

## CALCIUM AND MAGNESIUM CONTENT IN TURFGRASS INFLUENCED BY MIXTURE TYPE AND FERTILIZATION

Constantin Iulian POPOVICI<sup>1</sup>, Vasile VINTU<sup>1</sup>, Costel SAMUIL<sup>1</sup>, Mihai STAVARACHE<sup>1</sup>,  
Ciprian CIOBANU<sup>1</sup>

e-mail: [iulian\\_vici@yahoo.com](mailto:iulian_vici@yahoo.com)

---

### Abstract

Fertilization of turfgrasses is an important maintenance activity that influences the vigor and health of the grass plants. Different types of fertilizers can be used for different purposes. Nitrogen based fertilizers with both slow release and fast release nitrogen are the choice of managers who want to stimulate shoot growth and colour. Other fertilizers have different combination of macro and microelements such as potassium, phosphorus, calcium, magnezium, iron, sulfur and so on. The choice of fertilizer is influenced mainly by rootzone but also by turfgrass functionality and the intensity of management. In our study were analyzed the calcium and magnesium content in plant tissue in relation with differentiated fertilization on three different turf mixtures under the influence of the pedoclimatic conditions in the NE region of Romania. The first mixture (M1) was composed of *Festuca arundinacea* 80% + *Lolium perenne* 10% + *Poa pratensis* 10%. The second mixture (M2) consisted of three varieties of *Lolium perenne* mixed in equal proportions. The third mixture (M3) was composed of *Festuca rubra* 60% + *Lolium perenne* 20% + *Festuca ovina duriuscula* 10% + *Poa pratensis* 10%. Three types of fertilizers were applied: ammonium nitrate, a complex fertilizer with nitrogen and phosphorus and a commercial lawn fertilizer with macro and micronutrients. The experimental design was a split plot design with three replicates. Statistical interpretation of the data was done by analyzes of variance and limit differences.

**Key words:** calcium and magnezium content in plant tissue; turfgrass quality; turfgrass mixtures

---