

## Does Fodder-Pulling Pay?

We are told that the Bard of Avon "never repeats," and to repeat is also against the policy of *The Progressive Farmer*. Our Dr. Butler, however, so nearly exhausted his subjects in his two articles last year, "Does Fodder Pulling Pay?" and "The Right Way to Harvest Corn," that we break our rule for the purpose of bringing his arguments again to the attention of our farmers. Not twenty thousands, or hundreds of thousands, but actually millions of dollars have been lost by farmers in our territory by the fodder pulling folly and wrong methods of harvesting the corn crop. It is none too early for you to decide now that for your part at least you will avoid the wasteful methods so generally practiced and get ready to handle your 1907 corn crop rightly. And in this Dr. Butler's articles this week and next will be found invaluable:

Forty-seven per cent, or nearly half of the cultivated land in North Carolina is devoted to corn, and the last Census gave the total value of the corn crop in this and adjoining States as \$111,000,000 as against \$104,000,000 for cotton. The corn crop is therefore an important one, and since it is grown solely for its feed value, the method of harvesting the crop that will give the greatest amount of feed, should receive careful consideration. The feed value of a plant is ascertained by a chemical analysis and actual feeding trials, where both the animals and the feed are carefully weighed.

The chemist tells us that the average mature corn plant cut off near the ground contains about 46 per cent of its feed in the ear, or ears, and about 54 per cent in its stalk, leaves and shucks, or as it is generally called, the "stover."

But the chemist cannot tell us exactly the feed value of any substance, and to complete our information we must carry this corn plant to the mule or the steer and ask him the value of its parts as feed. To obtain a correct answer to such a question we must feed large numbers of animals or repeat the trials many times. This has been done, and the average of the results indicates that the steer or mule can digest the ear a little better than he can the stover, and that he gets about 51 per cent of the feed value of the average corn plant out of the ear and about 49 per cent out of the stover. If this be true, and it is, then the stover is a valuable part of the corn crop, and careful thought should be given to the question of harvesting it so as to obtain the greatest possible amount of feed from the entire plant.

### We Harvest Corn Too Early.

Experiments at the Iowa Station have shown that if we wish to harvest the crop at the time when the greatest feed value in the stover has been reached, we should cut it when the leaves begin to dry up, or not later than when one-third to one-half of the leaves are dry. On the other hand, these same experiments have shown that the time when the ears contain their highest feed value is when all the leaves are dry and the corn fairly hard, and that to cut the corn before this, or long after, lessens the feed value obtained in the ears.

But the time to harvest the corn crop is plainly that time when the ears and stover together contain the maximum of feed value. This time has been found to be about midway between the two periods mentioned, or say, **ten days after** the usual "fodder-pulling" time. In other words, at the usual time for "fodder-pulling" neither the corn plant, as a whole, nor the ears have reached their best development in feed value. There are several ways of harvesting and utilizing the corn crop, and at some other time we shall discuss some of the others, but in this article we wish to pay our respects to the common method of pulling the fodder before the plant has fully matured and then gathering the ears at a later date. How are we to find out if this venerated Southern custom of pulling the leaves and cutting off the top of the stalks pays?

### A Test That Tells.

The only way I know by which the question can be fairly tested is by taking a given area and beginning at one side, pull the fodder from every alternate row clear across the field, and leave the

other rows untouched. Then, when the corn is ready to harvest, gather that on the rows where the fodder was pulled and shell and weigh it; and then gather that on the unpulled rows and shell and weigh that. Repeat this several times and average the results and you will probably have a correct answer to the question, "What is the effect on the yield of shelled corn, in weight, from pulling the leaves from the stalks at the time fodder is usually pulled?"

If in addition to this information we also ascertain the weight of the "fodder" obtained, we then have the necessary facts to enable us to determine whether it pays to pull fodder.

### Ordinary Fodder Pulling Decreases Yield Six Bushels Per Acre.

Fortunately for our purposes, this has been done many times and in several Southern States. In these experiments to test the effect of pulling the fodder on the yield of shelled corn, by weight, the following results were obtained:

**Florida.**—When the fodder was pulled, 28.2 bushels per acre. When the plant was untouched, 27.3 bushels per acre. Loss by pulling fodder, 3.4 bushels per acre.

**Florida.**—When the fodder was pulled, 28.2 bushels per acre. When the plant was untouched, 31.1 bushels per acre. Loss, 2.9 bushels per acre.

**Mississippi.**—(1) When the plant was untouched, 43.5 bushels per acre. (2) When the plant was topped, 29 bushels per acre. Loss, 14.5 bushels per acre. (3) When the leaves were stripped, 35.5 bushels per acre. Loss, 8 bushels per acre.

**Alabama.**—Loss in shelled corn by pulling the fodder, average for two years, four bushels per acre.

The average loss in all these trials, that is, with corn ranging from 27.3 to 43.5 bushels per acre, was **six bushels** of shelled corn per acre, by weight.

