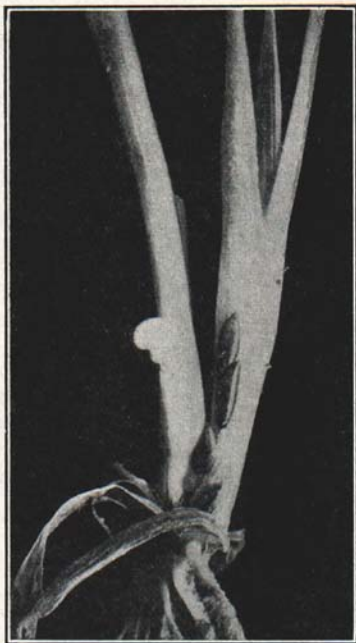


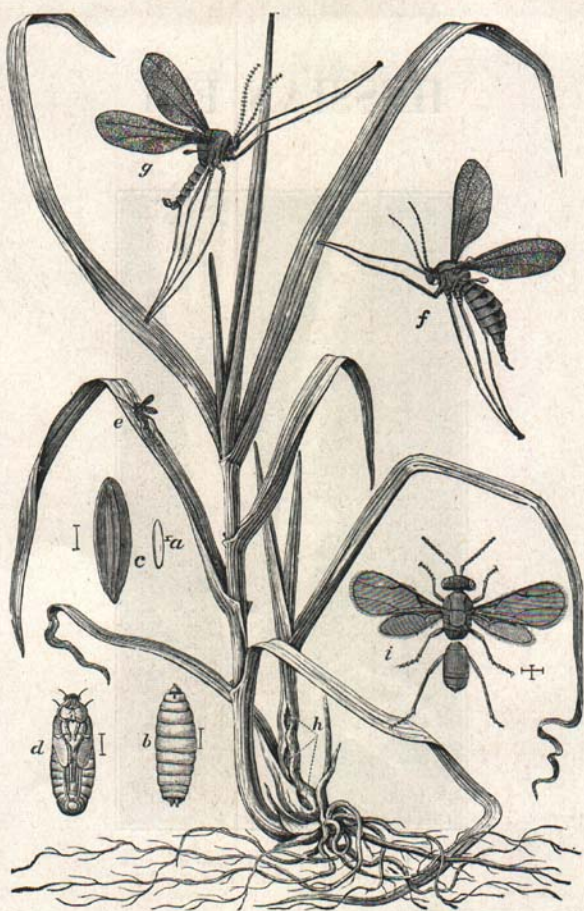
HESSIAN FLY



Flaxseed stage of Hessian fly
in young wheat plants

MICHIGAN STATE COLLEGE
EXTENSION DIVISION
EAST LANSING

Cooperative Extension Work in Agriculture and Home Economics,
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(Courtesy, U. S. D. A.)

Fig. 1. The Hessian fly and one of its parasites. a, egg; b, maggot; c, flaxseed; d, pupa; e, adult laying eggs; f, female; g, male; h, stalk of wheat showing attack; i, parasite.

HESSIAN FLY

RAY HUTSON

Hessian fly is commonly thought of as a wheat pest, but sometimes the insect occurs in winter barley, rye, spelt and some other grasses.

Damage and Importance

The larvae (maggots) of Hessian fly feed beneath the leaf sheath, usually just above the lowest node on the plant. The maggot obtains its food by scraping the plant tissue, and this activity results in weakening the straw and interfering with the supply of nutrients to the head. Injured plants lodge and show shriveled heads. In severe infestations complete loss of crop may result, either from the fall attack or from the spring attack.

Life History

The flies pass the winter as larvae inside a puparium (flaxseed) between the leaves and change to flies in the spring. These flies lay the eggs for the generation of larvae that causes lodging and shriveled grain.

Several generations are produced during the summer if food plants, such as volunteer wheat, are available. The population of Hessian flies begins to decrease as the weather cools during late summer and early fall and, unless wheat is available at this time for egg laying, the flies die, without provision for the next generation.

Control

The foregoing account indicates that a time arrives when most of the flies die. Fortunately, this is still early enough for wheat to become established before winter. Observation and experience have shown that there exists for each locality, depending upon such factors as latitude, altitude, nearness to large bodies of water, a "fly-free date," or time when most Hessian flies have died. Wheat planted after this date will escape injury from Hessian fly in most years. Owing to the necessity of getting wheat established before cold weather, it is a good plan to plant as soon after the fly-free date as possible.

These dates have been determined for each county and are presented as follows:

"Fly Free Dates for Michigan"

County	Earliest Seeding Date	County	Earliest Seeding Date
Alcona	Sept. 6	Lapeer	Sept. 15
Allegan	Sept. 20	Leelanau	Sept. 8
Alpena	Sept. 9	Lenawee	Sept. 21
Antrim	Sept. 4	Livingston	Sept. 16
Arenac	Sept. 13	Macomb	Sept. 18
Barry	Sept. 18	Manistee	Sept. 13
Bay	Sept. 14	Mason	Sept. 13
Benzie	Sept. 16	Mecosta	Sept. 12
Berrien	Sept. 23	Midland	Sept. 15
Branch	Sept. 19	Missaukee	Sept. 9
Calhoun	Sept. 19	Monroe	Sept. 21
Cass	Sept. 22	Montcalm	Sept. 15
Charlevoix	Sept. 3	Montmorency	Sept. 7
Cheboygan	Sept. 4	Muskegon	Sept. 18
Clare	Sept. 12	Newaygo	Sept. 15
Clinton	Sept. 17	Oakland	Sept. 16
Crawford	Sept. 6	Oceana	Sept. 16
Eaton	Sept. 16	Ogemaw	Sept. 10
Emmet	Sept. 4	Osceola	Sept. 10
Genesee	Sept. 17	Oscoda	Sept. 7
Gladwin	Sept. 12	Otsego	Sept. 6
Grand Traverse	Sept. 8	Ottawa	Sept. 19
Gratiot	Sept. 15	Presque Isle	Sept. 8
Hillsdale	Sept. 19	Roscommon	Sept. 7
Huron	Sept. 13	Saginaw	Sept. 16
Ingham	Sept. 17	Sanilac	Sept. 15
Ionia	Sept. 16	St. Clair	Sept. 16
Iosco	Sept. 7	St. Joseph	Sept. 23
Isabella	Sept. 11	Shiawassee	Sept. 16
Jackson	Sept. 16	Tuscola	Sept. 15
Kalamazoo	Sept. 20	Van Buren	Sept. 22
Kalkaska	Sept. 5	Washtenaw	Sept. 18
Kent	Sept. 18	Wayne	Sept. 18
Lake	Sept. 13	Wexford	Sept. 9

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