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IBI (India) = 4.260  
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SOI: [1.1/TAS](#) DOI: [10.15863/TAS](#)

### International Scientific Journal Theoretical & Applied Science

p-ISSN: 2308-4944 (print) e-ISSN: 2409-0085 (online)

Year: 2021 Issue: 10 Volume: 102

Published: 24.10.2021 <http://T-Science.org>

QR – Issue



QR – Article



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## STUDY OF THE EFFECT OF FUNGICIDES IN FIELD CONDITIONS FROM VEGETABLE CROPS AGAINST TOMATO DISEASE

**Abstract:** It is known that the tomato plant is one of the most important food crops. In recent years, tomatoes have been found to cause various diseases and damage to crops. One such disease is tomato fruit black mold (*alternariosis*). The *lycopersici* stimulates the *gifyomycete* fungus. The leaves, stems and fruits of the plant are damaged. On the fruits of tomatoes develops a disease of dark brown or black, sunken appearance, and they pass into the fruit. The resulting disease is more common in areas where the fruit is attached to the twig.

**Key words:** microorganisms, fungi, vegetation, fungicides, *alternariosis*, vegetable crops, tomatoes.

**Language:** English

**Citation:** Xalmuminova, G. K., & Sulaymonova, G. N. (2021). Study of the effect of fungicides in field conditions from vegetable crops against tomato disease. *ISJ Theoretical & Applied Science*, 10 (102), 813-815.

**Soi:** <http://s-o-i.org/1.1/TAS-10-102-89> **Doi:**  <https://dx.doi.org/10.15863/TAS.2021.10.102.89>

**Scopus ASCC:** 1100.

### Introduction

UDC 632.9+582.288

In Uzbekistan, it has been reported that *Alternaria solani*, a fungus caused by the fungus *Alternaria solani*, has been detected in greenhouses and has affected 70-80% of crops, but according to the author, the disease is most likely caused by the fungus *A. alternata*. The most important of the conditions necessary for the strong development of the disease - the presence of high humidity for a long time. By removing the lower leaves of the tomato and ensuring that the humidity is 70-80% by heating and ventilating the greenhouse, the crop will not be severely damaged. In order to prevent the accumulation of infection, damaged plant debris should be removed from the greenhouse and disposed of. If there is a strong risk of disease development, it is recommended to spray the crop fungicide. If fungicides are used regularly against the pathogen, it is necessary to develop a carefully prepared program of application of the fungicide, taking into account the possibility

that the pathogen will also develop resistance to them [7,10].

In order to increase the yield and quality of vegetable crops grown in the country, the use of modern technology in their cultivation, the introduction of productive and local varieties, as well as a number of factors play a special role in effective protection of vegetables from various diseases [1,4,2].

### Research results.

The fight against the disease in the fields is carried out on the basis of complex agrotechnical, biological, chemical and other measures. The importance of chemical control measures in the protection of the plant and its crop is high. The chemical method has several drawbacks and pollutes the environment. But their effects are fast and highly effective. In the research of S.Ya. Popov and others we can find information about anti-disease drugs and the history of their use. Sulfur preparations have been used as fungicides for many years and are still widely used in agriculture [3].

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The chemical method has several drawbacks and pollutes the environment. But their effects are fast and highly effective. Proper use of fungicides is important in protecting crops and increasing yields.

The list of pesticides and agrochemicals allowed in the territory of the Republic of Uzbekistan (list, 2016) includes 124 fungicides and 69 seeds. Of such a wide range of drugs, 12 have been recommended for alternariosis of vegetable plants [8,11].

According to Khojaev, the correct use of chemicals is important in protecting crops and increasing productivity.

Insufficient research on the effectiveness of fungicides against diseases of vegetable crops, as well as the use of fungicides against fungal diseases, prompted the implementation of these studies [5,6,9].

During the study, the biological efficacy of Folicur 25% em.k. against tomato alternariosis was studied, the results obtained are presented in Table 1. If we pay attention to the data in the table, the consumption of Folicur 25% em.k drug from 0.5 l / ha to 1.0 l / ha - when used in moderation, the disease is 65.0% to 2.0% compared to control, 0.5 l / ha. Expenditures were reduced from 65.0% to 5.0%.

**Table 1. Biological effectiveness of Folicur 25% em.k fungicide against alternariosis during the growing season of tomatoes,% (Tashkent region, Tashkent district "Yakhyakhon Ziyon Nur Agro" farm 2014 y).**

Experiment options	Preparation of use, kg / ha	Damage %			Preparation Biologically effective, %			
		Until processing disease development, %	day			day		
			15 days	30 days	45 days	15 days	30 days	45 days
Folicur	0,5	65,0	5,0	12,0	35,0	69,4	66,2	45,3
Folicur	1,0	65,0	2,0	14,0	35,0	<b>73,4</b>	63,7	45,3
Unprocessed control	-	65,0	76,0	81,0	86,0	-	-	-
EKF <sub>05</sub> =						2,3		

Folicure 25% em.k drug at a dose of 0.5 l / ha to 1.0 l / ha - its effectiveness was observed to be high, ie from 69.4% to 73.4%, increasing the dose leads to a decrease in the effectiveness of the drug arrival was noted. So, Folicure 25% em.k. Consumption of the drug at around 1.0 l / ha is a good norm in the fight against the disease. Based on the results obtained, we can conclude that the follicle is 25% em.k. application

of the drug against alternariosis of tomatoes is highly effective.

The most effective rate of application of follicul preparations for alternariosis in vegetable crops is 1.0 l / ha. So Folicure 25% em.k. drug gives good effect against alternariosis, we now plan to try drugs for alternariosis in vegetable crops that have not been used before.

**Table 2. Infection of tomatoes with alternariosis during the growing season,% (Temir Kadam farm, Qibray district, Tashkent region, 2015)**

Experience variety	consumption rate, kg / ha, l / ha	until processed	15 days	30 days	45 days
Ridomil Gold MTs 68% s.d.g.	1,5	74,0	5,0	13,0	35,0
	2,5	74,0	2,0	10,0	32,0
Fundazol 50% n.kuk. (default)	1,5	77,0	9,0	19,0	39,0
	2,5	77,0	6,0	27,0	44,0
Unprocessed control	-	77,0	87,0	90,0	97,0
EKF <sub>05</sub> =			0,9	1,4	2,4

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Two field experiments were conducted to test new drugs against alternariosis during the growing season of plants.

In our first experiment, Ridomil Gold MTs was found to be 68% s.d.g. preparations were obtained. For comparison, Fundazol 50% n.kuk. fungicide was applied. During the experiment, 77% of the plant leaf damage was noted. Less damage to the fruit was observed (Table 2).

Ridomil Gold MTs, when used at a dose of 1.5-2.5 kg / ha, is effective and protects the plant from disease throughout the growing season.

Based on their experiments, we can conclude that both drugs are highly effective in tomato alternariosis during the growing season of the plant.

## Conclusion.

Alternariosis fungal disease is very dangerous for tomatoes, and if no measures are taken to control it, the quantity and quality of the crop will fall sharply. The most effective rate of application of folicul 25% emk drugs for alternariosis in vegetable crops is 1.0 l / ha. Folicur 25% em.k. When applied at a consumption rate of 0.5 to 1.0 l / ha, plant damage decreased from 65.0% to 2.0%.

When Fundazol 50% n.kuk was used at a consumption rate of 2.5 kg / ha, plant damage decreased from 77.0% before treatment to 2.0% after 15 days.

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