better quality and hence will sell for better prices but as for a general rise in the market we do not look for it yet. We should be content to know that the crop, for once, is reduced and not increased, as has been the custom heretofore. It should be a satisfaction to know that the trade has, at last, a feint hope of recovery from the terrible illness that has clung to it so tenaciously during the past two years. And more than this we should be thankful that the mismanagement of the crop heretofore is giving way to more sensible methods in the culture of the weed.

We have recently interviewed all the leading manufacturers in North Carolina and a large number in Virginia and we find the great majority of them working on full time and in fair spirit. They have studied the trade closely and look for a healthy future. The outlook just now is more favorable than it has been for some time. And while we cannot reasonably expect any great jump in the tobacco business, we may confidently look for better days ahead.—*Southern Tobacco Journal.*

The Inter-State Commerce law went into effect on May 5th. Quite a number of railroads, and also other corporations, have already applied to the Commission to have some features of the bill at least temporarily suspended. Nearly all the railroads in the South have joined in such a petition, and the Commission has granted their request, pending a thorough investigation. The railroads in Oregon and along the Canadian line ask similar relief on account of competition with the Canadian Pacific road. The Central Pacific asks for relief on account of competition with water routes from China and Japan. Great disturbance of business has resulted, and some enterprises have felt the pressure to such an extent as to subject them to suspension of work. The Commission has also announced that for the present the express companies must consider that the law applied to them as well as to the other common carriers of the country.—*Farmers' Friend.*

A New England dairyman states that he has fed green rye to his cows for three seasons, and the improvement in the quality of milk, cream and butter is very marked.