

Pest Profile



Photo credit: (Left) Scott Bauer, USDA Agricultural Research Service, Bugwood.org; (Right) John C. French Sr., Retired, Universities:Auburn, GA, Clemson and U of MO, Bugwood.org

Common Name: Hessian Fly

Scientific Name: *Mayetiola destructor*

Order and Family: Diptera, Cecidomyiidae

Size and Appearance:

	Length (mm)	Appearance
Egg	0.4-0.5 mm	The eggs are elliptical in shape and orange in color. They are usually found in the grooves on the upper side of plant leaves.
Larva	0.56-4 mm	The larvae of the Hessian fly are white and cylindrical. They will also develop a translucent green stripe down the middle of the back. They have a poorly developed head and minute mouthparts.
Adult	Female: 4 mm Male: 3.5 mm	The adults are brown or black with the female appearing reddish-brown at times due to the presence of the orange eggs developing in the abdomen. They are a long-legged, two-winged fly that resembles a mosquito. The male contains two pairs of abdominal claspers.
Pupa (if applicable)	2.5-6.2 mm	The final instar larva forms a puparium, a case that is formed by the hardening of the larval skin. The puparium is dark brown in color and resembles a flax seed.

Type of feeder (Chewing, sucking, etc.): The larvae feed with their head in a downward position and their mouthparts pressed against the plant while injecting saliva into the plant cells. The saliva releases the cell contents which the larvae feed on.

Host/s: Wheat is the primary host of the Hessian fly; however, they can be found on rye, barley, and other native grasses.

Description of Damage (larvae and adults): Hessian flies are one of the most destructive pests of wheat in the Midwest and can result in significant yield loss. In seedlings, larval feeding causes stunted growth and death in tillers and seedlings. The coloration of infested wheat is a darker, almost blue-green

foliage. The larval feeding on wheat after stem elongation can result in lodging due to weakened stems, failure to produce a seed head, and a reduction in the amount of seeds per spike and seed weight. Even an individual larva can cause significant damage to a wheat plant due to the salivary toxins it releases while feeding, which can interfere with growth.

References:

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