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COMMON OIDIUM OR UN-DEW DISEASE IN VINEYARDS AND MEASURES TO COMBAT IT

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Abstract
The geographical location and soil-climatic conditions of the republic are very favorable for the development of all types of agriculture. It is estimated that 35% of the world's crop crop is lost each year, 14% of which is due to pests and diseases, while 20% of the crop is transported and stored dies during. In our country, agricultural crops can be damaged by various pests and diseases. Pests such as apples, spider mites, grape mites, and aphids are particularly harmful, as are dew, rust, and other diseases.

Keywords: Fruit, oidium, diphenoconazole, krezoksim-methyl, penconazole, tebuconazole, propiconazole, ampact, **impact, fungicide.**

Introduction

Oidium, or powdery mildew, came to Europe from the United States with seedlings. Oidium was first identified in 1843 by a gardener named Tucker in a vineyard in Marchet, England, on the Thames. The fungus that causes oidium was first described in 1947 by the English botanist Bernimi as Uncinula necator tuck [1-14].

In Uzbekistan, oidium is the most common, widespread and harmful disease of grapes. All green parts of the vine - leaves, leaf axils, green twigs, flowers, inflorescences, buds, vines and vines - are affected. The fungus enters the epidermal cells only with its gaustors and feeds on them by absorbing nutrients. When a leaf is damaged, an invisible dust, first white, then white-gray, sparse, thin hyphae, resembling flour or dust appears on the underside of the leaf, followed by the underside of the leaf [4-17].

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Leaves and branches. Later, small, dry, brown, scattered necrotic spots appear on the leaf, which join together to form a reticular image, which is a diagnostic sign that the leaves are alive, green. In the background. Dust consists of mycelium, conidiophores and conidia of the fungus. The young leaves are twisted and weak. The leaf blades become brittle and easily broken. [2-13].

It is known that the implementation of radical reforms in the agricultural sector of the economy in our country is one of the priorities of the Action Strategy of the Republic of Uzbekistan for 2017-2021. In particular, the timely and efficient processing of agricultural products is one of the problems of today's agricultural sector [3-8].

About 16 million tons of fruits and vegetables are grown in our country every year. The population is 300 kg of vegetables, 75 kg of potatoes and 44 kg of grapes per capita. This is three times the optimal consumption level [5-15].

Vine is one of the most susceptible to pests and diseases. The main reason for this is that the current is grown in a unique way. The most common cause of damage to vineyards is fungal diseases. Fungal anthracnose is one of the oldest diseases of the vine and has long been known in Europe and North America. Anthracnose spread over large areas of French vineyards between 1835 and 1840, causing a sharp decline in productivity. Passer called the causative agent Ramylaria ampelophaga. The fungus that causes anthracnose is now called Sphaeceloma ampelinum [6-18].

The homeland of this disease is Europe. Before the introduction of oidium and mildew from North America, anthracnose was the most harmful disease of the continent. Currently, anthracnose is distributed in all countries where grapes are grown, except in some arid climates, in the CIS, Ukraine, Russia (Dagestan, Astrakhan and Rostov regions, Krasnodar and Stavropol regions), Moldova, Transcaucasia and Kazakhstan. Occurs in all regions of Uzbekistan. In some years, the disease has caused severe economic damage to other vineyards. The disease mainly develops in deep, humid areas, on riverbanks, near groundwater, in densely planted vines. The disease affects all parts of the vine. Symptoms of the disease on the leaves of the vine appear reddish-gray or dark brown spots of various shapes [7-11].

The tissue breaks down quickly. The leaves become hollow and the leaves fall off. Later, these spots are replaced by curved wounds. There are bumps on the edges of the wounds and dark spots. As the disease progresses, the twigs turn black like charcoal [9-10].

Young twigs are strongly damaged. Small, brown, single-purple spots with a purple-

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brown border are formed on the joint. The spots gradually turn light gray-gray or purple-black, grow to a length of 7-8 cm or more, merge with each other, penetrate into the middle of the rod and turn into sores. A thick, bulging callus tissue forms around the wound, the center of the wound becomes slightly concave, and such branches become brittle and break in the wind [9-16].

