THE EFFECTIVENESS OF PLANT PRODUCTION SYSTEMS IN FARMS USING SPRINKLING IRRIGATION

Key words: plant production systems, sprinkling effectiveness, sprinkling irrigation

Summary

Results of studies on the efficiency of plant production systems based on sprinkling irrigation are presented in the paper. The studies were carried out in the years 1999-2003 in 25 chosen farms in the Kujawy region.

Close relationship between plant production systems applied in the farms and sprinkling efficiency was found. In the farms applying tuber crop-cereal plant production systems the mean increase in plant production value under the influence of sprinkling was 1075 zł × ha⁻¹, the efficiency index attained negative value of -167 and the effectiveness index was 87 %. Sprinkling irrigation in this group of farms was an inefficient measure. In farms applying the tuber crop-vegetable-cereal, cereal-vegetable-tuber crop, tuber crop-cereal-vegetable and cereal-vegetable systems, irrigation was the efficient measure. It resulted in the increase of plant production value from 1620 to 3293 zł × ha⁻¹, in the increase of efficiency index from 27 to 1622 zł × ha⁻¹ and the increase in effectiveness index from 121 to 197 %.

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