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ESTABLISHED IN 1974

September 22, 2022

REPORT

Conducting tests of organic fertilizer Biodon Agro on tomato.

1. Preparation: Biodon Agro – organic fertilizer. The active substance is dihydroquercetin, the concentration of the active substance is 30 g/l. Thanks to the main active substance dihydroquercetin, obtained from the wood of Daurian larch, the preparation is able to strengthen the resistance of cultivated plants to diseases, pests and adverse climatic conditions. In addition, it has a stimulating effect on the immune system of plants, preventing and significantly reducing the damage of fungal and bacterial diseases to plants.

2. The purpose of the test: to establish the effectiveness of the test Preparation on tomato.

3. Object of research: tomato in the open soil.

The average tomato fruit ripening occurs on the 103-109th day after germination. The plant is determinant, non-stemmed, medium-branched, medium-leaved, 50-70 cm high. The first inflorescence is laid over the 6-7-th leaf, the subsequent ones after 1-2 leaves. The fruit is rounded, smooth, red, dense, weighing 75-105 g. Yield - 3.7-4.7 kg/m.

4. Soil and climatic conditions.

The thickness of the humus horizon exceeds 150 cm . Soils are rich in total potassium; organic phosphates are contained in an amount of 43%. The soil has a high moisture-retaining capacity, but are characterized by a low range of active moisture. Of the total amount of soil moisture, only less than 50% belongs to the category of active or productive moisture.

Climate - the area of the experiments is characterized by relatively moderate temperatures, with maxima usually not exceeding 31 ° C in summer. On average, only 100-200 mm of rain falls per year, and most of this amount falls during the winter months. The highest temperatures occur in July and August with a maximum average of 34°C . Winter temperatures usually range from 9°C at night to 19°C during the day.

Weather conditions during the growing season of agricultural plants differed significantly from the average perennial. The early onset of drought and high temperature accelerated the passage of the phases of vegetation and leaf aging, weakened the process of formation of reproductive organs.

Scheme and methodology of research.

Scheme of experience:

- Control plot - without processing;
- Biodon Agro - spraying of plants: 1st - at the beginning of flowering of the first brush, 2nd and 3rd - with an interval of 10 days (60 ml / ha, 400 l/ha);

The area of the plot is 10 sq. m., the repetition is fourfold.

5. Research results

Biodon Agro enhance the growth of tomato plants in height (62.5-68.9 cm, in the control - 57.8 cm), as well as the increase in the raw and dry mass of aboveground organs (157.74-166.89 and 142.14 g, 46.22-50.07 and 40.37 g, respectively). A significant excess of the dry mass of aboveground plant organs of experimental variants over those of the control is due to the acceleration of assimilation processes under the action of these Preparations.

The results of the studies showed that the Preparation, by enhancing the viability and productivity of the leaves, thereby prolonging their life, contributed to an increase in the content of pigments in the leaves (chlorophyll - 1.33-1.41 mg /g, carotene - 0.77-0.79 mg /g, against the control group - 1.12 and 0.70 mg /g. respectively).

By increasing the accumulation of dry matter (29.3-30.0%, in the control - 28.4%) and their outflow from the leaves into the fruits, the tested Preparations contribute to the formation of fruits. Analysis of the data in Table 1 shows that in the experimental variants, larger fruits were formed in size (diameter - 7.6-8.1 cm, in the control - 5.9 cm) and weight (88.74-94.21 g, in the control group - 79.82 g) of high quality (sugar content — 3.4-3.6%, in the control — 3.1 %; vitamin C - 32.1-33.0 and 25.4 mg/100 g).

Table 1 - The effect of the tested Preparations on the formation of tomato fruits

	Diameter, cm	Fruit weight, g	Content	
			sugar, %	vitamin C, mg/100 g
Control plot - without processing	5,9	79,82	3,1	25,4
Biodon Agro - 3-fold treatment of plants (60 ml/ha. 400 l/ha)	8,1	94,21	3,6	33,0

The strengthening of growth and shaping processes contributed to an increase in the yield of tomatoes. In experimental plot, the yield of tomatoes was obtained (Table. 2), significantly exceeding that of the control plot (245.8-254.6 c/ha, in the control - 215.4 c/ha). The yield increase (18.2%) was obtained in the variant with the treatment of tomato plants with the preparation Biodon Agro three times: The 1st treatment is at the beginning of flowering of the first brush, the 2nd and 3rd - with an interval of 10 days.

Table 2 - The effect of the tested preparation on the yield of tomatoes

	Yield, c/ha	Increase	
		c/ha	%
Control plot - without processing	215,4	-	-
Biodon Agro - 3-fold treatment of plants (60 ml/ha. 400 l/ha)	254,6	39,2	18,2

6. Conclusion.

Biodon Agro has a high physiological activity. Its application in the technology of tomato cultivation contributes to the strengthening of growth processes and photosynthesis. In all experimental variants, more powerful plants were formed in terms of habitus. At the same time, the intensity of the outflow of assimilates from photosynthetic leaves to the reproductive organs is significantly higher than in the control variant, which is expressed in a quantitative and qualitative increase in the elements of the crop structure.

The maximum increase in the yield of tomato fruits (18.2%) of good quality was obtained in the variant with three-fold treatment of tomato plants (1st treatment at the beginning of flowering of the first brush, 2nd and 3rd - with an interval of 10 days) with Biodon Agro at a dose of 60 ml / ha.

Thanking you in advance for your kind cooperation

Cordially yours,

Mr. Seifalla Gaara

General manager

Gaara Establishment for Import & Export

