

The pink bollworm overwinters as a larva. Some of the larvae spend the winter in cottonseed while the remainder, 43 per cent or more, spend the winter within a silken cocoon in the soil.

Very few pink bollworm larvae went into diapause, or the overwintering resting stage, before September 15. Therefore, in order to take advantage of an early fall plow-up to suppress spring pink bollworm populations, it would be necessary to plow-up all the cotton by September 15. Such an early plow-up would be impractical because cotton yields would be reduced drastically.

Records show that heavy populations of pink bollworms emerged from bolls during October. This explains the heavy infestations found on late maturing cotton in Graham County. Practically all the late maturing cotton in Graham County was of long staple variety, Pima S-2.

Moisture was found to be a very important factor in reducing winter survival. In years of excessive rainfall during the winter, spring emergence of the pink bollworm from buried bolls was drastically reduced. When the winter rainfall was light, burial of bolls gave little or no suppression of the spring emergence of adults. In those years when burial of bolls gave suppression of spring adult emergence, December 1 burial was much more effective than a delayed (March 1) burial.

Addition of water at 10-day intervals, equivalent to 3 irrigations, to bolls buried in cage tests was found to be very effective in suppressing spring emergence of pink bollworms.

Planting of barley, following cotton, is an excellent method of reducing pink bollworm moth emergence, providing enough water is used to insure a good barley crop.

Low Volume Airplane Application of Insecticides

(George P. Wene)

A pint of technical malathion per acre was applied successfully by aircraft for the control of lygus bugs in 1964 tests. It was equal in effectiveness to the standard recommended dose of 1-quart of emulsifiable malathion applied in 5-gallons of water per acre.

To apply the technical malathion only 5 nozzles, with D-4 orifices, were equally spaced on the boom of a Pawnee airplane. A pressure of 50 pounds was maintained on the spray pump. In applying the spray the plane was flown at 90 miles per hour at a height of 30 feet, with the swath width averaging 70 feet.

Bollworm Studies

(George P. Wene)

Virus Disease A bollworm virus disease was used for the first time in 1964 to control bollworms on a commercial basis. The virus was applied at the per acre rate of 100 diseased worms in 5 gallons of water. The plot was 10 acres in size and was adjacent to an untreated check plot. The virus was applied