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COOPERATIVE EXTENSION WORK IN AGRICULTURE
AND HOME ECONOMICS.

U. S. Department of Agriculture
and State Agricultural Colleges
Cooperating.

States Relations Service,
Office of Extension Work, South.
(Farmers' Cooperative Dem. Work)
Washington, D. C.

TO GROW COTTON SUCCESSFULLY UNDER WEEVIL CONDITIONS.

The United States Department of Agriculture advises that you MUST - -

1. Select warm, fertile, well-drained soil.
2. Prepare a good seed bed.
3. Fertilize liberally.
4. Plant reasonably early.
5. Use good seed of an early maturing variety adapted to the locality.
6. Cultivate shallow - often, and until late in season.
7. Carefully pick up and destroy weevil infested squares, especially during the first month.
8. Destroy all cotton stalks three weeks or more before killing frost.

If you follow these instructions you can, when the weevil comes, on a reduced acreage continue to grow cotton profitably. If in addition you grow the necessary feed and food crops - have a good garden, produce your own meat, milk, butter, eggs, etc., with a surplus for market - you will live better and perhaps make more clear money than you did before.

In proof of this we reproduce recent letters from Louisiana and Mississippi farmers as sent in by county agents. These farms are on every type of soil, from sandy cut-over pine hills to rich river bottom lands, and are in heavily weevil infested sections. Hundreds of similar ones could be secured from farmers who are growing cotton successfully under severe weevil conditions by substantial compliance with above recommendations.

Approved:

Raymond K. ...
Chief:

J. A. Evans
Assistant Chief.

Big gain from destroying stalks early.

"I am writing to give you the benefit of our experience as to how we have grown cotton and handled our farms under weevil infestation.

1st. We have grown our home supplies. 2nd. We have grown all the velvet beans, cow peas, soy beans and lespedeza possible to build up our land and furnish us nitrogen at a low cost as well as an immense lot of feed. This method leaves our land here in South Mississippi so that we only have to use Acid Phosphate or Raw Rock. 3rd. One of the best methods for the control of the weevil is to destroy the cotton stalks as early in the fall as it can be done -- this alone has been worth \$17. per acre to the next crop where it had been done, even in isolated cases. The next thing is an early and thorough preparation; get the land in good shape and plant as early as cotton will grow and do well; work fast and shallow and if possible go over the cotton before the squares appear and catch the weevil, and by all means pick up and burn or destroy the first crop of punctured squares and the second if possible. By following this method we have been able to make from eight to 1500 lbs of cotton per acre with a rainfall of 52 to 80 inches. We made a net profit of \$16.25 per acre under the heaviest weevil infestation we had.

"I will say in conclusion, don't get scared but hold your land and stick to it. Those who have done this in South Mississippi have made good."

B. M. Smith & Bro., Peoria, Miss.

Plant only on well drained land.

"In this locality we break our land for cotton under boll weevil conditions in January or February with four furrows with turning shovel, and let stand until about the first of April. At this time we apply fertilizer by drilling in the water furrow and rebrake with four furrows with turning plow. Run large bill sweep on top of rows and follow with planter as soon as weather conditions will permit. Harrow with light harrow just before cotton comes up. As soon as cotton is up run side harrow around it. Space as soon as cotton begins to put on fourth leaves from 12 to 30 inches, owing to fertility of soil and distance apart of rows. I continue to plow cotton shallow with heel sweeps until 25th of July or first of August, using heel sweep around cotton every other week and large heel sweeps in middles every other week. The sooner the soil is stirred after each rain when land is in condition, the less trouble you will have with weevils.

"We never plant land in cotton unless it is thoroughly drained."

R. L. Mixon, Atlanta, Louisiana.

Picking squares doubled crop.

"I first bed my land for cotton early, and rebed same when ready to plant and harrow same twice with a good iron tooth harrow. I break land deep, in fact, I put my land in a good state of cultivation before planting; then I cultivate shallow with spring tooth harrow or big heel sweeps. I cultivate my cotton every eight days and as soon as the boll weevil begins to come, I go ahead of the plows and hunt weevils and gather up all punctured squares and

burn them. I keep that up until I lay by my cotton and cultivate my cotton as late as the middle of July or the first of August. I think this method the only way to raise cotton among boll weevils. As for proof, I had a share worker on my place this year. He planted twenty-three acres to cotton. I fertilized his cotton and worked it as I did my cotton. I had ten acres in. I hunted the weevils and gathered the punctured squares in my crop. He, the share worker, let the weevils have full sway at his. He gathered on his twenty-three acres five bales. I gathered on my ten acres five bales. On an average I make just about as much again cotton on the same amount of ground as those that don't look after the weevil."

