

SWEET POTATO [*IPOMOEA BATATAS* (L.) LAM] YIELD INFLUENCED BY SLIPS' ORIGIN ON ALLUVIAL SOIL IN SOUTH HUNGARY

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Sweet potato (*Ipomoea batatas* L.) is an herbaceous dicotyledonous plant belonging to the family *Convolvulaceae*. It is one of the most widely grown root crops in the world and cultivated throughout the tropical and warm temperate regions. Globally, it is among the important food crops in the world, after wheat, rice, maize, Irish potato, and barley. Along with several European countries, it is also grown in Hungary. In spite of the published cultivation technology sheets and experiences, yield security is still not fully solved, growing site- and genotype-specific advices are still missing. Internationally, sweet potato is usually planted on ridges, depending on the soil conditions. It is important to determine whether among the local conditions planting on ridges or without ridges planting technology give higher yields. Our main objectives in the current work to comparison of the effect of planting primary or secondary cuttings on yield. To produce high quality planting material it can be an important information whether slips directly cut from sprouting storage roots (primary cuttings) or those derived by sprouting of the primary cuttings (secondary cuttings) result in higher yield. The cuttings were planted at the end of May 2016 and early June in 2017, in an amount of ca. 1,000 pieces on the whole experimental area of 300 m². The cuttings were planted manually, followed by thorough irrigation. The experiment was performed in Deszk, South-Hungary on clay loam soil of medium to very good nutrient content. The experimental design was Randomised Complete Block Design (RCBD). We used the Ásotthalmi-12 orange-fleshed sweet potato variety. Ridges were formed on one half of our experimental area, on the other half rows were formed without ridges. The experiments with the planting material were started early April in 2016 and 2017. In both years minimum 5 plastic trays were chosen where the sprouting of sweet potato storage roots had already been started in both years. The primary cuttings were cut directly from the storage roots, watered, the lower leaves removed, and the slips were planted into the experimental trays. Secondary cuttings were derived from the sprouting of the primary ones. Both primary and secondary cuttings were used in the field experiments to get information that the primary or the secondary cuttings will

give us more yield. The experimental plots were harvested on 15th October 2016 and 2017. These plants had grown from primary or secondary cuttings, respectively. The first five plants from each row were harvested and weighed separately. These plants had grown from cuttings from tubers (primary cuttings) or from shoots (secondary cuttings). In 2016 and 2017 on ridges planting the secondary cuttings gave the best results. In 2016 with ridges technology, the difference between the yields of plants originating from primary and secondary cuttings (29.83 vs. 38.04 t ha⁻¹) can be even 9 tons. In 2017 with ridges technology the difference between the yields of plants originating from primary and secondary cuttings (19.39 vs. 27.59 t ha⁻¹) can be even 8 tons. Data were subjected to analysis of variance (ANOVA) using. Significant differences between treatment means were separated using least significant difference (LSD_{5%}) test at 5% level of significance. On ridges technology between 2016 and 2017, with primary and secondary cuttings indicated significant differences. In Hungary, this is a new set of experiments focusing on sweet potato slips' origin. This year, our aim is to continue the experiments and we hope that it will be of particular value for researchers, producers and farmers in the future.

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