

Cotton All-Practice Demonstration Outline-1963

Objectives

1. To increase the cotton yield of each individual cotton producer in the state to a maximum economical level.
2. For all cotton producers to double or increase yield to two or more bales per acre by following a complete program in cotton production.
3. Set up and carry out demonstrations on various production level farms.
4. Each cooperator use recommended practices and where practical show the results of all-practice production to other producers.

The Demonstration

One or more complete units may be set up for demonstration. These units will include any size field or fields that the cooperator can work and control effectively. The maximum number of demonstrations that can be handled effectively may be carried out simultaneously by a county or group.

REGULATION

1. The county extension chairman is named as coordinator of the all-practice program within a county. He may call upon other agricultural workers, members of cooperating firms, community leaders, and others to assist and share responsibilities in setting up and carrying out cotton all-practice demonstrations.
2. The cooperator may or may not use a check unit depending upon his desire to include his total farm. He is encouraged, however, to use check units, or fields, whenever possible or practical.
3. The demonstration unit must be at least 500 yards from any cotton field where insect control is not carried on. The demonstration unit may be within or beside the same field where an insect program is being carried out.
4. A prepared check list with remarks to include all practices followed, and/or not followed should be submitted by the cooperator for purposes of evaluation. (The extension cotton specialist will furnish check lists to cooperators.)
5. Counties are encouraged to hold tours of all-practice demonstrations and from the insect control viewpoint at least two tours be held. The first of these should be held during mid-season and the second at early harvest.

6. Practices not commonly used such as irrigation, in-row fungicide treatment, etc., may be incorporated into the all-practice demonstration. They should be applied, however, under the supervision of trained personnel.
7. Since equipment is vitally important, each demonstrator should either have adequate equipment available or plan to purchase such equipment prior to planting.

FIELD SELECTION

1. Select a soil type and condition normally used for cotton in the area.
2. Use well drained soils that are level or gently sloping. Incorporate necessary erosion control measures.
3. Locate near pond or stream if irrigation is to be used.
4. Follow a 3-year rotation involving small grain, legumes, tobacco, corn, and fescue. When 3-year plan is not practical, follow rotation best suited to situation. See Soil Information Series #1. "Guide to Land Management in North Carolina." On farms where rotation cannot apply deep turning of the cotton stubble may be substituted.
5. Eliminate short rows, and other conditions unfavorable to economical production.
6. Get soil classified through local SCS.

SOIL PREPARATION

1. Take soil samples several months prior to planting date. Give accurate account on information sheet. Mark sample "Special Cotton Demonstration."
2. Apply lime as recommended and thoroughly mix with soil.
3. Break land to a minimum depth of 8 inches as far in advance of the planting date as possible. (Fall plowing is best--particularly in heavy soils.)
4. Allow land to firm for at least two weeks before planting.
5. In event of soil "baking" or packing disk or harrow lightly before planting.
6. Where mechanical pickers are to be used space rows at least 38 inches apart. Where hand picking is used row widths are optional.

7. Skip row planting may be used. (Check with local ASCS office for regulations.)
8. If nematodes are a problem use preplant soil fumigation at least two weeks before planting.
9. Nemagon or fumazone may be used at planting, but should be used under supervision.

SEED

1. Plant registered or certified seed.
2. Secure a wilt resistant variety adaptable to the area. Get county agent's approval for variety chosen.
3. Seed should be treated adequately and thoroughly. Liquid, mistomatic and dust are preferred over slurry treatments.

PLANTING

1. Plant seed 3/4 inches deep in hills or in drill.
2. Plant machine or chemically delinted seed.
3. Plant when soil has maintained a minimum degree of 60°F. at a depth of 8 inches for 3 days.
4. Seeding rates per acre: enough seed to insure a strong final stand of 4-6 stalks per foot of row. (Twenty-five to thirty pounds of machine delinted seed or 14-18 lbs. of chemically delinted seed are usually required.)

