Summary

Irrigation of crops is the basis of their yield increases. Irrigation is needed in the years of low, medium and high rainfall, due to its unfavorable distribution in relation to plants’ demands for water. Farmer's decision to install an irrigation system and conduct irrigation of particular plants is based on economic and financial efficiency of the project. This paper presents an assessment of the economic and financial viability of sprinkler irrigation of potatoes on light soils in terms of a productive farm located in the Grójec district, Mazowieckie voivodship. The research was conducted in collaboration with the farmer, who made available the data on the costs and effects of irrigation, soil quality and agricultural practices applied. Calculations showed that the irrigation of potatoes in the surveyed farm was economically justified, since the financial internal rate of return \( FRR \) of investments amounted to 72.3\%, while the inflation rate during the study period (2008–2012) was in the range of 2.5–4.3\%. The average payback time \( T (r = 5\%) \) was 1.72 years and was much shorter than the technical durability of irrigation system.

Key words: economic and financial efficiency, irrigation, land reclamation