

The Importance of Applying Organic Fertilizers to Food Grape Varieties

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Annotation. The positive effect of the combined use of organic and mineral fertilizers on the yield and quality of grapes can be seen in the colorful varieties of table grapes. Because it takes time, they are planted in the vineyards in late autumn and early spring. Currently, manure, which is one of the organic fertilizers, is also applied during the vegetation period.

Key words: Bio humus, organic matter, colorful table grapes, liquid preparation, fertilization, agricultural engineering.

In order to study the influence of organic fertilizer norms on the growth, development and productivity of grape varieties in different regions of the world, their impact on grapes worldwide and in Uzbekistan was studied, recommendations on organic fertilizers were made. Fertilization of grapes, agricultural equipment of grape growing. Currently, scientific work is being carried out to further increase the yield and quality of organic fertilizers, to select varieties of grapes showing the maximum potential yield of varieties, to apply the most optimal norms of mineral fertilizers and growth regulators. Given the high efficiency of organic fertilizers (especially manure) in agricultural production, it is advisable to use these fertilizers in viticulture. For this purpose, waste containing decomposed organic matter (grape plant, plant residues) can be widely used instead of manure. They add phosphorus, potassium, trace elements. Although the application of such organic substances is 2-3 times higher than the application rate, organic fertilizers of 20-40 tons/ha are required every 3-4 years. In this case, the fertilizer is sealed in the ground to a depth of 25-35 cm after quenching the vine bushes for the winter and is introduced with a spreader. It is very effective to make organic and mineral fertilizers in pits measuring 60x60 cm, dug deep digging. Each pit is filled with 20-30 kg of fertilizer.

At present, the integrated use of organic and mineral fertilizers has a positive impact on the yield and quality of grapes. In particular, we can see it in colorful grape varieties. In this case, manure, which is an organic fertilizer, should be placed in special deep trenches, in which it retains water up to 0.5 tons per place depth of 130 cm. And you add 25 kilograms of potassium mineral fertilizer to it, and you fill it with water to make it digestible. After 2-3 days it is given together with watering. This method has a positive effect on the maturation dates of the grapes (table 1)

Table 1

No	Class name	Organic fertilizer standards, t/ha	Influence on the maturation period of grapes (days)
1	Oq husayni	15-17	9-12 days ago
2	Chillaki	10	11-12 days ago

3	Rizamat	20-22	14 days ago
4	Shoxonak	19-21	10-12 days ago
5	Mers	20-21	13-14 days ago
6	Kelinbarm	14-16	8-10 days ago

Also, when laying new vineyards, the soil is deeply ploughed for 2-3 months before planting vines on well-levelled, enriched organic plots, cleared of perennial weeds. In the development of irrigated alternating cultivation under the vineyard before deep ploughing, the main amount of mineral fertilizers (120 kg nitrogen, 90 kg phosphorus and 30 kg potash) and organic fertilizers from 5 to 20 g/ha can be applied. up to tons. At the same time, the vineyards create a favorable water supply regime when cultivating the row of rice and vegetable crops according to the technology of fertilization and irrigation. The big vine bush absorbs almost all useful macronutrients and organic material from the soil. This process is particularly rapid during flowering and fruiting, as not only nitrogen and other essential elements for growth, but also phosphorus potassium are removed from the ground. Fertilizer is almost not required for the young vine, it is enough that it is applied on planting - it will provide it with everything it needs in the next 2 years, especially if you provide it with phosphorous components and humus. The adult bush should be fertilized with easily digestible components (ammonia, nitrogen) 1 week before blooming, 15 days before the start of fruiting and 10-15 days before the stage of technical maturation of fruits. The process under this scheme optimizes the fertilization of the vineyard and provides the vine with many useful substances and minerals. Some gardeners set up chicken coops around vines in the autumn. If it is too concentrated during the winter, all the nitrogen that can get to the plant will be decomposed (there is a lot of it in the chicken droppings). Before flowering this amount will be enough, and the fertilizer in March-April need not feed.

Gradual process of vineyard fertilization.

The first feed (before flowering). In this case, it is better to give preference to liquid preparations. Under the roots it is necessary to sprinkle manure well diluted in the water (2 kg of manure is enough for 10-12 liters of water and this is per 1 square meter). Liquid chicken droppings introduced in autumn can be reused, but the concentration should be reduced to avoid burning roots. It is enough to dissolve 40-50 grams in a bucket of water and use per 1 square meter. Those who prefer mineral fertilizers, should prepare a mixture of nitroph (65 g per bucket of water), boric acid (added in the amount of 5-7 g per bucket). This is the most suitable consistency for the first attachment.

The second feed (13-15 days before the fruit ripens). This is based on the increase of the vegetative mass, as well as the mass of future fruits. The main component to be included is active nitrogen. 6-10 grams of potassium magnesia can be mixed with ammonium nitrate (20 grams per bucket) and applied to 1 square meter.

The third feed (feed - 2 weeks before harvesting). This is aimed at increasing the mass of the fruit and increase their sweetness. To do this, you need to add 20 grams of superphosphate and potassium (dissolved in 10 liters of water). In addition, the «composition» can be used in the form of juice prepared from a mixture of mineral fertilizers with organic fertilizers well dissolved in water.

In this case, bio humus organic fertilizer is better to use simultaneously with cultivation before planting. 50-55% of bio humus is introduced in the spring for

ploughing, 10-15% during fruiting and the remaining 30-40% before ripening. It quickly sprouts seeds and increases the yield, enriches the soil with organic substances. Calculated doses of bio humus 3-4 t/ha. It is better to apply fertilizers simultaneously with cultivation before planting. With local organic fertilizers, the dose can be reduced by 300-400 kg/day. When working with bio humus it is necessary to follow the usual safety rules. Bio humus is safe for humans, animals and bees. The application of fertilizers is prohibited in the following cases:

- fertilizing water-saturated, flooded, frozen or snow-covered soil;
- when fertilizing steep slopes, where there is a risk of run-off into surface water, seepage into groundwater and out of crops.

If you follow these instructions and do everything according to schedule, you can get a great harvest. It should also be noted that this process allows not only to get more when forming a bush, but also to keep it in winter, because thick and healthy branches easily withstand cold.

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