PARASITIC WASPS RELEASED AS BIOLOGICAL CONTROL AGAINST CITRUS SCALE DISEASES

By Julie Graddy

HOMESTEAD — A thousand parasitic Japanese wasps were released 6/9/87 in the Homestead area to test the wasp's ability to control chaff scale and snow scale, insects that attach themselves to citrus twigs, leaves and fruit. Similar releases of biological controls against scales have had a "very good" success rate, says Dr. Fred Bennett, an entomologist at the Institute of Food and Agricultural Sciences (IFAS) at the University of Florida.

Dr. Richard Baranowski, director of the IFAS Tropical Research and Education Center in Homestead, who released the minute wasps in a lime grove, says that releases will continue several times a week for a couple of months. Regular tests will monitor the wasps' progress against the scales, he adds. Material for the releases come from Japan via the biological control center at Texas A&M University in College Station.

Because a scale insect has a hard covering that protects its body, the insect is difficult to control with insecticides normally used on citrus. Although systemic insecticides can work, they are not used because the insecticide is taken up by the fruit as well as the leaves, says Bennett, who specializes in biological control.

The ingenious wasp drills a hole in the scale covering and lays an egg inside. When the egg hatches, the larva eats the scale. The wax covering protects the wasp as it grows and pupates into an adult, says Bennett. The wasp larva feeds on several growth stages of the scale. The insect feeds on scale insects only and is not a nuisance to man or other vertebrates, says Bennett.

Bennett hopes the wasp can also be used to control black parlatoria scale. This unsightly citrus pest was discovered in a small pocket of trees in the Little Haiti area of Miami in 1985. The wasp appears to provide some control against the insect in its Japanese homeland, says Bennett.

Florida cirtus growers are concerned that black parlatoria will make its way into the state's main citrus growing area, he says. Although the scale does not usually destroy citrus trees, it is difficult to clean off fruit, which damages marketability.

The state recently started a tree eradication program to remove the infested trees in the area, but has asked IFAS scientists to continue research in case the pest cannot be eradicated or someday reinvades the state.

Puerto Rico is a likely spot for continued testing, Bennett states, since reports indicate that black parlatoria scale is a problem there. ■