INSECTS

Codling Moth: M. M. Barnes, C. S. Davis, and G. S. Sibbett

Using moths from the Riverside laboratory, W. Roelofs (Cornell University) determined the structure of a synthetic attractant for codling moth males. This compound was extensively tested on the West Coast in 1971. (A trade name of the pure material is Codlemone.) Our field results show more consistent and reliable performance with the synthetic attractant than with live female moths (supplied by W. C. Batiste). Comparative results were obtained in both high and low populations. Integrated pest management in walnut orchards can be furthered if treatment for codling moth control is shifted from suppression of the first brood to suppression of the second brood. This permits excellent regulation of the walnut aphid by Trioxys pallidus during spring. A single treatment, accurately timed by the synthetic sex attractant against second brood, with azinphosmethyl (1 1/2 lbs), phosalone (2 lbs), or chlorphenamidine (1 1/2 lbs) at the indicated rates per acre provided excellent control of the codling moth and adequate control of the navel orangeworm.

2-Spotted Mites: L. C. Brown and C. S. Davis

For the third year in a row, 2-spotted mite was controlled in a walnut orchard in Hanford, California, with predators. Alfalfa hay was planted in every fourth tree middle in a 10-foot strip, a total of 6 strips in a 25-acre orchard. Every other strip was cut at 2-week intervals. The hay was infested with 2-spotted mite, spotted alfalfa aphid, pea aphid, and many other arthropods. This hay acted as an insectary to raise 6-spotted thrips, minute pirate bug, ladybird beetles, and predaceous mites. When the hay was cut, these predaceous insects and mites were forced into the trees where they fed upon mites and aphids and reduced the populations below economic levels. The aphids were mainly controlled by a parasitic wasp, Trioxys pallidus.

Insect Populations in Walnut Orchards with Alfalfa Strips: L. C. Brown

Alfalfa strips were grown in every fourth row of walnuts. Weekly counts of aphids and "mummies" were tabulated. At the same time, 10 sweeps with a standard sweep net were made in each alfalfa strip and insect populations were tabulated. Alfalfa strips yielded the minute pirate bug, Orius tristicolor, lady beetle adults, lady beetle larvae as well as the pea and spotted alfalfa aphid.

Mite build-up started July 1 in the walnuts. The Orius, an excellent predator of the mite, began increasing in the alfalfa. Mite populations peaked out on July 13 and by the end of July had been reduced to low levels. This decrease was contributed to the fast build-up of Orius in the alfalfa which migrated to the trees.