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 * Mimeograph June 1941 *
 * Paper No. 2 Rev. Jan. 1949 *
 * Rev. Jan. 1950 *
 * GEORGIA COASTAL PLAIN EXPERIMENT STATION *
 * Tifton, Georgia *
 * Information based on results of practical experiments in *
 * agriculture for press release and distribution to farmers *
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COTTON INSECT CONTROL RECOMMENDATIONS FOR GEORGIA

As formulated by Agronomists and Entomologists of the University System of Georgia

I. DUST MATERIALS AND AMOUNTS RECOMMENDED FOR BOLL WEEVIL CONTROL.

- (1) BHC-DDT - A mixture containing 3% gamma isomer of benzene hexachloride and 5% DDT. (3-5 mixture). Use at the rate of at least 10 pounds per acre all applications.
- (2) Calcium Arsenate in alternate applications with BHC-DDT (3-5 mixture). Use calcium arsenate at the rate of 7 to 10 pounds per acre. Apply BHC-DDT at 10 pounds per acre.
- (3) Toxaphene - A dust containing 20% technical toxaphene. Use at least 10 pounds per acre all applications.

Any of the above insecticide mixtures will control boll weevils, boll worms, aphids, flea hoppers, and cotton leaf worms if properly applied. In unusually large or rank growth cotton the recommended number of pounds should be increased.

In areas where red spiders are prevalent the BHC-DDT and toxaphene dusts should contain 40% sulphur. In other areas use any other suitable neutral or slightly acid diluent.

II. METHOD AND TIME OF APPLICATIONS FOR BOLL WEEVIL CONTROL.

Method - Hand guns, horse-drawn, and tractor operated dusters or airplane dusting are all satisfactory if well done.

Time - (1) Pre square: Early poisoning is recommended where boll weevils, thrips, or flea hoppers are numerous early in the season. At this time the BHC-DDT or toxaphene dusts may be used.

(2) After Squaring Begins: When squaring begins examine the fields. If punctured or flared squares are readily found, apply any of the recommended materials. In most years the normal dusting schedule commences with this application. Applications should be made at four to six day intervals until the infestation is brought under control. This will probably require at least three applications. Fields should be watched closely and poisoning resumed when reinfestation occurs. Presence of insects and weather conditions will determine the total number of applications during the season. Do not stop too early. Late applications are particularly important for control of boll worms. Any application of toxaphene or calcium arsenate washed off within 24 hours is not effective and should be repeated. BHC-DDT is considered effective if on the cotton for 12 hours.

III. SPRAYS FOR BOLL WEEVIL CONTROL.

Spray applications of the organic insecticides have been tested only one year under Georgia conditions. Results to date have compared very favorably with dust applications of the same materials. Sufficient experimental data are not available to justify making a general recommendation for sprays during 1950. For farmers who may consider using sprays, the following information is given. Because of mechanical difficulties which may result from poorly formulated emulsion concentrates, only materials furnished by reputable and well-known firms should be used. Applications should be made with emulsion concentrates diluted as recommended by the manufacturer and using the low-gallonage and low-pressure spray equipment. Materials that have been tested are (1) Toxaphene, using a 40% emulsion prepared for spraying and (2) Toxaphene-DDT in the proportion of 4 pounds technical toxaphene - 2 pounds technical DDT per gallon of high concentrated emulsion. Dosages of the material are recommended at from 5 to 10 gallons of spray (equivalent to 2 pounds technical toxaphene per acre) depending upon the size or growth of the cotton plant. Sprays should be applied only when the plants are dry. As a safety measure to the operator, it is recommended that the spray booms be mounted on the rear of the tractor. Place the nozzles 6 to 8 inches from the cotton plant. For effective coverage, the nozzles should not drag in the cotton plants.

IV. BOLLWORM CONTROL

As soon as squares with small holes in them are found, apply either BHC-DDT, toxaphene, or 10% DDT dust at the rate of at least 15 pounds per acre.

V. RED SPIDER CONTROL

One or more applications of 15 to 20 pounds of dusting sulphur per acre should be used in case of a build-up of this pest. In areas where red spiders are prevalent, the BHC-DDT and toxaphene dusts should contain 40% sulphur.

VI. GENERAL

1. Results using chlordane have been erratic. It is not recommended except in such areas as have had success with its use heretofore. Under North Georgia conditions the 10% chlordane - 5% DDT dust has given satisfactory results.
2. Machines for catching boll weevils and other insects are not recommended.
3. BHC should not be used on cotton where Irish potatoes, turnips, or beets are to be planted the following year, as these crops have been known to have off flavor following its use. Sweet potatoes and peanuts are not affected by the material.
4. Calcium arsenate will injure peach trees, soybeans, corn, and cowpeas, if allowed to drift onto these crops.

