STUDY OF DIFFERENT FERTILIZER DOSES ON THE YIELD AND SOME QUALITY PARAMETERS OF WINTER WHEAT

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The influence of different fertilizer doses on the yield and quality of winter wheat was studied on meadow soil in 2016-2017 years in Hódmezővásárhely. The experiment was set up on the area of SZTE Tangazdaság Ltd, in three replications. The preceding crop was sunflower. Six fertilizer steps were applied besides the control: N80PK30, N100PK30, N130PK30, N150PK30, N170PK0, N170PK50 kg/ha active ingredients. The year 2016-2017 was unfavourable for winter wheat production. The amount of precipitation in the vegetative period of winter wheat was lower by 80.2 mm than the average. The distribution of precipitation was unfavourable. The rainfall in October, November, April and May was more than the average, while in December, January, February, March, June, and July less rain fell compared the average. The obtained data were processed by single factor variant analysis. In the control treatment the yield was 4.20 t/ha. The maximum yield 5.60 t/ha was reached with N130PK30 kg/ha fertilizer treatment. The yield difference between the two treatments was statistically justified. The nutrient doses higher than N130PK30 did not increase the yield of wheat.
17.60 % crude protein content was measured in the N0PK0 treatment. The highest content of crude protein (18.70%) was in the N100PK30 and N130PK30 treatments, which was not statistically justified higher, compared the control value. Compared to this value in the higher treatments the crude protein content decreased. The Zeleny number was 70.40 ml in the control treatment. In N130PK30 treatment reached the maximum value, 76.0 ml. We can conclude, that, the N130PK30 kg/ha fertilizer dose was the most favourable concerning the yield and quality parameters of the examined winter wheat variety.