Analele Universităţii din Craiova, seria Agricultură – Montanologie – Cadastru (Annals of the University of Craiova - Agriculture, Montanology, Cadastre Series) Vol. XLII 2012/2

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

NUŢĂ C[1]., COTIGĂ C.[2]

[1] PhD. Student, University of Craiova, Faculty of Agriculture and Horticulture
[2] University of Craiova, Faculty of Agriculture and Horticulture

Key words: seed, production, quality, nitrogen

ABSTRACT

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

Obtaining seed with high biological value for the perennial gramineae is possibile 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. – Şimnic 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 P_0N_0 and 1296 kg/ha in the version $P_{100}N_{180}$; at the second mowing the harvest of seed oscillated between 124 kg/ha in the version P_0N_0 and 728 kg/ha in the version $P_{100}N_{180}$ (Cotigă, C., 2011, Bărbulescu, C. et.al., 1981).

The level of production for the total of both mowings at the fertilization system $P_{100}N_{180}$ was of 2024 kg/ha of seed. A level fertilization wiht $P_{50}N_{60}$ namely 1900 kg/ha of seed, the difference being low if is considered the amount of phosphorus and nitrogen used.

Table 1

The efect 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 P_{50} was obtained 1608 kg/ha of seed compared with the version P_0 taken as a testifier (928 kg/ha) which is a higly significant progress statistically speaking. This aspect shows that luvisoil from S.C.D.A. – Şimnic is deficient in phosphorous which is an obligatorz measure in obtaining increased harvests.

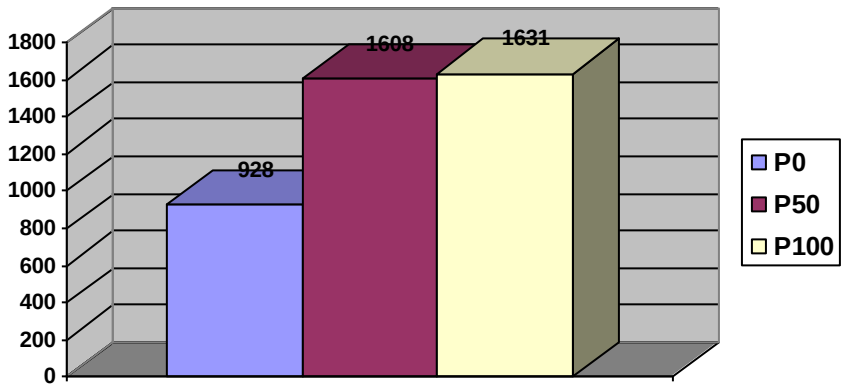

Fig. 1. The efect of phosphorus fertilization on the production of seed to lolium multiflorum (average 2011-2012)

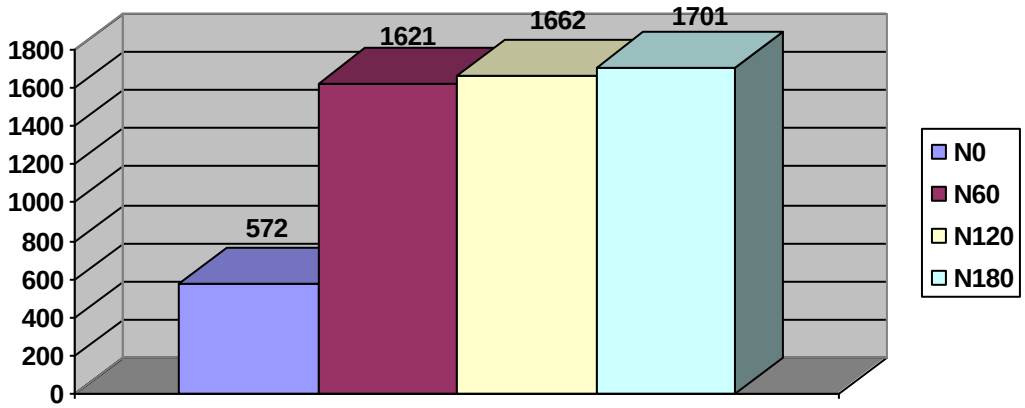

Fig. 2. The efect of nitrogen fertilization on the production of seed to lolium multiflorum (average 2011-2012)

which is a higly significant progress statistically speaking. This aspect shows that luvisoil from S.C.D.A. – Şimnic is deficient in phosphorous which is an obligatorz 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 avereged on two years thi increased conserably from version N_0 (572 kg/ha) to version N_{60} (1621 kg/ha), N_{120} (1662 kg/ha) and N_{180} (1701 kg/ha). We consider that the optimum level of fertilization with nitrogen is N_{60}.

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 $P_{50}N_{60}$ 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.

BIBLIOGRAPHY

Bărbulescu, C. et.al., 1981 – *Meadow and forage crops,* Didactic and Pedagogical Publishing House, Bucharest.

Carrere P. et al., 1995 – *Defoliation of a gress, doves, mixture continuosly grazed by sheep,* 5th International Rangeland Congress, Salt fake City.

Carrere P. et al., 1995 – *Echilibre entre befle blanc et graminee dans une association pature par des ovins en continu au en rotatif,* Fourrages 135.

Cotigă, C., 2011 – *Meadow and forage crops,* Sitech Publishing House, Craiova.

Moga I. et al., 1996 – *Forage plants Ceres Publishing House,* Bucharest.

Sevicikova M. et. al., 1998 – *The seed production of wild gress species for retoring botanical diverity of grassland.* Ecologycal aspects of Crosland Management. EGF Meeting.

Timirgaziu, C., 1977 – *New aspects on production tehnology of reygrass arista seed,* Annals of I.C.C.P.T. Fundulea, Vol. XLII, Bucharest.

Varga P. et al., 1976 – *Seed production of forage plants,* Ceres Publishing House, Bucharest.