

# ENVIRONMENTALLY FRIENDLY PRODUCT IS A PLEDGE OF OUR HEALTH!

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## **Annotation**

*At present, the provision of food security in maintaining a healthy lifestyle remains largely dependent on the composition of fruits and vegetables. It is known that the excessive use of mineral fertilizers in increasing the yield of agricultural products increases the amount of nitrate in the composition of fruits and vegetables from the permissible norm. Also, the application of biological (green manure) fertilizer, which is an alternative to mineral fertilizers in the prevention of poisoning from nitrate, is considered acceptable in all respects.*

*Keywords: organic product, environmentally friendly product, nitrate content, confectionery, acidity, dry matter, nutrients in the soil.*

**Introduction.** In our country the improvement of food safety is urgent to improve the health of the population. To increase the yield of agricultural products, the excessive use of nitrogen fertilizer affects the quality of food, in particular, it should be noted that the increase in the amount of nitrate in fruits and vegetables from the norm negatively affects human health. In recent years, a number of reforms have been carried out in our Republic to ensure food security of the population, to fully satisfy their need for fruit products, to process and export them, to

grow products in ecologically clean form. In particular, there are a number of decrees and rules aimed at food security in the Republic, including the decree of the president of the Republic of Uzbekistan “on measures to further ensure food security of the country” PD N5303 in 2018 year 16 January. it is defined as “filling the market with quality, safe, cheap food products”.

**The purpose of the study** is to develop a technological system of cultivation of environmentally friendly, organic products in terms of hygiene, as well as to protect the soil from mineral contamination.

**Methods of the study.** The experiments were conducted on the basis of methodological guidelines and scientific recommendations such as “Methods agrochemical ground tests and plants” (1979), “Methodology of government’s sorting tests of agricultural crops” (1983).

Biochemical analysis of fruit content A.I.Ermakova on the method presented in the method guide "Methods of biochemical testing of plants" published under the editorship of Ermakova , the amount of nitrate contained in the fruit was carried out in the instrument Soex nitrate-tester - 2 (2009 y.), the sugar content of the fruit was carried out by a refractometer, the acidity was titrated, and dry substances were taken in the Bertran method. The amount of humus in the soil tillage layer was conducted by the I.V.Tyurin methods, gross nitrogen, phosphorus, potassium content I.M.Maltsev and L.P.Gritsenko, the replaceable potassium flame photometer, nitrous nitrogen in the methods of Granvald- Lyaju, as well as the action phosphor B.P.Machigin methods.

**Results of the study.** Experience was conducted in 2014-2016 years in the foothill region of Zarafshan valley at the National Research Institute of gardening, viticulture and winemaking named after M.Mirzayev. Samarkand station of were Peach Garden. In the experiment, mineral fertilizers and biological (green manure) fertilizers, which are an alternative to them, were used. Also analyzed them is the gross and moving amount of soil structure.

Table 1

**The amount of nutrients in the soil after mineral and biological fertilizers in the experimental garden**

Options	Humus %	Gross %			Movable form, mg/kg		
		N	P	K	N-NO <sub>3</sub>	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
<b>Before the experiment</b>	0,80	0,08	0,08	1,25	6,50	25,4	262,6
<b>Mineral fertilizers (POH+N<sub>120</sub>)</b>	0,81	0,16	0,10	1,26	8,62	25,9	274,5
<b>Biologic fertilizers (green manures)</b>	0,84	0,14	0,13	1,30	7,05	30,3	291,5

In this presented table, it was found that if the amount of humus before the experiment was 0,80%, the biological fertilizer in the variants increased by 0,84% for three years. The amount of

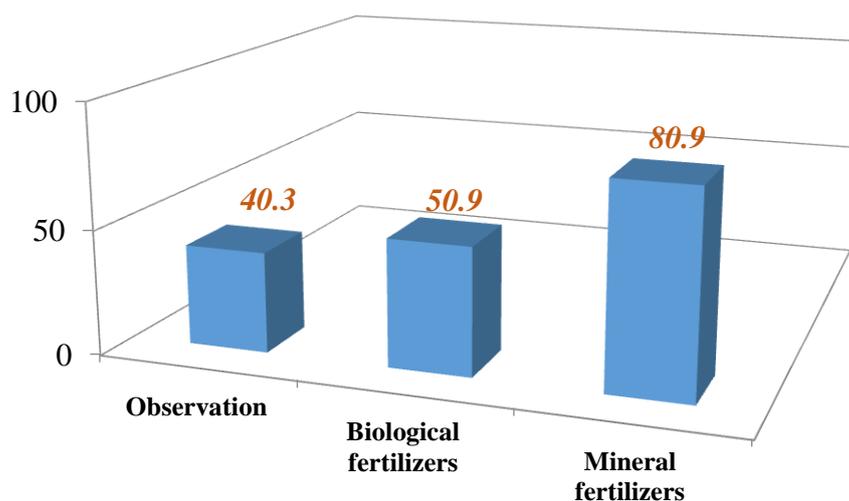
gross nitrogen, phosphorus and potassium was 0,08% before the experiment, and after the experiment it was found that their mobility forms increased accordingly, by species 0,10-0,13%. In the variant fertilized with mineral fertilizers, there was a rapid assimilation of minerals in the soil, as well as rapid accumulation in the composition of fruits. It was also found that when the chemical analysis of the fruit composition, more nitrate was collected in the variant fed by mineral fertilizer than biological fertilizer.