R. E. Mathews, Winnifield, Louisiana.

Cotton follows corn and velvet beans.

"I am sending you a report of my cotton patch. This is just a rough report, but it is about as near right as I can remember.

I planted my land in corn and velvet beans last year and early this spring I turned the corn stalks and bean vines under. I let it lie a month or so and then I took 200 pounds of Virginia Carolina fertilizers and put about 100 pounds to each acre. I put the fertilizer down in the middles, and rebroke this land in beds about four feet apart. The second breaking of this land put it in fairly good shape, and I planted it about the 15th of April.

It came up in a few days and started to growing. When it got about 3 inches high, I took my side-harrow and ran around it. When I had done this it was then ready for chopping. So I went in and chopped it and let it stand a few days; then I barred it off close. When it had stood in this condition a week or so I dirted it up good. I didn't use any plows any more then until I laid it by. All I used was harrow and cultivator.

This cotton grew fast and it was not long before squares began to come and boll weevil with them, but I began to pick up the squares as soon as they began to fall, and I began to look for the weevils that lived in the tops of the plants. Early every morning before the sun got hot they could be found sitting in the tops of the plants, but later up in the day, they would go down lower on the stalks to find a cool place. I kept the squares picked up and burned until the cotton got too rank to try to keep the squares picked up. My patch of two acres yielded about 1200 pounds of seed cotton per acre."

A. I. Jackson, Simpson, Louisiana.

Makes more cotton per acre since weevil came than before.

"My method of growing cotton under boll weevil conditions.

1. A thorough preparation of the land by plowing or disking in the fall or winter.
2. Re-breaking in the spring just before planting. Have the rows about four feet wide; put in bed from 200 to 250 lbs. of commercial fertilizer. I usually use 10-2 goods, as my land grows weed enough with very little nitrogen.

3. Use an early variety of seed for planting; the Mebane Triumph has given good satisfaction on my land.
4. I commence cultivation as soon as the cotton is up to a good stand, with heel sweeps and side harrows, and keep up intensive cultivation until late in the season, usually about the first of August, plowing once every ten days or oftener.
5. Where the stand will permit I try to space the cotton about two feet in the drill.
6. Commence to pick the weevils when they make their first appearance on the cotton before it is chopped out; pick the weevils and squares after the cotton commences to square as often and as late as necessary.

I have worked some of my land according to Demonstration Methods ever since there has been an agent in this parish, commencing with Mr. Stutton in 1907; that year I had 25 acres in cotton and made 18 bales. I consider the picking of the weevils and punctured squares a very effective way of controlling the boll weevil. In 1907 when I was picking squares my neighbors laughed at me and said I was chunking away my time and money; these same neighbors that year, with just a fence between us made from 100 to 200 lbs. of seed cotton per acre. While I have never kept an account of the cost of picking weevils and squares I know it has been very small.

Under the above method I have averaged from one half to three fourths bale per acre on the entire place. I made from a bale to a bale and a half on several acres. Usually I plant from 100 to 150 acres in cotton.

If the farmers would follow this method they need not fear the boll weevil. I have made more cotton per acre since the boll weevil came than I usually did before."

G. W. Wovelard, Ringgold, Louisiana.

A good demonstration.

"One hundred and fifty acres of rich well drained silt loam soil was selected for my 1916 cotton crop.

It was flat broken to a depth of about 6 inches during the months of January and February; in March it was thrown into beds with turn plows and water furrows left open. At planting time, April 15th, these beds were freshened, and lowered by means of walking cultivators with the side harrow attachments lashed together so as to meet at the top of the row, the planters follow immediately behind the cultivator; approximately twenty five pounds of Money Maker Cotton Seed to the acre, planted shallow but covered thoroughly.

As soon as the cotton was up, cultivation began with one row walking cultivators running close up to the cotton, about ten days later the cotton was chopped out to about eighteen inches in the drill, then followed with the cultivator, using the side harrow attachment; then with shovels, and half shovels going to considerable depth. After the second chopping larger sweeps were used, and run shallow. At the third chopping the cultivator and side harrow were also used, followed by large sweeps.

