

The Blueberry Flea Beetle

- [Introduction](#)
- [Description](#)
- [Biology](#)
- [Damage](#)
- [Monitoring Technique](#)
- [Action Threshold](#)
- [Control](#)

Introduction

The Blueberry Flea Beetle, *Altica sylvia* Malloch, can cause severe defoliation in lowbush blueberry fields. Both the adult and larval stages feed on the blueberry plant. The following information should help the grower to recognize the various stages of this insect, and to be able to control infestations.

Description

Adult blueberry beetles are small, oblong-shaped beetles, 5 to 6 mm in length. They are shiny, coppery bronze in colour. The name 'flea beetle' comes from the fact that the hind legs are enlarged, and developed for jumping.

The eggs are very small, orange-yellow in colour and are laid singly near the base of the blueberry plant, or in the leaf litter.

Blueberry Flea Beetle Adult



Click picture to enlarge

The larvae are dark brown, almost black in appearance. They resemble small caterpillars, but have only three pairs of legs. They vary in size from 3 to 10 mm. They are very similar in appearance to the larvae of the blueberry leaf beetle, which tend to be lighter brown in colour. Flea beetle larvae can be distinguished from blueberry leaf beetle larvae by the lack of simple eyes (stemmata). This characteristic can only be seen under high magnification.

Blueberry Flea Beetle larva



Click picture to enlarge

The pupae are yellow-orange in colour, and are found about 12mm deep in the soil.

Biology

The insect passes through winter in its egg stage, either in the litter layer of the blueberry field or at the base of blueberry plants. The eggs hatch in May when the leaves of the blueberry plant begin to unfold. The larvae begin to feed on the leaf buds and newly expanded leaves. They go through three instars before burrowing into the soil to pupate. The larval stage takes from 9 to 20 days to complete. The eggs hatch over a considerable period so that larvae may be found from mid-May to mid-June. When fully grown the larvae pupate in the soil, just below the surface. The pupae require 15 to 28 days (average 18 days) to emerge as adults.

The adults feed on the foliage and, if abundant, may cause considerable damage. Adults begin to appear in late June and are present until late August. Mating takes place about two weeks after the adults emerge. Eggs are laid in late July and August.

Damage

Both the larvae and adults feed on the foliage of blueberry. If present in large numbers they can cause defoliation of the plants. The larva feed mainly along the margin of the leaves, giving it a distinctive notched appearance. The adults chew small holes in the leaves. Severe infestations may completely defoliate the plant. Most outbreaks occur in the crop year during the bloom period. If uncontrolled, an outbreak can cause crop loss.

Flea beetle damage



Click picture to enlarge

Monitoring Technique

Blueberry flea beetles can be monitored by sweeping the foliage with a 30 cm diameter insect sweep net. Crop fields should be sampled weekly during May to mid-July. Sprout fields should

be sampled weekly throughout June. This insect is most likely to be a problem in the crop year.

At least three samples per field in fields of 5 hectares or less should be taken. Each sample should consist of 25 sweeps. For larger fields an additional sample should be taken per 5 hectares.

Sampling should be done on warm sunny days. Care should be taken to walk toward the sun while sweeping, so your shadow does not fall across the plants that you are sweeping.

Action Threshold

An action threshold has not been established for either the adults or larval stage of this insect. Based on research done at the University of Maine, it may range from 3 to 5 larvae per sweep or 75 to 125 per sample. If sample numbers are found in this range, the field should be checked for signs of defoliation and control measures taken if necessary.

Control

Very little information is available about the natural control agents for the blueberry flea beetle. The type of pruning used does have an effect on flea beetle populations. Since the eggs are laid in the leaf litter, and are the overwintering stage, either a fall or spring burn will reduce the flea beetle population. Most outbreaks of flea beetle occur in mechanically pruned fields.

If populations reach the levels discussed under [Action Threshold](#), an insecticide should be applied. Consider the safety of pollinating insects when deciding to control this insect, as most outbreaks occur during the bloom period. Control products and rates of application are listed in the Lowbush Blueberry Protection Guide - ACC 1011.

Note: *Nova Scotia growers can purchase sweep nets through the Blueberry Producers Association of Nova Scotia (BPANS). They may also participate in the annual blueberry insect survey.*

Prepared by: Lorne Crozier, Entomologist
Nova Scotia Department of Agriculture and Marketing

January, 1995

