

STUDY CONCERNING THE BEHAVIOUR OF SOME TURF MIXTURES

STUDIUL COMPORTĂRII UNOR AMESTECURI PENTRU GAZON

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Abstract: The existence of small turf surfaces in the front of every house is in many neighbourhoods from big cities the postponing in modernity of the spaces between house and road from rural areas, which are dominated by grass. In fact, turf has become an essential an irreplaceable element for recreation and sport. Also, the turf is providing a soil stabilisation, protection against erosion due to its roots system and other features of the component grasses. Turf presence on soil stops water evaporation, is maintaining a lower temperature of soil due plants evapotranspiration. Extra, a considerable advantage of turf is that the uneven surfaces and land imperfections are transformed in landscape elements.

Rezumat: Existența micilor suprafețe de gazon din fața fiecărei case în foarte multe cartiere din marile orașe nu este altceva decât transpunerea în modernitate a spațiilor din așezările rurale dintre casă și drum, dominate de iarbă. De fapt, gazonul a devenit un element esențial și de neînlocuit pentru agrement și sport. De asemenea gazonul asigură o stabilizare a solului, o protecție antierozională datorită sistemului radicular și a altor caracteristici ale ierburilor care îl compun. Prezența gazonului pe un sol oprește evaporarea apei, menține o temperatură mai scăzută a solului datorită evapotranspirației plantelor. În plus un avantaj considerabil al gazonului este că denivelările și imperfecțiunile terenului sunt transformate în elemente de peisaj.

Key words: turf, mixtures, germination, evaluation, comportment.

Cuvinte cheie: gazon, amestecuri, germinare, evaluare, comportament.

INTRODUCTION

In the last time surfaces covered with turf have increased considerable. A house with turf inside its yard has an incomparable aspect in comparison with a house with dirt or weeds in yard. The turf offers a great aesthetic value due to the different greens dependent by the participant species and varieties.

The multitude uses of turf grass makes that for every destination are some certain species or mixtures, and in consequence there are many types of turf.

Turf mixtures that are used for lawns are depending by less then three elements as are:

- turf type;
- owner need;
- seeds and setting works price.

The use of a single species is not general, usually being seeded species or variety mixtures, in fact being associated two or more grasses with complementary features. This fact is depending also by the turf type.

The main species used for turf are: *Lolium perenne*; *Festuca rubra*; *Festuca arundinacea*; *Poa pratensis*; *Phleum pratense*; *Agrostis capilaris*; *Cynodon dactylon*.

These species are used for turf because their adaptation capacities. These grasses are able to tolerate repeated cutting having the next important properties: basal meristematic tissues well protected during cutting, short and compact internodes and a fasciculate root system well developed.

MATERIAL AND METHOD

Studied material is represented by ten turf different mixtures and a *Lolium perenne* variety. These are represented by:

1. *Lolium perenne* –TOVE variety

2. Ornamental turf – for parks and gardens

- 25 % *Festuca rubra commutata* –SIMONE variety
- 25 % *Festuca rubra rubra* –LAXTONE variety
- 20 % *Lolium perenne* –SAKINI variety
- 15 % *Poa pratensis* –COMPACT variety
- 15 % *Festuca ovina duriuscula* –RIDU variety

3. SPORT – for sport fields

- 30 % *Poa pratensis* –COMPACT variety
- 20 % *Lolium perenne* –SAKINI variety
- 10 % *Festuca rubra* –SIMONE variety
- 10 % *Festuca ovina* –RIDU variety

4. SUNSHINE – for sunny and dry places

- 40 % *Festuca arundinacea* –FINELAWN variety
- 30 % *Poa pratensis* –COMPACT variety
- 20 % *Lolium perenne* –SAKINI variety
- 10 % *Festuca rubra rubra* –LAXTON variety

5. ECOLAWN – ecologic turf

- 40 % *Festuca rubra rubra* –LAXTON variety
- 25 % *Lolium perenne* –SAKINI variety
- 15 % *Poa pratensis* –COMPACT variety
- 10 % *Festuca rubra commutata* –SIMONE variety
- 10 % *Trifolium repens* –NANOUK variety

6. ROBUSTICA

- 35 % *Festuca rubra rubra* –ECHO variety
- 30 % *Festuca rubra rubra* –RUBINA variety
- 20 % *Lolium perenne* –BELIDA variety
- 15 % *Poa pratensis* –BALIN variety

7. PLAYGROUND

- 45 % *Festuca rubra rubra* –ECHO variety
- 25 % *Poa pratensis* –BALIN variety
- 15 % *Lolium perenne* –BELIDA variety
- 15 % *Lolium perenne* –FANDA variety

8. RAPID

- 35 % *Festuca rubra rubra* –ECHO variety
- 30 % *Lolium perenne* –FANDA variety
- 25 % *Lolium perenne* –BELIDA variety
- 10 % *Festuca rubra commutata* –TAMARA variety

9. PARK

- 50 % *Festuca rubra rubra* –ECHO variety
- 30 % *Festuca ovina* –TRIANA variety
- 20 % *Lolium perenne* –BELIDA variety

