

# THE IMPACT OF MODERN AGRICULTURAL TECHNOLOGIES ON CEREAL PRODUCTION EFFICIENCY IN ROMANIA

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## Abstract

Given the ever-increasing need for food and the challenges of climate change, as well as the availability of European funding for agriculture, it is crucial to adopt advanced agricultural technologies to maintain and improve agricultural efficiency. This study aims to assess the impact of modern agricultural technologies on the efficiency of cereal production in Romania. Using data collected from N.I.S., we examined the relationship between the implementation of technologies such as irrigation systems, farm equipment and chemical fertilizers and grain yield, assessed as the relationship between total production and area of land cultivated, using multiple linear regression. Findings indicate that agricultural technology and infrastructure significantly influence the level of production. The increase in the number of tractors, ploughs and combines indicates a trend towards modernisation and mechanisation in the Romanian agricultural sector. This is in line with farmers' efforts to respond to the growing demand for cereal products and to benefit from the opportunities offered by the NRDP.

**Key words:** modern technologies, production efficiency, cereals, Romania