Lowbush Blueberry Fact Sheet

Blueberry Thrips

Introduction

Blueberry thrips are a minor pest of lowbush blueberries. They are often present in many fields at low levels. Occasionally, they can become a severe pest, and reduce yields by their effect on the blueberry plant. There are two species of thrips present in Nova Scotia which damage blueberries. They are Frankliniella vaccinii Morgan, and Catinathrips kainos O'Neill. Both species are very similar in appearance, and can only be distinguished from one another by examination under high magnification. Both species may be present in the same infestation.

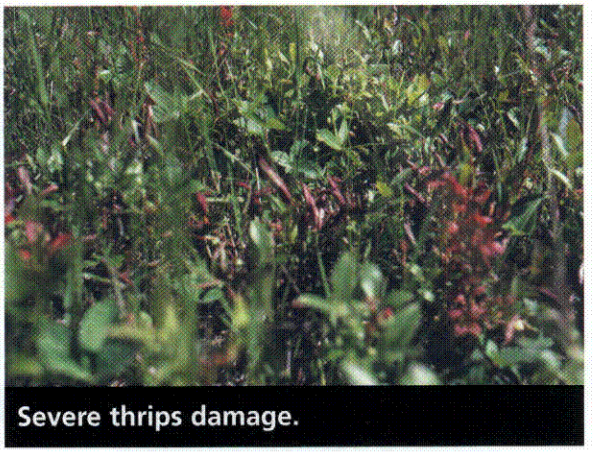
Thrips larvae.

The following fact sheet describes these insects and their biology. Management practices are also discussed.

Description

Adult blueberry thrips are very slender, tapered insects, about 1 mm long. The body is light brown in colour, and the wings are yellowish gray. The blueberry thrips F. vaccinii is somewhat darker in colour than C. kainos. The two pairs of wings are very slender, and edged with a fringe of long hairs. They are held flat over the abdomen, when not in use.

The larvae are creamy white to light yellow in colour, (Fig.1). They are similarly shaped to the adults, but are smaller in size and lack wings. The prepupa and pupa stage are similar in colour to the larvae. Developing wings are present in both of these stages.



Severe thrips damage.

Biology

Both species of thrips spend the winter in the soil. Usually only females survive the winter, although a small number of male C. kainos

may survive. The females become active in late May to early June. They lay their eggs in the leaves of the host plant. The eggs hatch into larvae, which feed for several weeks within the curled leaf galls. There are two larval instars, which actively feed, a prepupal, and a pupal stage which are less active and do not likely feed. The pupae develop into adults. There is a slight difference in development between the two species. C kainos adults are most abundant during late June and early July, whereas F. vaccinii adults are most abundant during late July to early August. In F. vaccinii all development occurs within the leaf rolls, while in C. kainos the larvae may leave the leaf roll and complete development in the soil.

Thrips damage to blueberry plants.

Damage

Damage is caused by both the feeding of the thrips, and by the effect that their feeding has on the blueberry plant. Thrips damage can easily be detected by the leaf galls or rolls caused by the thrips (Fig.2). The edges of the leaves curl inward forming a tight leaf curl. The leaves also turn purplish-red in colour. In many cases all the leaves on a stem will be affected (Fig.3). Damage during the sprout year of production, reduces the amount of fruit produced the following year.

Thrips infestations are usually restricted to a few clones or small areas of a field. They also tend to spread very slowly, and infest the same areas of the field each year. In some instances, however, larger areas of the field may be infested. Thrips damage can be found in both the sprout and crop years.

Monitoring Technique

Areas of thrips infestation can be noticed by inspecting fields throughout the growing season. Any areas that have thrips infestation should be marked by stakes, or accurately mapped. A record should be kept of the fields that have thrips infestations

Control

The most effective control for thrips is to apply an insecticide during the spring of the sprout year. This can usually be done by a spot treatment to areas that have been marked or mapped in the field. If large areas of the field are infested, then a general application can be made. The insecticide should be applied when the new shoots are 1 to 2 cm in length. This application is aimed at controlling the adult thrips as they begin egg laying. The insecticides that are recommended are only registered for application during the sprout year. Control products and rates are listed in the Lowbush Blueberry Protection Guide - ACC 1011.

Prepared by:

Lorne Crozier
Entomologist

May, 1999

Nova Scotia Department of Agriculture and Marketing