ASPECTS REGARDING VEGETATION BEGIN AND WINTER ACCESS OF SOME SPECIES OF FORAGE GRAMINEOUS PLANTS

ASPECTE PRIVIND PORNIREA ÎN VEGETAȚIE ŞI INTRAREA ÎN IARNĂ A UNOR SPECII DE GRAMINEE PERENE

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Abstract: *For the success of a culture, one must know at any moment the vegetation state of the meadow and forage plants to be able to apply the measures that are required for getting big productions. Reserve substances accumulation, which plants need to get started in spring vegetation takes place in the root, offsets, at the base of stems. This permits plants to resist at low temperatures during the winter and in spring to get started in vegetation early. After the arise degree analysis of Dactylis glomerata, Lolium perenne and Festuca pratensis species, it was observed that the arise degree is very good, the arise degree being of 95% at all breeds. The fraternity degree at Dactylis glomerata and Festuca pratensis species answer to the optimum stage of entering the winter, and at Lolium perenne breeds it is under the optimum stage of entering the winter.*

Rezumat: *Pentru reuşita unei culturi trebuie să cunoaştem în orice moment starea de vegetaţie a plantelor din pajişti şi din culturile furajere, pentru a putea interveni cu măsurile care se impun, în vederea obţinerii unor producţii mari. Acumularea substanţelor de rezervă, de care plantele au nevoie pentru a porni în vegetaţie primăvara, are loc în rădăcini, stoloni, la baza tulpinilor. Acest lucru permite plantelor să reziste la temperaturile scăzute din timpul iernii şi primăvara să pornească mai devreme în vegetaţie. În urma analizei uniformităţii la răsărire şi a gradului de înfrăţire a soiurilor din speciile Dactylis glomerata, Lolium perenne şi Festuca pratensis s-a observat că acestea s-au comportat foarte bine, procentul de răsărire fiind de peste 95% la toate soiurile. Gradul de înfrăţire la soiurile de Dactylis glomerata şi Festuca pratensis corespunde stadiului optim de intrare în iarnă, iar la soiurile de Lolium perenne acesta este sub stadiul optim de intrare în iarnă.*

Cuvinte cheie: *Dactylis glomerata, Festuca pratensis, Lolium perenne, uniformitate la răsărire, grad de înfrăţire.*

Key words: *Dactylis glomerata, Festuca pratensis, Lolium perenne, sameness at arise, fraternity degree*

INTRODUCTION

Including performant breeds of gramineous meadow plants inside of simple or complex mixtures or meadows, which are for establishing seeded meadows, improved natural meadows, constitutes the main element that determinates the success of the actions. In the concept of sustainable agriculture for assuring the meadows multifunction ability, making new breeds represents an imperative necessity.

Dactylis glomerata is one of the best grasses from the meadow, is very spread even in hayfield (MOISUC, 2002). It is cultivated in simple mixtures with alfalfa or red clover, which is exploiting in hayfield regime and in complex mixtures for grazing also, occupying near perennial ryegrass, and the biggest surface in the 4.8 mil he of meadows and hayfields (VARGA et al., 1998). It can bear drought, which makes it to develop very well, it is medium in resistance at winter, but

sensitive at temperature spring oscillations (MOISUC, 2002).

Lolium perenne is the earliest taken in culture perennial gramineous plant, since the XVII century in Oxford area from England. It grows in mezofile meadows in forester floors and cultivated as a good forager (COSTE, 1994; LUMINITA COJOCARU, 2005). Perennial ryegrass is a species with a big variability regarding adaptability at environment conditions (VARGA et al., 1998). It prefers areas with medium temperatures and raised humidity. It cannot bear drought (MOISUC, 2002).

Festuca pratensis is a valorous perennial gramineous plant, it is from Europe. It is met on meadows and fat hayfields which are in wet areas. It is found on many soils with the exception of poor and dry ones. It is resistant at winter but very sensitive at drought (MOISUC, 2002).

MATERIAL AND METHOD

The observations were made in the Experimental Field from USAMVBT, the experience being placed on a gleysed cambic chernozem with salting in depth.

The studied biologic material is represented by 3 species of perennial gramineous plants: *Dactylis glomerata, Lolium perenne, Festuca pratensis*, studied in field conditions.

