

EXOTIC PEST FACT SHEET 11

Swede Midge (*Contarinia nasturtii*)

What are the main hosts?

Swede midge is a serious threat to Brassicas - cabbage, broccoli, cauliflower, Brussels sprouts, bok choy, and other leafy vegetables. Organic growers may be at greater risk because they lack effective plant protection options.

What do they look like?

Adults have a 1.5-2 mm long body (Fig 1). Eggs are laid in clusters of 2-50 eggs, primarily on the newest growth points of plants and leaf axils. Each female will lay about 100 eggs during her short (1-5 day) lifetime. Eggs are very small (0.3 mm) and transparent at first, but change to a creamy white colour as they mature.

Swede midge eggs hatch into larvae within a few days, depending on the temperature, and begin to feed on plant tissue. Larvae are small maggots, initially about 0.3 mm long and reach 3-4 mm (Fig 2). The larval stage is the only life stage that damages cruciferous plants. Larvae produce a secretion that breaks down the plant cell wall allowing larvae to feed on the liquid contents. Larval feeding changes the physiology of the plant and results in the formation of swollen, distorted and twisted tissue (Fig 3).

What should I look for?

Swede midge larvae cause swelling and severe distortion of young plant tissues, resulting in the death of the growing tip or the development of blind or multiple heads in cruciferous plants. Secondary bacterial infections are common.

How do they spread?

The Swede midge is a relatively weak flyer and most easily spreads to new areas in infested transplant material. It will also appear near infested crucifer crops from the previous season, especially if new crops are planted downwind. Infestation may be reduced with rotation to non-crucifer crops every 2-3 years. Swede midges spend the winter as pupae in the top 1-5 cm of the soil. As the temperature becomes favourable, adults emerge and make their way to the soil surface.

Where are they present?

Swede midge is native to Europe, and was introduced to North America where it is now present in the eastern regions of Canada and USA.

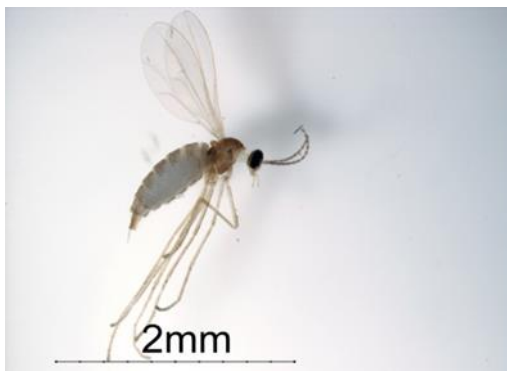


Fig 1. Swede midge adult

Image: Susan Ellis, USDA APHIS PPQ, Bugwood.org.

How can I protect my industry?

Check your production sites frequently for the presence of new diseases and unusual symptoms. Make sure you are familiar with common pests and diseases of your industry so you can recognise something different.

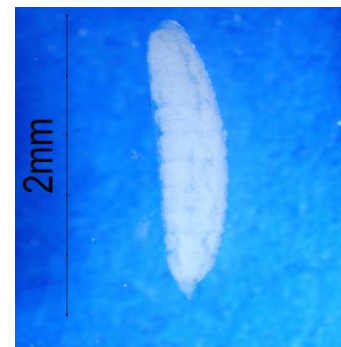


Fig 2. Swede midge larva

Image: Susan Ellis, USDA APHIS PPQ, Bugwood.org.



Fig 3. Damaged cabbage plant with brown scarring, multiple stems and twisted leaves.

Image: Julie Kikkert, Cornell Cooperative Extension, Bugwood.org.