Blank squares may result from feeding by lygus bugs on meristematic tissues of presquaring cotton.

Presquaring cotton plants grown in fields adjacent to preferred host crops, such as alfalfa or safflower, or near areas of native desert vegetation, can be seriously injured by heavy, inward-migrating infestations of lygus bugs. Under the conditions of irrigated agriculture found in central Arizona, such migrations may result when preferred host plants are no longer available or are not in a condition to support the existing populations of lygus bugs.

Laboratory Studies of Cotton Insects and Their Natural Enemies

(George D. Butler, Jr.)

Detailed laboratory studies have been made on the biology and feeding habits of the black fleahopper, Spanagonicus albofasciatus. The fleahoppers fed readily on cotton aphids, whitefly eggs and nymphs, spider mite eggs, nymphs, and adults, bollworm eggs, and lygus bug eggs. It is believed that this insect may have to be an early-season predator in Arizona cotton fields, but additional field evaluations are needed. A related fleahopper, Rhinacloa forticornis, was observed but, for the second year, it could not be reared in the laboratory. It, too, has been observed as a predator.

The life cycle of the banded-wing whitefly, Trialeurodes abutilonea, on cotton was studied in detail in the greenhouse and in temperature cabinets. Preliminary experiments were conducted on the development of whiteflies on cotton plants with different nutrient levels. The low nutrient and very high nutrient levels were less favorable for whitefly development. The whitefly parasite, Encarsia, was studied. It developed from egg to adult in from 9 to 17 days. Parasitized whitefly pupae turned black. The number of whiteflies in the field varied on different cotton varieties with high populations developing on some pubescent lines.

Future work will emphasize a study of the more important natural enemies, particularly insect parasites, of the bollworms and other caterpillar pests of cotton.

Stub Cotton Provides Haven for Western Boll Weevil
(From "Progressive Agriculture", January, 1965)

(G. T. Bottger)

A few fields of cotton in central Arizona which were infested with the western boll weevil, Anthonomus grandis thurberiae Pierce, in 1963 and stubbed in 1964, provided excellent conditions for this weevil to overwinter and produce a generation of boll weevils on the first cotton squares available in 1964.

Live weevils were found from November to April within their pupal cells in the bolls of this cotton, which remained on the soil surface during the winter, thus making hibernation in the edge of the field ground trash or other shelter necessary.