

Pest Profile



Photo credit: Even Dankowicz, bugguide.net

Common Name: Winter Grain Mite

Scientific Name: *Penthaleus major*

Order and Family: Trombidiformes, Penthaleidae

Size and Appearance:

| | Length (mm) | Appearance |
|-----------------------------|--------------------|--|
| Egg | 0.10 to 0.25 mm | <ul style="list-style-type: none">- Eggs are smooth, kidney-shaped, and reddish-orange when freshly deposited. But within minutes of being laid, eggs wrinkle; several days later, the color changes to straw yellow.- Eggs may be difficult to see because they are so small. |
| Larva/Nymph | Larvae are 0.18 mm | <ul style="list-style-type: none">- Initially larvae are reddish orange in color and become dark brown with three pairs of yellow-orange legs- Larvae molt to nymphs, nymphs have a fourth pair of legs.-Nymphs continue to have dark-brown body and yellowish-orange legs. |
| Adult | About 1 mm | <ul style="list-style-type: none">- Dark brown to almost black body with reddish-orange legs, and mouthparts, and a pair of silvery eyes located behind the second pair of legs.- First and fourth pairs of legs are longer than the middle pair- They have a dorsal anal opening, which is surrounded by a reddish-orange spot. Although these markings are cited in literature, they are hard to see because the mites are so small. |
| Pupa (if applicable) | | |

Type of feeder (Chewing, sucking, etc.): Sucking, all stages.

Host plant/s: Small grain plants such as timothy or winter wheat and grasses.

Description of Damage (larvae and adults): The winter grain mites are a pest of small grains and grasses. Mites (all stages) damage plants by puncturing individual cells and feeding on the cellular fluids and the chlorophyll, causing the leaves to take on a silvery-gray appearance. Heavily damaged leaves will have brown leaf tips. Many times the infested plants do not die, but become stunted and produce little forage or grain. Damage on young and stressed plants is more severe than on large, healthy plants.

References:

Michaud, J. and Sloderbeck, P. (2007, July). *Wheat Pests: Winter Grain Mite, Penthaleus major*. Kansas State University. Retrieved from <http://entomology.k-state.edu/extension/insect-information/crop-pests/wheat/winter-grain-mite.html>

Whalen, J., Cissel, B. (2014, April). *Winter Grain Mite Management in Small Grains*. Retrieved from <http://extension.udel.edu/factsheets/winter-grain-mite-management-in-small-grains-2/>

Bauernfeind, R. (2005, July). *Winter Grain Mites*. Kansas State University. Retrieved from <http://www.bookstore.ksre.ksu.edu/pubs/mf2073.pdf>

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