ISSUES REGARDING THE INFLUENCE OF THE AGOFUND ON THE PRODUCTION EARMARKING ON SCYTHE AT *LOLIUM MULTIFLORUM* L. IN TIMISOARA ENVIRONMENT

INFLUENTEI AGROFONDULUI ASUPRA PRODUCTIEI SPECIEI *LOLIUM MULTIFLORUM L.* IN CONDITIILE TIMISOAREI

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Abstract: *Lolium multiflorum presents a number of qualities that can successfully integrate into the structure of fodder crops in a modern animal husbandry. Starting from these considerations, in this paper we aimed at addressing a number of issues that determine the production of dry matter and intake of scythe I and II to achieve it. The experience has been located in Timisoara, for three consecutive years (2006-2008), on an agrofund on the N50 P50 K50 (at the starting of the culture) and N50 after first scythe. As biological material we used a Wesley variety of Lolium multiflorum var. Westervoldicum. The year's influence was decisive on the culture of Lolium multiflorum, so the scythe production was very high (4,5-5,1 t / ha) and of good quality. Because of drought in June-July with scythe II very low yields have been obtained (0,6-1,05 t / he SU). As such, on the specific conditions of culture in Timisoara we recommend only scythe I for Lollium multiflorum, after following a successive crop.*

Rezumat: *Lolium multiflorum prezintă o serie de calităţi, pentru care se poate integra cu succes în structura culturilor furajere dintr-o zootehnie modernă.Pornind de la aceste considerente, în prezenta lucrare ne-am prpus să abordăm o serie de aspecte care determină producţia de substanţă uscată şi aportul coaselor I şi II la realizarea acesteia. Experienţa a fost amplasată la Timişoara, timp de trei ani consecutivi (2006-2008), pe un agrofond de N50 P50 K50 (la înfiinţarea culturii) şi N50 după prima coasă. Ca material biologic s-a folosit soiul WESLEY de Lolium multiflorum var. Westervoldicum. Influenţa anului a fost decisivă asupra culturii de Lolium multiflorum, astfel că producţia coasei I a fost foarte mare (4,5-5,1 t/ha) şi de bună calitate. Datorită secetei din lunile iunie-iulie la coasa a II –a s-au obţinut producţii foarte mici (0,6-1,05 t/ha S.U.).Ca atare, în condiţiile specifice de la Timişoara recomandăm în cultură doar coasa I la Lollium multiflorum, după aceasta urmând o cultură succesivă. Importanţa lucrării rezidă din faptul că, prin aceste experimente, s-a demonstrat că influenţa alcaloizilor asupra modificării indicelui de calitate a plantelor luate în studiu s-a reflectat printr-o uşoară scădere a conţinutului de proteină brută.*

Key words: *Lolium multiflorum, DM production, earmarking on scythe,*
Cuvinte cheie: *Lolium multiflorum, producţie de S.U., repartizare pe coase*

INTRODUCTION

Fodder graminaceae is an important source of feed for ruminant animals. *Lolium multiflorum* is part of the genus *Lolium*, belonging to Family Poaceae.

Lolium multiflorum is a culture trying to expand into production due to production capacity, but also presents the disadvantage of lack of uniformity production on scythe.

The amount of material is dependent on resistance to stress conditions during summer (drought), *Lolium multiflorum* having separate claims.

In the plain, under irrigation, scythe I and II produce 10-15 t / his dry matter by mid-

July. In the hills around, yields of green mass can reach between 70-95 t / he of green mass and 14-20 t dry matter. In general, most production is achieved at *Lolium multiflorum* with first scythe, almost 70% of total production (LUMINIȚA COJOCARIU, 2005; MOISUC and DUCIK, 2002; BINNI et al., 1972).

MATERIALS AND METHODS

Experience has been located at S.D.E. at U.S.A.M.V.B. Timisoara, levigate cambic black earth in non-irrigated system.

Crop was sown on rare rows in early April on an agrofund of N50 P50 K50 (at strating the culture) and N50 after first scythe.

As biological material we used variety Wesley - of *Lolium multiflorum var.* Westerwoldicum, studying the behavior in culture for green forage mass exploited by mowing (CI and C II).

Data refer to the results obtained in the years 2006-2008, overall different years between themselves, but also from multiannual average. This allowed the separation of some conclusions on the ability of adapting and exploring of the material studied.

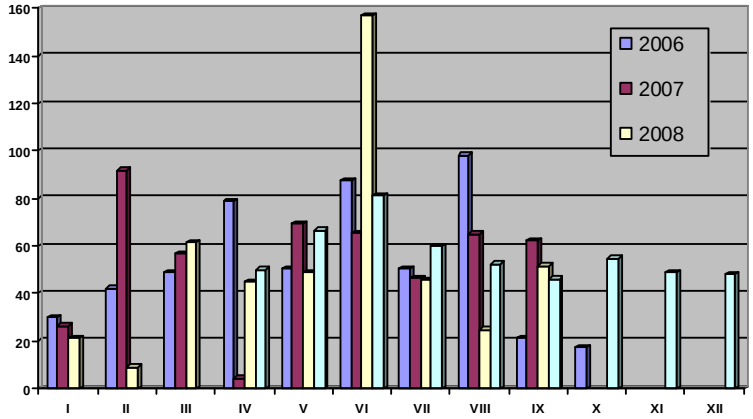

Figure 1. Graphical representation of the average monthly rainfall (mm) and average monthly temperatures (C0) recorded at Meteorological Station Timisoara during 2006-2008

From Figure 1 shows that during the growing season of the species *Lolium multiflorum*, temperatures were high, above multiannual average in all studied years, against the background of reduced rainfall leading to different crop results.

