



THE EFFECTIVENESS OF THE FUNGICIDE AGAINST TOMATO ALTERNARIA

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ABSTRACT

The publication discusses the use of the fungicide Zerox against tomato Alternaria. Alternaria is one of the most harmful tomato diseases in Uzbekistan.

KEYWORDS: *tomato, fungal diseases, alternaria, fungicide, consumption rate, plant susceptibility, disease development, biological effectiveness.*

INTRODUCTION

Favorable soil and climatic conditions of Uzbekistan make it possible to grow here not only a high yield of vegetables, but also to get two crops of different vegetable crops from the same area. Uzbekistan provides the earliest vegetable production, fully satisfies its needs and exports it in significant quantities outside the republic.

One of the vegetable crops is not used as widely and variedly as tomatoes. This is due to the high content of vitamins, sugars, acids and other minerals in them. The fruits of tomatoes have a pleasant taste. They are consumed in a fresh and pre-processed form. Tomatoes are rich in almost all vitamins and mineral salts, including trace elements and organic acids, they are useful for metabolic disorders, stomach diseases, diseases of the cardiovascular system [4].

To obtain a high yield, in addition to the use of modern technologies for cultivating tomato and improving varietal characteristics, it largely depends on measures to combat diseases that cause enormous damage to vegetable growing, because the development of diseases not only reduces the yield of vegetables, but also worsens their quality and consumer value.

A widespread tomato disease in Uzbekistan is Alternaria-dry spot.

The causative agent of tomato Alternaria solani. Most often, the disease occurs in leaf form in greenhouses. At the beginning of fruit formation, a massive manifestation of tomato alternariosis begins on vegetative organs. Dry spotting can be dangerous in the open field and in greenhouses at the end of the growing season, and during this period mainly fruits are affected, the yield of which is reduced by 50-60%. As a result of injury to tomato fruits and an

abundance of pathogenic spores, during storage, the intensity of the disease increases [2].

Against tomato alternaria, it is recommended to spray plants with chemicals. In connection with this, the production test of the fungicide Zerox, v.c.r. (300 mg / l colloidal silver) was carried out in the field of the "Temir Qadam" farm, Kibray district, Tashkent region, for tomatoes of the "Sulton" variety.

Treatments were carried out on June 3 before flowering, June 18, July 3, 15 days after each treatment. Treatments were carried out with a calculated flow rate of the working fluid of 300 l / ha.

A survey of tomato culture for the infection of Alternaria was carried out during the development of the second pair of leaves. On the surveyed area, 10 samples of 0.25 m each were taken.

The conducted counts for the susceptibility of tomato to alternariosis show that in the control the susceptibility was 45.4% on the leaves, 20.8% on the shoots and 9.5% on the fruits, with the development of the disease 10.6%, 8 \ 9.3 % and 5.2%.

The best result was shown by the fungicide Zerox, c.r. (3000 mg / l colloidal silver) at a rate of 3.0 l / ha, where the biological efficiency was 88.8% on the leaves, 89.1% on the shoots and 88.1% on the fruits, with a plant attack rate of 5.3%, 3.1%, 2.5% and the development of the disease 1.4%, 0.9%, 0.7%, respectively.

The fungicide Zerox, c.r. (3000 mg / l colloidal silver) at the rate of 2.0 l / ha acted slightly less and the biological efficiency was 84.4% on the leaves, 85.8% on the shoots and 85.7% on the fruits, with the development of the disease 2.5 %, 1.6% and 0.6%, respectively. In the experimental variants, an intensive growth and development of plants was observed in comparison with the control.



Biological effectiveness of the reference biological product Revus Top 50% c.c. (Mandipropamide + Difenoconazole) against *Alternaria* at a rate of 0.6 l / ha was 81.0% on leaves, 82.3% on shoots and 83.3% on fruits, respectively, with 8.2% plant attack, 3, 5%, 1.7% and disease development 2.2%, 1.3%, 0.7%.

Thus, the fungicide Zerox, c.r. (3000 mg / l colloidal silver) is highly effective when used against tomato *Alternaria* at a consumption rate of 2.0-3.0 l / ha; therefore, the fungicide can be recommended for combating this disease on tomato.

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