### Fodder Pulling is Labor Lost.

The amount of fodder obtained in the tests in Georgia, Florida and Mississippi is also fortunately given, and the average for all of them is 595 pounds of fodder obtained per acre.

Since the feed value of six bushels of corn is nearly equal to that of 595 pounds of fodder, it is, therefore, apparent that if we pay for the fodder we obtain by a loss in corn and lose the labor of pulling the fodder besides, it does not pay to pull fodder. In fact, although half the feed value of the corn plant be in the stover, it would pay better to let all of this stover rot in the field than to pull the fodder **at the time it is usually done.**

Why does this loss in weight of shelled corn occur? Simply because when the leaves are removed from the plant all further work or growth is effectually stopped. The corn may dry up and get hard, but nothing more is added to the grain. The leaves of a plant may be likened to the lungs of an animal, and when you take the leaves off a corn plant you stop its work about as effectually as you do when you take the lungs out of an animal. Moreover, the fodder is usually pulled a week or ten days earlier than the proper time for cutting the corn. Again, when the corn is cut and shocked, the leaves being left on the plant and the cut end of the stalk placed on the moist ground, the ear is still further developed from the material already in the plant.

Next week we may discuss the harvesting of the crop in such manner as to save all the stover and also have something more to say regarding the feeding value of it.

TAIT BUTLER.

## Prof. Massey's Weekly Letter.



### ROTATION FOR A COTTON FARM.— No. 2.

Since all the red clay uplands of the Southern Piedmont are naturally as well adapted to wheat as the same Cecil clay is in Maryland and Pennsylvania, it will follow that a rotation of crops in the Piedmont section should include the wheat crop. Even in the Eastern coast plain, while the soil and climate are not the best for wheat, good crops have been grown by good farmers.

But the fact that Governor Holt did grow over forty-six bushels of wheat per acre on the red Cecil clay of Jersey red soil, shows well the capacity of the Piedmont clay, for on similar soil North, where wheat is the main grain money crop, twenty to twenty-five bushels per acre is considered a good crop.

### Money Profit in Auxiliary Crops.

And with good farming in the Piedmont section of North Carolina and South Carolina, crops of twenty-five bushels per acre should be common. To the upper Piedmont section of South Carolina a man came from the North, and was laughed at for trying to grow wheat where every one else was devoted to cotton only. His first crop, he said, was six bushels per acre, but by persevering in rotation he gradually built up his land, and at the time he talked with me he said he was making thirty-five bushels per acre.

One farmer in the upper Piedmont section of North Carolina, who had been taking my advice for some years in a crop rotation, wrote me that he had that season made seventy-five bushels of oats per acre, and after the oats were cut had made two tons of cowpea hay per acre on the same land. As the hay was worth right there \$20 per ton, it with the oats, put him far ahead of the cotton crop which was low in price at that time.

I mention these instances to show that, while cotton should always be the main money crop in the Cotton Belt, the good farmer can make the auxiliary crops a source of income, and often as much, or more, than his cotton crop.

### Average Corn Yield Should Be Fifty Bushels.

But, says one, how, with the scarcity of labor, are we to handle a wheat crop right in the busy season of cultivating the cotton and corn? By economizing in human labor and making mules and horses, with improved implements, do the work. By putting a smaller area in cotton and giving it the best chance. There is not a farm in the Piedmont section of North or South Carolina that cannot, by proper farming with a good rotation of crops, be made to produce fifty bushels of corn per acre, one bale of cotton per acre, and two tons per acre of pea-vine hay.

Mariboro County, South Carolina, recently came to the front in a contest with 182 bushels of corn per acre in competition with the great corn State of Iowa where 125 bushels was the limit. In every such contest for many years past South Carolina has carried off the first prize. Some years ago, at the A. & M. College farm in Raleigh, on land that was notoriously poor when the college started, Mr. Skinner made on a sandy hill-slope eighty-eight bushels of corn per acre. All of this goes to show that with good farming fifty bushels per acre in all the Piedmont country should be the average crop.

### Rotation Should Be Adapted to Soils.

But right here we get another objection. "I have some good bottom land that grows fair crops of corn, but is not so well-suited to cotton, while my up-land is cotton soil." And you go on year after year growing corn on that bottom land and cotton on the up-lands. I have seen this continual corn culture run down the crops that should be 100 bushels per acre to less than one-fourth of that amount!

The fact that your cotton lands are not as well adapted to cotton as your up-lands is no reason why the bottoms should always be devoted to one crop, and is no reason why the up-lands should not grow corn as an aid in the production of cotton. One having such a farm should adapt his rotation to each of the portions.

This is the end of my scolding, and in my next I will consider how we are to remedy the defects in our Southern farming.

W. F. MASSEY.