Calif. medfly takes winter vacation

WASHINGTON, D.C -California growers may have to wait until next year to finish off the Mediterranean fruit fly threatening their crops.

While Florida seems to have gotten the small numbers found there under control, California suffered a series of disappointments in its fight against the 'medflv''.

When three medflies first appeared in detection traps in Santa Clara county in June, 1980, the California government had hoped that a combination of fruit stripping, sterile flies, bait traps, and ground spraying could eradicate the insect.

However, the infested area was larger than expected, and things took a turn for the worse. No one really knows why the infestation began to grow, but one of the techniques to fight the medfly may have backfired: Some fertile medflies possibly found their way into a shipment of sterile ones.

Just as harmful to eradication efforts, though, were motorists who carried infested fruit out of the quarantined area. The flies spread from the backyard orchards where

to the state's commercial crops, including the San Joaquin Valley, where the bulk of the fruits that host the medfly are grown.

Because the biological and genetic control techniques that had worked earlier take time and aren't effective with widespread infestation, there was no alternative but aerial spraying with malathion, in the form of baited droplets, according to a U.S. Dept. of Agriculture spokesman. Even so, some medfly pupae may survive and reappear in the spring, says USDA economist Roger Conway. That's when officials and growers hope to wipe out the survivors.

Only the adult fly is vulnerable to aerial spraying. Once the female has deposited her eggs in a fruit, the developed larvae begins to eat its way out. When the fruit falls, the larva burrows into the ground, becomes a pupa, and emerges as an adult fly 6 to 11 days later.

With the coming of cooler weather, the pupa goes into dormancy in the ground until the spring. This is the most resistant stage in the life cycle, but growers will spray diazinon on the ground around the trees to destroy the larva and the emerging adult fly. They'll resume malathion spraying next spring, if necessary.

Spraying is nothing new to growers, but those in infested areas will have to spend more to combat the medfly. And because of the quarantine, they'll need to build more fumigation chambers for treating the fruit before it can be shipped.

Matters will be complicated by motorists who continue to transport the fruit, and by people who, instead of destroying the infested fruit after stripping it, discard it where the larva can survive. Spraying must be backed up by strict enforcement of the quarantine for , maximum effectiveness, says Conway.

Another problem is the possibility that spraying will destroy medfly predators along with the medflies. However, according to Merrill Cleveland of USDA's Agricultural Research Center in Beltsville, Maryland, the batted droplets used to carry the malathion are designed to attract only the medfly, and few other insects should be affected.

While the number of flies being found is small compared with past

infestations when as many as a thousand flies were found in a single trap, the stakes are so high that even one medfly worries growers. The farm value of fruits and nuts in California is around \$3 billion. . Medflies can easily destroy, or at least make more difficult to sell, 25 to 50 percent of a crop. A heavy infestation can wipe out the entire crop.

Economists estimate that if an infestation were to cover the whole state, the loss could reach \$413 million-\$146 million for added pest control, \$207 million from direct crop losses, and \$60 million to fumigate. .

Unfortunately, California's biggest fruit and vegetable crops are the ones most attractive to the medfly-citrus fruits, peaches, apples, cherries, tomatoes, peppers, avocadoes, and some nutsover 50 in all. While the range of fruits, vegetables, and nuts that can nost the medfly in large—over 250-the insect is no threat to other major field crops.

Although the infestation has been limited to California and Florida, it could have spread to any of the southern states with climates warm enough to harbor the fly, Cleveland says.

In fact, any state where the host crops are grown could be hit, but in the colder states the medfly would have to be introduced with each growing season, as the climate would be too cold for the nina to survive the winter. Both the adult and the pupa die within a few days in temperatures below 42 degrees.

In the past only Florida, Texas, and California have had significant medfly infestations. The first, in central Florida in 1929, was the worst, when 6,000 state and federal workers battled the fly for 2 years with arsenical-molasses bait sprays. The infestation covered 188 square miles and cost over \$7 million to wipe out. The damage to crops was substantial.

Other infestations have not been as serious, although the secondalso in Florida-covered 1,000 square miles. The medflies were controlled somewhat more easily. with malathion spraying and the introduction of sterile flies.

The quarantines imposed to contain this outbreak affect more than shipments within the U.S. In August, Japan indicated it would not accept any produce from quarantined areas and won't accept any from other areas in California that hasn't been fumigated or cold-treated to destroy the larva.

Growers are rushing to build more fumigation centers, but they won't know how many they'll need until the extent of the infestation is clear. Only 33 EPA-approved centers are near the infested areas, plus some temporary structures that must be monitored at every treatment.





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