The essential feature of my cultivation which produced a successful crop, and as I see it, the key-note to my success, was beginning early with cultivation, and keeping at it, never allowing the crop to wait until weeds and grass

got ahead of me. Cultivation ceased in August.

In June and July, the former showing the first weevils, and the latter the second generation, the squares were picked up and burned, being careful to get the squares along turn rows, and other hibernating places of the weevils.

My total yield on 150 acres was 132 bales without fertilizer, sold on the local market giving me a net profit on each of 150 acres of \$45 per acre.

I am grateful to the Demonstration Agent, and to the retired District Agent for their valuable assistance which was rendered at all times."

T.O. Taylor, Ingleside Planation, Monroe, Louisiana.

Cultivate till August 15th - thinks picking squares too expensive on large acreage.

"Before beginning any preparation of my cotton land for my 1916 cotton crop, I applied the common farm level to the fields and saw that each and every drain was well opened and making new drains where ever I found it necessary, as I believe that thorough drainage is one of the essentials to growing good cotton.

In the early spring I threw my land up into beds by running four furrows, eight inches deep, with a turn plow, breaking out the middles thoroughly with middle splitter. The land was left in this condition several weeks before planting so as to insure a thoroughly settled seed bed.

Before planting, disc harrows were run up and down the bed, followed by an Ajax harrow, the planter following immediately after, distributing one bushel of seed to the acre. I believe in planting plenty of seed, or more than necessary, in order to secure a good stand early. Cotton was planted April 10th and a good stand came up quickly. Cultivation began immediately after the cotton was up. A Planter Junior Cultivator was run close into the cotton before it was chopped; then cotton was chopped to twelve inches in a drill leaving two to three stalks in the drill, and in four to four and a half foot rows. At the second and third chopping cotton was thinned to one stalk in the hill.

After first chopping the cotton was side harrowed, and dirt thrown back a few days later with a turn plow in order to thoroughly clean the grassy middles. Then Oliver wheel cultivators with double shovel No. 7 and two 16" sweeps following was used fairly close into the cotton; if cotton is too grassy some other implement will have to be used; in some cases we had Coco grass to contend with, and the turn plow solved this problem. After third chopping the continued use of double shovels, and sweeps every ten days, as near as possible, completed the cultivation through August 15th.

My method of combating the boll weevil is producing the cotton early, making two-thirds of the crops, bottom and middle crops, before the migratory period of the weevil, and allowing the weevil to take the top crop. I have found that the picking of punctured squares is too costly an operation.

By the above methods I produced 700 packed bales of cotton averaging 500 pounds each on 900 acres of good silt loam soil without fertilizers."

J.R. Goynes, Magneta Planation, Monroe, Louisiana.

Early, deep breaking and shallow cultivation.

"A successful way to make a fine cotton crop in boll weevil territory. I have produced a bale to the acre when my neighbors made one-fifth bale. I broke land with 12 inch John Deer Steel plow, eight inches deep, in January and February. Laid off rows $3\frac{1}{2}$ feet apart in early April. Put 200 #16 Phos. and 200 lbs. cotton seed meal to the acre, prepared a deep and flat seed bed and planted between 20th and 30th of April. Side harrow as soon as cotton was up. Harrow again in ten days. Then when cotton is six inches high, eighteen inches apart, cultivate shallow and clean after each rain. Pick up all punctured squares until August 1st, from June 15th until July 25, every week."

T. C. Franks, Minden, Louisiana.

Rotate crops - frequent shallow cultivation.

- 1st. Soil should be well drained and warm. Should have a systematic rotation of crops that plenty of organic matter should be incorporated with the soil.
- 2nd. Good land should be broken or bedded deeply and early enough that a firm seed bed may be had at planting time.
- 3rd. About 250 or 300 lbs. of fertilizer containing at least 10% of phosphorous and nitrogen in proportion to needs of soil should be applied from eight to ten days before planting.
- 4th. Harrowing and shallow cultivation should be as often as practicable up to the 15th of August. And all punctured and fallen forms should be picked up before each plowing.
- 5th. Width of rows and distance in drill depends upon strength of land and growth of stalk. Distance should be as to give plenty of sunshine to all parts of the weed."

H. B. A. Plant, Doyline, Louisiana.

Never lay by until cotton begins to open.

