ECONOMIC EFFICIENCY OF RED PEPPER FIELD CROP UNDER THE INFLUENCE OF VARIOUS IRRIGATION AND FERTILIZATION METHODS

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SUMMARY

The efficientization of red pepper field crop represents an objective for farmer, so that the profit level would allow him to restart the annual cycle of production process and the satisfaction of its own and family financial needs.

The objective of our research was to make evident the influence of the interactions between the varieties cultivated (c₁-Cornel and c₂-Granat) and some modernized technological steps of the crop technology (irrigation methods applied: a₁ – not irrigated control variant; a₂ – furrow irrigation; a₃ – sprinkling irrigation; a₄ – drip irrigation; a₅ – mixed irrigation – drip + sprinkling) and the types of fertilizers used: b₁ – classical fertilizers: NH₄NO₃, (NH₄)SO₄, K₂SO₄, CaCO₃ and b₂ – modern Kemira-type fertilizers: Cropcare and Ferticare).

The economic efficiency analysis of red pepper crop under the singular influence and of the interaction between the experimental factors (variety, irrigation methods and types of fertilizers used) leads to the conclusion that the biggest profit is achieved from the variety Cornel (c₁) in all four irrigation methods (excluding the control variant not irrigated), under the influence exerted by the Kemira-type fertilizers (b₂), but also the influence exerted by the classical fertilizers (b₁), in comparison with the variety Granat (c₂). A decisive influence upon profit is provided by the Kemira-type fertilizers (b₂), as a consequence of the achievement of high yields, in terms of quantity and quality as well. The biggest profit achieved is in a₂b₂ – 27111 lei/ha (126.9% compared to a₁b₁), then by a₃b₂ – 23761 lei/ha (123.85 compared to a₁b₁). In terms of percentages, the following profits are evident: a₄b₂ – 153.7% (10997 lei/ha) compared to a₁b₁ (100%) and a₂b₂ – 151.1% (4206 lei/ha) compared to a₂b₁ (100%).

We may notice that under the influence exerted by the irrigation method, in two variants the profit is 2-3 times bigger than in the other irrigation variants, namely: in a₅ (mixed irrigation: drip + sprinkling) a profit of 24239 lei/ha and a profit rate of 34.4%, and in a₃ (sprinkling irrigation) the profit is 21480 lei/ha and the profit rate 29.8%; in a₁ (not irrigated control variant) we recorded a loss of -1340 lei/ha, with a negative profit rate of -10.2%, and in a₄ (drip irrigation) a profit of 9077 lei/ha, with a good profit rate, of 25.9%, the lowest profit being recorded in a₂ (furrow irrigation), only 3495 lei/ha (profit rate 14.0%).

As final conclusion, in terms of profit and profit rate, the irrigation methods a₃ (sprinkling irrigation) and a₅ (mixed irrigation: drip + sprinkling) were efficient, and the Kemira-type fertilizers (b₂) were efficient, too, in correlation with the utilization in crop of the variety Cornel.

BIBLIOGRAPHY