STRUCTURE , DYNAMIC AND ABUNDANCE OF SPECIES COLEOPTERE FOR RAPESEED CROP-AUTUMN

Nela TĂLMACIU, M. TĂLMACIU, Liliana MANOLE

University of Agronomy Sciences and Veterinary Medicine of Iassy
Phytosanitary Unit Braşov

Abstract: *There are were made observations in 2008 year in the rape crops in the National Institute for Research and Development for the cultivation of potatoes and sugar beet (INCDCSZ) Braşov, in two experimental variants: V1 - rape culture in which no treatments have been either chemical or seed during the growing season; V2 - rapeseed crops to which the chemical treatments to prevent and combat pests. Within each variant were used to collect material 6 traps each soil type Barber. Of the material collected were retained species coleoptere which were then determined. The determinations made in version 1, untreated rape, it was found that the 271 copies of coleoptere belong to a number of 28 species, while in version 2 , where rape has been made in treatments during the growing season against pests were collected 411 samples of coleoptere belonging to 30 species. The species most commonly encountered in the two variants were: F. Phyllotreta atra, Meligethes aeneus F., Pterostichus cupreus L., Phyllotreta nemorum L ., and Amara eurynota Panza .. These species were also the highest number of copies. Uncommon species were Pterostichus vulgaris L., Baris chlorizans germ., Malachius bipustulatus L., Amara aenea De Geer, Harpalus laevicollis Heyden, Amara APRICARIA Payk., Amara familiaris Duft., Apion violaceum Kirby, Cantharis fusca L., etc.*

Key words: coleoptere, rape crops, dynamic, treatments

INTRODUCTION

In Romania, the total losses from the attack of pathogens, pests and weeds annually amounts to 2.5 - 3 billion dollars, that is several times greater than the amount required for the purchase of plant protection products, including the cost of treatment works for performance. As with other cultures and the culture of rape is attacked by a number of pests, causing major damage. autumnal rape culture occupies large areas especially in areas with lower temperature, where replaced sunflower (Poland, Germany, England, the Scandinavian etc.. (ARION, 1957; BALACHOWSCHI, MESNIL, 1935-1936, KNECHTEL, 1951; MANOLACHE et al., 1946-1957, 1969). In our country, although has a long tradition, being cultivated since the first decades of the century Previously, this record crop in recent years reveniment strong, so now sometimes cultivated areas exceeding 100,000 ha annually (BAICU, 1982, PANINI, 1951; BARBULESCU et al., 1993, 2002; BOGULEANU, 1980; HULEA et al . 1975; RADULESCU et al., 1973, SAVULESCU et al., 1982; SIN, 2000; SANDRU, 1996). Follow the progress achieved in the process of improvement by obtaining varieties whose oil content to 40% and protein in degreased grists, 40% and with a low erucic acid, rapeseed has become, from a forage-plant industry, an important plant food. Both because of its many industrial uses, but many agronomic advantages, rape is considered a valuable crop, easily established and marketed, but with some protection problems, especially caused by pests (MANOLACHE, BOGULEANU, 1978; PAULIAN, ILIESCU, 1973; PAULIAN et al., 1974; PERJU et al., 1976; POPOV, 2003).

MATERIAL AND METHOD

The material was collected from rape crops belonging to the National Institute of Research and Development for growing potatoes and sugar beet (INCDCSZ) Brasov, in 2008,

in June, using Barber traps soil type. The used two experimental variants, one for each variant 6 traps so:

V1 - rape untreated diseases and pests during the growing season

V2 - rape to which treatments were common during the growing season, diseases and pests. During June 3 harvesting were conducted at each of the two variants, the following data:

- the collection I, on 9.06.2008 - the collection of-II, on 17/06/2008, - harvesting to III, on 24.06.2008. The material so collected was cleaned of plant debris were retained only beetle species that were then kept in a solution of alcohol about. 20% concentration.

After determining the species had the following results

RESULTS AND DISCUSSIONS

Regarding harvesting situation, the two variants, it is:

- In variant 1 (Table 1) the first harvest, which was made on 9.06.2008, is the presence of 85 copies of coleoptere belonging to a number of 20 species. The species most commonly collected in this collection were Phyllotreta atra F., Pterostichus cupreus L., Harpalus distinguendus Duft. Phyllotreta nemorum L. and

- in the II of harvesting, which was conducted on 17.06.2008, were collected 136 samples of coleoptere belonging to a number of 11 species. The species most commonly collected in this collection were Phyllotreta atra F., Phyllotreta nemorum L., Meligethes aeneus F. Kugel and Dermestes frische.

- To the third harvest, which was conducted on 24.06.2008, were collected 50 samples of coleoptere belonging to a number of 13 species. The species most commonly collected were Phyllotreta atra F., Phyllotreta nemorum L., Pterostichus cupreus L. and Meligethes aeneus F..

- The first harvest table 2, which was made on 9.06.2008 were collected 266 samples of coleoptere, belonging to a number of 17 species. The species most commonly collected were Phyllotreta atra F., Phyllotreta nemorum L., Pterostichus cupreus L. and Meligethes aeneus F..

