TECHNOLOGY ELEMENTS AT THE IRRIGATED SOY CROP IN TRANSYLVANIA AREA CONDITIONS

Ioan COLCEAR, Emil LUCA

University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca,
3-5 Manastur Street, 400372 Cluj-Napoca, Romania, ioancolcear@yahoo.com

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:

<table>
<thead>
<tr>
<th>Factor</th>
<th>A-the water regime</th>
<th>Graduals</th>
</tr>
</thead>
<tbody>
<tr>
<td>b₁</td>
<td>Diamant</td>
<td>Graduals</td>
</tr>
<tr>
<td>b₂</td>
<td>Perla</td>
<td>Graduals</td>
</tr>
<tr>
<td>b₃</td>
<td>Agat</td>
<td>Graduals</td>
</tr>
<tr>
<td>a₁</td>
<td>- no irrigation</td>
<td></td>
</tr>
<tr>
<td>a₂</td>
<td>- irrigated 50% active moisture interval</td>
<td></td>
</tr>
</tbody>
</table>

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 experimental parcels was 27 (N = 9x3). The surface of a parcels was 30 m².

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-irrigated experiences, compared to 3,10 t/ha soy bean in irrigated conditions. The water consuntion, on different vegetation phases, varies sensitively, but the highest values were registred in phase of germination 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


643