Codling moth in Iran

An abstract of results obtained during the years 1975, 1976 and 1977

Gh. Radjabi (1), N.D. Beheshti, F. Akrami, H. Bayatassadi, E. Dickler and Z. Davoudi

The researches on codling moth started in 1975 in different altitudes throughout the country.

According to the sex pheromone traps, various light traps and corrugated paper bands the number of generations in different parts of the country is as follows:

Central province: Karadj (1320 m. alt.) three generations.
Damavand; Abessard (1850 m. alt.) and Ahmadabad (1900 m. alt.) two generations.
Esfahan province: Esfahan (1590 m. alt.) three generations.
Azarbaidjan province: Zonouz (1710 m. alt.) two generations.
Gorgan province: Gorgan (175 m. alt.) three generations.
The last generation in all these regions is partial.

The importance of injury of codling moth has been evaluated during three years, according to which the unsprayed trees regularly lose from 30% (in high altitudes) to 98% (in Gorgan).

We tried to find the relation (if it exists) between the date of beginning of flight of various generations and the sum of temperature. The results are:
at the beginning of first flight the sum is about 50 degrees C.
» » » second flight the sum is about 600–700 degrees C.
» » » third flight the sum is about 1500–1700 degrees C.

There is no constant relation between the beginning of penetration in the fruits and phenological stages of apple trees when we compare the various regions with each other in the same years, but it seams that in each region this

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(1) Dr. Gholamreza Radjabi P.O.Box 3178 Tehran, Iran.

constancy is higher from year to year.

We found that the first penetration in cold regions occurs when the fruits are bigger in comparison with the fruits in less cold or warm regions, but in all our experimental localities the sum of temperature at this time was averagely 250 degrees c.

According to our various traps the first penetration occurs at least one month after the flight of the first males and at least 12 days after the flight of the first females.

The time of induction of diapause of codling moth in the regions with remarquable different latitudes is slightly different (the range of latitudes of our experimental localities is from 32 to 38 degrees). The critical daylength forcing all larvae entering into diapause is 12½ hours in Central province (Tehran; Evin with 1520 m. altitutde and 35° 43' of latitude).

References

RUSS, K., and O. Rupf. 1974. Investigations on the generations dynamic of *Laspeyresia pomonelle* (L.) presented in the meeting of Rome, discussing ecology in relation to plant pest control, 47–54.