

Dynamics of Some Lepidopteran Pests in Vegetable Crop in the Mureş Floodplain Area

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Abstract. The potential of biotechnical using sex pheromones as monitoring and control tool was investigated in this experiment. The lepidopteran species identified and monitored in experimental plots from Vegetable Research and Development Station Iernut was diamondback moth *Plutella xylostella*, cabbage moth *Mamestra brassicae*, gamma moth *Autographa gamma* and cotton bollworm *Heliothis (Helicoverpa) armigera*. If in the first year in the baited sticky traps was captured hundred of moths' males, in the second year population was much lower, a reason for using pheromones in IPM techniques for protecting vegetables crops.

Keywords: Lepidoptera, Noctuidae, pheromone, traps, cabbage, vegetables

INTRODUCTION

The dynamics of diamondback moth, cabbage moth, gamma moth, turnip moth and cotton bollworm lepidopteran pests' population in vegetables crop can be follow using pheromones - baited traps (Ghizdavu *et al.*, 1979; Tóth *et al.*, 2010). Relation between number of adults and larval population and/or damage level has been demonstrated in field crops (Tingle and Mitchell, 1981).

MATERIALS AND METHODS

The experimental plot was approx. 1 ha cultivated with cabbage situated in VRDS Iernut, Mures floodplain area. The sex pheromones baited sticky traps were provided by UBB-ICCRR Cluj and was placed 3 traps/ha in the field.

RESULTS AND DISCUSSION

For all four species monitorized the number of adults captured decreased in the second year, more or less for *Plutella xylostella* (Fig. 1 and 2). It can be said that when pest population is high neither pesticide nor traps don't reduce enough next generation, but when population is low only using traps could be maintained under threshold of pest.

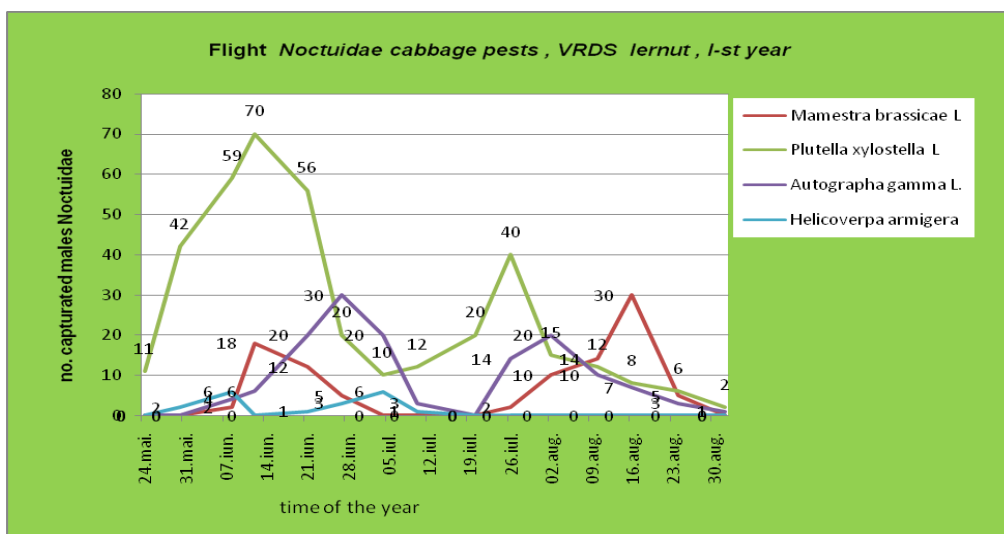


Fig. 1. Adults males Lepidoptera captured in pheromone baited traps, first year

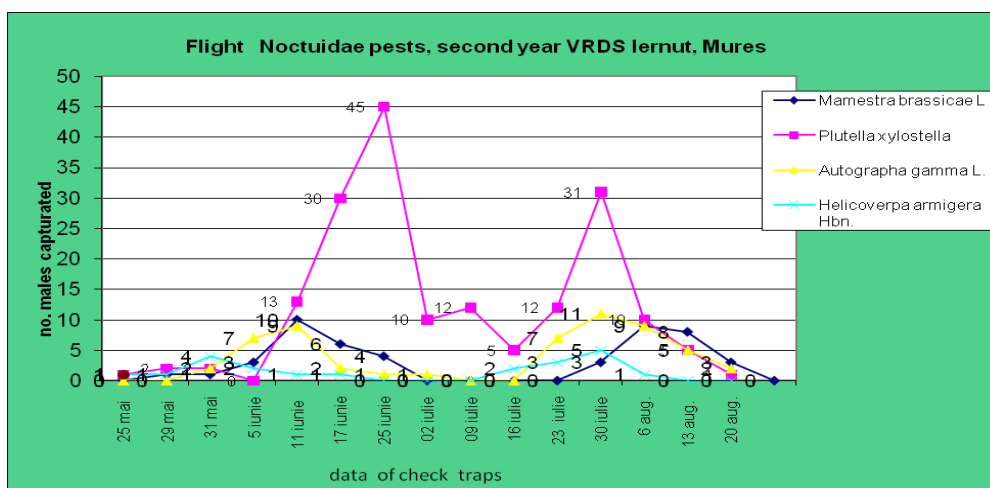


Fig. 2. Adults pests captured in pheromone baited traps, second year

CONCLUSIONS

Using pheromone-baited traps as a predictive tools for many insects species suggest that a pheromones based monitoring system provide farmers a useful indicator of pest population level and if treatments with insecticide is necessary or not. In the same time if the population is not so high occurs mass-trapping, the next generation was diminished and the damage level are low.

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