- In a collection II, which was conducted on 17.06.2008, have been collected a number of 75 copies of coleoptere belonging to 12 species. The species most commonly collected were Phyllotreta atra F., Phyllotreta nemorum L., Meligethes aeneus F. Panza and Amara eurynata ..

- The collection of III, which was conducted on 24.06.2008, have been collected a number of 70 copies of coleoptere belonging to 17 species. The species most commonly collected were Phyllotreta atra F., Phyllotreta nemorum L., Meligethes aeneus F. and Staphylinus spp.

In the comment period on the two variants (table 3) were collected 682 specimens belonging to a number of 41 species. Of the 41 species, a total of 18 species were common, being collected at the two variants. They were cockchafer violaceus L., Harpalus aeneus F., Harpalus distinguendus Duft. Amara eurynota canvases., Dermestes frische Kugel., Phyllotreta atra F., Brachynus crepitans L., Bembidion properans Steph., Leptinotarsa decemlineata Say., Phyllotreta nemorum L., Meligethes aeneus F., Cymindis humeralis Fourc., Microlestes maurus Sturm., Pterostichus cupreus L., germany Cicindela L. Psylliodes chrysocephala L., and Staphylinus spp, Galeruca pomonae Purp.

The species with the highest number of specimens collected at the two experimental variants were (Table 4) Phyllotreta atra F., Phyllotreta nemorum L., Meligethes aeneus F., Pterostichus cupreus L. and Amara eurynota Panza .

What should be noted is that all species had a frequency and a large number of copies compared with other species, the highest number of specimens were collected from the version where there were chemical treatments.

Table3

Structure and abundance of species collected from coleoptere rape crops in the two variants

No.	Species Name	Variant	
		Untreated rape	Treated rape
1.	Carabus violaceus L.	2	2
2.	Anisodactylus signatus Panz.	1	-
3.	Harpalus aeneus F.	2	6
4.	Oxythyrea funesta Poda	1	-
5.	Harpalus distinguendus Duft.	6	2
6.	Amara eurynota Panz.	8	13
7.	Dermestes frischi Kugel.	4	2
8.	Phyllotreta atra F.	131	233
9.	Brachynus crepitans L.	4	1
10.	Brachynus psophia Serv.	2	-
11.	Bembidion properans Steph.	2	2
12.	Coccinella 7-punctata L.	2	-
13.	Peritelus familiaris Boh.	1	-
14.	Leptinotarsa decemlineata Say.	2	2
15.	Phyllotreta nemorum L.	51	84
16.	Meligethes aeneus F.	19	20
17.	Cymindis humeralis Fourc.	4	3
18.	Microlestes maurus Sturm.	1	2
19.	Pterostichus cupreus L.	13	16
20.	Cicindela germanica L.	2	2
21.	Ophonus azureus F.	1	-
22.	Psylliodes chrysocephala L.	2	1
23.	Psylliodes wrasei Leonardi et Arnold	1	-
24.	Malachius bipustulatus L.	1	-
25.	Amara aenea De Geer	1	-
26.	Harpalus laevicollis Heyden	1	-
27.	Pterostichus vulgaris L.	1	-
28.	Tachyporus nitidulus F.	-	2
29.	Staphylinus spp.	4	5
30.	Galeruca pomonae Scop.	1	1
31.	Baris chlorizans Germ.	-	1
32.	Amara apricaria Payk.	-	1
33.	Amara familiaris Duft.	-	1
34.	Apion violaceum Kirby	-	1
35.	Coccinella 14-punctata L.	-	1
36.	Cantharis livida L.	-	1
37.	Athous hirtus Herbst.	-	1
38.	Cantharis fusca L.	-	2
39.	Agriotes lineatus L.	-	1
40.	Athous sacheri Kies.	-	1
41.	Ceuthorrhynchus obsoletus Germ.	-	1
	TOTAL	271	411

Table 4

Coleoptere abundance of species most commonly found in crops of rape in the two variants

No	Species Name	Variant	
		untreated	trated
1.	Phyllotreta atra F.	131	233
2.	Phyllotreta nemorum L.	51	84
3.	Meligethes aeneus F.	19	20
4.	Pterostichus cupreus L.	13	16
5.	Amara eurynota Panz.	8	13

CONCLUSIONS

1. In 2008, June 3 were harvesting the species coleoptere, using traps soil type Barber. Collections were made at the following dates: 9.06.2008, 17.06.2008 and 24.06.2008.

2. La version "rape untreated were collected 271 specimens belonging to a number of 28 species, while the variant treated were collected 411 samples of coleoptere belonging to 30 species.

3. The species most commonly collected and the highest number of copies were Phyllotreta atra F., Phyllotreta nemorum L., Meligethes aeneus F., Pterostichus cupreus L. and Amara eurynota Panza .

4. Noteworthy is that all species were larger in variant treated with the other variant, variant untreated.

BIBLIOGRAPHY

1. GAËTAN DU CHATENET, 1990 – Guide des Coléopterés d'Europe. Délacrois et Niestlé, Paris.
2. PANIN I., 1951 - Determinatorul Coleopterelor dăunătoare şi folositoare din R.P.R. Editura de Stat, Bucureşti.
3. REITTER E., 1908 - Fauna Germanica. Die Käfer des Deutschen Reiches Band I, Stuttgart.