Seeding density is over 1800 seeds germinative/m^2 for *Dactiylis glomerata* and *Festuca pratensis* and of 1280 seeds/m^2 for *Lolium perenne*. Seeding depth is 2.5 cm for *Lolium perenne* and 2 cm for *Dactylis glomerata* and *Festuca pratensis*.

The experiences are placed after the method of randomized blocks in 3 repetitions. A parcel surface is of 20 m^2 (4m x 5m).

In what concerns the vegetation actuality, the determinations that have been done are: the arise sameness determination, fraternity degree determination.

RESULTS AND DISCUSSION

Sameness at arise of *Dactylis glomerata* varies between 91% at Otello breed and 99% for the witness breed, Amba and Amera breed. This thing demonstrates that the used seed was of quality and the germination is very good. Fraternity degree varies between 2.11-2.18, which proves that plants are in the 21st vegetation stage (after BBCH code), stage that assures the entry in winter in good conditions, thing that can be seen in figure 1.

Breeds of *Festuca pratensis* have also a very good sameness stage of arise. That varies between 97.3% for the witness breed and 99% for the Laura breed. For Sigmund breed sameness at arise is 98%. The biggest fraternity degree is present at witness breed followed up in decreasing order of Laura and Sigmund breeds, but all 3 varieties are in the 21st stage of BBCH code, stage that permits to pass the winter in very good conditions (figure 2).

The analysis of arise sameness of *Lolium perenne* breeds look that these have an arise degree between 96% for Calibra breed and 99% for Eminent breed, between these is the witness breed with 97% and Leia breed with 98%.

Fraternity degree is between 1.8 at witness breed and 2 for Calibra breed, this thing showing that plants did not reached at 21 stage of BBCH code and that they need to accumulate more reserve substances to can get in winter in good conditions (figure 3)

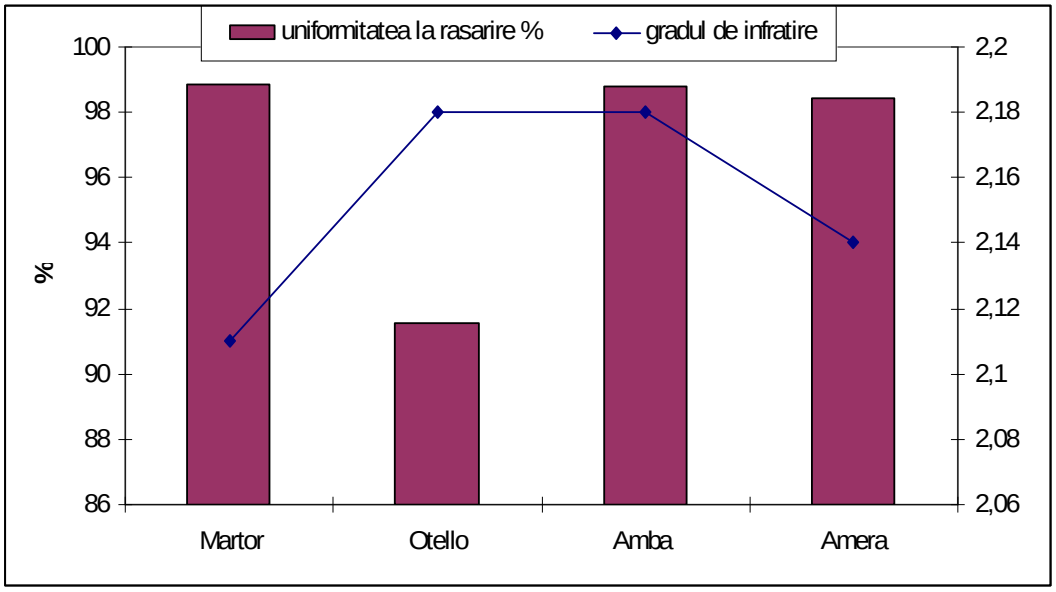

Figure 1. Graphic representation of arise sameness and of fraternity degree at *Dactylis glomerata* breeds

