

## VARIABLE NITROGEN AND ZINC NUTRITION EFFECTS ON RELATIVE CHLOROPHYLL CONTENT OF DIFFERENT MAIZE GENOTYPES

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In agricultural production due to the environmental requirements, improving the quality of crops is becoming more and more important. Nitrogen (N) is the most widely applied fertilizer worldwide, while zinc (Zn) plays a crucial role as well in physiological processes and important in the improvement of yield quality. An experiment was set for the examination of Zn supply on maize (*Zea mays* L.) genotypes with different nitrogen use efficiency. Plants were grown under controlled conditions on a hydroponic system, and five different ZnSO<sub>4</sub> concentrations and two in case of N were applied in the hydroponic solution. Relative chlorophyll contents were recorded with SPAD-502 weekly, three times during experiment on the oldest and youngest fully developed leaves.

At the first sampling time significant difference was found between N levels and genotypes. Higher SPAD values were observed in P9903 genotypes, under reduced N level on both examined leaves. At second sampling time significantly higher values was observed in case of reduced N and in P9903 on the younger leaves. At the third sampling time reduced N caused decrease in the oldest leaves SPAD values, but the value was higher in P9903, than in X, as found before. At the earliest growth stages N deprivation has no negative effect on relative chlorophyll content but genotypic variations can be observed already at younger plants. Based on these results no strong correlation between the reduced N application and Zn nutrition at this early growth stage of maize plants.

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