

STUDY OF AGROCHEMICAL ANALYSIS OF SOIL AND WATER ON PLANTATIONS OF SOME BLACKCURRANT VARIETIES IN THE CENTRAL PART OF THE REPUBLIC OF MOLDOVA

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The paper presents the results of the analyzes of the soil on the land intended for blackcurrant, as well as of the water used to irrigate the plants. The research was carried out on the experimental sector in Todiresti commune, Ungheni district. The study objects served the soil samples, taken from the depths of 0–20 cm and 20–40 cm, as well as water from a lake located 3 km from the experimental sector and water pumped from the Prut River. The type of soil intended for the plantation is ordinary chernozem. After the study, it was established that at a depth of 0 - 20 cm the humus has values of 3.23%, and at a depth of 20 - 40 cm it reaches 6.69%. The soil does not contain carbonates, having an alkaline reaction at a depth of 0-20 cm, pH = 8.63, and at a depth of 20-40 cm, pH = 9.35. The content of mobile phosphorus (0-20 cm - 8.08 mg/100g; 20-40 cm - 9.83 mg/100g) and mobile potassium (0-20 cm - 46.16 mg/100g; 20-40 cm - 40.87 mg/100g) from the soil is in sufficient quantities for plant development. As for nitric nitrogen, it is contained more in the upper layer (0-20 cm - 0.65 mg/100g) than in the lower one (20-40 cm - 0.20 mg/100g), an insufficient amount for plant development, thus requiring the annual application of approximately 30 kg/ha. The analysis of water samples from the nearby lake established that it has an alkaline reaction with pH = 9.35, and water with a maximum pH of 8.3 is recommended for irrigation. Dry residue is contained in water in amounts of 7.224 g/l, while less than 1.000 g/l is allowed. The amount of chlorine in the water reached values of 301.04 mg/l, while it must not exceed 250 mg/l. The rest of the water parameters in the lake are acceptable. The water pumped from the river Prut was found to be suitable for irrigation, because it has a pH = 7.0, the chlorine content is 35.5 mg/l, and there is no dry residue. Adjusting the balance in the usual chernozem soil, as a result of irrigating the plants with high-quality water pumped from the river Prut, supplementing the amount of macro-elements necessary for plant development, will make it possible to develop the blackcurrant plantation to obtain quality fruits.

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