

## THE MONITORING OF CABBAGE MOTH – *MAMESTRA BRASSICAE* L. IN SUMMER CABBAGE

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*Key words: monitoring, cabbage moth, summer cabbage*

### INTRODUCTION

The cabbage moth is one of the main pests in cabbage cultures, producing significant damages in the cabbage crops in summer (Călin, 1998).

Stan et al. (1991) monitored the populations of noctuid using pheromone traps and found two generations of cabbage moth per year. An important place in the biology and ecology of cabbage moth population is occupied by the pedo-climatic conditions (Leather, 1995). The warning and prognosis of noctuid apparition, as well as the estimation of larva attack have a great importance in the maintaining of cabbage moth population under the economic damage threshold attack (EDTA).

Stan et al. (1991) experimenting numerous variants of pheromone traps didn't found a positive correlation between the number of captures and the attack developed by the larva in cabbage crops.

The authors explain this situation through: photogene, preferential habitat, level of food, polygamies and reproductive isolation between the sympatric species of noctuid.

For the warning and the reduction of number of treatment applied for the control of cabbage moth, SCDL Bacau and I.C.C. Cluj Napoca accomplished experiments regarding: the synthesis of variants with synthetic pheromones as well as experiments in the field during 2008 – 2010. In the present paper we present the generations with the highest number of captures.

### MATERIAL AND METHODS

The monitoring of cabbage moth pest in adult stage was accomplished with the pheromone traps with adhesive.

The sexual pheromones were assured by the Institute for Chemistry Cluj-Napoca.

In the present experiment Mb 2008 variant was tested.

The pheromone traps were placed in the cabbage cultures during the entire period of vegetation, from culture establishing until harvest, almost 3 traps/ha, at plant level.

The pheromone capsules were changed at each 3 weeks, and the surfaces with adhesive at the clogging with fauna.

The captures were collected from the pheromone traps twice a week.

The dates regarding the development of stages and generations were obtained after different boring, observation in the field and the captures registered in the pheromone traps.

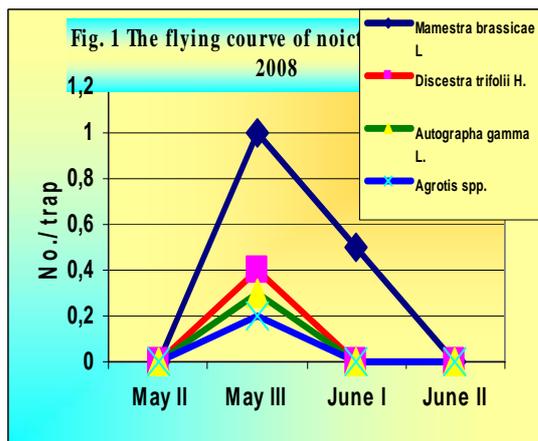
With the results obtained curves of male cabbage moth flight were marked out.

### RESULTS AND DISCUSSIONS

In the summer cabbage, the first generation of cabbage moth is usually dangerous. In 2008 and 2010, the number of pheromone captures of first generation pest, was very low (table 1, fig. 1).

Table 1. The species of Lepidoptera captured on the pheromone variant Mb 2008, in the first generation of noctuides

Specie	Mb 2008 - no. ex./trap		Total ex. /trap
	May III	June I	
2008			
<i>Mamestra brassicae</i> L.	1	0,5	1,5
<i>Discestra trifolii</i> H.	0,3	0	0,3
<i>Autographa gamma</i> L.	0,3	0	0,3
<i>Agrotis</i> spp.	0,3	0	0,3
2010			
<i>Mamestra brassicae</i> L.	7	1	8
<i>Discestra trifolii</i> H.	2	0	2

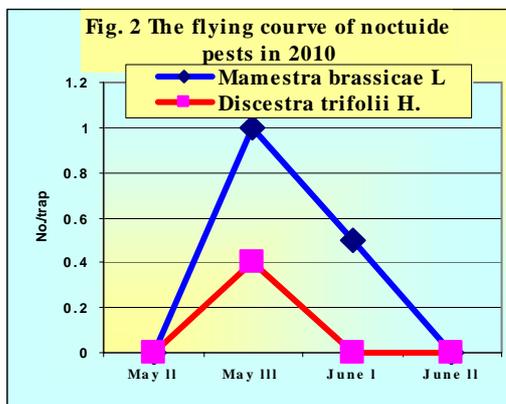


The dates registered in 2008 year show that many of the Lepidoptera traps were obtained at variant MB 2008, *Mamestra brassicae* L. specie, in the third decade May. Also, the variant MB 2008 captured a number of 3 sympatric species (*Discestra trifolii* H., *Autographa gamma* L., *Agrotis* spp.). Most of the captures belonged to cabbage moth specie, in variant V1 - Mb – 2008 – 1.5 males/trap.

The pest flight curve for the first generation is presented in figure 1. We can observe that the flight started in the second part of May, the maximum of curve being registered in the third decade of this month. At the beginning of June the male flight finished, the cabbage moth being present in cabbage crops only in larva stage.

In 2009 the population of cabbage moth was under Economical Damage Level (EDTA).

In 2010 the flight started in the third decade of May and finished in early June (table 1, fig. 2). Two noctuide species were caught *Mamestra brassicae* L. and *Discestra trifolii* H. Most of the catches belonged to cabbage moth specie. The results obtained demonstrate the good efficacy of the new synthesized pheromone variants - Mb 2008.



## CONCLUSIONS

Four species of pests were caught in 2008 in variants with pheromone trap Mb 2008: *Mamestra brassicae* L., *Discestra trifolii* H., *Autographa gamma* L. and *Agrotis* spp. Most of the captures belonged to cabbage moth specie, in variant V1 - Mb – 2008 – 1.5 males/trap.

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## ABSTRACT

Experiments were carried out at Vegetable Research and Development Station Bacau during 2008 – 2010. Four species of pests were caught in 2008 in variants with pheromone trap Mb 2008: *Mamestra brassicae* L., *Discestra trifolii* H., *Autographa gamma* L. and *Agrotis* spp. Most of the captures belonged to cabbage moth specie, in variant V1 - Mb – 2008 – 1.5 males/trap.

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