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Verification of the influence of the biological additive PGE Flora Forte on the production of tomatoes

Growing tomatoes using biological additives PGE Flora Forte.

The issue of verifying the biological effect of additives on the yield PGE Flora Forte tomato varieties Tornado F 1 , was solved at Central Agricultural University in Olomouc.

When processing the above issues was taken into account general knowledge that tomatoes are already a number of years the worlds number one vegetable they are rich in a variety of vitamins and tetraterpen or lycopene a substance found in red tomatoes apples. People, who have higher levels of lycopene content, show a much lower risk of developing a variety of tumour types. Lycopene content is not lost after heat treatment of tomatoes a lesser amount of lycopene found in tomato paste and or juice from tomatoes.

To verify the effect of biological additives PGE Flora Forte on the yield of tomato varieties Tornado F 1 plants were subject tomato under foliage applications under the heel drive lane in plants, but also on the leaf surface additive PGE Flora Forte.

The chosen method to compare two versions of the test:

Variant **"K"** (15 plants per 9.6 square meters) not contained a biological additive and variant **"V"** (15 plants per 9.6 square meters) were treated with 1 x biological additive PGE Flora Forte.

The biological additive PGE Flora Forte was applied as a spray using a hand sprayer knapsack full time in a dose of 3 l/ha. The objectification of the test results the test was repeated under the same conditions again. The results demonstrate that applying the biological additives PGE Flora Forte increased to grow tomatoes themselves and also their yield increased nutrient status in tomato plants as well as the contents of the macro nutrients N, P and K and Fe, Mn and Zn.

From (Table 1) it is evident a positive effect on yield PGE Flora Forte tomato fruit varieties tornado Tornado F1. The second test confirmed the results of the 1.test.

The yield of tomatoes from each parcel:

Table 1

	Test order numer 1		**Test order numer 2**	
	Plot of land K1 unsprayed PGE Flora Forte	Plot of land V1 1x spraying PGE Flora Forte	Plot of land K2 unsprayed PGE Flora Forte	Plot of land V2 1x spraying PGE Flora Forte
The yield of individual plots (g)	69 133	91 230	69 420	89 850
The yield of individual plots (kg)	69,133	91,230	69,420	89,850
Adjusted income from individual plots in kg per 100 m2	**720,135** kg/100 m2	**950,313** kg/100 m2	**723,125** kg/100 m2	**935,938** kg/100 m2
The difference yields from individual plots extrapolated to 100 m2		+ 230,178 kg/100 m2		+ 212,813 kg/100 m2
The average yield of fruits per plant [kg]	4,609 kg	6,082 kg	4,628 kg	5,990 kg
The difference in average yields of fruits per plant [kg]		+ 1,473 kg		+ 1,362 kg

After application of biological additives PGE Flora Forte tomato fruit yield of Tornado F1 from 100 m^2 increased by **Test order numer 1** about 230,178 kg, which is an increase of 31, 96 % in the **Test order numer 2** about 212,813 kg, which is an increase of 29,43 %.

Statistically (Table 2) were evaluated by weight of the fruit varieties of tomato Tornado F1:

Table 2-1 Statistical characteristics of the tests – fruit weight

Statistical characteristic	**Statistical characteristics of the test sequence number 1**	
	K 1	**V 1**
The arithmetic average - weighted form	**112,70**	**115,30**
Average absolute deviation - the weighted form	6,00	5,83
Scattering - weighted form	45,86	42,46
The standard deviation	6,772	6,516
The variance	**22**	**20**
Coefficient of variation	0,060	0,057

Table 2-2 Statistical characteristics of the tests – fruit weight

Statistical characteristic	**Statistical characteristics of the test sequence number 2**	
	K 2	**V 2**
The arithmetic average - weighted form	**110,00**	**113,90**
Average absolute deviation - the weighted form	5,60	5,20
Scattering - weighted form	42,30	35,24
The standard deviation	6,504	5,936
The variance	**20**	**18**
Coefficient of variation	0,059	0,052

From Table 2 shows that the use of biological additives PGE Flora Forte did not significantly affect the variability in w fruit eight monitored plants in both variants. It can be stated that in plants that have been treated biological additives PGE Flora Forte with a slight increase fruit weight balance.

From Table 2 also shows that the treated plants observed biological agent, increased the average weight of the fruit. Demonstrating the positive effect of biological additives PGE Flora Forte at the edible variety tomato Tornado F1 in the Czech Republic.

Tests were performed on small plots using standard methods corresponding to the means and methods customary in the cultivation of tomatoes in horticulture and in the home.

Due to the objectification of the results obtained it is necessary according to the applicable standards of research, repeat the test with biological additives PGE Flora Forte to yield not only tomato varieties Tornado F1 but also to other varieties used in food chains.

The following are the test results influence and impact of biological additives PGE Flora Forte to yield one of the most common types of vegetables in the food chain to a select variety of edible tomato Tornado F 1.

When word processing was used knowledge gained from solving professional essay on Central Agricultural University in Olomouc: "Verifying the effect of additives PGE Flora Forte on yield of tomatoes“

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