

Entomofauna harmful and useful study of some agricultural seed lots depending on the chemical treatment against pests from NE Moldavian’s climatic conditions

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Abstract

Maize is widely cultivated throughout the world, and a greater weight of maize is produced each year than any other grain. Our aim is to demonstrate that the use of bio-products in pest of corn, giving positive results.

The research is aimed at achieving a study on harmful and useful Entomofauna in some agricultural crops seed located in the territory of NE Moldavian’s climatic conditions.

In this research, we try to determine entomofauna useful and harmful entomofauna of corn seed lots, but here we present strict pest *Ostrinia nubilalis*

Keywords: maize, trap, control

Introduction

Corn (*Zea Mays*) occupies third place in importance among the world's crop. This position, in terms of agriculture, is motivated by a number of features, as follows: Has a large production capacity, with about 50% higher than other cereals; Has a high ecological plasticity, which allows a wide distribution area, giving high yields and relatively constant, less influenced by climatic deviations; Is an herb hoe, good run for most crops; Supports monoculture years; Has a high breeding ratio (150-400); With a later planting in the spring, allows a better staging of agricultural work; Culture is 100% mechanical; Harvesting is done without danger of shaking; Leverage highly organic and mineral fertilizers and irrigation water; Options for recovery of production are so varied. (Muntean, L.S., 2003).

Given that today is Romania (geographic, climatic and economic), to obtain higher crop quantity and especially quality, is very important. Is directly proportional to the difficulty that can achieve these quality products. Combating diseases and pests is through preventive and curative methods, taking into account the biology of plants, varieties of pesticides, pest biology agents.

Losses in agricultural crops vary as follows: cereals ranges from 27-36% to reach 46% grain legumes, potatoes are 45% sugar beet is 27%, for sunflower are 30% of the pests return between 8-15% it. (Tălmaciu M., 2005).

Materials and Methods

The experience was carried out in 2011-2012 in Trifesti - Bivolari microzone. The research was done and these stages of vegetation of corn.

In 2011, entomofaunei collection was done using pitfall traps were placed in 4 of 4 meters and the net entomologic. Traps were placed in six groups of seeds that we will call Lot A, Lot B, Lot C, Lot D, Lot E and Lot F was determined status of species and number of

samples collected from groups A, B, C, D, E, F. Collections will be made and in 2012, in all phases of maize vegetation

In modern agriculture is a greater emphasis on pest control because production obtained is dependent on resolving this problem.

These studies have taken place in all phases of maize vegetation.

The study took place in 10 plots of corn. Here we present the results of the 6 groups, named group A, B, C, D, E, F. In particular, we followed the evolution of *Ostrinia nubilalis* reaching this: In groups A, B, C where using a treatment based on Zenon Karate not find any harmful of *Ostrinia nubilalis* and in groups D, E, F where using a treatment with a bio-based *Bacillus Ahuringiensis* duplicate were collected.

Results

The conclusion we can draw is that biological bio-products are effective in the future should put more emphasis on their use

As perspective, we appreciate the fact that more farmers will use organic products for pest control

Corn borer, *Euopa* widespread in Asia, North Africa and America, a leading pest culture pests of corn.

In Romania registers powerful attacks in northern Moldavia and the Danube Plain. The larvae fruit floral organs of male inflorescence and one of the epidermis and leaves parenchymul. Larvae can locate and stalk or cobs. (Talmaciu, M., 2005)

Table 1. Statement of species and number of specimens collected in group A seed corn, the average of the years 2011-2012 About Astra Trifesti

Year	Name of species	Number of copies trap							Number of copies species	Total copies-Average 2011/2012
2011	<i>Ostrinia nubilalis</i> Hb	0	0	0	0	0	0	0	0	1,5
	<i>Agriotes</i> spp.	1	0	0	0	0	0	1		
	<i>Scotia segetum</i> Schiff	0	0	0	0	0	0	0		
Total								0		
2012	<i>Ostrinia nubilalis</i> Hb	0	0	0	0	0	0	0	0	1,5
	<i>Agriotes</i> spp.	0	0	0	0	0	0	0		
	<i>Scotia segetum</i> Schiff	0	0	0	0	0	0	0		
Total								0		

Table 1 shows that in group A, where treatment was performed with Zenon Karate notice that was not collected any copy *Ostrinia nubilalis* Hb, but in 2011 a specimen was collected *Agriotes* spp.

