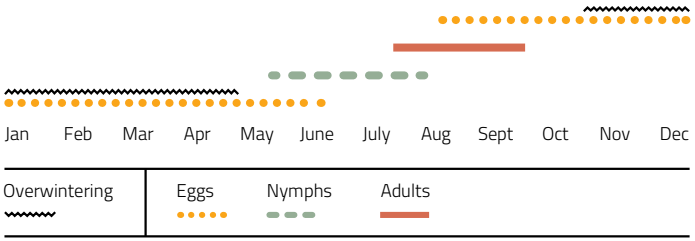
Fall field cricket – adult
Joseph Berger, Bugwood.org

Cricket, fall field

Gryllus pennsylvanicus Burmeister



Hosts

Lamb's-quarters, plantain, switchgrass, crabgrass, ragweed, seeds of forages and cereals, small fruits, living insects (grasshopper eggs, pupae of moths, butterflies and flies, their own young), and dead insects.

Identification

ADULTS: 15-25 mm long, with brownish forewings that do not cover the length of the shiny, dark brown to black body; two appendages (cerci) extend from the end of the abdomen; females also have an 18 mm long, sword-shaped ovipositor extending backward from the abdomen. Adults do not fly.

MATURE NYMPHS: Resemble adults but smaller, lack wings and ovipositor.

Life Cycle

Overwinter eggs in clusters of around 50, laid in moist sand or soil. Nymphs can take up to 12 weeks to mature.

Feeding Damage

ADULTS AND NYMPHS: Feed mostly at night. Seed yields can be reduced during outbreaks.

Similar Species

Mormon cricket (p. 104) has antennae longer than its body which is not the case with the fall field cricket.

Monitoring/Scouting

None developed.

Economic Threshold

None established.

Management Options

BIOLOGICAL: Several species of birds, shrews, small rodents, parasitic and predatory insects, pathogens, spiders (pp. 111-114), and toads cause high mortality among all stages.

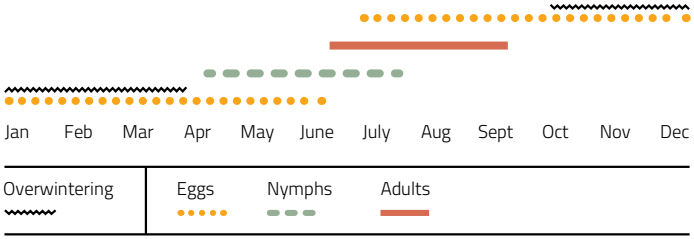
CULTURAL: Specific cultural methods have not been developed; see also IPM section (p. 3).

CHEMICAL: None registered in Canada.

Mormon cricket – adult
Howard Ensign Evans, Colorado State University, Bugwood.org

Cricket, Mormon

Anabrus simplex Haldeman



Hosts

Forbs (broad-leafed plants) are favoured, but grasses and shrubs such as sagebrush are also eaten. Field crop hosts include wheat, barley, alfalfa, sweetclover, as well as forages and garden vegetables (estimated 400 hosts). They also eat insects, including other Mormon crickets.

Identification

ADULTS: 40–50 mm long, stout-bodies; colour varies according to population density – swarming individuals may be black, brown, or red, whereas solitary individuals are purple or green. The "shield" (pronotum) behind the head may have colored markings. The abdomen may appear to be striped. Females have a long ovipositor. Both sexes have antennae longer than the body and neither can fly.

MATURE NYMPHS: Resemble adults in appearance and colour variation except for smaller size and lack of ovipositor in females.

Life Cycle

Overwinter as eggs laid singly in disturbed soil and hatch the following spring when the soil temperature reaches 4.5°C. One generation per year.

Feeding Damage

ADULTS AND NYMPHS: Migrating swarms will feed on all parts of plant hosts, devastating crops and significantly reducing marketable yields. Alfalfa baled with crickets is unpalatable to livestock. Drought encourages Mormon cricket outbreaks, which may last several years (historically 5 to 21 years).

Similar Species

Fall field cricket (p. 103) may be present in some crops. Its antennae are not as long as its body. There are other *Anabrus* species; however they never reach outbreak densities.

Monitoring/Scouting

Starting from a corner of the field, sample at least twenty sites along a line to the field centre, then to one side. Count the number of nymphs that jump in a 1 ft^2 area as you approach each site (e.g. every 100 steps). Divide the total number of grasshoppers counted by 2 for number/m^2.

Economic Threshold

No specific thresholds for this pest; however, thresholds for grasshoppers may be useful guides depending on location. Thresholds are posted on the Western Committee on Crop Pests web site by crop at www.westernforum.org/WCCP%20Guidelines.html.

Management Options

BIOLOGICAL: Birds, small rodents, coyotes, and parasitic and predatory insects are the primary natural enemies.

CULTURAL: Shallow fall cultivation will expose eggs to predation.

CHEMICAL: Bait and spray products are available to treat areas where damage and numbers justify protection.

Field Crop and Forage Pests and their Natural Enemies in Western Canada:

Identification and Management



Agriculture and Agri-Food Canada
Agriculture et Agroalimentaire Canada
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1. Pea leaf weavil (*Sitona lineatus*) and leaf damage - Jonathon Williams, AAFC
2. *Pteromalus puparum* parasitizing an imported cabbage worm cocoon (*Pieris rapae*) - T. Haye, CABI
3. Lacewing (*Chrysopa* sp.) adult - John Gavloski, Manitoba Ministry of Agriculture
4. Grasshopper - Jesse MacDonald, AAFC

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