



Research Article

PEST CONTROL AND MEASURES ON BEAN CROPS - CALLOSOBRUCHUS MACULATUS, BRUCHUS PISORUM AND ACANTHOSCELIDES OBSOLETUS

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ABSTRACT

Treating seeds of leguminous crops against bruchuses 20 days before sowing with insecticide dressing agents at the rate of consumption of Avalanche 70% d. 4 heg / t and Cruiser Extra Cotton 362 c.t., 3 l / t at the end of the growing season preserves up to 45-50% yield.

KEYWORDS

Leguminous crops, mung bean, kernels, harmfulness, insecticide dressing agents, biological effectiveness, chemical treatment.

INTRODUCTION

Legumes, like other agricultural crops, are highly infested with various pests. Among these pests there are specialized and polyphages. Basically, specialized pests do more harm than polyphages. Legumes also have such pests and one of them is caryopses - Bruchidae. According to the literature data, mung

harvest during the growing season and during storage in warehouses contaminates up to 50-60% with this pest [1,2].

Currently, the development of measures to combat the above-mentioned pests is the main task, and during

2021-2022 we carried out research work in this direction.

RESEARCH METHODOLOGY

Testing of drugs (insecticide dressing agents) against caryopsis on leguminous crops was carried out in farms of Tashkent region. At the same time, the seeds of beans, mung bean and chickpea were treated with preparations 15 days before sowing at the Avalanche consumption rate of 70% dp. 4 kg / t and Cruiser Extra Cotton 362 class sous. Experiments and calculations of efficiency were carried out according to the generally accepted method. [3,4].

In order to determine the infestation of the obtained crop, 5000 seeds were examined and analyzed from each variant.

RESEARCH RESULTS



Callosobruchus maculatus



Bruchus pisorum



Acanthoscelides obsoletus

In our experiments, the opposite data was observed. Below are the results of experiments on mung bean cultures. From the results of the experiment it can be seen that in the control variant the infestation results of the experiment on mung bean cultures show that in the control variant the infestation of mung bean seeds

During the years of research, we determined the infestation up to 60-70% of the yield of mung crops with caryopses during the growing season and during storage.

BIOLOGY

Caryopsis (Bruchidae) is a highly mobile insect in hot and daylight hours. In spring, these pests often and strongly infest late-sown leguminous crops in the flowering phase and bean formation. The beetles of these pests feed on the nectar of mung flowers [4].

In the conditions of Uzbekistan, there are 3 types of weevils - pea weevil - (*Bruchus pisorum* L.), four-point weevil - (*Callosobruchus maculatus* Z.) and bean weevil - (*Acanthoscelides obsoletus* Say.). According to the data, when dressing pea seeds before sowing against a pea weevil, no efficiency was observed and the infection of peas with weevils continued during the growing season and during storage [1].

was 52.1%, in the variant with Avalanche it was 70% dp. the infection of mung bean seeds was 3.7%, in the second variant, where the drug Cruiser Extra Cotton 362 c. sus., 3 l / t was used, 7.4% of infection was observed.

Table 1
Biological effectiveness of disinfectants against caryopses on mung crops

№	Options	Consumption rate prep., Kg, l / t	Number of viewed seeds, pcs.			The percentage of infection of seeds with caryopses, %	Average weight of 1000 seeds, gr		Saved yield versus control, %
			Total	Not infected	Infected		Not infected, gr	Infected, gr	
mung plant (Phaseolus aureus Pip)									
1.	Control (no processing)		5000	2604	2396	52,1	77,1	39,3	-
2.	Avalanche, 70% n.kuk (imidacloprid)	4,0	5000	4818	182	3,7	81,5	56,0	48,4
3.	Cruiser Extra Cotton 362 k.sus (thiamethoxam)	3,0	5000	4627	373	7,4	80,7	52,1	44,7

CONCLUSION

From the results of research work, it can be concluded that the treatment of seeds of leguminous crops with dressing agents 15 days before sowing at the Avalanche consumption rate of 70% dp. 4 kg / t and Cruiser Extra Cotton 362 c. Sous., 3 l / t, the resulting crop is less infected with caryopses by 48.4% to 44.7% than on crops with an untreated plot (control). This method of combating caryopses saves up to 45-50% of the harvest from bruchuses (caryopses).

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