

Biological Control of Insect and Mite Pests of Avocado

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Efforts were directed entirely toward biological control of greenhouse thrips, presently the most serious arthropod pest of avocado. Thripobius semiluteus, a parasitoid of greenhouse thrips larvae, has been colonized in release blocks in the major avocado-growing areas. Since its introduction from Australia in August, 1986, nearly 200,000 parasitoids have been released in about 25 different sites in 4 counties. Establishment and spread of these wasps has been observed in most sites that we are monitoring, and up to 70% of the immature thrips were parasitized in one block. Thripobius pupae have been found in the field in February, indicating that they survived the cold weather earlier in the winter.

More data are needed on the rate of spread of the parasitoid and its impact on the greenhouse thrips populations. Thrips and parasitoid populations are being monitored in release and non-release blocks in several orchards. Fruit damage will be rated in the paired blocks.

Observations are being made on various aspects of the biology of Thripobius (e.g., length of life cycle, fecundity and stage of thrips preferred for parasitization) in order to improve the efficiency of mass-producing the parasitoid.