Appl. Ent. & Phytopath. Vol. 59. Nos: 1&2, Feb. 1992

BIOLOGY, HOST RANGE AND DAMAGE OF CORN STEM BORER IN KHUZESTAN

GH. R. GEMSI and K. KAMALI

Agricultural Research Center of Khuzestan and Shahid Chamran University

Summary

In Khuzestan the dominant species of corn stem borer is *Sesamia nonagrioides botanephaga* T.&B. Its host plants included **maize**, sugar cane, wheat, sorghom, sudan grass, rice and some wild grasses. Our investigation showed that *S. nonagrioides* attacked to all plant parts of maize except the roots. It overwintered as fully grown larvae at the stem bases and in stubbles of maize in the field. They remained as resting until early spring, then turned to pupae late in March. Adult moths were emerged late in March and mated females initiated to lay eggs in early April.

Eggs were deposited in small batches at the base of leaf blades and leaf sheaths. The incubation period of eggs last 4-8 days. Larval feeding damage on the heart of the young plants caused the symptoms of dead heart on them. Fully grown larvae pupated at the end of their feeding sites.

S. nonagrioides produced 4 generations during the active seasons from late March to early December. A partially fifth generation was also produced on second planting of maize and on stubbles from mid - November to late February. In Khuzestan, the first planting of maize tolerated damages of 1-1.5 generations of *S.nonagrioides*, whereas the second plantings were damaged by 2-2.5 generations of the pest.

References

- DANIALI, M. 1977. Biological studies of sugarcane stem borer Sesamia nonagrioides Lef. (Lep.Noctoidae)in Haft-Tappeh.Ent.Phytopath.Appliq.
 Vol. 42: 1-22. (in Farsi with English summary)
- DANIALI, M. 1984. Study of application biological, cultural and chemical control methods against sugar cane stem borers. M.S. Thesis, Shahid Chamran univ., Ahwaz, Iran.
- MIRHADI, M. 1988. A guide of corn pests and diseases in the world and Iran. Agricultural and Natural Resources Research Organization, Tehran, 81pp. (in Farsi)
- MIRKARIMI, A. 1987. Biology of corn stem borer (*S.crelica*) in Varamin during 1975- 1988. Iran Agricultural Sciences Journal (18). No. 192: 17-36 (in Farsi).
- NAIM, A. 1979. Maize. Plant pests and diseases Res. Inst. Publi. Tehran, 233pp. (in Farsi)
- RIVNEY, E. 1962. Field crop pests in the Near East, University Inst. of Agric. Rehorat. Netherland: 194- 199.
- SCHRIMP, D. R. K. 1965. Maize cultivation and fertilization, PUHR -Stieksteff A. G. Boohum, West Germany: 9-20.
- TAMS, W. and J. BAWDEN 1935. A revision of the African species of *Sesamia* Guenee and related genera. **Bull. Entomol. Res.** 43: 645-678.

WILLIAMS, J. R., J.R. METCALF, R. W. MONTGOMERY and R.
MATHES 1969.Pest of Sugar - cane. Elsevier. Amesterdam: 209- 219.
WALKER, P.T. 1979. The relation between infestation by Lepidopterous stem

borer and yield in maize, methods and results. Cent. for Overseas Pest Res. London U.K.: 101-105.

Address of the authors:

Eng. Gh. R. GEMSI. Plant Pests & Diseases Research Department, Agricultural Research Centre of Khuzestan, P.O.Box 456, Ahwaz 61335, Iran. Dr. K. KAMALI. Faculty of Agriculture, University of Shahid Chamran, Ahwaz, Iran.