

Blueberry thrips: *Frankliniella vaccinii* Morgan and *Catinathrips kainos* O'Neill

Economic importance and damage

Two species of thrips are known to infest lowbush blueberry plants. In eastern Canada, thrips damage to wild blueberry plants has been reported from the following locations: New Brunswick, Nova Scotia, Prince Edward Island, Newfoundland.

Thrips feed on leaves and they are found in between curled leaves. Damaged leaves do not unfold normally and turn reddish (Figure 1). In sprout fields, leaves on infested plants become wrapped around the stems which may become twisted. Often, the entire stem has curled leaves. Infested patches are visible the following spring, as damaged leaves remain attached to the plant. In crop fields, leaves on infested buds do not unfold normally and resemble enlarged buds. Damage is often seen on the buds at the end of the main and side stems.



Fig. 1. Damage caused by blueberry thrips

Infestations are concentrated in localized areas where almost every plant is affected. In most cases, infested areas are as small as a few square metres with little damage appearing elsewhere. Larger infestations, covering several hectares, have also occurred. Injured plants may become more susceptible to winter injury and have a reduced fruit set the following year. Yields have been known to be reduced by fifty percent or more.

Life cycle and description

Thrips have five life stages: egg, larva, prepupa, pupa, adult. The two species known to attack wild blueberry plants are similar in appearance and have similar life cycles. Only the adult females survive the winter. In late April or early May the females emerge from the ground. They lay eggs in leaf tissue from late May to early June. Larval and adult thrips damage blueberry plants by sucking sap from plant tissue. This causes the leaves to become deformed. The prepupal and pupal stages are inactive. All thrips life stages occur within the curled blueberry leaves. Newly formed adults appear in late July. A second generation occurs in ten days to two weeks. By mid-August, adults leave the plants and eventually overwinter in the soil.

Adult blueberry thrips are minute, about 1 to 2 mm long, and slender-bodied (Figure 2). Adults are yellowish grey, have two antennae and have four long, narrow wings, fringed with hairs. The larvae (immature stage) resemble

adults but do not have wings, and are smaller. They develop into prepupae and pupae, which have wing buds.



Fig. 2. Adult blueberry thrips

Pest management

Fields should be visually inspected for curled, red leaves, starting in early June. The curled leaves should be examined for thrips as the leaves may be infested with the maggot stage of another insect, the blueberry tip midge (species: *Prodiplosis vaccinii* (Felt.)). The midge (a small fly) causes damage similar to that of thrips, except the leaves are not as tightly curled, not as red, and only leaves at the tip of the plant are curled. Within these leaves, a small white maggot may be found. The blueberry tip midge is more often found on the velvet leaf blueberry (sour top), while thrips are more often found on the common lowbush blueberry. This midge is a minor pest, but is occasionally found in the same leaf roll with thrips.

Infested areas should be marked out with stakes and treated the following spring when the plants are one to two cm tall. This is when overwintered adults first appear on the plants. Plants can be treated with an insecticide. An alternative method is to burn the curled leaves as soon as they are noticed in the spring. Burning curled leaves later in the summer may not be effective since the thrips may have already left the plant.

Insecticide recommendations and rates are listed in the Wild Blueberry Insect Control Selection Guide (fact sheet C1.6.0) which is updated annually. Further information can be obtained from the NB Department of Agriculture, Aquaculture and Fisheries.

References:

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