

EXPERIMENTAL RESULTS ON INCREASING PRODUCTION OF SEED TO *LOLIUM MULTIFLORUM* IN THE HILLY AREA OF OLTENIA

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ABSTRACT

The expansion of meadows surfaces in our country implies the existence of increased quantities of perennial gramineae seed.

Obtaining seed with high biological value for the perennial gramineae is possible only from the lots of seed specilly placed in favorable conditions for culture.

INTRODUCTION

In the first years after 1989, due to changes in the ownership structure of seed trade liberalization, the production and marketing process of these deteriorated due to the importance of quality seeds in increasing the agriculture production.

A strategy for improving the legislation was created to stimulate the production of seeds in accordance with the european union (Carrere P. et al., 1995; Moga I. et al., 1996).

MATERIALS AND METHOD

The material used for experimentation was provided by the I.N.C.A. – Fundulea and consisted of *Lolium multiflorum* seeds from arina variety.

The experimental product was placed on the luvisoil from S.C.D.A. – Șimnic Craiova and observed during the period 2011-2012.

Sowing has been made in the autum of 2010 having as main objective the optimal system of mineral fertilization (Bărbulescu, C. et.al., 1981, Carrere P. et al., 1995).

RESULTS AND DISCUSSIONS

If is made the analysis of the results obtained and represented in table 1, we can find that, at the first mowing, depending on the level of fertilization, the production of seed was between 376 kg/ha in the version P₀N₀ and 1296 kg/ha in the version P₁₀₀N₁₈₀; at the second mowing the harvest of seed oscillated between 124 kg/ha in the version P₀N₀ and 728 kg/ha in the version P₁₀₀N₁₈₀ (Cotigă, C., 2011, Bărbulescu, C. et.al., 1981).

The level of production for the total of both mowings at the fertilization system P₁₀₀N₁₈₀ was of 2024 kg/ha of seed. A level fertilization wiht P₅₀N₆₀ namely 1900 kg/ha of seed, the difference being low if is considered the amount of phosphorus and nitrogen used.

Table 1

The effect of nitrogen and phosphorus fertilizers on the production of seed to lolium multiflorum (average 2011-2012)

Version	Production of seed (kg/ha)		Total mowings I-II	%	Difference	Significance	
	Mowing I	Mowing II					
P ₀	N ₀	376	124	500	100	MT	-
	N ₆₀	684	346	1030	206	530	***
	N ₁₂₀	696	388	1084	216	584	***
	N ₁₈₀	710	390	1100	220	600	***
P ₅₀	N ₀	388	210	598	119	98	-
	N ₆₀	1240	660	1900	380	1400	***
	N ₁₂₀	1268	684	1952	390	1452	***
	N ₁₈₀	1284	698	1982	396	1482	***
P ₁₀₀	N ₀	394	224	618	124	118	-
	N ₆₀	1256	679	1935	387	1435	***
	N ₁₂₀	1270	680	1950	390	1450	***
	N ₁₈₀	1296	728	2024	404	1524	***

DL: 5% 152 kg/ha
 1% 286 kg/ha
 0,1 % 424 kg/ha

If is observed the separate influence of phosphorus on the production of seed averaged on two years, it can be noted that at the level of fertilization with phosphor P₅₀ was obtained 1608 kg/ha of seed compared with the version P₀ taken as a testifier (928 kg/ha) which is a highly significant progress statistically speaking. This aspect shows that luvisoil from S.C.D.A. – Șimnic is deficient in phosphorous which is an obligatorz measure in obtaining increased harvests.

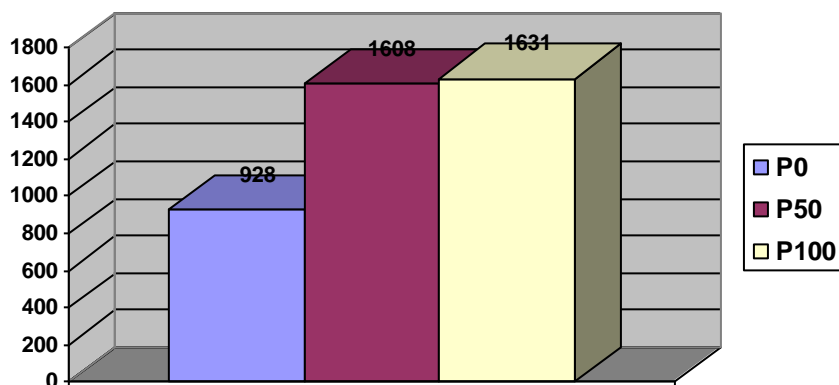


Fig. 1. The effect of phosphorus fertilization on the production of seed to lolium multiflorum (average 2011-2012)

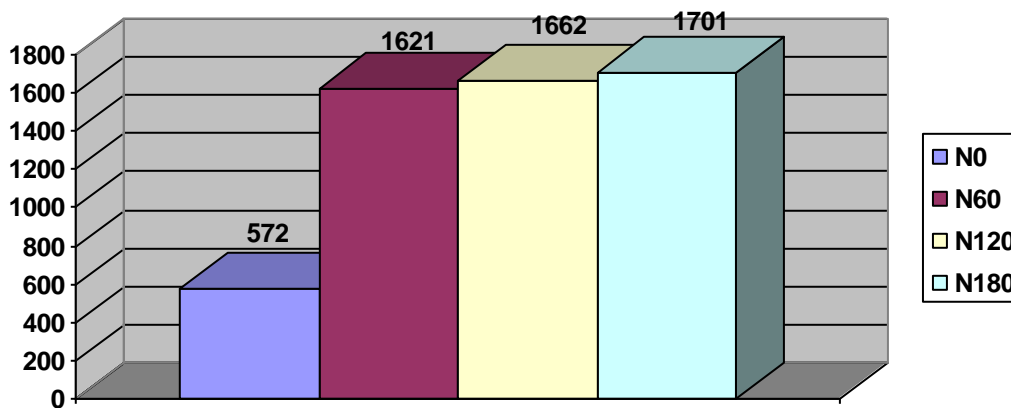


Fig. 2. The effect of nitrogen fertilization on the production of seed to *lolium multiflorum* (average 2011-2012)

which is a highly significant progress statistically speaking. This aspect shows that luvisoil from S.C.D.A. – Șimnic is deficient in phosphorus which is an obligatory measure in obtaining increased harvests (Timirgaziu, C., 1977, Varga P. et al., 1976).

Regarding the separate influence of nitrogen on seed production (fig. 2) we can observe that averaged on two years this increased considerably from version N₀ (572 kg/ha) to version N₆₀ (1621 kg/ha), N₁₂₀ (1662 kg/ha) and N₁₈₀ (1701 kg/ha). We consider that the optimum level of fertilization with nitrogen is N₆₀.

CONCLUSIONS

Obtaining production for *Lolium multiflorum* is necessary for the ecological conditions in the research area in order to increase the production of fodders and also qualitatively.

A balanced mineral fertilization of P₅₀N₆₀ type leads to obtain substantially quantities of seed.

Strict compliance of technological links represents the manner in which the crop can be integrated within optimal parameters of growth and development.

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