Damaged twigs eventually darken, lag behind in growth, and die. The symptoms of the disease on the leaves and flower stalks and twigs are the same as on the twigs. When the flower balls are damaged, round, black spots appear on the petals. Damaged flower balls and buds turn brown and fall off [12-19].

Grapes are susceptible to disease until they begin to ripen from the buds and buds. The main axis of the stem and the signs of disease in the fruit bands are the same as in the branches. When the spots surround the main axis of the bunch, the lower part of the head of the vine bends and dies. Grapes are slightly sunken, with purple to white in the middle, followed by white-gray spots with a narrow dark brown or black border around them. If they spread into the vine, it will crack.

In some parts of Europe, some varieties are not planted due to severe anthracnose infestation. As the leaves and flowers of the affected vines fall off, the branches lag behind in growth, and the vines are less productive, the vines lose growth and yield. Chronically and severely damaged currents can die in 3-4 years.

In Uzbekistan, anthracnose is more harmful (but less so than oidium). Sernam can lose 27.9% of the leaves of Husayni and Black raisin varieties of the vine damaged in early June in bad weather. The yield of severely damaged Husseini varieties is 3-5 times lower than in healthy ones. In the experiment, when the plants were protected from anthracnose with fungicides, the yield of grapes per bush increased from 9.0 kg in the affected control to 22.1-24.0 kg (2.5-2.7 times) [12].

The method and conditions of picking, storage and transportation of fruits have a significant impact on the quality of fruit and products made from it. Failure to comply with the requirements not only leads to rapid spoilage of the fruit, but also limits its ability to produce fruit products, and even leads to contamination of the fruit with pathogenic microorganisms that cause infectious diseases in the human body. At present, the issue is to accelerate the implementation of sectoral plans for modernization, technical and technological restructuring of production, the transition to international quality standards in the domestic and foreign markets [10-21].

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We conducted our research in the vineyards of Koshtepa district of Fergana region. Observations have shown that oidium, anthracnose, mildew-fake flour-dew diseases are widespread in vineyards. Oidium, one of the main diseases, has been shown to have the following bioecological characteristics, and its brief description is as follows [22-24].

The first symptoms of the disease appear in spring (May), when the temperature is 20-25 °C and humidity 60-80%. In summer, when the humidity is above 25% for the fungus to grow, the disease can develop. Flour-dew infects the leaves, young twigs and fruits of the vine. Strongly damaged leaves wrinkle and dry out. It looks like a sack that encloses with a drawstring. You will not notice any dust on the fruit, but the second sign of the disease is cracking and the fruit begins to rot. The fungus overwinters in buds and plant debris. In some years it destroys the grape yield by 60-70%

Experimental Part

The following measures are taken to combat this disease

Quality tillage, moderate irrigation; giving jacob water; fertilization with phosphorus and potassium fertilizers.

The following chemical agents were used in the chemical method with the permission of the State Chemical Commission:

Diphenoconazole based (25% em.k. - 0.2 l);

Krezoksim-methyl based (50% s.d.g. - 0.2 l);

Penconazole based (10% em.k. - 0.3 l);

Tebuconazole + Triadimefon based (22.5% em.k. - 0.15-0.25 l);

Propiconazole + Tebuconazole (40% k.e.k. - 0,3 l/)

A study of the biological and economic efficacy of these drugs found that the results were positive. Such control measures have been carried out in full compliance with the requirements of environmental protection and food safety.

Experimental Results

The results of the experiment showed that the following results were obtained when the ampact 250 K / e was applied to 0.1 l of flour dew disease:

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The biological efficiency in the leaves was 88.2% in the branches 89% and in the fruits 86.9%. The biological efficiency of the Impact 25% k / s 0.1 l obtained as a reference to these norms was the same.

The results showed that the modern drug Ampakt had the same results as the drugs used.

Ampact 250 k / e 0.1 l / ha showed 90% efficacy in 85% of branches and 85% of fruits when applied twice against oidium disease.

Ampact is allowed to be used in horticulture on winter farms.

When Ampact 250 k / e was applied at a rate of 0.15 l / ha, 92.7% of the grape leaves, 91.6% of the fruits and 90% of the twigs were grapes. The same results were observed when using the drug Impakt in Etolon. Received results showed that Ampakt 0.1-0.15 l / ha showed high efficacy before and after flowering when applied against oidium disease in grapes.

