

DEVELOPMENT OF SOIL SALINIZATION PROCESSES UNDER CHANGING MOISTURE CONDITIONS IN TAMAN

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In the South of the Russian Federation, Taman farms are the leading producers of grapes and products of grape processing. In this area the problem of soil degradation processes development, particularly of salinity processes, is very important. Along with the intensification of agricultural production, a significant impact on the development of salinization processes is caused by a change in the climatic conditions of the area. Over the past 21 years, the amount of precipitation has increased compared to the average long-term data, and over the 35-year observation period, the average air temperature has risen by 1°C. In this regard, the aim of the project was to identify sources and study the processes of soil salinization in the Taman vineyards. It was found that one of the causes of soil salinization in the South Taman was the movement of mineralized surface waters, composed of saline marine sediments, from mountains and hills down the slope of the terrain on the hollows and micro-pitting. The soil cover of the mountains and hills slopes is characterized by heavy loam and clay texture. High water-retaining and low filtration capacity of these soils contribute to a more intensive horizontal movement of water flows down the slope of the terrain and a weak vertical filtration of water along the soil profile. At the evaporation of moisture, the arrived salts accumulate in the soil and the area of the saline soils expands. The increase in the amount of precipitation and in the average air temperature leads to an intensification of these processes. An increase in the content of harmful readily soluble salts in the root layer of the vineyard soils causes oppression and premature death of vines.

Key words: precipitation, salinity, activity of ions, sodium ions, chloride ions.

