Cotton culture in Mississippi: in areas infested with the Mexican cotton boll weevil

W. L. Hutchinson

Follow this and additional works at: https://scholarsjunction.msstate.edu/mafes-bulletins

Recommended Citation
Hutchinson, W. L., "Cotton culture in Mississippi: in areas infested with the Mexican cotton boll weevil" (1908). Bulletins. 308.
https://scholarsjunction.msstate.edu/mafes-bulletins/308

This Article is brought to you for free and open access by the Mississippi Agricultural and Forestry Experiment Station (MAFES) at Scholars Junction. It has been accepted for inclusion in Bulletins by an authorized administrator of Scholars Junction. For more information, please contact scholcomm@msstate.libanswers.com.
COTTON CULTURE IN MISSISSIPPI
(In areas infested with the Mexican Cotton Boll Weevil.)

BY W. L. HUTCHINSON.

Introduction.—The effect of the presence of the Mexican cotton boll weevil, in any section, is to shorten the season for making a crop of cotton by about one-fourth. This means that a crop must be made in weevil-infested areas in this state in from 100 to 120 days, and this, too, in the first part of the season. Perhaps, at some time, every cotton grower in this state has made a good crop of cotton in 90 to 100 days. This has been done in the Delta as well as in the upland sections, but in all these cases, perhaps, the crop was made during the last 100 days of the season instead of the first 100 days as must be the case under weevil conditions. Therefore, making a good crop of cotton in 100 days in not a new thing to Mississippi farmers—the new feature will be the making of the crop the first part of the season instead of the latter part.

It is a fact that the boll weevil does not prevent the growing of good crops of cotton. What he does is to prevent and make impossible the making of a late crop of cotton. Apparently farmers perfectly familiar with the growing of cotton could adapt their affairs to the growing of an early crop without any loss or without any serious disturbance of economic conditions, but such has not been the case with those farmers who have thus far had to meet weevil conditions. The greatest trouble comes when the farms are first infested with the weevils and the farmer persists in trying to make a late crop. Just as soon as farmers realize that they cannot grow a late crop, but can grow a good early crop, the problem is solved. The object of this bulletin is to put into the hands of Mississippi farmers such data as will enable them to produce a good early crop of cotton in weevil-infested areas.

Success depends essentially on good tillage, proper fertilization, the planting of good seed of a good early variety of cotton as soon as
weather conditions are favorable; and, properly cleaning up the farm of hibernating places for the weevils during the winter months.

**Early planting.**—Farmers cannot make a greater error than to think that an early crop depends solely or mainly on early planting. To plant cotton too early will be a mistake. Early planting should only mean to plant as soon as the weather is right. As early in April as the season or weather will permit will doubtless be a good rule for Mississippi.

**Tillage.**—Perhaps a good early crop depends more on the very best tillage than on any other one thing. It is important to keep the crop growing constantly, especially when the plants are young, and it is the young plants that stand particularly in need of a well-tilled soil. A firm, moist, fine soil free from clods or lumps of any size is what is wanted for a seed bed, but it is far more important to the young plants, and it is also best for older plants and this makes plain what good tillage means.

**Preparation.**—Plow the land well some weeks before planting time in order that the rains may wet it thoroughly and to give ample time for harrowing the plowed soil until it is fine and firm. A deep soil is desirable but deep plowing does not necessarily mean a deep soil, if the soil be plowed six inches deep it may be regarded as being well plowed and no fixed rule can be given as to how deep to plow various soils. Any depth greater than six inches may be regarded as deep plowing. I have seen land that was plowed too deep and I have seen land that was not plowed deep enough, but I never saw land that had been harrowed too much, though I have seen it harrowed and cross-harrowed five or six times. An effort should be made to harrow until the soil is in that condition of tilth most preferred by cultivated crops and more particularly necessary for the best welfare of young tender plants.

**Cultivation.**—Inter-tillage or cultivation between the rows of plants should have for its object to keep the soil in the same moist, mellow fine condition given it in the preparation. This is why the best preparation is sometimes said to make the crop before it is planted. If the land is properly prepared shallow tillage will keep it in the very best condition for growing crops. When the cotton is young is when it most needs the very best attention that can be given it with cultivator and hoe in order that it may grow constantly at this time, for it is at this time that growth is most apt to stop. If the land is prop-
erly prepared and the cultivators run as often as they should be run for best results, the farmer will not even want to use a turning plow in the cultivation of his crop. Whenever the turning plow is used in the cultivation of a crop no better evidence could be had that the crop has suffered for the want of proper tillage. The fact that the use of the turning plow in the cultivation of the cotton crop is quite general in this state is significant, and suggests that in this matter of tillage the boll weevil is going to find the greatest weakness of Mississippi farmers. If the cotton growers of the state can only bring themselves from a careless half way tillage to the practice of the very best tillage that may be given the soil, the other conditions necessary to growing a good early crop of cotton will come comparatively easy. Good tillage is so helpful to a crop that its effects have been compared to that of manure, and if cotton farmers are to successfully meet boll weevil conditions they must know and practice the best tillage. Here is the vulnerable point of the cotton farmer and the boll weevil gets in his work of destruction because of it. Good tillage means good teams and good implements and after the land is well plowed the thorough cultivation of the soil with harrows and cultivators cannot be done too well.

Soil Mulch.—Good surface tillage of well prepared land has much to do with maintaining in the soil a desirable moisture content and this in turn has much to do with the constant and steady growth of the plants. Good yields and early crops are promoted by keeping the plants constantly growing. Any covering for the soil tends to keep it moist and mellow, and the practical way to do this is to use the first two inches of the surface as a cover, or mulch. The frequent use of the cultivator does this.