Table 1: Biological efficacy of Ampact and Impact fungicides in powdery mildew

№	Options	Consumption rate of the drug is kg, l	Leaves			Vine branches			Fruit		
			Damage rate,%	Disease development,%	Biological efficiency,%	Damage rate%	Disease development,%	Biological efficiency,%	Damage rate,%	Biological efficiency,%	Biological efficiency,%
1	Ampakt, 250 k.e.	0,1	10,2	2,2	88,2	9,2	1,8	89	8,9	2,2	86
2	Impact, 25% k.s. (standard)	0,1	10,9	2,3	87,7	9,8	1,9	88,4	9,2	2,2	86
3	Control (not sprayed)	-	40,5	18,7	-	38,4	16,4	-	29,8	15,7	-

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Table 2: Biological efficacy of Ampact and Impact fungicides in oidium diseases

№ p/p	Options	Consumption rate of the drug is kg, l	Leaves			Vine branches			Fruit		
			Damage rate,%	Disease development,%	Biological efficiency, %	Damage rate%	Disease development,%	Biological efficiency, %	Damage rate,%	Biological efficiency, %	Biological efficiency, %
1	Ampakt, 250 k.e.	0,1	15,1	2,6	90	6,2	2,1	85	5,3	2,3	90,7
2	Ampakt, 250 k.e.	0,15	12,8	1,9	92,7	4,7	1,4	90	4,2	2	91,9
3	Impact, 25% k.s. (standard)	0,15	13,1	1,9	92,7	4,9	1,5	89,3	4,3	2,1	91,5
4	Control (not sprayed)	-	69,2	26,1	-	44,1	14	-	46,8	24,7	-

Table-3: Biological efficacy of Insegar against pests of grape leaf blight

№	Options	Consumption rate of the drug is kg, l / ha	Number of worms in 1 bush tree			Fruit loss,%			reduction in fruit damage %	
			Leaf wrapper	fruit harvest		Leaf wrapper	fruit harvest			
				Consume suitability	heap		Consume suitability	heap	Consume suitability	heap
1	Insegar, (250 g / l) v.d.g.	0,6	256,8	2463,8	2720,6	10,6	4,2	7,4	93,4	90,6
2	Double D, 55% k.e. (standard)	1	405,3	1965,7	2371	12,5	6,7	9,6	89,4	87,8
3	Control (not sprayed)	-	1845,6	675,9	2521,5	93,7	63,4	78,6	-	-

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Table 4: Biological efficacy of Insegar against pests of grape leaf blight

№	Options	Consumption rate of the drug is kg, l / ha	Grape head damage,%		The average damage score of a grape head		Decrease in damage relative to control,%	
			Until processing	After processing	Until processing	After processing	The number of lesions on the head of grapes	Score index
1	Insegar, (250 g / l) v.d.g.	0,6	46,2	3,1	4,2	0,4	94,8	91,5
2	Karate, 5% k.e. (standard)	0,5	43,8	4,8	3,9	0,5	91,5	88,6
3	Control (not sprayed)	-	45,2	58,2	4,1	4,6	-	-

The results showed that when Insegar 250 kg / l was administered at a dose of 0.6 l / ha, the rate of reduction in control was 93.4% compared to 91.6% in total. Double D, obtained as an etalon variant, 55% k.e. The drug was 89.4-87.8% at a rate of 1.0 l / ha. According to the results of the study, it is recommended to add the insecticide to the "List…" of the State Chemical Commission. We also studied the effects of chemicals on grapes, focusing on the organoleptic characteristics of grapes in terms of food safety, ie taste, smell and taste. And the state standards of the fruit were obtained for export.

According to the data obtained, the above-named drugs in the established norms showed positive and high efficacy, but did not adversely affect the quality of grapes.

Conclusion

According to the results of the study, it is recommended to include the insecticide in the list of the State Chemical Commission. We also studied the effect of Insegar, karate, ampak on grapes, focusing on the organoleptic characteristics of grapes in terms of food safety, ie taste, smell and taste. **According to the data obtained, the above-named drugs in the established norms showed positive and high efficacy, but did not adversely affect the quality of grapes.** The drugs used in our study do not change the organoleptic characteristics of the food when it is used in accordance with the established standards.

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