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THE MOST DANGEROUS DISEASES FOUND IN WATERMELON AND THE EFFECT OF BIOLOGICAL AND CHEMICAL PREPARATIONS AGAINST THEM (IN THE EXAMPLE OF TASHKENT REGION)

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ABSTRACT

In this article, the effectiveness of biological and chemical preparations against root rot disease and other fungal diseases, which is one of the most dangerous diseases of watermelon and melon crops grown in the conditions of our Republic, is discussed. In particular, the results of our scientific research conducted on the example of Tashkent region, where watermelons and melons are grown the most, are described.

KEYWORDS: *melon and watermelon, micromycetes, root rot, fungal diseases, biological and chemical treatment*

INTRODUCTION

Plant protection from diseases is an important part of the technological process of growing plants, the main production task of which is to eliminate or reduce crop losses. This task can be formulated as the implementation of complex protective measures to reduce product losses and reduce the harmful effects on plants [2].

The fight against diseases of crops is a complex of agro technical, chemical, biological and other measures. In addition to agro technical practices, breeding and seed-growing activities, which limit the development of fungal diseases, an important role is given to biological and chemical methods of protection.

In Uzbekistan, there is little data on diseases of gourds, as well as on the use of modern fungicides in the fight against fungal diseases, which served as the basis for studying the effect of these chemicals on the eradication of diseases [3, 4].

Since 2013, we have been studying diseases of gourds in the conditions of the south of Uzbekistan - Tashkent region. During the study, diseases were noted: fusarium and root rot, spotting and powdery mildew. The main and most common diseases of gourds are: root rot, wilting, fungal raids - powdery mildew and necrosis - spotting. Studying the harmfulness of fungal diseases of gourds in the farms of the republic, it was found that fungal diseases, developing throughout the growing season, affected all the vegetative organs of plants and caused great harm to agricultural crops.

One of the issues facing us was the approbation of the system of protection of gourds from the development of diseases, where specific measures were applied, in particular, the use of the *Trihoderna lignorium fungus* as an antagonist of soil rot pathogens in the fight against Fusarium, dressing of planting material, the use of specific fungicides, norms their applications.

Root rot, in particular Fusarium, is currently one of the most dangerous diseases of vegetable (melon) crops in Uzbekistan [3, 4].



RESEARCH METHODS

The work involved classical methods used in mycology and phytopathology, according to "Methods of experimental mycology" (Dudka et al., Kirai Z. et al., Chumakov A.E. [6])

Identification was carried out according to the determinants Vasilyevsky N.I., Karakulin K.D. (1937), Litvinov M.A., Pidoplichko N.M. (1977-1978), as well as "Mushroom Flora of Uzbekistan" (1983-1997).

The calculation of biological effectiveness against diseases was carried out according to the "Guidelines ..." of the State Chemical Commission of the Republic of Uzbekistan (Khodzhaev, 2004).

RESULTS

During our own surveys of crops, we found pathogens of root rot (Fusariosis) *F.oxysporum* _ f.sp. *melonis* (L. et C.) Sn. et Hans , withering of watermelons - *F. oxysporum* Schlecht. f.sp. _ *niveum* (EFSmith) Sn. et Hans , root rot and wilt of *Fusarium solani* (Mart.) App. et Wr. f.sp. *cucurbitae* Sn. et Hans . [one].

It should be noted that in the case of the fight against root rot, we used biological preparations - Bist s.k. and Trichodermin s.p. As a result of the study, it was noted that the damage to crops was noted in the range of 3.3-3.5%.

The biological effectiveness of the use of biological preparations Bist and Trichodermin is more than 70% (table 1). Efficiency lasts up to 30 days.

Table 1.
Biological efficacy of preparations Bist and Trichodermin against Fusarium and root rot.

A drug - seed treater	Biological efficiency, %					
	15 days		30 days		45 days	
	watermelon	melon	watermelon	melon	watermelon	melon
Bist with . to .2.5 l/t	77.3	78.8	85.7	69.6	58.8	62.8
Trichodermin s.p.1 g/kg	74.8	84.8	74.3	76.0	72.5	69.7

Before testing the drug Previkur SL 722 powdery mildew was noted on the leaves of watermelon with an intensity of development - 3.3-4.3% of foliage damage.

From the data given in Table 2 it can be seen that the biological effectiveness of the preparations Previkur SL 722 v.r.k., Falcon 46% a.e., Alto Super 33% a.e. was studied. The maximum efficiency of the drug Previkur SL 722 v.r.k at the rate of consumption of 1.5 kg/ha was observed on the 15th day and amounted to 91.9%. by day 30, it slightly decreased to 84.1%. In Alto Super 33% a.e. at a consumption rate of 0.3 l/ha, the biological efficiency on day 15 was 84.4%, on day 30 it decreased to 71.9%. For the drug Falcon 46% a.e. at a rate of 0.4 l/ha on day 15 was 83.1%.

Table 2.
Biological efficiency of the fungicide Previkur SL 722 against powdery mildew of watermelon

Experience options, fungicide application rates	Biological efficiency of the fungicide Previkur SL 722 against powdery mildew of watermelon		
	Q/D 15 days p.o.	N/A 30 days p.o.	N/A 45 days p.o.
Previkur SL 722 , 1.5 kg/ha	91, 9	84.0	75.3
Falcon 46% a.e. 0.4 l /ha	83.1	77.0 _	67.1
Alto C uper 33% a.e. 0.3 l/ha	84, 4	71.9	62.8

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