Fertilizers.—The rational use of fertilizers is an easy thing and Mississippi farmers need not err in this regard. The four experiment stations in the state have made a great many experiments with fertilizers and rational fertilization is a simple proposition.

The upland or hill sections, to include the sandy-loam soils of the long leaf pine belt and the oak and hickory uplands; and the brown silt-loam, through which runs the I. C. R. R., should use a mixture of cottonseed meal and acid phosphate. The mixture should contain one-third cottonseed meal and two-thirds phosphate. Such a mixture represents the type of fertilizer that should be used. Potash may be left out. The farmers of this state are annually wasting more than $100,000, in the purchase of Potash from which they derive no benefit.
From two to three hundred pounds of fertilizer to the acre will, as a rule, give the best profits. The fertilizers should be applied in the drill immediately under where the seed are to be planted and the Stations have gotten best results by applying all the fertilizer at one time.

In the Delta neither Potash nor Phosphates have helped the crops, but on the older and lighter lands cottonseed meal has increased the cotton crop enough to pay. The heavier buck-shot soils have not responded to fertilizers. A crop of cowpeas is the best thing to improve the soils of the Delta.

Where fertilizers increase the crop to a profitable degree they also make the crop earlier—perhaps two weeks earlier as a rule.

**Varieties.**—While tillage may be the principal thing the variety of cotton planted, and the care that has been used in the selection of the seed, have much to do with the growing of a good early crop of cotton. One variety may be fifteen to twenty days earlier than another and this means much when every day counts for profit or loss.

It matters not what the good qualities of a late variety may be it is not desirable under boll weevil conditions. Let farmers realize that whenever the farm is thoroughly infested with weevils a late crop is out of the question. Don't invite bankruptcy by trying to grow a late crop. A late crop is a boll weevil's crop, not a farmer's crop.

Cleveland big boll and Cook's improved (short staple), are two of the best varieties for Mississippi farmers to grow under boll weevil conditions. Both are early, fifty to sixty bolls make a pound; the fiber is about one inch; both yield a high per cent of lint, Cook's being best on this point. Both varieties yield well, heading the list for yield in comparison with both early and late varieties. Except where staple cottons are grown they are the two best varieties, either with or without the weevil.

Russell big boll, Triumph and Smith's Double Header are three varieties with slightly larger bolls than either Cook or Cleveland, and they have a fiber of 1 1-16 to 1 1-8 inches. They are reasonably early.

Prize, King's improved and Toole are three varieties with small bolls that may be used under boll weevil conditions because of their early maturity.

But of more importance than any variety is the careful and intelligent selection of seed each year. Seed for planting should not be saved from diseased or otherwise undersirable stalks and such
stalks will appear in every cotton field. Only those who have seen this done realize its real value and importance in growing a good early crop of cotton.

Wide rows.—As shade is favorable to the rapid increase of the weevils, during the cotton growing season, the rows should be wide enough to prevent the cotton meeting between them in order to allow the sun’s rays to interfere with the increase of the weevils as much as possible.

A well-kept farm.—If cotton farmers are to make a crop in weevil infested areas they must have neat well-kept farms. The average Mississippi farm shows the neglect of a step-child.

The winter weather kills a great many weevils—most of them, in fact, but some always hibernate through the winter and the poorer the farm is kept the more weevils there will be the next spring as bushes, briers and similar rubbish about the farm furnish the weevils protection from the cold.

Start each crop with as few weevils as possible. The less protection the weevils have for winter the smaller number there will be the next spring. Of all the things the farmer can do to lessen the number of weevils, cleaning up the farm, to include burning the stalks as soon as the crop is gathered, during the winter months accomplishes most. One pair of weevils less in the spring means millions less later in the season.

Clean up the farm until it is as neat as a pin and make an early crop of cotton. Success will be in proportion to the thoroughness with which the cleaning is done and the ability manifested in growing an early crop.

Drainage.—Poorly drained land cannot be planted early, hence the advent of the weevil emphasizes strongly the necessity for draining all bottom lands so that water will not stand still. All water that will not soak into the soil promptly should be made to run off promptly.

Broad shallow ditches made with a plow and triangle or with a plow and dump scraper are very much more satisfactory than those made with a spade. Ditches made with a spade make first-class hibernating places for weevils; cause an appreciable loss of land, and give comparatively poor drainage. The broad shallow ditch referred to above is better for drainage and permits of perfectly clean culture thus preventing grass, weeds, bushes and other growth from furnishing hibernating quarters for weevils.
Planting seed.—It takes several million bushels of seed to plant the crop in Mississippi. Such a supply cannot be furnished by seed houses and a few growers. If a farmer would have good seed of a good variety with which to plant his crop the sure way and, perhaps, the only sure way is to furnish them himself. He may buy enough from some grower to plant a patch, but a few plantations can exhaust the supply of any store or grower. Mississippi cannot possibly get enough good seed of the best-varieties to plant the crop of the state sooner than they will need them.

Hostile conditions.—Evidently one reason why the weevil is worse in newly infested territory is because he finds there much better hibernating quarters. As the weevil invades new territory let him meet hostile or unfavorable conditions at every point. Perhaps the best year of all for cleaning up the farm and for making an early crop and for an early destruction of the cotton stalks would be the year before the weevil comes. Let him find the farmer ready for him, and his first injuries will neither be so great nor so easy.