10. GOLFMMASTER

- 15 % *Poa pratensis* –CONNI variety
- 15 % *Poa pratensis* –MARADONA variety
- 10 % *Festuca rubra commutata* –SIMONE variety
- 10 % *Festuca rubra commutata* –CARINA variety
- 10 % *Festuca rubra tricophylla* –NAPOLI variety
- 10 % *Festuca rubra tricophylla* –SMIRNA variety
- 10 % *Lolium perenne* –DANILO variety
- 5 % *Lolium perenne* –TAYA variety
- 5 % *Agrostis stolonifera* –KROMI variety

11. SPORTMASTER

- 25 % *Poa pratensis* –CONNI variety
- 25 % *Poa pratensis* –MARADONA variety
- 15 % *Festuca rubra commutata* –CARINA variety
- 15 % *Lolium perenne* –ESQUIRE variety
- 10 % *Festuca rubra commutata* –MEDINA variety
- 10 % *Lolium perenne* –DELAWARE variety

The experience is realised in laboratory conditions with three repetitions. The seeds were seeded in the same ecological conditions being analysed their germination. Turf seeds were seeded on 24th March 2006 in the Grassland and Forage Crops laboratory from Agriculture Faculty of Banat's University of Agricultural Sciences and Veterinary Medicine from Timișoara.

RESULTS AND DISCUSSIONS

Researches are realised on ten turf species mixtures and a *Lolium perenne* turf variety.

Concerning the germination period of these turf mixtures and *Lolium perenne* (figure 1), the greatest germination rate can be noticed in case of **Sportmaster** (25 % *Poa pratensis* – CONNI, 25 % *Poa pratensis* –MARADONA, 15 % *Festuca rubra commutata* –CARINA, 15 % *Lolium perenne* –ESQUIRE, 10 % *Festuca rubra commutata* –MEDINA, 10 % *Lolium perenne* –DELAWARE) and **Golfmaster** (15 % *Poa pratensis* –CONNI, 15 % *Poa pratensis* –MARADONA, 10 % *Festuca rubra commutata* –SIMONE, 10 % *Festuca rubra commutata* –CARINA, 10 % *Festuca rubra tricophylla* –NAPOLI, 10 % *Festuca rubra tricophylla* –SMIRNA, 10 % *Lolium perenne* –DANILO, 5 % *Lolium perenne* –TAYA, 5 % *Agrostis stolonifera* –KROMI) mixtures.

The lowest germination rate is founding case of **Sunshine** mixture (40 % *Festuca arundinacea* –FINELAWN, 30 % *Poa pratensis* –COMPACT, 20 % *Lolium perenne* – SAKINI, 10 % *Festuca rubra rubra* –LAXTON), this being followed by *Lolium perenne*, **Ecolawn** (40 % *Festuca rubra rubra* –LAXTON, 25 % *Lolium perenne* –SAKINI, 15 % *Poa pratensis* –COMPACT, 10 % *Festuca rubra commutata* –SIMONE, 10 % *Trifolium repens* –NANOUK variety) and **Robustica** (35 % *Festuca rubra rubra* –ECHO, 30 % *Festuca rubra rubra* –RUBINA, 20 % *Lolium perenne* –BELIDA, 15 % *Poa pratensis* –BALIN).

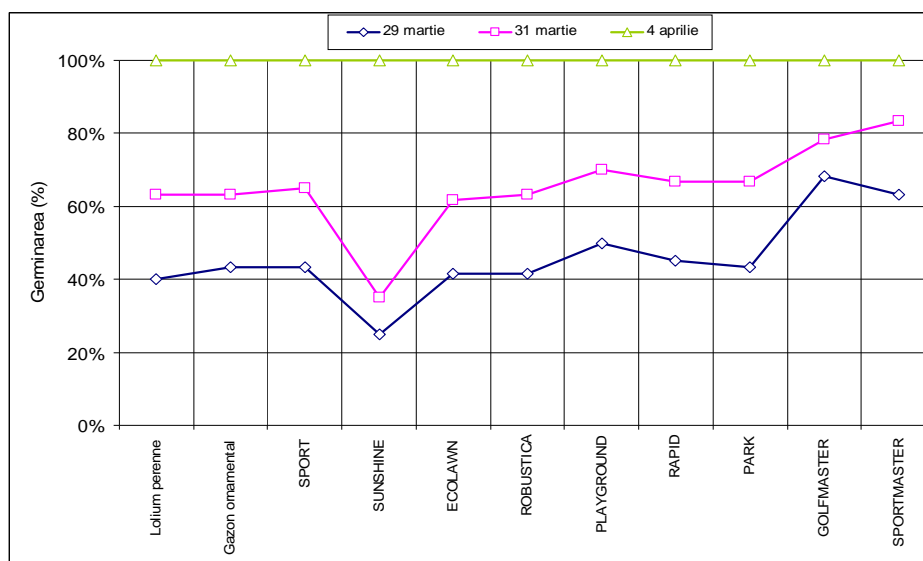


Figure 1 Germination of studied turf mixtures in comparison with *Lolium perenne*

CONCLUSIONS

Analyzing the obtained data we can conclude:

- the greatest germination rate is noticed in case of Sportmaster and Golfmaster mixtures;
- the lowest germination rate is noticed for Sunshine mixture, this being followed by *Lolium perenne*, Ecolawn and Robustica.

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