PRODUCTION AND FINANCIAL EFFICIENCY OF DRIP IRRIGATION OF HIGHBUSH BLUEBERRY

Key words: drip irrigation, economic and financial efficiency, highbush blueberry, irrigation productivity

Summary

The paper presents an assessment of production and financial viability of drip irrigation of highbush blueberry, on the surface of 4.0–4.5 ha. The study was conducted in 2008–2015 in farm. Annual irrigation doses ranged from 145 to 333 mm and were applied in 24–32 irrigation cycles lasting from 3 to 6 hours.

Studies have shown that increases yields thank to irrigation were 6.76 t·ha⁻¹ (132%). Irrigation productivity, measured rise of the harvest per m³ of water – 3.2 kg, but the commercial price of fruit on irrigated plantations are higher average of 1.56 PLN·kg⁻¹ (11%) than from no irrigated plantations.

Economic and financial assessment of carried out using the discounted cash flow (DCF) analysis showed that the financial internal rate of return from irrigation (FRR) was 544%, financial net present value (FNPV) under the discount rate \( r = 6\% \) equals 2039.0 thousand PLN (501.9 thousand PLN·ha⁻¹), and investment cost on irrigation system accounted for only 20% increases of net revenue in the first year of irrigation. These indicators are extremely high and indicate the advisability of blueberries irrigation.