

NAVIGATOR SUS.K. BIOLOGICAL EFFECTIVENESS OF THE DRUG

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Abstract

Like other branches of the national economy, tomato cultivation is being developed with the help of innovative technologies. Among the vegetable crops, the tomato fields are being expanded and updated. Particularly high-yielding and high-quality varieties of tomatoes ripening in different periods, as well as varieties resistant to pests and diseases, are grown.

To achieve a solution to these problems,

it is necessary to develop a system of scientifically based measures aimed at combating plant pests and various pathogens.

As a result of pest damage in tomatoes in the greenhouse, the taste and product quality of the fruits are lost and the productivity is reduced. As a result, these lead to a sharp increase in the cost of production and negatively affect the profitability of farms.

Introduction

In recent years, consistent measures have been taken to reform agriculture and introduce market mechanisms to this sector. In order to ensure the implementation of the Presidential Decree "On the approval of the strategy for the development of agriculture of the Republic of Uzbekistan for 2022-2030", it is indicated to increase the production of products with high added value from vegetable products, to increase the volume of exports, to develop vacant and dry land, and to increase the area of agricultural crops for export.

of the President of the Republic of Uzbekistan on December 11, 2019

- The decision No. 4549 "On additional measures to further develop the fruit-vegetable and viticulture industry, to create a value added chain in the sector" mentions the establishment of greenhouses in cotton and grain-free lands and their effective use.

Timely preventive and agrotechnical measures against plant pests and diseases have a positive effect on reducing the population of pests and diseases, but they are not enough when pests and diseases develop strongly. Therefore, expanding the types of insecticides approved for use in the Republic of Uzbekistan and their effective use is one of the important tasks in viticulture.

Description of the literature

At the moment, the preparations offered by the companies producing pesticides for the use against pests and diseases of tomato crops are successfully protected against harmful organisms if they are used in the right time during the growing season in the prescribed time and consumption rates .

Today, tomatoes can be damaged by many types of spider mites. Tomato aphids (*Aphis gossypii* Glov.) and greenhouse aphids (*Trialeurodes vaporariorum* West.) are found in Uzbekistan [1].

Greenhouse cockroach (*Trialeurodes vaporariorum* West.). Ituzum is especially damaging to



tomato and potato plants among other crops. These crops can be damaged by both common species: greenhouse and cotton (tobacco) mites.

Greenhouse mite mainly damages crops in greenhouses and flies to open conditions from spring. In outdoor crops, the greenhouse moth does not develop during the hot summer days, but this does not apply to the cotton moth. This type of cockroaches is not adversely affected by high air temperature. That's why, from the 1990s, the cottontail became a dominant species in Khorezm, Bukhara, Surkhandarya regions and Karakalpakstan. It developed strongly both in open field conditions and in greenhouses, partially supplanting greenhouse aphids and becoming the most important. Like any pest, the damage caused by spider mite depends on the stage of plant development from which it begins to be damaged. That is, the earlier the plant is damaged, the more yield it can lose. For example, a tomato crop infected from the seedling stage (if not protected) can become completely unproductive. If it is damaged from the moment of harvest, 1/3 of the crop can be lost [3].

Research location and methods

The research was conducted in the tomato field of "Faradis Thresher" f/x, Ukurochirchik district, Tashkent region. In case of 3 withdrawals from the tested insect, chemical treatment of the plant 3 times during the growing season; the first chemical treatment is carried out when the first generation of the pest appears and tomatoes are harvested, and subsequent treatments are carried out depending on the mechanism of action of the drugs used, each chemical treatment was carried out at the rate of 300 l/ha working solution.

The test experience was carried out by the Research Institute of Plant Quarantine and Protection Sh.T. It was carried out on the basis of "Methodological guidelines for conducting registration tests of pesticides and agrochemicals" (2023) published under the editorship of Khojaev.

The test experiment was carried out in the following scheme.

1. Control - no chemical treatment
2. Mospilan 20% n.kuk. – 0.3 kg /ha (Sample)
3. Navigator shut down. – 100 ml/100 l.

The biological effectiveness of the drug was calculated according to the generally accepted Abbott formula.

In this:

$$C = \frac{Ab - Ba}{A} \times 100;$$

Ab

C - biological efficiency;

A is the number of pests before spraying the drug in the test plot.

Days after spraying a-perparat.

B is the number of pests in the control area until the drug was sprayed in the experiment.

Days after spraying b-preparation.

The biological efficiency was filled in based on the table.

Experimental test results . Navigator sus.k. preparation - 100 ml/100 l of water *The test was carried out at the rate of consumption. As a measure, Mospilan 20% n.cook. preparation - 0.3 kg/ha the drug was selected .*



Experience according to the results of the test against Navigator sus.k. preparation - in the version used at the consumption rate of 100 ml/100 l, on the 3rd day, 81.4% efficiency was achieved compared to the control, on the 7th day, 86.5% efficiency was achieved compared to the control, and on the 14th day, this indicator was 89.7% . .

Size option Mospilan 20% n.cook. In the case of the drug - applied at a consumption rate of 0.3 kg/ha, 84.7% efficiency compared to the control was achieved on the 3rd day, 85.3% efficiency compared to the control was achieved on the 7th day, and on the 14th day, this indicator was 87.8% . . In the control variant, it was observed that the number of ticks did not decrease in the middle of 14 days (Table 1).



1 - fig. Experiment process and result

1 – Table Navigator sus.k against spider mite on tomatoes in the greenhouse. biological efficiency of the drug (Field test-experiment "Faradis Khirmoni" f/x., located in the Urochi Chirchik district, Tashkent region)

No	Variants (name of drugs)	Consumption rate, l/ha	Average number of aphids per leaf, pcs			Biological efficiency in days, %			
			before processing	days after processing			3	7	14
				3	7	14			
1.	Nazorat (ishlov berylmagan)	-	20.3	21.4	25.6	23.6	-	-	-
2.	Mospilan 20% n.kuk. (andose)	0.3	19.8	3.9	3.2	2.8	84.7	85.3	87.8
3.	Navigator sus.k. (syn)	100 ml /100 water	18.4	4.3	3.6	2.4	81.4	86.5	89.7

CONCLUSIONS

100 ml/100 l of water used at a rate of Navigator susc. the preparation showed high efficiency . Biological efficiency was 89.7% on the 14th day .

The drug is easy to use, it quickly forms a working solution when mixed with water. There is no phytotoxicity.



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