[P1] Field Crop Production

Thu. Sep 9, 2021 12:15 PM - 2:00 PM Room 1 (Poster) (Field Crop Production)

1:15 PM - 2:00 PM

[P1-16]Assessment of Dual-Purpose Sweet Potato Cultivation in Japan: Effects of Shoot Harvest Regimes and Cultivar Differences

*Nominated for Presentation Awards

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Sweet potato (*Ipomoea batatas* L.) is often cultivated for dual purposes by resource-poor farmers, and both tuberous root and shoot are harvested. Leaves are important as nutrient sources as they are rich in minerals and protein. The objectives of this study were to evaluate the effect of timing and intensity of mid-season harvest of shoot on tuberous root yield and total shoot yield, and cultivar differences in the response to mid-season harvest of shoot.

Two field trials were conducted at the upland farm of the University of Tokyo, Japan in the summer of 2020. In Trial 1, seven treatments (50%45DAP, 50%75DAP, 50%45DAP&75DAP, 100%45DAP, 100%75DAP, 20%45DAP&60DAP&75DAP, control) were compared, where 50%45DAP means 50% of shoot were harvested at 45 days after transplanting (DAP). In Trial 2, three cultivars (Beniazuma, Koganesengan and Suiou) were grown with mid-season harvest of shoot.

In Trial 1, total shoot yield was highest in 100%75DAP and least in 100%45DAP. Tuberous root yield was highest in control, while not significantly different from 50%45DAP. In Trial 2, total shoot yield was highest in Suiou, while Koganesengan for tuberous root yield. The total amount of iron in edible part (leaf + tuberous root) significantly increased by mid-season harvest of shoot.

The results showed that total shoot yield, tuberous root yield and crops' nutrient contents in dual-purpose sweet potato cultivation depend on the timing and intensity of shoot harvest. Suitable cultivars should possess both vigorous shoot recovery from mid-season harvest and genetic potential of high tuberous root yield.