

Lygus bugs and other insects in Buckwheat



Manitoba Buckwheat Growers Association Directors Meeting

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John Likes Buckwheat !



- Groats good as breakfast cereal.
- Buckwheat cabbage rolls are awesome.
- Bucket honey – my favorite.



Top insect concerns in buckwheat



- Lygus bugs
- Cutworms
- Grasshoppers

Note - many beneficial insects may be attracted to fields of buckwheat, particularly at flowering.

Host plants of lygus bugs



A concern in many field crops; canola, dry beans, alfalfa seed, sunflowers, quinoa, buckwheat, etc.

Weed hosts of lygus bugs include chickweed, dandelion, red clover, red root pigweed, lamb's quarters, plantain, goldenrod, and asters.

Lygus bugs

Identification



Lygus Lineolaris



Adult



Fifth instar nymph



Second instar nymph

Fourth and fifth instars have four black spots on the thorax and one on the abdomen. Adults have yellow triangle or "V" mark on scutellum)

Figures from Tharshi Nagalingam, University of Manitoba.

Lygus bugs

Feeding



- Lygus bugs have **piercing and sucking mouthparts**, with which they puncture plant tissues, inject digestive enzymes, and suck the plant juices in the area.
- Prefer to feed on the nitrogen-rich growing points and reproductive parts of the plant such as **buds, flowers and young seeds**.
- Many plants can **compensate** well for feeding to buds and flowers, provided there is adequate soil moisture.
- Feeding on seeds can cause visible **damage to the seed**.

Susceptible stages of buckwheat to Lygus bugs



- Yields can potentially be reduced mainly by feeding from the Lygus nymphs at the **flowering stage**.
- This feeding can result in decreased seed weight, flower and seed numbers, and increased percentages of shriveled seeds.

How to monitor for Lygus bugs in Buckwheat



- Lygus bug populations can be monitored using a **sweep net**.



Economic Thresholds for Lygus bugs in Buckwheat



- Economic thresholds for lygus bugs on buckwheat are not available.

Economic Thresholds for Lygus bugs in other crops



- **Canola:** 20 – 30 Lygus bugs per 10 sweeps.
- **Alfalfa Seed:** 8 lygus bugs/sweep (80 in 10 sweeps) or 5 nymphs/sweep (50 in 10 sweeps), when the alfalfa is in bud or in bloom.

Insecticide applications for Lygus bugs in Buckwheat



- No insecticides currently registered for Lygus bugs in buckwheat.

Bee careful if spraying for Lygus bugs in Buckwheat



- Extra considerations are needed when applying insecticides to buckwheat that is flowering. **Buckwheat requires cross-pollination**, and honey bees, leafcutting bees, and other insect pollinators may be present on flowering buckwheat. Efforts should be taken to minimize harm to pollinators during flowering.
- If making an application of a broad-spectrum insecticide for Lygus bugs in buckwheat, apply **in the evening** when bees are not foraging.

Resources on Lygus bugs in Field Crops



Lygus Bugs in Field Crops



- [Lygus Bug on Sunflowers](#)
- [Tarnished Plant Bug on strawberries](#)

The term lygus bug refers to any member of plant bug in the genus *Lygus*. Lygus bugs have piercing and sucking mouthparts, with which they puncture plant tissues, inject digestive enzymes, and suck the plant juices in the area. They prefer to feed on the nitrogen-rich growing points and reproductive parts of the plant such as buds, flowers and young seeds. Many plants can compensate well for feeding to buds and flowers, provided there is adequate soil moisture. Feeding on seeds can cause visible damage to the seed because of the enzymes in the saliva that are left behind.

Host Crops

Lygus bugs feed on many plants; crops, weeds and wildflowers. Some of the crops that they potentially can be of greatest economical concern in Manitoba include alfalfa seed, canola, sunflowers, beans, quinoa, buckwheat, and strawberries. Lygus bugs will also feed on flax and wheat, but feeding in these crops does not appear to be economical. Lygus bugs are regularly found on hemp crops, but injury potential remains unclear. Some weed hosts of lygus bugs include chickweed, dandelion, red clover, red root pigweed, lamb's quarters, plantain, goldenrod, and asters.



