RESEARCH CONCERNING A NEW METHOD FOR IMPROVING THE VERY EARLY POTATO CROP IN SOLARIUM

Neicu Eliza and V. Popescu

Faculty of Horticulture, University of Agronomic Science and Veterinary Medicine, Bucharest, 011464, Romania; fax: 021 318 36 36; e-mail: neicu_eliza@yahoo.com

Key words: very early potato crop, Ostara, tubers, minitubers, solarium

SUMMARY

The classical technology of culture of very early potato is used on very small surfaces because it presents a lot of disadvantages.

Through the experience organized this year at a private vegetable farm near Bucharest, it was experimented the rooting of sprouted tubers in Jiffy pots.

The experimental variants in solarium were: \( V_1 \) – sprouted and rooted tubers, \( V_2 \) – sprouted and rooted minitubers, \( V_3 \) – sprouted tubers and \( V_4 \) – sprouted minitubers. Same variants, in open field represented the control variants.

The tubers preparation for planting had begun on 27 January for \( V_1 \) and \( V_2 \), on 8 February for \( V_3 \), \( V_4 \), \( V_{1M} \) and \( V_{2M} \) and on 20 February for \( V_{3M} \) and \( V_{4M} \), having 2 stages: sprouting (applied to all variants) and rooting (\( V_1 \), \( V_2 \), \( V_{1M} \) and \( V_{2M} \)).

The mean yield obtained in solarium and in the unprotected crop was measured for two consecutive dates (01.05.2007 and 10.05.2007 for the solarium crop and on 19.05.2007 04.06.2007 for the control crop) over the growth period.

The best yield obtained in solarium were registered at \( V_1 \) (31,26 at the 1st of May and 36,27 t/ha at the 10th of May) and \( V_2 \) (21,72 at the 1st of May and 32,12 t/ha at the 10th of May). At the variants where were have used sprouted tubers, the yields were smaller (14,31 at the 1st of May and 25,59 t/ha at the 10th of May at \( V_3 \)). These results show that the tubers rooting in Jiffy pots determines a production increase over 16 t/ha in solarium on 1st of May.

In the open field, the yields were influenced by the dimension of the tubers used for planting. Thus, at \( V_1 \) were obtained 20,31 t/ha on 19th of May, in the same time at \( V_2 \) the yield at the same date was just 7,11 t/ha. At the harvest from the 4th of June, the yields varied between 31,21 t/ha at \( V_1 \), 14, 46 t/ha at \( V_2 \), 24,82 t/ha at \( V_3 \) and 15, 03 t/ha at \( V_4 \).

The influence of the culture system can be remarked by comparing the yield obtained in open field and also in solarium at the variant where were used rooted tubers. Thus, at \( V_1 \) in solarium on the 1st of May were obtained 31,26 t/ha; same yield was obtained in open field only on the 4th of June.

Fig. 1 Aspects from the preparation of the tubers for planting and from the harvest