Table 2. Statement of species and number of specimens collected in group B seed corn, the average of the years 2011-2012 About Astra Trifesti

Year	Name of species	Number of copies trap							Number of copies species	Total copies-Average 2011/2012
2011	Ostrinia nubilalis Hb	0	0	0	0	0	0	0		
	Agriotes spp.	0	0	0	0	0	0	0		
	Scotia segetum Schiff	0	0	0	0	0	0	0		
Total		0	0	0	0	0	0	0		0
2012	Ostrinia nubilalis Hb	0	0	0	0	0	0	0		
	Agriotes spp.	0	0	0	0	0	0	0		
	Scotia segetum Schiff	0	0	0	0	0	0	0		
Total								0		

From Tables 2 and 3 shows that neither in 2011 no in 2012, in groups B and C, where treatments were performed with Zenon Karate were not seized copies of Ostrinia nubilalis Hb,

In 2012, the trap number 6, in group C were captured two copies of Agriotes spp average two years was 1.5.

Table 3. Statement of species and number of specimens collected in group C seed corn, the average of the years 2011-2012 About Astra Trifesti

Year	Name of species	Number of copies trap							Number of copies species	Total copies-Average 2011/2012
2011	Ostrinia nubilalis Hb	0	0	0	0	0	0	0		
	Agriotes spp.	0	0	0	0	0	2	2		
	Scotia segetum Schiff	0	0	0	0	0	0	0		
Total								2		1
2012	Ostrinia nubilalis Hb	0	0	0	0	0	0	0		
	Agriotes spp.	0	0	0	0	0	0	0		
	Scotia segetum Schiff	0	0	0	0	0	0	0		
Total								0		

Table 4. Statement of species and number of specimens collected in group D seed corn, the average of the years 2011-2012 About Astra Trifesti

Year	Name of species	Number of copies trap						Number of copies species	Total copies-Average 2011/2012
2011	Ostrinia nubilalis Hb	2	1	0	3	0	1	7	7
	Agriotes spp.	1	0	0	2	0	0	3	
	Scotia segetum Schiff	0	0	0	0	0	0	0	
Total							10		
2012	Ostrinia nubilalis Hb	0	0	1	0	1	0	2	4
	Agriotes spp.	0	2	0	0	0	0	2	
	Scotia segetum Schiff	0	0	0	0	0	0	0	
Total							4		

From Tables 2 and 3 shows that neither in 2011 no in 2012, in groups B and C, where treatments were performed with Zenon Karate were not seized copies of Ostrinia nubilalis Hb,

In 2012, the trap number 6, in group C were captured two copies of Agriotes spp average two years was 1.5.

Table 5. Statement of species and number of specimens collected in group E seed corn, the average of the years 2011-2012 About Astra Trifesti

Year	Name of species	Number of copies trap						Number of copies species	Total copies-Average 2011/2012
2011	Ostrinia nubilalis Hb	2	1	0	1	0	1	4	5
	Agriotes spp.	1	0	0	1	0	0	2	
	Scotia segetum Schiff	0	0	0	0	0	0	0	
Total							6		
2012	Ostrinia nubilalis Hb	2	0	1	0	0	2	4	4
	Agriotes spp.	0	0	0	0	0	0	0	
	Scotia segetum Schiff	0	0	0	0	0	0	0	
Total							4		

Table 6. Statement of species and number of specimens collected in group F seed corn, the average of the years 2011-2012 About Astra Trifesti

Year	Name of species	Number of copies trap						Number of copies species	Total copies-Average 2011/2012
2011	Ostrinia nubilalis Hb	0	1	2	1	0	1	5	5
	Agriotes spp.	1	0	0	0	0	0	1	
	Scotia segetum Schiff	0	0	0	0	0	0	0	
Total							5		
2012	Ostrinia nubilalis Hb	0	1	0	1	1	1	4	5
	Agriotes spp.	0	0	0	0	1	0	1	
	Scotia segetum Schiff	0	0	0	0	0	0	0	
Total							5		

Conclusions

Conclusions That Can be drawn has the best results compared with classic fertilization unfertilized variants, But Which variants HAS Been Shown That have Been used in organic products, significantly higher production WAS Than the unfertilized variant.

The main conclusion is that the treatments made chemicals give good results, and biological treatments are positive.

Taking into account environmental protection and use organic products tend abundantly recommend using these products.

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