Bulletin UASVM Agriculture, 67(1)/2010
Print ISSN 1843-5246; Electronic ISSN 1843-5386

The Effect of Differential Fertilization upon Ostara Potatos Production on Chernozem Soil

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Keywords: potato, production, Chernozem soil

SUMMARY

The potatoes harvest occurs with an intensive intake of nutrients, although this does not increase proportionally, however, crops are obtained. A rational fertilization increases production are obtained between 30 and 70% and significant effect on the develop quality of tubers in potato crops.The research and the experiments linked to the goals were carried out on a typical Chernozem soil located in Cojocna Farm, from Cluj, and we use 12 types of fertilization. Analyzing potatoes crops obtained in 2009 from the Chernozem soil, from Cojocna, we can made the first specification, that the production levels obtain, regardless of fertilization, are under biological potential at *Ostara* variety, the maximum crops obtain was no more than 26-27 t/ha tubers to medium potential production of this variety (38 t/ha),(tab.1).

Tab. 1

Production results regarding the effect of differentiate fertilization for potato, *Ostara* genre (year 2009)

No.	Fertilization variance	The Average tubers production				
		t/ha	%	Difference t/ha	Significance of difference	Duncan Test
1	Control	15.69	100,0	0,00	Mt.	A
2	$N_{40}P_{40}K_{40}$	20.24	129.0	4.55	-	A
3	$N_{80}P_{80}K_{80}$	19.29	122.9	3.60	-	A
4	$N_{120}P_{120}K_{120}$	12.48	79.5	-3.21	-	A
5	20t/ha manure	27.38	174.5	11.69	**	A
6	20t/ha manure + $N_{40}P_{40}K_{40}$	20.24	129.0	4.55	-	A
7	20t/ha manure + $N_{80}P_{80}K_{80}$	19.76	126.0	4.07	-	AB
8	20t/ha manure + $N_{120}P_{120}K_{120}$	15.95	101.7	0.26	-	AB
9	F- 311 HUM + $N_{40}P_{40}K_{40}$	14.52	92.6	-1.17	-	AB
10	F-311 HUM + $N_{80}P_{80}K_{80}$	12.62	80.4	-3.07	-	AB
11	F- 311 HUM + $N_{120}P_{120}K_{120}$	16.67	106.2	0.98	-	B
12	F- 311 HUM + 20t/ha manure	26.19	166.9	10.50	**	B

DL(5%) 7.3, DL(1%) 9.98, DL(0,1%) 13.42

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