

EVOLUTION OF MAIZE LEAF AREA INDEX DYNAMICS UNDER DIFFERENT NITROGEN LEVELS

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Maize is one of the most important industrial crops in Hungary. Maize cultivation is significantly encumbered by dry, rainless periods and atmospheric drought during critical phenological phases. In addition to the favorable climatic conditions, maize also appreciates the optimal nitrogen supply. The goal of our experiment was to examine the evolution of Leaf Area Index (LAI) values, as the growing season progresses using different nitrogen levels. It was carried out at three nutrient levels: N0 - 0 kg N ha⁻¹, N2 - 120 kg N ha⁻¹, N5 - 300 kg N ha⁻¹. The hybrid included in the experiment belongs to the FAO420 maturation group. Its properties include excellent nutrient response, high yield potential hybrid. The measurement dates examined were as follows: 16th June 2021, 23th June 2021, 15th July 2021. The obtained results were the average of four replicates. In terms of measurement dates, the highest LAI was measured in 15th July for all three nutrient levels (N0: 2.1, N2: 2.9, N5: 2.9). In the average of the measurement dates, the highest LAI value was measured at the N5 level (2.2). The evolution of LAI was 2.1 at the N0 level in 15th July, obtained 2.9 LAI value at the N2 level in 15th July, and finally obtained 2.9 LAI value at the N5 level in 15th July. This results obtained in this study demonstrate the advantages of Leaf Canopy Analyses System as an useful tool to estimate essential agronomic features, such as biomass and predict yield.