

Influence of the Amount of Organo-Mineral Feeding and the Number of Watering on the Parchish Productivity of the Mother Seedling of Plum Grafts

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Abstract: It is known that the set of external conditions (aeration, feeding and moisture supply) has a great influence on the size of the root system, the nature of its distribution along the soil layer and the formation of its active part, capable of maximally absorbing nutrients. The interaction of the root system with the external environment, its absorption of nutrients from the soil – is an active physiological process associated with the vital activity of the whole organism.

Keywords: Among all fertilizers that are given to fruit plants, nitrogen fertilizers are considered of great importance. It is known that nitrogen is part of the most important nitrogenous substances – amino acids and, above all, nucleic acids, which are present in the chlorophyll nucleus and play an important role in the process of photosynthesis. The growth and development of plants will largely depend on the nature of nitrogen exchange.

The interaction of the root system with the external environment, its absorption of nutrients from the soil – is an active physiological process associated with the vital activity of the whole organism. Agrotechnical measures play a large role in this, first of all, the fertilizing procedure, which allows you to create a strong absorbent surface of the roots. And it is considered absolutely essential for the mineral nutrition of plants.

The roots of legumes develop in a large volume of soil and, in terms of lengthening, are much ahead of the surface of the Earth. Therefore, when developing agrotechnical measures for plant maintenance and soil maintenance, it is necessary to take into account the nature of the location of the root system, which can penetrate deep into the soil, even to its lower layers. This indicates that the roots are capable of rapid growth and strong branching. Among all fertilizers that are given to fruit plants, nitrogen fertilizers are considered of great importance. It is known that nitrogen is part of the most important nitrogenous substances – amino acids and, above all, nucleic acids, which are present in the chlorophyll nucleus and play an important role in the process of photosynthesis. The growth and development of plants will largely depend on the nature of nitrogen exchange. Phosphorus is mainly found in plants as part of complex proteins and other organic compounds that play an important role in the structure of the cell nucleus. It accelerates a number of enzymatic processes.

Lack of phosphorus can slow down the growth force of twigs. Fruit plants belong to the type of plants that require a lot of potassium, and are strongly susceptible to its lack in the soil. potassium is of great importance in the life of plants, it increases the resistance of plants to diseases, improves the quality of hsil. Organic fertilizers are the main means of maintaining soil fertility. it enriches the soil with humus and increases the vital activity of organisms. However, despite the positive qualities of organic fertilizers, due to its numerous lack, it is considered important to find ways to use organic fertilizers more rationally in a number of farms.

The results of our experiments on the use of fertilizers showed that the growth of the active root part of the plum svg 11-19 graft largely depended on the type of fertilizer applied. In these experiments on the

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study of the effect of fertilizer types, the highest effect was obtained when giving nitrogen fertilizer. When phosphorus fertilizer was given, up to 46 growth points were formed in one polygon meter root system. Compared to the control, this figure was 145%. The minimum (128%) formation of active roots was recorded only when potash fertilizers were given.

In paired compounds, plants showed the highest sensitivity to nitrogen-phosphorus fertilizers. The reaction of the active roots to nitrogen-potassium and phosphorus-potassium fertilizer compounds was very close, and the nitrogen-phosphorus mixture slightly dominated. In these fertilizer compounds, the average amount of growth points developed at the 1 m Root was 147, 163 and 143%, respectively, with respect to control. Against the background of complete mineral feeding and especially the use of manure to 5T/ha, the best conditions for the formation of absorbent roots have arisen.

The reason for the strong underdevelopment of absorbent and growing roots when feeding with nitrogen-free one-sided phosphorus or potassium is that when these fertilizers approach parts of the soil, they are absorbed by the soil and pass into compounds that are difficult for plants to master. In the presence of ammonium forms of nitrogen with a physiologically sour reaction, phosphorus and potassium fertilizers dissolve faster and in greater quantities and are absorbed by the plants the more.

A study of mineral fertilizers, widely used in world practice, and the effect of low amounts of organic fertilizers against their background (5 t/ha), showed that applying mineral fertilizers to the soil annually at the rate of N120 P90 K30 allows you to maintain a stable amount of humus in irrigated rich soils at the level of 1.1-0.6. In cases where fertilizers are not given chronically, soil humification conditions worsen, which leads to a decrease in the total humus content in it. Such a decrease is 0.1% in the 10-50 cm layer of the soil. As the root system of plum welds deepens below the spreading 50 cm layer, the amount of humus decreases by 1.8-2.2 times compared to the upper layers, which is definitely reflected in the further development of plants.

The best conditions for a stable capture of the amount of humus in the layer where the root is spread were observed in the experiment in varinate, where 5T/ha of manure is applied against the background of annual full feeding into the soil. In this case, the humus content in the soil was 0.1-0.2% higher than in other experimental options. In this case, fertilizer in a layer of 10-50 CM of soil was stable at the level of 0.9-1.2% over the years provided. In our opinion, this situation is explained by the fact that favorable conditions are created for the activity of soil microflora and the activation of nitrifying processes in the soil.

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