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Varietal Variation in Biomass Production and Total Digestible Nutrients of Maize Grown under Lowland Condition

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[Abstract]
This study was carried out to select the excellent silage maize varieties customized for paddy cultivation that is vulnerable to lodging and waterlogging in the central and region. Ten varieties (Kwangpyeongok, P3394, etc.) were sown with 3 replicates in Suwon, Gyeonggi-do. It was sown twice in April and June of each year in 2020-2021 and harvested during the yellow ripe stage suitable for silage.
The number of days to flowering stage in lowland condition increased up to 11 days compared to that in upland condition. In April seedling, varieties that showed a relatively small decrease in biomass production and total digestible nutrients (TDN) under lowland condition compared to upland condition were Gangdaok and Kwangpyeongok in 2020, and Dacheongok, Gangdaok and Kwangpyeongok in 2021. Kwangpyeongok, Gangdaok, and Sinhwangok showed relatively higher biomass production and TDN than the other varieties under lowland compared to upland in both 2020 and 2021.
Our results suggest that Kwangpyeongok and Gangdaok are suitable silage maize varieties for lowland cultivation in the central region of Korea.

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