- 1st. I plant early maturing variety, usually Simpkins.
- 2nd. Prepare a perfect seed bed before planting.
- 3rd. Plant medium early, not too early nor too late, say about first of April.
- 4th. Cultivate shallow and rapid from time cotton comes up with side harrow and cultivator. First plowing is usually done with a spring-tooth cultivator run as a side harrow and later cultivation is done with Planet Jr., 1 horse cultivator.
- 5th. I never lay by until cotton begins opening which is usually about the first of August. I consider the secret of making cotton under boll weevil conditions is a good seed bed and rapid, shallow cultivations with side harrow, cultivators and sweeps."

J. O. Logan, Colfax, Louisiana.

Break deep in fall or winter if possible - shallow in spring.

"I select well drained, sandy soil of fair fertility. When possible I break the land deep in the fall and winter. If unable to do this, I break shallow in spring. I endeavor to prepare seed bed early and if it becomes too compact, I loosen it up a little with a spring-tooth harrow just before planting. I use seed of a quick maturing variety of cotton, and select seed from the earliest maturing fruit of this cotton. I plant very early some times in March, always by the fifteenth of April. Plant rather thick in order to allow for some of the plants succumbing to cold. Do not thin out until late, in order to select the most vigorous plants and to make sure that all danger of cold is past. I leave the plants fairly thick in the rows, twelve to eighteen inches apart - according to the strength of the land. Frequent shallow cultivation is then in order, my endeavor being to produce a rapid growth, but only a medium sized plant that will mature and fruit early.

The above outlined method accomplishes the intended purpose unless the weather conditions during the summer are such as to cause a rank growth and consequent late fruiting. I find that the weevil becomes numerous enough by the fifteenth to thirtieth of July to destroy practically all the fruit the plant can produce, hence unless your crop is well toward maturity before this date your chances for a profitable yield are very small."

T. H. McNeely, Colfax, Louisiana.

Weather conditions very favorable - big yield.

"Kind of soil: Sand loam on Bayou Jean DeJean, Rapides Parish, Louisiana. Amount of land, twelve acres.

Broke land in rows $4\frac{1}{2}$ feet wide in March, broke about four inches deep, then disc land, then harrowed just before planting. Planted 18th day of April.

Cultivation: First cultivation with side harrow, then chopped cotton to 16 inches in drill; then broke out middles very shallow with turning plow; then side harrowed; then used Planet Jr. Cultivator and side sweep; then plowed out middles very shallow with turning plow; then side harrowed; then used solid sweep; then used Planet Jr. I kept cotton clean all the time. Did not pick up any squares. Weather conditions were very favorable for making good crop with the exception of some rains in July.

I produced 13 bales of lint cotton averaging 544 pounds each, which brought in cash \$1082.79. Seed brought \$205.00, total amount for lint and seed \$1287.79. The amount paid for ginning and bagging and ties was deducted from the above amounts."

S. W. Hines, Boyce, Louisiana.

OWS. 1019-8.

(From the Negro Farmer and Messenger - Tuskegee Institute, Ala.)

12/2/16.

"How my Father succeeded in growing cotton this year in spite of the weevil."

"In the first place my father realized that the dreaded pest was here in 1915, and set about destroying all places of hibernation. He burned the woods near, burned the stumps and trees in the field and did away with all rail fences.

He plowed his land thoroughly in the fall of 1915 which gave it a chance to freeze much deeper, and further put the weevil out of business.

He used an early variety of cotton seed, such as Tool's, Brown's and also Prof. Carver's Improved variety. The seed secured from Tuskegee was very successful and I would recommend it to all farmers who desire to get ahead of the weevil.

My father planted cotton the last of March - 30 acres in all, to the plow; used 200 pounds guano to the acre. Plowed this cotton every week, using a brush on the shiffletree. He had the squares gathered two or three times a week. But for the heavy rains in June, I am sure he would have gotten two-thirds of a crop in spite of the weevil. However, he succeeded in getting 13 bales to his two plows.

His experience this year convinces him that he had too much planted to cotton. He has decided to plant only 6 acres to the plow next year in order to cultivate more thoroughly. And too he advises that whenever a small quantity of fertilizer is used, it should be used at planting time.

In addition to the cotton crop, my father also made 700 bushels of corn, 20 bushels of wheat, 10 bushels of rye, three tons of hay, 100 gallons of syrup, 200 bushels of potatoes, plenty of peanuts and peas. He had 18 large hogs to kill with 25 to run over for another year. In this way we are not very much hurt by the weevil. After my school closes I go home and become a regular hand on my father's farm."