

EAR MINER MOTH

Hadena basilinea F.

(Lepidoptera, Noctuidae)

By S. Eghlidi

The larvae of this pest causes serious damage to the grains of cereals.

DISTRIBUTION

This pest was first mentioned in the literature by Kollar (1855) in Viena. Since then its damage to cereal crops has been reported in England, Germany, France and Denmark. In 1928 it significantly attacked barley in Poland, U. S. S. R. and Central Europe. Recently, in the Hokkaido Island of Japan, a new variety of this pest locally named "Basistrig", has been reported attacking wheat, barley, corn and other gramineae and is similar to *H. basilinea*. In Canada, the pest is known under the name of *H. finilina*.

In Iran, this pest is distributed in Ardebil.

MORPHOLOGY AND LIFE HISTORY

The adult moth measures about 34 - 40 mm with wings spread.

The body is yellowish to grey in general. The anterior wings have a big black & white kidney shaped spot. The posterior wings are brown to greyish with the veins dotted, and the margin black.

The length of the larvae, a week after hatching, is about 4 mm, after 12 - 14 days it is 10 - 12 mm and at the last larval stage is 35 - 40 mm.

The larva's head is dark brown and embossed, and the frontal plate is short flat and triangular. The thorax is dotted black. There are three longitudinal white dorsal stripes, one median and one on each side. The ventral surface is light colored with dark spiracles. The palpus is long and needle-like. The extremity of each leg is surrounded by 12 crescent shaped claws.

BIOLOGY

The adult appears in about May 15 th. Two weeks after copulation, egg laying begins. Eggs are deposited on the leaves of cereals or some other plants such as *Calamagrostis epigeos*. The period from egg laying to hatching is about 12 - 15 days.

The moths are active at night and are positively phototropic.

The yellow young larvae appear beginning the first week of June and extending to the end of June or first week of July, just at the blossom time of wheat. They feed on the grains until the harvesting time in Ardebil (September). Around the middle of June, when the length of larvae is about 10 - 12 mm at the day time they go under the soil, near the wheat roots or under the dry leaves or stubble (negatively phototropic). The larvae have never been observed to feed on oats.

This pest feeds also on other gramineae such as, *Festuca*.

In Ardebil, it feeds on two species of weeds such as, *Centaurea* and *Acroptilon reptans*.

The larvae overwinter in the soil.

Larvae have not been found in winter or fall in Ardebil.

DAMAGE

In some areas of Ardebil the damage by this pest assume heavy proportion. Injury on the non-irrigated wheat crops is more than on irrigated ones. The percentage of the injury on heaped wheat is sometimes over 2.

On the other hand, since the period of the larval cycle is long (about 4 months), we can realize the economic importance of this pest.

CONTROL

According to Balachowsky (1435), the biology of this pest is not thoroughly known. Therefore its control has not been thoroughly determined.

So far, control recommendations are as follows:

- 1 - Winter plowing to kill the larvae and pupae.
- 2 - Spray the stubbles with S₂C.
- 3 - Cultivation of the early maturing cereal varieties.
- 4 - To thrash the harvested wheat crops immediately after harvesting.

It seems to me, to spray D.D.T., Eldrine or D.L.D. at the spring time against the moths could be useful.