

Date:
February, 2021

European Skipper - A Timothy Pest



Above: Adult European Skipper found in Timothy.

Right: Adult European Skipper found in Orchardgrass

Below: A pinned European Skipper



For more information:

A list of articles used to contribute to the above can be found on the PRFSA website at www.peaceforageseed.ca

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European Skipper:

Introduced from Europe into Ontario, Canada in approximately 1910, the European skipper (*Thymelicus lineola*) can be abundantly found where Timothy (*Phleum pratense*) is grown for seed, hay, or pasture. This pest can also be seen in ditches and open areas, flying somewhat clumsily between host plants.

Lifecycle:

A general lifecycle of this insect consists of larvae hatching in the spring and feeding on a plant's flag leaves and sometimes on the seed head. Larvae bodies are green and exhibit a dark dorsal stripe with white subdorsal stripes, the head is whiteish green with 5 coloured bars, alternating brown and white. After feeding, the caterpillar will pupate on the stem for about 14 days and then emerge as the adult butterfly. Adults do not cause any damage to plants as they feed on nectar from plants in the area. The female, after mating, lays a string of egg pods on the stem of the host plant. Generally, around thirty eggs are laid by a single female per string of pods, which will overwinter, and the larvae will emerge the next spring. Adult European skippers range from

Besides timothy, other host plants can include quackgrass (*Agropyron repens*) and orchardgrass (*Dactylis glomerata*). Belonging to the Superfamily Hesperidae, skippers are small butterflies that often exhibit a bright, brassy orange color with black borders on both wings and move from place to place with rapid, 'skipping' flight.



2.5—2.9 cm in length with a wingspan of 1.9 to 2.6 cm. Male skippers can be characterized by bright brassy orange with narrow black borders on both wings, and the ends of the veins outlined in black, while the female skipper tends to often be lighter in coloration and may have little to no black border. You can commonly see this butterfly in fields around early June - July.

Skippers start eating at the top of the plant and work down the stem with usual signs of skipper larvae presence in timothy being bare or damaged seed heads and defoliated flag leaves.

The Seed Head

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more Seed Head fact sheets available soon on our website
www.peaceforageseed.ca

Scouting:

Its recommended that scouting for larvae should begin by late April and accomplished by removing five random, one-square-foot (30 cm²) samples of Timothy, down to ground level, and placing them along with old crop residue into a bag. Tie the bag and leave overnight at room temperature. The caterpillars will crawl out of the residue and should be counted easily. Threshold has been determined to be six to eight caterpillars counted in a 30cm quadrat.

Control:

Some forms of control have proven to be ineffective when trying to do away with this pest. Modern seed cleaning techniques are not able to remove the eggs from plants and native beneficial predators and parasites don't adequately



Bottom Left:
European Skipper
Larvae (Picture
provided Gerald
Finster, Valley-
view Alta. 2020)

Left:
Larval feeding
damage to
Timothy Head
(Picture courtesy
Field Crop News,
June 28 2012)

control European skipper. One microbial insecticide containing a naturally occurring, soil-borne bacteria, *Bacillus thuringiensis* var. *kurstaki* (Btk), is effective in controlling larvae of European Skippers in timothy being grown for seed production. Btk is commonly used for control of caterpillars in other crops. It must be applied with good coverage on the foliage as larvae need to ingest it in order for the insecticide to be effective. Btk is the active ingredient in DiPel. It is available through Fosters Seed & Feed. Product cost is \$496.00 for a 5 kg package which covers a range of 45-90 acres. Early scouting is essential as younger larvae are more susceptible. More than one application may be required if scouting indicates additional larvae are present.

References:

- 1) Ontario Ministry of Agriculture and Rural Affairs. [July 21, 2020] <http://omafra.gov.on.ca/english/crops/pub812/pub812ch3.pdf>
- 2) Canadian Biodiversity Information Facility. [July 21, 2020] <https://www.cbif.gc.ca/eng/species-bank/butterflies-of-canada/european-skipper/?id=1370403265612>
- 3) National Pesticide Information Center. [July 28,2020] <http://npic.orst.edu/factsheets/btgen.html>

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