



SEASONAL POPULATIONS OF CITRUS INSECTS AND MITES IN COMMERCIAL GROVES ¹

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Populations of the major insects and mites that affect citrus are known to vary from month to month as each species passes through its life cycle and responds to environmental changes. Also well recognized is the variation in abundance of a major insect or mite pest from year to year.

In the case of minor citrus pests, fluctuations in population are less well known because these species usually have been studied only in limited areas and mainly during outbreak years.

Very little information on the range of population sizes in Florida groves has appeared in the literature. The purpose of this paper is to present population data obtained from observations made each month from 1951 through 1958. These data, taken from 130 representative groves, reflect the influence of natural ecological factors plus the effects of pest control practices used in a majority of groves.

The population records obtained have been used to express the average abundance of 19 citrus pests throughout the Florida citrus belt during each month of the year. By utilizing records of maximum and minimum populations that occurred in the 8-year period, it has been possible to delimit a probable range of fluctuation for a number of species. Although it is not the intention in this paper to dwell upon factors that cause population changes, some comments are included regarding unusual population changes that followed the cold winter of 1957-58.

METHODS

Populations were determined each month over a period of eight and a half years from January 1951, through July 1959, for the following citrus pests:

Citrus rust mite, *Phyllocoptruta oleivora* (Ashm.)

Purple scale, *Lepidosaphes beckii* (Newm.)

Citrus red mite, *Panonychus citri* (McG.), commonly called purple mite in Florida.

Black scale, *Saissetia oleae* (Bern.)