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THE EFFICIENCY OF DRIP IRRIGATION OF CHERRY ORCHARDS

Key words: cherry orchard, drip irrigation, economic and financial efficiency, productivity of irrigation

Summary

The paper presents an assessment of the economic and financial efficiency of drip irrigation cherry orchard in the three farms. Two of which are located in the district of Grójec (Mazowieckie province) and one in the district of Lipno (Kujawsko-Pomorskie province). The study relied on data relating to the yield on a field irrigated and without irrigation, revenues from the sale and irrigation costs. On the basis of collected data, the crop yields increases and indicators of economic and financial efficiency due to irrigation was calculated. Indicators of economic and financial efficiency were calculated using the discounted cash flow method. Studies have shown that the average increases yields through irrigation was 2.07 t·ha⁻¹ (20%) and individual farms within 1.6–2.6 t·ha⁻¹ (11–29%). It should be noted that the irrigation of cherries orchard have been economically justified because the financial net present value of the project on individual holdings (FNPV), under the conditions of the discount rate \( r = 6\% \), was in the range 7.91–35.36 thousand zł, a financial internal rate of return (FRR) from 15.2% to 51.3%. Indicators FRR much higher than the rate of inflation and interest rates on bank deposits during the study period, but lower than those obtained in other studies on the irrigation of apple orchards, strawberries, vegetables and potatoes.