

## REARING INVESTIGATIONS

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### Objective

To improve rearing and mass production of insects infesting cotton for use in programs involving the release of sterile insects and in programs requiring production of parasites and predators for field release.

### Summary of Progress

Laboratory cultures of boll weevils (Anthonomus grandis Boheman), bollworms (Heliothis zea (Boddie)), beet armyworms (Spodoptera exigua (Hubner)), cabbage loopers (Trichoplusia ni (Hubner)), pink bollworms (Pectinophora gossypiella (Saunders)), tobacco budworm (Heliothis virescens (F.)), and salt-marsh caterpillars (Estigmene acrea (Drury)), are maintained at the U.S.D.A. Cotton Insects Research Laboratory in Tucson. The pink bollworm is being used for studies of irradiation-induced sterility and for parasite studies. The other lepidoptera are used in studies of parasites and predators which are oriented toward biological control.

During the summer of 1969, sufficient numbers of pink bollworms were reared to provide stock for a new rearing facility of the Plant Pest Control Division in Phoenix, Arizona. From 1,000 to 10,000 eggs were shipped per day. The number of pink bollworm pupae obtained was counted for 40 weeks and found to average 3,000 per week.

During June and July 1969, about 12,000 beet armyworm larvae and 2,500 tobacco budworm larvae per week were provided as parasite hosts for the biological control section of the laboratory.

Rearing methods and diets are being constantly improved to simplify techniques and to cut down production costs. The rearing program now provides adequate host insects for the biological control program and the insects needed for physiological and ecological studies.