FERTILIZATION

1. Use number pounds of plant nutrients recommended by soil tests.
2. Place recommended rates in 2 bands (preferred) or place in one band at least 3 inches to side and 2 inches below level of seed.
3. Sidedress with recommended analysis and quantities according to following:
 - (a) Clay soils - sidedress before seedlings are 4 weeks of age.
 - (b) Sandy soils - Apply one half the recommended rate at 2-4 and at 8 weeks of age.

- (c) Under excess rain conditions apply extra nitrogen according to the following table:

Inches of water entering soil in 4-5 day period in excess of water holding capacity	Extra nitrogen needed through 3rd week of fruiting
1 inch	1/5 of total N used
2 inch	1/3 of total N used
3 inch	1/2 to 3/4 total N used

4. When irrigation is used apply at least 15-20 per cent more nitrogen than normally used for sidedress.

WEED CONTROL

1. Control weeds early.
2. Use pre-emergence weed control, band or broadcast according to recommended applications. (Reference: N. C. Agr. Ext. Service Folder #178.)
3. Late chemical (lay-by) control optional. Cotton rows and middles must be absolutely free from weeds at lay-by time. (Extension Folder #178)
4. To cultivate use high speed sweeps. Set cultivators and sweeps flat. They should run from 1/2 to one inch deep. Deep cultivations prune the root and cause excessive shedding of squares and bolls.
5. Cultivate or hoe only when necessary for weed and grass control.
6. Leave cotton on sharp 3-4 inch ridge to facilitate clean leaf-free harvest.

DISEASE CONTROL

1. In areas where nematodes are recognized or suspected to be a problem, take necessary steps to control them.

A composite soil sample should be collected from several places in the field 1-10 inches in depth and placed in a sealed plastic container as soon as possible after March 1. Mail sample immediately to H. R. Garriss, Plant Pathology Extension, N. C. State College, for assay and control information.

2. In-row fungicide treatments are designated for reducing damage from damping off diseases.

This treatment is optional to all-practice demonstrations. For more detailed information consult Plant Pathology Note #89, N. C. State College. The county agent will furnish this information upon request.

INSECT CONTROL - The latest recommendations by North Carolina State College entomologists on cotton insect control are as follows:

1. At 8-leaf stage of cotton, begin applications of a recommended insecticide and continue at 5-day intervals until 4 applications are made.
2. Resume application of material on or about July 24 and continue at 5-day intervals until cotton stops squaring.
3. Broadcast all applications evenly with a boom type sprayer or duster.
4. Thrips control will be left to the discretion of the county agent, county committee or producer. Where used, the first thrips application should be applied when seedlings emerge with two additional applications following at 7-day intervals.
5. For detailed information check Extension Circular No. 429-61, "Cotton Insect Control."

DEFOLIATION

1. Apply recommended defoliant at least 10 days but not more than 20 days before intended date of harvest.
2. Apply when 50-60% of all bolls are open or when 85% or more bolls have matured.
3. Bottom defoliation may be needed due to boll rot conditions. Consult Extension Folder No. 214, "Cotton Defoliation" for further information.

HARVESTING - Maintaining quality cotton through harvest is important. To do this a producer must do the following:

1. Harvest cotton as early in season as possible.
2. Pick cotton (hand or machine) while dry. Seed should not have more than 15% moisture.
3. Spread on or put in wire or slotted beds until removal from field. Do not pack or compress seed cotton at any time.
4. Allow cotton to thoroughly dry before ginning. A ginner cannot assure quality of seed or fiber when delivered to the gin in wet condition.

MARKETING - After all work is done get the most for your cotton.
This can be done by following these suggestions:

1. Have cotton classified by USDA Classing Office
2. Study current market reports and know the price of cotton grades.
3. Get bids based on the quality of your cotton and compare with market news and loan rates.
4. Sell to market or put in government storage--whichever price is highest.

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