Interpretation of results was done according to current methods of calculation (CIULCĂ, 2006).

RESULTS AND DISCUSSION

The influence of environmental conditions is reflected directly on the number of scythes and final total production at surface unit with *Lolium multiflorum*.

Figure 2 shows the percentage distribution of the production of SU per scythe from the total production.

Thus in 2006 scythe I was 85.34% and scythe II of 14.65% of total production.

In 2007 weather conditions make the total production be very low compared to other years (5.1 t / he). As a consequence the percent of the distribution per scythe is different, I

scythe representing 88.2% of total production. The explanation to this is that in spring (April-May) rainfalls were sufficient for plant growth.

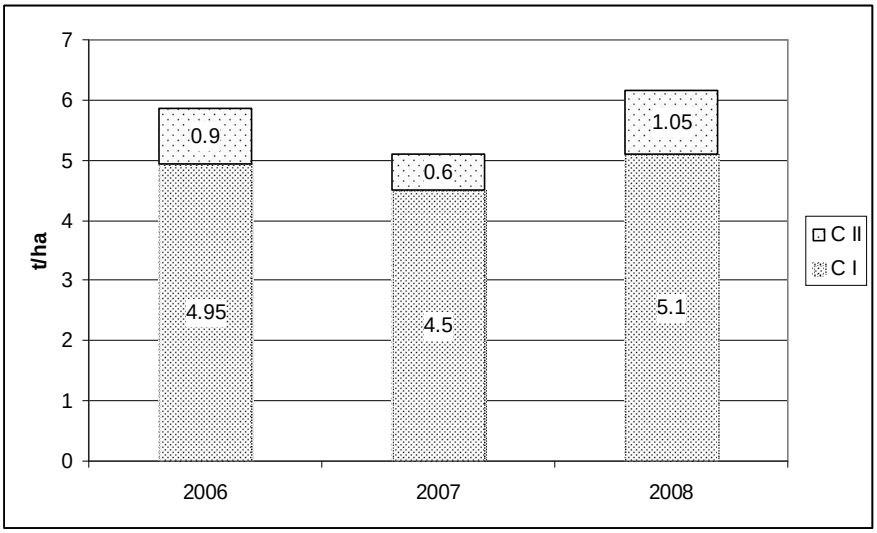

Figure 2. Scythe intake on dry matter production in *Lolium multiflorum* (2006-2008)

In 2008 it can be noted a better distribution of production on scythe, precisely that I scythe is 82.93% and II scythe 17.07% of total production.

Table1

Significance of differences between scythes in terms of dry matter production in *Lolium multiflorum*

Scythe	Average		Relative values (%)	Difference/Significance
Scythe II- Scythe I	0,85	4,85	17,53	$-4,00^{000}$

$DL_{5\%}$=0,78 t/he $DL_{1\%}$=1,17 t/he $DL_{0,1\%}$=1,89 t/he

In *Lolium multiflorum* (Table 1) scythe II production was significantly lower compared to I scythe, representing only 17.53% of the scythe I.

Drought and high temperatures in June and July make plants mature faster, the duration of the use of scythe II is shorter and the production of SU much smaller. Extension of drought in August lead to drying of *Lolium multiflorum* plants and therefore, under the conditions, there is no scythe III.

To help make the division clearer of scythe earmarking of production of *Lolium multiflorum*, we calculated the differences of production between scythe I and II in the experimental years.

From Table 2, it is notable that in 2006 production of scythe II was significantly lower than production of scythe I.

In 2007 production of scythe II represents 13.33% of the production of I scythe which is significantly lower.

Production of scythe II in 2008 is 20.59% of the production of I scythe, which shows a better distribution of production on scythe.

Table 2

Comparison of scythes in the same experimental year on production of dry matter in *Lolium multiflorum*

Experimental years	Average		Relative values (%)	Difference/Significance
Scythe II 2006 – Scythe I 2006	0,90	4,95	18,18	-4,05^{000}
Scythe II 2007 – Scythe I 2007	0,60	4,50	13,33	-3,90^{000}
Scythe II 2008– Scythe I 2008	1,05	5,10	20,59	-4,05^{000}

$DL_{5\%}$=1,34 t/he $DL_{1\%}$=2,03 t/he $DL_{0,1\%}$=3,27 t/he

CONCLUSIONS

• Nitrogen fertilizers applied after the first scythe have not been fully used by the culture of *Lolium multiflorum* in the absence of water from rainfall. As a consequence the yields of U.S. of scythe II, in all the experimented years were very small.

• The highest yields of U.S. were made in 2008, both the scythe I (5.1 t / ha) and scythe II (1.05 t / ha).

• The better distribution of production of SU the sewer was in 2008 I scythe representing 82.93% and scythe II is 17.07% of total production.

In conclusion, with non-irrigated system, application of nitrogen fertilizer in ***Lolium multiflorum*** leads to increase in production of scythe I, the fodder being of the highest quality, covering the needs of spring green mass.

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