

GEORGIA COASTAL PLAIN EXPERIMENT STATION  
Tifton, Georgia

Information based on results of practical experiments in  
agriculture for press release and distribution to farmers

1951 COTTON INSECT CONTROL RECOMMENDATIONS FOR GEORGIA

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

RECOMMENDED DUSTS 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) Toxaphene - A dust containing 20% technical toxaphene. Use at least 10 pounds per acre all applications.
- (3) 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.
- (4) Aldrin-DDT - A mixture containing 2.5% aldrin and 5% DDT. Use at least 10 pounds per acre all applications. Under extremely hot conditions, especially in South Georgia, the rate per acre should be increased to 15 pounds.

Any of the above insecticide mixtures will control boll weevil, fleahopper, and cotton leafworm if properly applied. When certain of these are used other pests have to be considered (See bollworm, cotton aphid, and red spider mites). In unusually large or rank growth cotton the recommended number of pounds should be increased. Due to the possible short supply of sulfur during 1951 this material is not recommended in the above mixtures. Inert materials are recommended as the diluent instead of sulfur which has been included in the past for red spider control.

Hand guns, horse-drawn, and tractor mounted dusters or airplane dusting are all satisfactory for application.

RECOMMENDED SPRAYS FOR BOLL WEEVIL CONTROL

- (1) Toxaphene or Toxaphene-DDT - Apply toxaphene at the rate of 2 pounds of technical toxaphene per acre. Where DDT is included in the concentrate the rate per acre of DDT will vary from 0.5 to 1 pound depending on different manufacturers' formulations.
- (2) Aldrin-DDT - Apply at the rate of 0.25 pound aldrin and 0.5 pound technical DDT per acre.
- (3) BHC-DDT - Apply at the rate of at least 0.3 pound gamma isomer BHC and 0.5 pound technical DDT per acre.

Any of the above insecticide mixtures will control boll weevil, fleahopper, cotton leafworm, and thrips, if properly applied. When certain of these are used other pests have to be considered (See bollworm, cotton aphid, and red spider mites).

OTHER INSECTICIDES FOR CONTROL OF BOLL WEEVIL AND CERTAIN OTHER INSECTS

Dieldrin - This insecticide has been tested for only one year in Georgia. The use of 1.5% dieldrin plus 5% DDT is not recommended for general use in Georgia during 1951 and is to be used experimentally only. The dust mixture of 1.5% dieldrin plus 5% DDT used at the rate of 10 pounds per acre or a spray used at the rate of 0.15 pound dieldrin and 0.5 pound DDT per acre, will control boll weevil, fleahopper, thrips, and certain other injurious insects. Although aphids have not been serious there is an indication they may build-up following the use of this mixture.

Dieldrin is regarded as highly toxic to man and animals and is readily absorbed through the skin. Extreme precautions should be exercised when handling and applying dieldrin.

Calcium Arsenate plus 1% Parathion - A special lime-free calcium arsenate containing 1% parathion dust has been used experimentally and has given satisfactory control of boll weevil, aphid, and red spider at the rate of 10 pounds per acre.

Parathion is extremely toxic to man and should be handled with caution. This material should not be used unless the operator follows the special precautions on the use and application of parathion (See Precautions).

Chlordane-DDT - 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 has given satisfactory results. This mixture applied at the rate of 10 pounds per acre will control boll weevil, fleahopper, and thrips. Aphids may build-up following the use of this material.

TIMING OF APPLICATIONS FOR BOLL WEEVIL CONTROL

Pre-square: Early applications are recommended where boll weevil, thrips, fleahopper, or other injurious insects are numerous early in the season.

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 regular schedule commences with this application. Applications should be made at four to five 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. If conditions are such that ground equipment will damage the plants fenders or guards should be used. When it is impossible to get in the field late in the season, airplane application is recommended. If rain occurs within 24 hours after poisoning, repeat application within 48 hours.

OTHER INSECTS

BOLLWORM

As soon as squares with small holes in them are found apply a dust of either 10% DDT or benzene hexachloride 3% gamma isomer and DDT 10% (3-10 mixture) at the rate of 10 to 15 pounds per acre. The BHC-DDT (3-10) controls both boll weevil and bollworm. Under certain conditions 20% toxaphene will control bollworm. When spraying is being practiced and the emulsifiable concentrate used does not contain DDT, add sufficient concentrate to give 1 to 1.5 pounds of technical DDT per acre. Prompt action is essential as large worms are difficult to kill. Late season applications are particularly important for control of bollworms.

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