THE COMPARATIVE STUDY ABOUT THE VARIATIONS IN THE GRAINS AND PROTEIN PRODUCTIONS IN PEAS AND SOYBEAN IN THE PEDOCLIMATIC CONDITIONS OF THE ALMAJ-DEPRESSION

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Abstract:*The research work was carried out on a Terra rossa (preluvisol), moderately eroded with the pH value of (in H2O) 6.00. The humus content is moderate in the first 30 cm (2.33 to 2.12%), the potassium content has high values (207.5 ppm in the Ap horizon), the mobile phosphorus content is high (63.3 to 117.3 ppm) and the nitrogen index has middle values. Trifactorial experiments were carried out in the pea culture, in which the factor A, was represented by the cultivated variety (Dosa, Montana and Monique), the factor B – represents the influence of the bacterisation with non bacterized and the factor C the influence of the sowing time. The results varied within the investigated period between 900 kg / ha and 1700kg/ha.For the soybean culture the experiments were organized trifactorially, the investigated factors were: factor A – the cultivated variety (Felix Neoplant and Venus), factor B - bacterizarea (nebacterizat and bacterizat) and factor C sowing period with two graduations. The crop of the researched area ranged from 1500 - 2200 kg / ha. The researches took place in the Almaj Depression being considered an area less favourable for the two cultures, the only leguminouse cultivated being the beans. The practical implications of the research work are to create opportunities to ensure the protein needs for human and animal food consumption and to improve the crop structure and to ensure efficient rotations. The project that forms the basis for the paper is financed by CNCSIS and is entitled Contributions to the development of non-poluting technologies, economically efficient for peas, soybeans and lentils, adapted to the South-Western part of the country, with effects on the reduction of protein deficiency in* food".

Key word:, *bacteris, sowing time, peas, soybeans*

INTRODUCTION

Grain legumes is a very important group of crops due to high protein content in grain, and some of them (peanuts and soybeans) and oil content.

Legumes have a special importance because agrophytotechnical soil nitrogen enrichment as a result of its fixation from the atmosphere through which plants simbiozelor to form the bacterial genus Rhizobium.

MATERIAL AND METHOD

Experience has been placed on the territory of a soil type Bozovici preluvosol, vertic batistagnic, moderately eroded by water, very deep, the clay inflatable, very fine clay agile environment / silty clay.Texture profile is distinguished by being smooth throughout the profile, Figure 1. Weakly acid soil reaction throughout the profile with pH values between 6.00 and 6.86.Humus is in moderate quantities in the first 50 cm (2,33-2,12%) and in smaller quantities in the lower horizons (1.53%).

Cell K content is high with values between 207.5 ppm and 182.6 ppm in the Ap horizon Btyw horizon. Mobile P content is high with values between 63.3 ppm and 117.3 ppm, and the index N has medium values. To characterize the climate conditions have used data

from the Meteorological Station Bozovici. The two cultures were organized experiences trifactoriale the A-factor was the variety grown (from pea Dosa, Montana and Monique, the soybean Felix Neoplata and Venus), factor B - (nebacterizat and bacterizat) and factor C from sowing two graduations (March 27 era, sowing time two April 7).

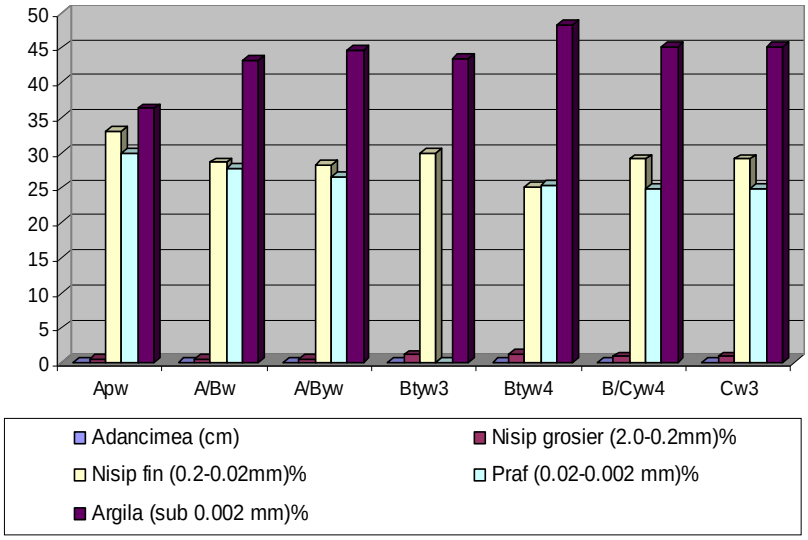

Figure1

RESULTS AND DISCUSSIONS

Table 1 and Figure 1 are presented results of Depression Almaj

Table 1

Results obtained in pea harvest Bozovici

Factorul A	Factorul B	Factorul C		Mediile factorului A			
		C1-Epoca I	C2-Epoca II	Recolta kg/ha	%	Diferența kg/ha	Semnificația
A_1 Dora	B_1.nebacterizat	918	802	1010	100		
	B_2.- bacterizat	1214	1106				
A_2 Montana	B_1.nebacterizat	1449	1255	1510	150	500	XXX
	B_2.- bacterizat	1726	1609				
A_3 Monique	B_1.nebacterizat	1321	1217	1412	140	402	XXX
	B_2.- bacterizat	1663	1448				

DL5% = 181 kg/ha DL1% = 239 kg/ha DL 0,1% = 351 kg/ha

Mediile factorului C

Specificare	C1-Epoca I	C2-Epoca II
Recolta kg/ha	1382	1240
%	100	90
Diferența kg/ha		-142
Semnificația		

