

IRRIGATION POSSIBILITIES OF THE SOILS FROM THE NORTHERN AGRICULTURAL REGION OF THE REPUBLIC OF MOLDOVA LOCATED IN THE RIVER BASIN OF THE PRUT

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Abstract

Currently, irrigation is considered one of the main factors for regulating and improving the soil moisture regime, but the establishment of soil irrigation systems for fruit trees in some agricultural areas of the Republic of Moldova is problematic and deficient. Researching soil cover within the river basins, evaluating the suitability of lands and soils for irrigation, highlighting the ecological problems that may occur, simultaneously with evaluating the quality of various water types suitable for irrigation represent current and important issues for all agricultural areas of the Republic of Moldova. The problem becomes even more pressing in connection with the adoption of the „Regulation on the use of groundwater for drip irrigation of agricultural land occupied by horticultural crops” (GD RM 635/2020 of 19.08.2020). Previously, the irrigated land in the Republic of Moldova included mostly typical and carbonate chernozems and some alluvial soils. The paper aims to avoid and minimize the impact of anthropogenic degradation of soils affected by intensive agriculture, under different crops, including fruit plantations and consequently not compromising long-term investments, such as establishing horticultural plantations, given that groundwater is unacceptable for irrigation, therefore the soils, depending on their suitability, can create ecological irrigation problems. Soil cover and water quality in various localities of the 2nd ecopedological district of the Republic of Moldova were investigated. The soil type of Moșeni village, administrative district Râșcani, consists of cambic chernozems in proportion of 75%. Here, over 100 ha of intensive orchards were established and the water suitable for irrigation is missing.

Key words: irrigation, chernozems, groundwater, water quality, irrigation indices.
