

Investigation on Bioecological Characteristics of *Docioptaurus maroccanus* Thunb. in Behbahan.

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ABSTRACT

The harm of short-horned grasshoppers (Acridoidea) to crops has long been understood in Behbahan region. The most harmful species of this group is moroccan locust which costly chemical operations performed to control this pest led to environmental problems.

To present a convenient control program, study of bioecology of the insect seems to be essential. In this regard the bioecology of moroccan locust studied in field, in breeding cages in nature and in laboratory. The investigations showed the three following species are the most harmful grasshoppers of region respectively: *Docioptaurus maroccanus*, *D. hauensteini* and *D. (Notostaurus) anatolicus*.

Eggs of *D. maroccanus* hatch at $t = 18^{\circ}\text{C}$ and $\text{RH} = 50\text{-}60\%$ after a 8 to 10 month diapausing period. Nymphs and adults feed generally on pasture and do not attack adjacent cereal fields unless pastures dried-up.

Comparison of $E/F \left(\frac{\text{Elytra}}{\text{Femur}} \right)$ and $F/C \left(\frac{\text{Femur}}{\text{Caput}} \right)$ ratios of adult moroccan locust with those of Cyprus *D. maroccanus* shows that this insect was shifting from solitarious to transitional phase during 1992 and from transitional to gregarious phase during 1993 in Tal-Bardy (Behbahan). In Rahdar the fluctuation of these ratios were more inconspicuous.

On the basis of collected informations, to keep moroccan locust under the economic injury level, one must exert various methods such as pasture revitalization, grazing management, pasture preservation, patchy spraying with short-lived insecticides and protection of beneficial insects.

Refereneces

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