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INFLUENCE OF BIOFERTILIZERS ON YIELD AND QUALITY OF LETTUCE GROWN IN THE OPEN FIELD

Aleksandra GOVEDARICA-LUČIĆ^{1*}, Dragana KNEŽEVIĆ¹, Dragica GAGOVIĆ¹, Milica GRUBAČIĆ¹, Milica STOJANOVIĆ²

¹Faculty of Agriculture, University of East Sarajevo, Vuka Karadžića 30, 71 123 East Sarajevo, Bosnia and Herzegovina

²University of Belgrade, Institute for Multidisciplinary Research, Kneza Višeslava 1, 11030 Belgrade, Serbia

*Corresponding author: a.govedaricalucic@pof.ues.rs.ba

Abstract

The production of lettuce is very profitable due to the short vegetation period and the possibilities of its cultivation throughout the year. On average, the salad contains 94% water, 2% sugar, 0.6% crude cellulose, 0.6% mineral matter and 1.2% crude protein. It is rich in vitamins C, B₁ and B₂, and many mineral elements. Great influence on the quantitative and qualitative properties of lettuce in addition to the variety and production conditions has a proper diet. The application of mineral fertilizers results in high yields, but their inadequate application can cause various problems such as: decrease in dry matter content, deterioration of salad quality, increase in soil acidity, degeneration of physical properties, increase in erosion and instability in land aggregates. In order to reduce the use of chemicals and increase the yield in the same time, the improvement of plant production is moving in the direction of introducing biofertilizers. In recent years there has been a trend of decreasing the usage of mineral nutrients, primarily nitrogen, phosphorus and potassium (Haytova, 2013), in which bio stimulators play a significant role. Therefore, the goal was to determine the impact of biofertilizers on the yield and quality of lettuce and to investigate the possibility of streamlining the crop by using biostimulators in lettuce nutrition. The two-factor experiment was set on a private plot in district Vranjes, East Sarajevo by using the randomized block in 3 replications. The highest yield of lettuce was obtained in the variant with the application of the biofertilizer Bioplant flora (630.50 g – please state the unit), whereas the lowest was recorded in the control variant of fertilization (468.00 g). The highest percentage of dry matter was noted in the third variant of fertilization (Bioplant flora) in the variety Majska kraljica (6.45%), whilst the lowest percentage was reached in the control variant of the same variety (4.14%).

Keywords: *lettuce, biofertilizer, yield, quality.*