EFFICIENCY OF SPRINKLER IRRIGATION THE CUCUMBERS IN TERMS OF HORTICULTURAL FARM

Key words: cucumbers, economic and financial efficiency, irrigation productivity, sprinkler irrigation

Summary

The paper presents an assessment of the economic and financial efficiency of sprinkler irrigation of cucumbers in vegetable farm production. This assessment was carried out using the discounted cash flow method (DCF). The base of calculation was the results of research parameters which are important in the statement efficiency (including increases in yields and revenues from the sale of cucumbers as a result of irrigation, the capital expenditures and operating costs of irrigation). Studies have shown that increases yields through irrigation in the study ranged from 3.0 to 9.1 t·ha⁻¹ (average 6.6 t·ha⁻¹) and the productivity of irrigation measured rise in the yields per m³ of water was in the range 6.0‒19.2 kg (mean 14.5 kg). The financial internal rate of return (FRR) was 63%, financial net present value (FNPV) under the discount rate \( r = 6\% \) equals 21.8 thousand PLN, \( FBCR = 1.64 \), and the payback time was 1.5 years. These indicator shows that irrigation cucumber is economically justified.