Thrips and Tree Pollen in Vegetables

At times growers may be surprised to find a fairly large number (10-15 adults and 7-10 immatures/leaf) of thrips on the leaves of cantaloupe, watermelon and potato early in the season. However, no thrips feeding damage was visible on the leaves. One would have expected to find the highest number of thrips in flowers, but instead find only a few thrips in the flowers of these fruit and vegetables. Most of the thrips are eastern flower thrips (*Frankliniella tritici*) along with some western (*F. occidentalis*) and tobacco (*F. fusca*) thrips. The thrips on the leaves of these plants may have been feeding on pollen—not pollen from the vegetables, but tree pollen such as pine. A recent study in Georgia found western flower and tobacco thrips feeding and laying eggs on plants covered with pine pollen. The plant species are normally poor hosts for the thrips, but not when covered in pine pollen. When the pollen was removed from the plants, the thrips did not lay eggs or feed on the plants.

What does this mean for vegetable growers? If we had to contend with tomato spotted wilt virus in our area on a regular basis it would mean a great deal, but since we rarely have TSWV outbreaks in the mid-Atlantic it means we must be sure NOT to apply insecticides unless we absolutely have to. Why? The thrips are feeding on the pollen that is on the leaf and are causing little damage to the leaves. Once the pollen washes off the leaves and no more tree pollen falls, the thrips should move on. However, if chemical sprays (such as pyrethroids or carbaryl) are used on a calendar basis (once a week) for striped cucumber beetle or worm control when the pests are not present or are present in low numbers this could increase the chances of a thrips outbreak. Chemical applications for pests should only go out when thresholds are reached and not on a calendar spray basis.

Could pollen-feeding thrips on the leaves of fruit crops such as strawberry, blueberry and brambles move to the flowers as they appear on these crops? That is a good question and one I hope to answer in a thrips survey I am conducting in the mid-Atlantic area. Because there is usually no apparent feeding damage to the leaves the thrips were populating, the only way to find them is to take a random survey of the leaves and closely examine them. If any grower thinks they may be having thrips problems on any early season fruits or vegetables please email me at jbrust@umd.edu or phone: 410-627-8440 and I will survey your crops.

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