

TECHNICAL AND ECONOMIC EFFICIENCY OF THE DRIP IRRIGATION SYSTEM AT S.C. TRITICUM S.R.L.

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Abstract

The new global challenges related to climate change, the efficient use of natural resources, sustainability or food security require scientifically based and updated answers in order to create the general framework for ensuring the balance of human-economic activity-nature system. The paper aims to highlight the technical-economic efficiency of the drip irrigation system at S.C. Triticum SRL, an enterprise with agricultural profile from Neamț County, Romania. In order to show the efficiency, the technical description, the analysis of the statistical indicators (based on the data provided by the accounting balances made available), the correlation of the irrigation potential with the yield increase and the identification of the productivity of the drip irrigation system were taken into account. The results of the study indicate a significant increase in yield obtained as a result of using of the system compared to the non-irrigated version (and implicitly an increase in the economic result recorded by the company). The research also identifies a much more efficient use of the amount of water in relation with the increase in production. Drip irrigation systems can be sources of added value in a green economy being elements that can contribute to ensuring the technical-economic performance of agricultural holdings. Even if the initial investment is high, requiring additional efforts on the part of the beneficiary, the calculations highlight the profitability of using such a system and also the results can be extrapolated to other economic units in the agricultural sector with similar characteristics.

Key words: climate change, drip irrigation system, technical and economic efficiency