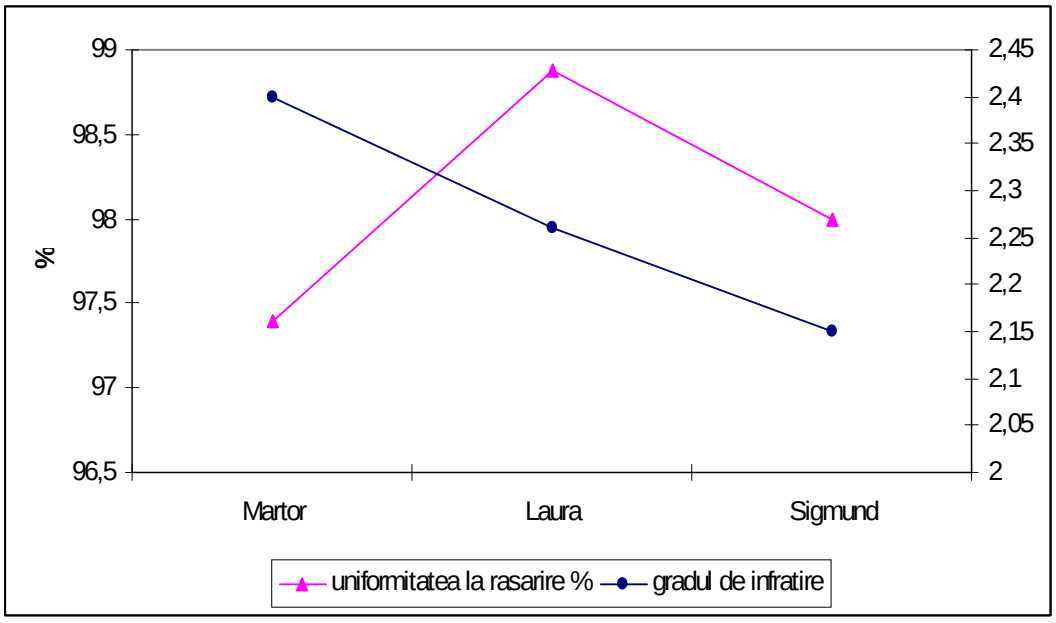

Figure 2. Graphic representation of arise sameness and of fraternity degree at *Festuca pratensis* breeds

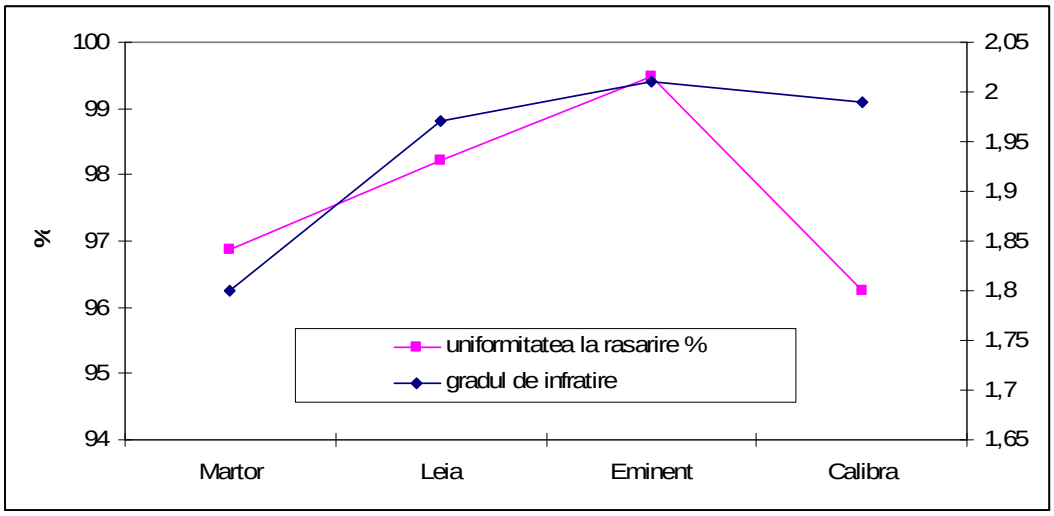

Figure 3. Graphic representation of arise sameness and of fraternity degree at *Lolium perenne*

CONCLUSIONS

After arise sameness analysis and fraternity degree at entering in winter can be observed the following:

- the arise sameness at all 3 forage gramineous species analysed are between the optimum parameters

- the fraternity degree at *Dactylis glomerata* and *Festuca pratensis* species answers at 21 BBCH code

- the fraternity degree at *Lolium perenne* breeds are not in 21 BBCH stage and the wintering resistance can be lower than to the others 2 analysed species.

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