

# The Role Of Chemical Methods In The Protection Of Newly Planted Legumes And Potatoes From The Root-Bearing Frost

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**Abstract:** In this article, the prevalence of late ripening (*Agrotis segetum* Den. Et Schiff) and ripening tinctures (*Agrotis exclamations* Den. Et Schiff) on re-seeded mash and potato sowings, with damage and seedling Avalanche 70% n. (5kg / t) and the Cruiser Extra 362 sus. (3 l / t) The plants are fully protected from root-ripening trunks for up to 21 days after the germination of the plants after application of the preparations. Maximum 55% s.c.s., and Primagold 36% Eq., Against rodent tunnels during plant growth, were experimented and monitored to determine the efficacy of chemicals. According to Max, 55% s.e.g., 0.1 mg / ha per hectare, was 86.6% effective on day 7 of the study. According to the Primagold 36% absorbed version, 1.5 l / ha, the maximum efficiency was 82.4% on the 7th day.

**Index Terms:** Stem rods, beans, vegetables, melons and potatoes, root stem, germination, tubers, sexual pheromone handles, variants, chemical methods, biological efficiency.

## 1. INTRODUCTION

In Uzbekistan today, with a view to ensuring a continuous and complete supply of food to the population of the republic, a great deal of attention is paid to the planting of legumes, vegetables and potatoes, and the diversification of these products, as well as increasing the incomes and living standards of the rural population. In spring, farmers and dehqan farms planted 234,000 hectares of vegetables, 93.9 thousand hectares of potatoes and 67.9 thousand hectares of melons. At the same time, the area after the grain was released 878,9 thousand hectares, including 151,8 thousand hectares of vegetables, 28,6 thousand hectares of potatoes, 54,6 thousand hectares of melons, 23,3 thousand hectares of sunflowers, 9,5 hectares. sowed soybeans, 398,1 thousand hectares of legumes, 57,3 thousand hectares of rice, 94,3 thousand hectares of fodder and 61,5 thousand hectares of other crops. As a result of this, by the end of 2017, total revenue was \$ 21.4 million. tons (101.5% to 2016), of which 11.4 million tons, vegetables (101.4%), 2.1 million tons (12.4%), melons, 3.0 million tons, tons (101.9%), fruit - 3.1 million, tons (101.1%), and 1.8 million tons (100.8%). The root-bearing pests during the cultivation of legumes, vegetables and potatoes in the Republic; 15-20% yield is lost due to the detrimental effects of autumn thunderstorms (*Agrotis segetum* Den. et Schiff) and overgrazing (*Agrotis exclamations* Den et al. [2,6]). In recent years, due to damage to root-bearing pests, damage to root and shoots of legumes, vegetables and potatoes during the young germination causes germination and destruction of plants. This results in a drastic reduction in yields and a deterioration in the quality of products. Autumn tunnels (*Agrotis segetum* Den. Et Scheffer) are one of the

most common pests in irrigated agriculture. This pest infects hundreds of crops in 34 families. Cotton, alfalfa, sugar beet, corn, grain, legumes, oilseeds, vegetables, melons and potatoes, as well as stove, wild cranberries, sorghum, gluten-free nights. Autumn-laying worms penetrate the roots of young plants that germinate and damage the roots. It also gnaws roots or stems near the root collar, and sometimes affects the top of the grass. *Agrotis exclamations* Den. Et Schiff is the most common species, usually the second largest in autumn to large extent. Wormworms infest 75 species of crops, including cereals, tobacco, cannabis, corn, cotton, sunflower, sugar beet, legumes, vegetables and potatoes.

On the front of the wings, the stain is reminiscent of the exclamation mark, and the name is also drawn by the same sign. This pest, unlike the autumn frost, leaves offspring twice a year. Morphological symptoms and survival are very similar to those of autumn tunnels [5].

## 2 METHODS OF RESEARCH

Pests rooted in legumes and potatoes planted in Tashkent, Samarkand and Kashkadarya regions; The species distribution, range of distribution, and degree of damage of the root rodents were studied. As a result of the study, 1.0 hectares of sown area of the Kibray District Scientific Research Institute of Plant Research in the Upper Chirchik District and the "Best Faiz Baraka" in 2016-2018 to determine the biological effectiveness of insecticides for the fall and cold prey. cultivated on the farm's 0.5 hectare potato field. Phenological observations have been made on the tunnels and their extinction, laying eggs, and generation of new offspring have been studied [1,3]. Sex pheromone handles were used to control the flight of butterflies in the autumn and late night [4,5]. Observations were made to detect the occurrence and prestige of worms in the autumn and beetles, as well as the efficacy of chemical preparations in the field. Chess was 1 m<sup>2</sup> and sampled from 10 areas of the field. Avalanche 70% noodles before seeding to protect beet and potato from fall and freezing temperatures, and Cruiser Extra 362 sq. M. % s.e.g., drug received. Prima Gold36% of the drug is taken as the standard. From the day the drug was administered to the experiment, control observations were analyzed from 3 days. In the study, the average density of 1m<sup>2</sup> of autumn and summer tides (calculated separately in and

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around the field) was determined by the density of species in agrobiocenosis. Conducting research Sh.T. The biological efficiency of the methods and techniques used was determined using the method of Abbot (1925) [6,7,8].

