SCIENTIFIC CORN CULTURE.

Darlington Man Makes Important Discoveries--Develops Grain Instead of Stalk.

The following article was written by E. McIver Williamson at the request of the Hartsville Messenger, and first printed in that newspaper:

For a number of years after I began to farm I followed the old-time method of putting the fertilizer all under the corn, planting on a level or higher, six by three feet, pushing the plant from the start and making a big stalk, but the ears were few and frequently small. I planted much corn in the spring and bought much more corn the next spring, until finally I was driven to the conclusion that corn could not be made on uplands in this section, certainly not by the old method, except at a loss.

I did not give up, however, for I knew that the farmer who did not make his own corn never had succeeded, and never would, so I began to experiment. First, I planted lower, and the yield was better, but the stalk was still too large, so I discontinued altogether the application of fertilizer before planting, and, knowing that all crops should be fertilized at some time, I used mixed fertilizer as a side application and applied the more soluble nitrate of soda later, being guided in this by the excellent results obtained from its use as a top dressing for oats. Still the yield, though regular, was not large, and the smallness of the stalk itself now suggested that they should be planted thicker in the drill. This was done the next year with results so satisfactory that I continued from year to year to increase the number of stalks and the fertilizer, with which to sustain them, also to apply nitrate of soda at last ploughing, and to lay by early, sowing peas broadcast. This method steadily increased the yield, until year before last, (1904) with corn eleven inches apart in six-foot rows, and $11 worth of fertilizer to the acre, I made eighty-four bushels average to the acre, several of my best acres making as much as 125 bushels.

Last year (1905) I followed the same method, planting the first week in April, seventy acres, which had produced the year before 1,000 pounds seed cotton to the acre. This land is sandy upland, somewhat rolling. Seasons were very unfavorable, owing to the tremendous rains in May, and the dry and extremely hot weather later. From June 12 to July, the time when it most needed moisture, there was only five-eighths of an inch of rainfall here; yet with $7.01, cost of fertilizer, my yield was 52 bushels per acre. Rows were six feet and corn 16 inches in drill.

With this method, on land that will ordinarily produce 1,000 pounds of seed cotton, with 800 pounds of fertilizer, 50 bushels of corn per acre should be made by using 200 pounds of cotton seed meal, 200 pounds of acid phosphate, and 400 pounds of kainit mixed, or their equivalent in other fertilizers, and 125 pounds of nitrate of soda, all to be used as side application as directed above.

On land that will make a bale and one-half of cotton per acre when well fertilized, a hundred bushels of corn should be produced by doubling the amount of fertilizer above, except that 300 pounds of nitrate of soda should be used.

In each case there should be left on the land in corn stalks, peas, vines and roots, from $12 to $16 worth of fertilizing material per acre, besides the great benefit to the land from so large amount of the vegetable matter. The place of this in the permanent improvement of land can never be taken by commercial fertilizer, for it is absolutely impossible to make lands rich as long as they are lacking in vegetable matter.

Land should be thoroughly and deeply broken for corn, and this is the time in a system of rotations to deepen the soil. Cotton requires a more compact soil than corn, and while a deep soil is essential to its best development, it will not produce as well on loose open land, while corn does best on land thoroughly broken. A deep soil will not only produce more heavily than a shallow soil with good seasons, but it will stand more wet as well as more dry weather.

In preparing for the corn crop, land should be broken broadcast during the winter one-fourth deeper than it has been ploughed before, or if much vegetable matter is being turned under, it may be broken one-third deeper. This is as much deepening as land will usually stand in one year and produce well, though it may be continued each year, so long as much dead vegetable matter is being turned under. It may, however, be subsoiled to any depth by following in bottom of turn plow furrow, provided no more of the subsoil than has been directed is turned up. Break with two-horse plow if possible, or better, with disc plough. With the latter cotton stalks as large as we ever make can be turned under without having been chopped, and in pea vines it will not choke or drag.

Never plough land when it is wet, if you ever expect to have any use for it again.

Bed with turn plough in six-foot rows, leaving five-inches balk. When ready to plant, break this out with scooter, following in bottom of this furrow deep with Dixie plough, wing taken off. Ridge then on this furrow with same plough, still going deep. Run corn planter on this ridge, dropping one grain every five or six inches. Plant early, as soon as frost danger is past, say, first seasonable spell after March 15, in this section. Especially is early planting necessary on very rich land, where stalks cannot otherwise be prevented from growing too large. Give first working with harrow or any plow that will not cover the plant. For second working use ten or twelve inch sweeps on both sides of corn, which should now be about eight inches high. Thin after this working. It is not necessary that the plants should be left all the same distance apart, if the right number remain to each yard of row.

Corn should not be worked again until the growth has been so retarded, and the stalk so hardened that it will never grow too large. This is the most difficult part in the whole process. Experience and judgment are required to know just how much the stalk should be stunted, and plenty of nerve is required to hold back your corn, when your neighbors, who fertilized at planting time and cultivated rapidly, have corn twice the size of yours. (They are having their fun now. Yours will come at harvest time.) The richer the land the more necessary it is that the stunting process should be thoroughly done.

When you are convinced that your corn has been sufficiently humiliated you may begin to make the ear. It should now be from twelve to fourteen inches high, and look worse than you ever had any corn to look before.

Put half your mixed fertilizer, (this being the first used at all) in the old sweep furrow on both sides of every other middle, and cover by breaking out this middle with turn plough. About one week later treat the other middle the same way. Within a few days side corn in first middle with 16-inch sweep. Put all your nitrate of soda in this furrow, if less than 150 pounds. If more, use one-half of it now. Cover with one furrow of turn plough, then sow peas in this middle broadcast at the rate of at least one bushel to the acre, and finish breaking out.

