

# RESEARCH FOR COMPETITION RELATIONS BETWEEN THE *Festuca arundinacea* Schreb. and *Trifolium pratense* L. SPECIES CULTIVATED IN SIMPLE MIXTURES

Teodora ZAIȚ (GRĂPAN)<sup>1</sup>, Adrian-Ilie NAZARE<sup>1</sup>, Costel SAMUIL<sup>1</sup>, Vasile VÎNTU<sup>1</sup>

e-mail: teodora\_grapan@yahoo.com, vvintu@uaiasi.ro

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## Abstract

Purpose of research carried out in 2022 at Ezăreni Farm (47°05'-47°10' North latitude and 27°28'-27°33' Eastern longitude) belonging to the Iași University of Life Sciences, was to analyze the competitiveness of the species *Festuca arundinacea* Schreb. and *Trifolium pratense* L., grown alone or in simple mixtures, under different conditions of fertilization with complex mineral fertilizers, under the climatic conditions from Moldavian Forrest Steppe. The studied factors were: species or mixture of grasses and perennial legumes, with 5 graduations, respectively a<sub>1</sub> - *Festuca arundinacea* Schreb. (100%); a<sub>2</sub> - *Festuca arundinacea* Schreb. (75%) and *Trifolium pratense* L. (25%); a<sub>3</sub> - *Festuca arundinacea* Schreb. (50%) and *Trifolium pratense* L. (50%); a<sub>4</sub> - *Festuca arundinacea* Schreb. (25%) and *Trifolium pratense* L. (75%); a<sub>5</sub> - *Trifolium pratense* L. (100%) and fertilization with mineral fertilizers, with 5 graduations, respectively b<sub>1</sub> - unfertilized, b<sub>2</sub> - N<sub>50</sub>P<sub>50</sub>; b<sub>3</sub> - N<sub>75</sub>P<sub>75</sub>; b<sub>4</sub> - N<sub>100</sub>; b<sub>5</sub> - N<sub>150</sub>P<sub>150</sub>. In the second year of vegetation, the RYT index (Relative Yield Total) recorded values >1, except for variants fertilized with N<sub>150</sub>P<sub>150</sub>, showing that the *Festuca arundinacea* Schreb. and *Trifolium pratense* L. species competes for the same vegetation factors, and the CR index for the *Festuca arundinacea* Schreb. species was higher than in the case of the *Trifolium pratense* L. species only at a percentage of participation in the mixture of 75%, under fertilization conditions, in which case the species was more competitive.

**Key words:** mixture percentage, fertilization, RYT (Relative Yield Total), CR (Competition Rate)