DL5% = 192 kg/ha DL1% = 247 kg/ha DL 0,1% = 362 kg/ha

Mediile factorului B

Specificare	B_1.nebacterizat	B_2.- bacterizat
Recolta kg/ha	1160	1461
%	100	126
Diferența kg/ha		301
Semnificația		XXX

DL5% = 140 kg/ha DL1% = 208 kg/ha DL 0,1% = 259 kg/ha

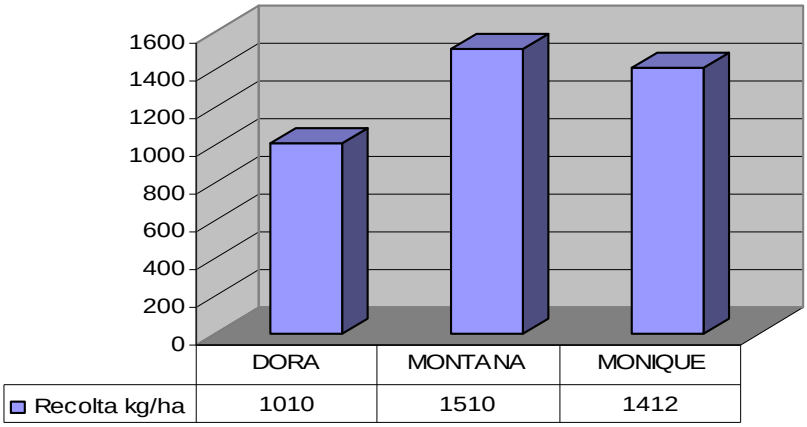

Figure 2. Results obtained in pea harvest Bozovici

The first three varieties ranged variety Dora Montana that exceeded 500 kg / hadiferență very significant. Monique results in variety are similar to those of the variety Montana difference between the two varieties of only 100 kg / ha. With reference to the influence bacterizării results show the effectiveness of the technological measures, the shortfall being about nebacterizat 300 kg / ha. Planting dates proved important in this area. So by delaying sowing of urgency urgency I II has been a loss of 140 kg / ha, located in eruării.

Depression results in soybean obținutela Almaj Table 2 and Figure 2 a year even under less favorable weather conditions indicate that this culture and this area meets the conditions of soy expansion, the harvest is over 2000 kg / ha in variety Neoplata, and even exceeding 2300 kg / ha in variety Venus, close to the seed drill bacteris.

Table 2

Results obtained from soybean harvest Bozovici

Factorul A	Factorul B	Factorul C		Mediile factorului A			
		C1-Epoca I	C2-Epoca II	Recolta kg/ha	%	Diferența kg/ha	Semnificația
FELIX	B_1.nebacterizat	1647	1515	1764	100		
	B_2. bacterizat	2017	1878				
NEOPLATA	B_1.nebacterizat	1881	1720	1952	111	188	X
	B_2. bacterizat	2193	2012				
VENERA	B_1.nebacterizat	1900	1806	2036	115	272	XX
	B_2. bacterizat	2302	2135				

DL5% = 198 kg/ha DL1% = 233 kg/ha DL 0,1% = 304 kg/ha

Mediile factorului C

Specificare	C1-Epoca I	C2-Epoca II
Recolta kg/ha	1990	1844
%		93
Diferența kg/ha		-146
Semnificația		

DL5% = 171 kg/ha DL1% = 252 kg/ha DL 0,1% = 344 kg/ha

Mediile factorului B

Specificare	B_1. nebacterizat	B_2. bacterizat
Recolta kg/ha	1745	2090
%		120
Diferența kg/ha		345
Semnificația		XXX

L5% = 148 kg/ha DL1% = 203 kg/ha DL 0,1% = 241 g/ha

Of the three varieties was observed followed by Neoplata Venus. Bacteris seed harvest has increased by 20% back a very significant difference of 345 kg / ha. Close to drill in rows spaced 25 cm and 50 cm in specified experimental conditions did not lead to obtain significant differences in yield. These conclusions are required to be verified in future years, given the climatic irregularities in 2009.

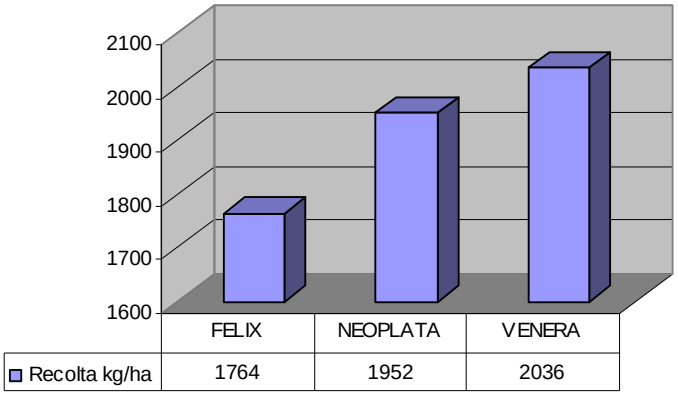

Figure 2. Results obtained from soybean harvest Bozovici

CONCLUSIONS

1. In Depression Almaj of pea varieties investigated variety Montana that was imposed on other factors investigated average yield exceeded 50% Dora blank variety.
2. Referring to bacterizare results show the effectiveness of such technological measures, the shortfall being about nebacterizat 300 kg / ha.
3. Study of soybean varieties that Venus has imposed harvest was higher Felix variety with a difference of 11% returns over 180kg/ha.
4. Bacterizarea seed, averaged over the three varieties with increased yield 20%.

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