Insect Pests of Field Peas and Lentils

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Overview

- Early season pests
- Pea aphids
- Grasshoppers
- Lygus bugs
- Others
Lentils: Pea Aphid Threshold

- **Treatment advised:** 20 aphids/plant in top 8 inches OR (52 aphids per sweep) Minimum of 20 plants/sweeps, 4 locations in field

- **Continue to sample:** if 7 to 20 aphids/plant (20-52 aphids per sweep)

- **Don’t treat** if below 7 aphids/plant

- Spray if necessary when **pods first form** on at least half the field

- **Chickpeas:** aphids are not typically a problem because high density of plant hairs

*Remember Natural Enemies*

http://www.gov.mb.ca/agriculture/crops/insects/fad14s00.html
Increased Risk of Pea Aphid Outbreak

• Abundant regrowth of alfalfa in fall

• Killing frost later than normal (more overwintering aphid production)

• Mild January and February temperatures

• Stresses on alfalfa in spring (moves earlier to pea)

• Immediately after alfalfa is cut

• Insecticide spray in alfalfa (kills natural enemies)
Common Grasshopper Pests

Red-legged grasshopper

Differential grasshopper

Two striped grasshopper

http://www.ndsu.nodak.edu/entomology/hopper/orthoptera_home.htm
Grasshopper Facts

- Grasshoppers are generally more severe with hot and dry weather

- Especially a problem in the bloom and pod filling stages

- Lentils are less tolerant than other pulse crops

- Less than 10% of grasshopper species in the area will attack pulse crops
Not a Pest

- Grasshoppers that fly before June

- Hind wings color is visible in flight (red, yellow, orange, or black) (clear winged is a pest)

- Sings, calls, clacks, clatters or makes other similar sounds

- Katydid and crickets (long antennae) (exception: Mormon cricket)

Grasshopper – Thresholds

- Lentils = 2 adults per square yard in field
- Peas* = 8-14 adults per square yard in field
- Peas >20 adults per square yard on field edges

*NOTE: Pea thresholds are closer to lentils if grasshoppers are feeding on flowers or pods.
Lygus Bug on Pea and Lentils

• Feed on over 385 plants

• Small (1/4 inch), Pale green to reddish brown

• Yellow triangle or “V” marking

• Immatures (nymphs) are bright yellow-green and move more than aphids

• Overwinter as adults
Lygus Bug

• Move from alfalfa and hayfields that are being cut to other crops

• Adults enter pea/lentils at bloom stage to feed and lay eggs

• Older nymphs and adults suck out the contents of developing seeds and inject a toxic saliva into plant

• Significant quality losses from chalk spot in 1997 and 2002 to ND pulse crops
Chalk Spot on Peas

Undamaged Pea

Damaged Pea
Chalk Spot on Lentils

Damaged Lentils

Note: Chalk spot can also be caused by harvesting at too high moisture (bruising)
Lygus Bug Management

• Monitor during blooming

• Take 25 sweep net samples at 5 representative locations across the field

• **No Treatment:** Less than 7 adults/25 sweeps
• **Continue Sampling:** 7-10 adults
• **Treatment Advised:** Greater than 10 adults
Western Insect Pests of Pulse Crops (MT, ID, Pac. NW)

• Pea Leaf Weevil - adult feeding causes notching and ragging of young plants in spring

• Pea Weevil - appear at bloom, lay eggs, larvae feed on pods
Additional Sources:

- Dr. Jan Knodel, NDSU Entomology
- [http://www.ipmcenters.org/crooprofiles/docs/mtchickpea-garbanzobean.html](http://www.ipmcenters.org/crooprofiles/docs/mtchickpea-garbanzobean.html)
- [http://www.mbforagecouncil.mb.ca](http://www.mbforagecouncil.mb.ca)
- [http://www.ipmcenters.org/CropProfiles/docs/MTdrypea.html](http://www.ipmcenters.org/CropProfiles/docs/MTdrypea.html)