The quality of the fruit composition is an important condition of export requirements. Fruits provide the human body with its own healing properties, aroma, taste, the need for vitamins. However, now, due to the excessive use of mineral fertilizers in order to increase the yield of fruits and vegetables, the amount of nitrate in the composition of the fruit is also adversely affected.

In the experiment, the amount of nitrate in fruit trapping in the biological fertilizer option was 50,9 mg/kg, while in the mineral fertilizer fed variant this figure was 80,9 mg/kg. The permissible amount of nitrate for berries was required to be 60 mg/kg, in this variant it was found that 30, 0 mg/kg of excess nitrate was collected (1 picture).

*Picture 1*

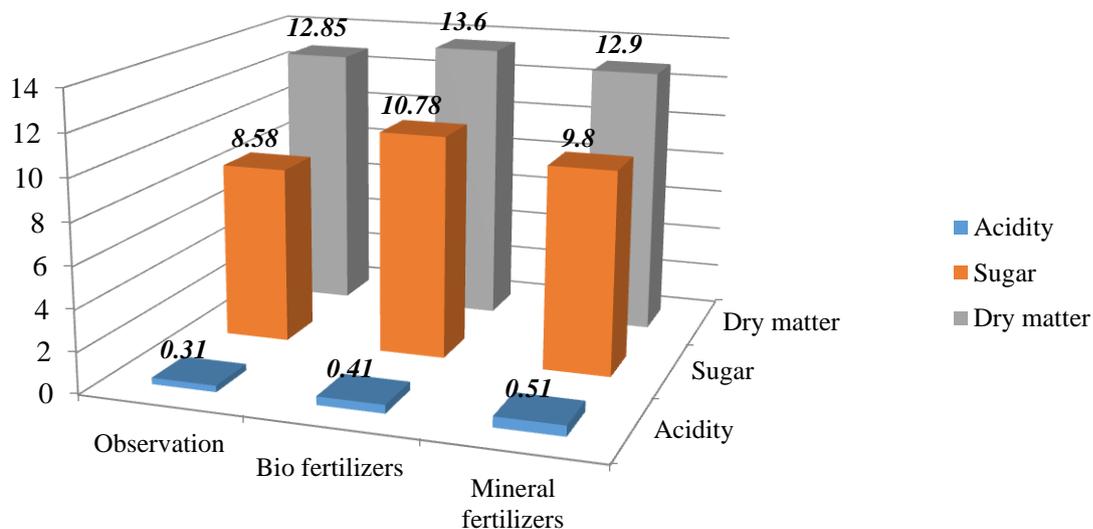
#### **The effect of fertilizer types on the amount of nitrate contained in peach fruit**



Currently, attention is paid for food insecurity in World Health and nowadays, poisoning from nitrates is observed due to the abundance of nitrates in the composition of fruits and vegetables. The daily amount of nitrates entering the human body should not exceed 600 mg. On average, 60 kg of body weight 222 mg of nitrate is considered as daily nitrate norm. And the data obtained above revealed that it affects not only the nitrate itself, but also the sugar and acidity in the composition of the fruit, which is the driving factor for them.

In the experiment, it was found that mineral fertilizers affect not only the amount of nitrate contained in the fruit, but also the sugar content, acidity and dry matter of the fruit (Figure 2).

Picture 2

**The effect of fertilizer types on the chemical performance of peach fruit**

As is known from Figure 2, the sugar content in the experiment was 8,65% in the control (without fertilizers) option, it was found that the acidity was 10,80% in the biological fertilizer (green manure) option, while the acidity was 0,30% in the control and 0,40% in the biological fertilizer option was 0,51% higher than in the control. It was also found in the experiment that dry matter is 12,85% in the control option, which is 13,6% higher in the seer biological fertilizer option than in the mineral fertilizer option 0,9.

**Conclusion.** The increasing population in the world also leads to an increase in the demand for food. And the quality of food is a pledge of Health. Based on the above data, it can be concluded that consumption without analyzing the amount of nitrate contained in fruits and vegetables is dangerous for our health. And not increasing them from the daily norm guarantees our health. And the presence of sugar, acid and vitamins, as well as other biologically active substances in the daily intake of fruits and vegetables, means a quality diet. The regulation of the norm of the daily intake of nitrates into the body is one of the factors that every person should observe.

**Literature**

1. Abdumuminova R.N. Effective use of Natural Resources and techniques factors in gardening. // Scientific application "Agro science" of the Journal of Agriculture of Uzbekistan. - Tashkent, 2016. – № 6. - P 42-43.

2. Abdumuminova R.N. Requirements of peach to external environmental factors. // Journal of Agriculture of Uzbekistan. - Tashkent, 2017. – № 8. - P 40.

3. Botirov X.F., Abdumuminova R.N.Y. The biology and technology of cultivation of green manure crops. // Magazine of Actual problems of modern science. – Russia, 2018. – № 6. - P 128-132.

4. Abdumuminova R.N. Environmental factors and peach yield. / Materials of the scientific-practical conference devoted to the "Year of prosperity" of professors and teachers on

the topic "science achievements and prospects of agrarian sphere" (10-11 April 2013).)- Part I. - Samarkand, Samarkand State Agricultural Institute , 2013. - P 57-53

5. Botirov X.F., Abdumuminova R.N. Winter green manures and peach yields. / The text of the materials of the scientific-practical conference" of UzBU and Veterinarian Research Institute factors of development, yield and quality improvement of intensive garden vineyards in the Republic " (12-13 may 2013).). - Tashkent, 2013. - P 110-112.