Bulletin UASVM, Horticulture 65(2)/2008
pISSN 1843-5254; eISSN 1843-5394

TECHNOLOGY ELEMENTS AT THE IRRIGATED SOY CROP IN TRANSYLVANIA AREA CONDITIONS

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Keywords: soy bean, irrigation, graduals

SUMMARY

The basis of this paper is the three years experiences (2006-2007) performed at Nutriceutical Resource Center Tureni analyzing the effect of irrigation on the evolution of soy varieties.

The bi-factorial experience was performed as follows:

Factor	A-the water regime	Graduals	a_1 – no irigation
			a_2 –irrigated 50% active moiture interval
	B-the variety	Graduals	b_1 – Diamant
			b_2 – Perla
			b_3 – Agat

The experience had a number of 3 repetitions (n=3),the number of variables tested in the experience were 9 (v = 3x3), and the total number of the experipental parcels was 27 (N = 9x3). The surface of a parcels was 30 m^2.

The irrigation was made using furrow irrigation method of surface water flow. Before starting the experiences, we made analysis regarding the main physical and hydro-physical characteristics of soil, on depth from 25 to 25 cm, down to 150 cm. The moment of watering application, as well as the watering norm, was determined using the soil humidity dynamic, analyzed every 15 days starting the 1st of April until harvesting.

The registered data were statistically processed using the variance analysis method.

The soy varieties analysed during the experiences performed had a different reaction at the A factor. Therefore, all soy varieties registered significant increased outputs in irrigated conditions, compared to the non-irrigated trials. The highest yield was registered at the Agat variety: 2,63 t/ha soy bean in non-irigated experiences, compared to 3,10 t/ha soy bean in irrigated conditions. The water consuntion, on difrerent vegetation phases, varies sensitively, but the highest values were registred in phase of germinație and to come up, to flower, formation period and bean filling. The soy varieties cultivated at Nutriceutical Resource Center Tureni during 2006-2007 period, proved special qualities and high receptivity in different irrigation conditions.

REFERENCES

1. Grumeza, N., O. Merculiev, C. Kleps, 1989, Prognoza si programarea aplicarii udarilor in sistemele de irigat, Ed.Ceres, Bucuresti.
2. Gus, P.si colab., 1998, Agrotehnica, Ed. Risoprint, Cluj-Napoca.
3. Luca, E., Z. Nagy, 1999, Irigarea culturilor, Ed. Genesis, Cluj-Napoca.
4. Nagy, Z., E. Luca, 2001, Cercetari privind regimul de irigare la principalele culturi de camp din Transilvania, Simp. Prospects for the Agriculture of the 3rd Milennim, 22-27 octombrie.