Pest Alert: Japanese flower thrips

Thrips setosus

Introduction

Japanese flower thrips (JFT), *Thrips setosus* Moulton (Thysanoptera, Thripidae), native to eastern Asia, has recently been introduced into Britain, France, Germany, and the Netherlands. In 2016, it was found at a single nursery in Michigan. The nursery shipped hostas to hundreds of nurseries around the United States. As of August 2017, JFT is only known from two counties in Michigan. A single specimen was also found in Rhode Island, and several specimens have been found in a nursery in Salem, Oregon. At least nine Oregon nurseries received potentially infested hostas from the Michigan nursery. These range from Vernonia to Cottage Grove. The Salem nursery has treated infested material with systemic insecticides in the hope of eradicating the pest.

Despite protests from the Oregon Department of Agriculture (ODA) officials and those of other states, the USDA APHIS (Animal and Plant Health Inspection Services) has deregulated this new pest. This means that shipments contaminated with this thrips will no longer be stopped when found during port inspections. In addition, there will no longer be restrictions on the movement of this pest within the US. Oregon nurseries that have received infested material have been notified by ODA and are aware of the risks posed by this new pest.

Host Range

JFT is known to feed on at least 14 plant families. This wide host range means that it is likely to be moved in a variety of live plants and fresh cut plant material, especially flowers. Although it is called a flower thrips, it does not feed on pollen and will feed on all above ground parts of plants. It is a known pest of solanaceous crops such as tomato, pepper, and eggplant and is known to attack chrysanthemum, cucumber, hellebore, hosta, hydrangea, impatiens, petunia, poinsettia, soybean, and many more. It is a relatively weak vector of tomato spotted wilt virus. It can survive year-round in greenhouses and outdoors in USDA plant hardiness zones 4-11, which includes all of Oregon.

Adult female *Thrips setosus*.

Pest Status

In its native range it is considered a minor pest. Damage to leaves is similar to damage caused by other thrips species: silvery streaks and spots. It has damaged hostas in Michigan and Oregon and hydrangea in the Netherlands. In Oregon, streaking and deformed leaves were noted on some varieties of young hostas. Tolerance of damage seemed to vary by variety.

JFT was discovered in Michigan because biological control methods used for thrips in greenhouses were no longer effective. At this time, known effective insecticide active ingredients include: dimethoate, carbaryl, malathion, methomyl, naled, chlorpyrifos, acephate, methidathion, and diazinon. Be sure to read the pesticide label to ensure that it is an appropriate treatment in your situation.

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Identification

In the field, JFT can be identified using 10x magnification. Adults are about 1.3mm long (less than 1/16 inch). Females have the basal quarter of the wing pale, which contrasts with the otherwise dark brown body and wing color. There are several other species of brown thrips with pale wing bases in Oregon, but the pale band tends to be restricted to the basal 1/8th or less or is not especially obvious with a hand lens. The males are yellow and must be identified by an expert.

JFT may not respond well to biocontrol practices and may be more abundant where biocontrol agents are the primary control method.

References

Murai, T. 2001. Life history study of *Thrips setosus*. Entomologia Experimentalis et Applicata. 100: 245-251

Vierbergen, G. and A.J.M. Loomans. 2016. *Thrips setosus* (Thysanoptera: Thripidae), the Japanese flower thrips, in cultivation of Hydrangea in the Netherlands. Entomologische Berichten. 76(3): 103-108

Field Identification

Adult females are:

- less than 1/16th of an inch long
- dark brown with pale wing bases
- found in flowers and underside of leaves

Adult female *Thrips setosus*. Note pale wing bases.

What can you do?

If you suspect the presence of JFT in your facility please stop any movement of plants and contact your nursery inspector or the Oregon Department of Agriculture at plant-entomologists@oda.state.or.us or 503-986-4636.

For more information

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