### 3 SECTIONS

According to the experimental results in the control (sowing seeds without sowing) sprouting average, 1.9 pieces per 1 m<sup>2</sup> on day 3, 2.3 units at day 7, 3.2 units on day 14, and 3.9 on day 21 It has been reported that a number of autumn larvae are damaged. The Avalanche drug was administered at a rate of 5 kg per 1 ton of seeds, and it was observed that plants were not affected by root-ripening tunnels until the 21st day. On the following counting days, on the 28th day, an average of 0.4 autumn worms were found in the area of 1 m<sup>2</sup> of grass.

In the cruiser Extra 362 sq.k.a version of the drug at a rate of 3 liters per hectare, plants were 100% protected from root-bearing nights until day 21, and on the 28th day there was an average of 0.5 autumn worms per 1 m<sup>2</sup> of crop (Table 1).

Similar experiments were done with seed germination before sowing potatoes, with 0.9 units on day 3, 2.7 units on 7th day, 3.1th day on 14th day, on average, 1m<sup>2</sup> in control variant after sowing potatoes. There were 3.6 worms and 3.9 worms on the 28th day. In the seed-sown variants, in the amount of 5 kg per tonne treated with Avalanche, no root-bearing tunnels were encountered until the 21st day of the count, with 0.6 pests per 1 m<sup>2</sup>. In the next variant, on the 28th day of the calculation there were 0,8 rodent rodents. (Table 1).

Our next experiment is a repeated crop against the fungal and potato pests (autumn and late night frost) during the growing period Max 55% s.e.g., The drug 0.1 l / ha and Primagold 36%. The drug was administered at a rate of 1.5 l / ha.

According to the study, the number of worms per 1 m<sup>2</sup> in the control sample was 2.5, Max 55% s.e.g. , 6%. During the 14 to 21 days after the drug administration, the drug's effectiveness decreased slightly and was 82.5- 78.0%.

Primagold in the experimental area was 36% of the drug, and in the variant used, the number of worms was 1.9 units before the drug administration, and biological

efficiency was 72.5% from the third day after drug administration. At the next counting days, that is, on the 7th day, the efficiency was the highest at 82.4%, and on the 14th and 21st days it was 78.9-76.2% (Table 2).

**Table 1.** Biological effect of sowing beetroot and potato seeds with seedlings against root-ripening tunnels. (Experimental Field Research Institute of Plant Science, Kibray district of Tashkent region, 2016-2018)

№	Experimental options	Active ingredient of the drug	Spending rate, kg, l / ha	Number of worms per 1m <sup>2</sup> area before drug administration	Number of worms, units, days after drug administration				Biological efficiency, in days,%			
					3	7	14	21	3	7	14	21
1	MAKS 55% v.d. g.	Emamectin benzoate 120 g / kg + lufenuron 430 g / kg	0,1	2,5	1,0	0,7	1,2	1,7	74,1	86,6	82,5	78,0
2	PRIMAGOLD 36% Eq. (reference)	Deltamethrin + triazophos	1,5	1,9	0,8	0,7	1,1	1,4	72,5	82,4	78,9	76,2
3	Control (unsupported version)	-	-	2,0	3,1	4,2	5,5	6,2	-	-	-	-

№	Variants	The cost of the drug is kg / l					The average number of worms in 2.5 m <sup>2</sup> is by days after germination					Biological efficiency, %				
		3	7	14	21	28	3	7	14	21	28	3	7	14	21	28
Mosh																
1.	70% n Avalanche. (imidoclaprid)	5,0	0	0	0	0	0,4	100	100	100	100	100	100	100	100	90,6
2.	Cruiser Extra 362 sus. (thiametoxam + mefenoxam + fludioxonil)	3,0	0	0	0	0	0,5	100	100	100	100	100	100	100	100	88,3
3.	Surveillance (not treated)	-	1,9	2,3	3,2	3,9	4,3	-	-	-	-	-	-	-	-	-
Potatoes																
1.	70% n Avalanche.	5,0	0	0	0	0	0,6	100	100	100	100	100	100	100	100	84,6
2.	Cruiser Extra 362 sus. (thiametoxam + mefenoxam + fludioxonil)	4,0	0	0	0	0	0,8	100	100	100	100	100	100	100	100	79,4
3.	Surveillance (not treated)	-	0,9	2,7	3,1	3,6	3,9	-	-	-	-	-	-	-	-	-

**Table 2.** Effectiveness of chemicals against worms in autumn and winter

(Upper Chirchik district of Tashkent region. Omad Fayz Baraka farm. 2016-2018)

## 4 CONCLUSION

According to the results of the research, timely and effective use of pheromone handles is an important factor in the management of their numbers, starting with the cultivation of tares and potatoes in winter and frostbite seedlings of seed and potatoes seeded for repeated periods Avalanche 70% n. (5kg / t) and the Cruiser Extra 362 sus. (3 l / t) The plants are fully protected from rodent fronds for up to 21 days after germination. Maximum 55% c.s.g.

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