In a few days side corn in other middle with large sweep, put balance of nitrate of soda in this furrow if it has been divided, cover with turn plough, sow peas and break out. This lays by your crop with a good bed and plenty of dirt around your stalk. This should be from June 10 to 12, unless the season is very late, and corn should be hardly bunching for tassel.

Lay by early. More corn is ruined by late ploughing than by lack of ploughing. This is when the ear is hurt. Two good rains after laying by should make you a good crop of corn, and it will certainly make with much less rain than if pushed and fertilized in the old way.

The stalks thus raised are very small, and do not require anything like the moisture even in proportion to size, that is necessary for large, sappy stalks. They may, therefore, be left much thicker in the row. This is no new process. It has long been the custom to cut back vines and trees in order to increase the yield and the quality of the fruit, and so long as you do not hold back your corn, it will go, like mine so long went, all to stalk.

Do not be discouraged by the looks of your corn during the process of cultivation. It will yield out of all proportion to its appearance.

Large stalks cannot make large yields, except with extremely favorable seasons, for they cannot stand a lack of moisture. Early applications of manure go to make large stalks, which you do not want, and the plant food is thus used up before the ear, which you want, is made. Tall stalks not only will not produce well themselves, but will not allow you to make the pea vines, so necessary to the improvement of the land. Corn raised by this method should never grow over seven and a half feet high, and the ear should be near to the ground.

I consider the final application of nitrate of soda an essential point in this ear making process. It should always be applied at last ploughing and unmixed with other fertilizers.

I am satisfied with one ear to the stalk, unless a prolific variety is planted and leave a hundred stalks for every bushel that I expect to make. I find the 6-foot row easiest to cultivate without injuring the corn. For fifty bushels to the acre, I leave it sixteen inches apart; for seventy-five bushels to the acre, twelve inches apart, and for one hundred bushels, eight inches apart. Corn should be planted from four to six inches below the level, and laid by from four to six inches above. No hoeing should be necessary, and middles may be kept clean until time to break out by using harrow or by running one shovel furrow in center of middle and bedding on that, with one or more rounds of turn plough.

I would advise only a few acres tried by this method the first year, or until you are familiar with its application. Especially is it hard at first to fully carry out the stunting process, where a whole crop is involved, and this is the absolutely essential part of the process.

This method I have applied or seen applied, successfully, to all kinds of land in this section, except river lands and moist bottoms, and I am confident it can be made of great benefit throughout the entire South.

In the middle West, where corn is so prolific and profitable, and where, unfortunately for us, so much of ours has been produced, the stalk does not naturally grow large. As we come South its size increases, at the expense of the ear, until in Cuba and Mexico it is nearly all stalk. (Witness Mexican varieties.)

The purpose of this method is to eliminate this tendency of corn to overgrowth at the expense of the yield, in this Southern climate.

By this method I have made my corn crop more profitable than my cotton crop and my neighbors and friends who have adopted it have, without exception, derived great benefit therefrom.

Plant your own seed. I would not advise a change of seed and method the same year, as you would not know from which you have derived the benefit. I have used three varieties and all have done well. I have never used this method for late planting. In fact, I do not advise the late planting of corn, unless it is necessary for cold lowlands.

The increased cost of labor and the high price of all material and land, are rapidly making farming unprofitable, except to those who are getting from one acre what they formerly got from two. We must make our lands richer by ploughing deep, planting peas and other legumes, manuring them with acid phosphate.

ONE ACRE ANALYSIS.	Nitrogen.	Phos. Acid.	Potash.	Value.
2,800 pounds corn (grain)	51	20	11	
500 pounds shucks	5	2	7	
400 pounds cobs	2	0	2	
"A" taken from land	58	22	20	
1,200 pounds corn stalks	12	3	17	
3,000 pounds peas, vines and roots grown in corn	59	16	44	
Entire crop contains	129	41	81	28.26
Taken from land "A"	58	22	20	12.03
Left for next crop	71	19	61	16.23
100 bushels oats and straw will require	78	31	48	
1,500 pounds seed cotton and stalks will require	64	17	56	
50 bushels corn, stalks, cobs and shucks will require	70	25	37	

Don't Be Imposed Upon.

Foley & Co., Chicago, originated Honey and Tar as a throat and lung remedy, and on account of the great merit and popularity of Foley's Honey and Tar many imitations are offered for the genuine. These worthless imitations have similar sounding names. Beware of them. The genuine Foley's Honey and Tar is in a yellow package. Ask for it and refuse any substitute. It is the best remedy for coughs and colds. J.W.Bell.

Killing Off the Children.

Two million children in this country have been killed by impure milk and 1,000 babies have succumbed to soothing syrups and pain-killer. This is the estimate of Dr. H. W. Wiley, chief chemist of the department of agriculture at Washington. The need for stricter food laws is constantly appearing. Congress, however, seems very reluctant to protect the people by enacting a pure food bill. Canned goods are sold under false labels and poisonous preservations used with impunity and the packers, apparently, wish to have it remain so and influence the people's lawmakers accordingly.—Farm and Home.

Here's a Big Pig.

L. H. Couch, of Easley, a breeder of Poland China hogs, was in town yesterday. He was exhibiting a scales ticket showing the weight of a hog raised by him, and killed on Monday, to have been 900 pounds. He says the hog was the largest ever killed in his neighborhood, and that it attracted great attention when driven through the streets to be weighed. Mr. Couch says he has another hog that is still larger than the one killed.—Greenville News, February 28.