Figure 1. *Lygus lineolaris* adult



Figure 2. *Lygus lineolaris* fifth instar nymph

February 2022

Manitoba 

<https://www.gov.mb.ca/agriculture/crops/insects/pubs/lygus-bugs-factsheet3-revised-february2022.pdf>

Grasshoppers: Situation from 2025



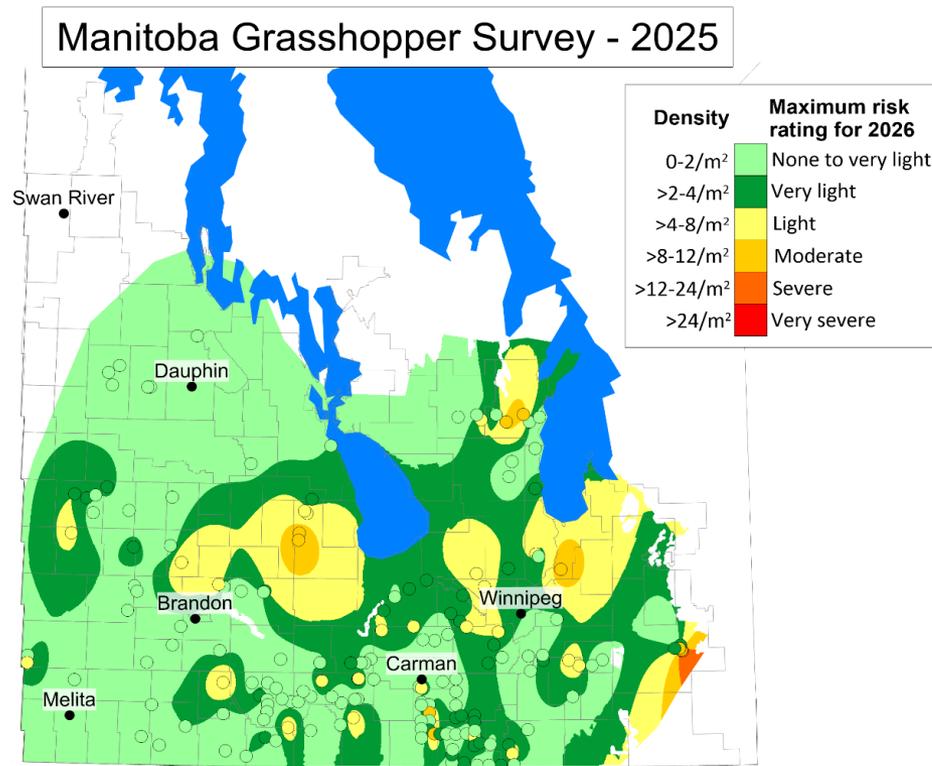
- Overall of less concern in Manitoba in 2025 compared to recent years.
- Drier conditions and grasshoppers had an impact on pastures in some regions.
- Some control also reported in alfalfa, forage grass seed fields, and small grains.



Grasshoppers – Forecasting levels for 2026



- Grasshopper counts from 173 locations in August.
- 1 counts in severe risk category, 9 in moderate risk.



Average density of grasshoppers in Manitoba during August 2025.

Grasshopper Survey - 2025:

Dominant species of grasshopper recorded at 116 locations in August.

Dominant species at the most locations



Monitoring grasshoppers on buckwheat



- Levels can be monitored by observing and estimating grasshopper densities as you walk through the field.

Thresholds for grasshoppers on buckwheat



- Economic thresholds are not available for grasshoppers in buckwheat.
- A generalized threshold of 7 to 12 grasshoppers per m², which is used in some other field crops, may be a reasonable guideline for deciding whether control would potentially be economical.
- Grasshopper populations may be higher near field edges, particularly early in the season.

Insecticides for grasshoppers in buckwheat



Chlorantraniliprole

- Coragen MaX, Shenzi,
Cosayr, Vermis, Rorvik,
Maxunitech Chlorantraniliprole

Ground or aerial application

Buckwheat as an Insectary Plant

Corn intercropped with buckwheat



- In Maryland, corn plots intercropped with buckwheat had less injury from first generation European corn borer, and increased levels of the spotted lady beetle, *Coleomegilla maculata*.

The ESA 2001 Annual Meeting

Buckwheat as an Insectary Plant

Buckwheat bordering cabbage



- In a study in Minnesota, cabbage plots with buckwheat borders had increased parasitism rates by the parasitic fly *Voria ruralis* on cabbage loopers and increased parasitism of the imported cabbageworm by the parasitic wasp *Cotesia rubecula*.

Biological Control. 2005. Vol. 34: 290-301

Discussion and Questions?



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