insect answers

THRIPS

Thrips are very small, slender insects less than 1/16-inch long. They live in the leaf sheaths, flowers, or other parts of plants, feeding on the plant juices. Many species are serious pests of field crops, flowers, onions, and other vegetables and fruits. Some of the more important species in Washington are onion thrips, *Thrips tabaci;* gladiolus thrips, *Taenio-thrips simplex;* the wheat or flower thrips, *Frankliniella tritici;* greenhouse thrips, *Heliothrips haemorrhoidalis;* and grass thrips, *Anaphothrips obscurus.*

Fig. 1. Adult thrips.

Injury

Damage is caused by both the nymphs and adults. Thrips mouth parts are of the rasping-sucking type. That is, the thrips first rasp the buds, flowers, or leaf tissue, then suck up the exuding plant juices. This kind of feeding causes distorted and discolored flowers and buds, silver or white streaking and mottling of leaves (Fig. 2), and russeting, deformation, and scarring of fruit. Occasionally when not controlled, thrips can cause reduction in yield, loss of plant vigor, or complete loss of the crop.

Description

Adult thrips are usually tan to dark brown or nearly black in color (Fig. 1). Close examination of some species will reveal colors of yellow to orange and occasionally some with stripes of different colors. Adults of many species possess two pairs of featherlike fringed wings that are laid back over the body when at rest. The immature stages (nymphs) resemble the adults. They are normally lighter in color, cream-colored to yellow, and wingless. The white, kidney-shaped eggs are extremely small.

Seasonal History

Most species overwinter as adults. In the spring, eggs are deposited on plant tissue or occasionally inserted into plant leaves or stems through slits made by a sharp ovipositor. Eggs hatch quickly and total development from egg to adult can take 15 to 30 days. During this development time, the nymph goes through four instars (stages); the last two do not normally feed. Most species can have many generations in the

summer. Development is dependent upon climate and crop conditions. A few species, such as the pear thrips, have only one generation per year. In many species there is a notable absence of males, and parthenogenesis (development of unfertilized eggs) is common. A few species are predacious and attack other small insects and mites.

Natural Enemies

There are many natural enemies of thrips, including other thrip species which belong to the generic groups, *Aeolothrips, Franklinothrips, Scolothrips and Aleurodothrips*. Other natural enemies of thrips are lacewings, lady beetles, some parasitic flies and wasps. However, none are efficient enough to keep populations of harmful species below economic levels.

Control

Since thrips can occur in a number of different habitats and on a number of different kinds of crops, trees, and shrubs, consult your county Extension agent or pest consultant or pest management consultant for identification and recommendations for specific problems. County Cooperative Extension offices have several publications on control of insect pests. Ask them for a copy covering thrips control on your specific crops.
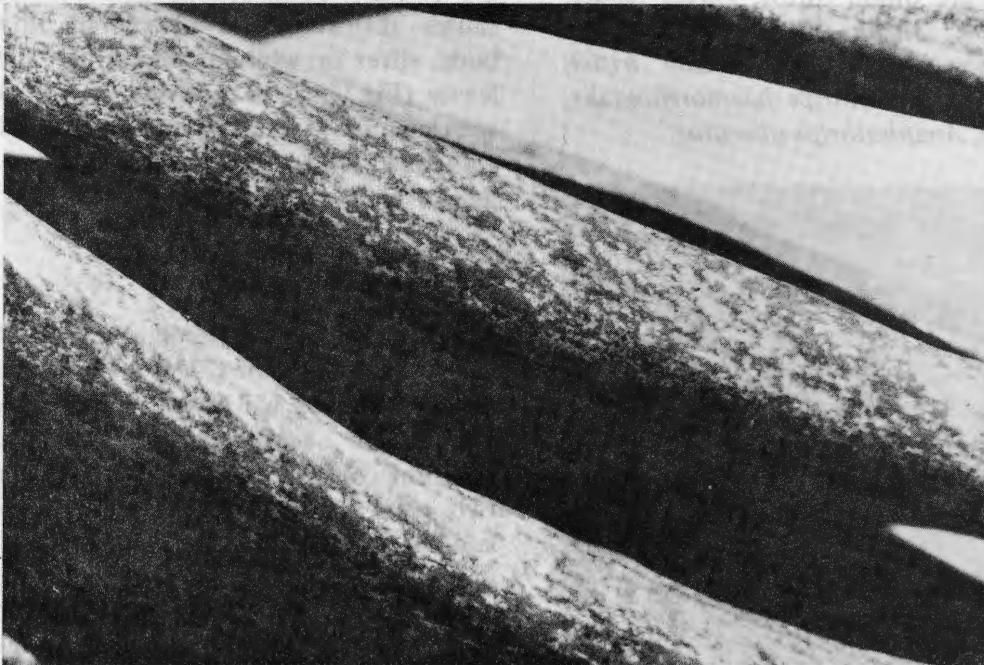

Fig. 2. Onion damaged by thrips.

Prepared by Arthur H. Retan, Extension entomologist and James Fisher, former Extension entomology assistant, Washington State University, Pullman.