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Oral sessions | Field Crop Production | O12: Concepts, Prospects, and Potentiality of Crop Production in East Asia

## [O12] Concepts, Prospects, and Potentiality of Crop Production in East Asia

\*Sponsored by the Korean Society of Crop Science

Chair: Sang-In Shim (Gyeongsang National University, Korea)

Chair: Takeo Sakaigaichi (Kyushu Okinawa Agricultural Research Center, National Agriculture and Food Research Organization, Japan)

Chair: Hiroshi Ehara (Nagoya University, Japan)

Thu. Sep 9, 2021 2:30 PM - 4:30 PM Room 1 (Oral) (Field Crop Production)

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2:30 PM - 2:50 PM

### [O12-01]Yield Performance of Recent Breeding Lines of Sweetpotato Developed for Direct Planting in Japan

○Takeo Sakaigaichi, Yumi Kai, Akira Kobayashi, Keisuke Suematsu (Division of Upland Farming Research, Kyushu Okinawa Agricultural Research Center, National Agriculture and Food Research Organization, Japan)

Sweetpotato is an important carbohydrate crop in Japan. In general, sweetpotato crops are propagated using stem cuttings. According to the statistical data in 2018, working hours from preparation of stem cuttings to transplanting occupy over one third of the total. To establish a labor-saving cultivation system, we have studied "direct planting" in which small storage roots are planted instead of stem cuttings. In direct planting, we can see "mother root" and newly produced "daughter root" at harvest. Compared with daughter root, mother root has lower quality as processed food material. Therefore it is necessary to breed cultivars with small enlargement of mother root and high yield of daughter root for the extension of direct planting. In this study, yield performances of recent breeding lines, "Kyushu No.198" and "Kyushu No.199", were compared with a standard cultivar of direct planting, "Suzukogane". We carried out a field experiment in two years. Storage roots were planted in March and yield performances including mother root enlargement were investigated in August. Partitioning index which was calculated from both mother and daughter root yield indicated that both of two lines showed smaller enlargement of mother root. In addition, their yields of daughter root were significantly higher than that of "Suzukogane". These results indicate it is possible to enhance the present yielding level of daughter root through breeding. We appreciate the Project of the Bio-oriented Technology Research Advancement Institution, NARO for their financial support.