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## Introduce of agronomic characteristics, forage yields and quality of sorghum × sudangrass hybrids ‘Cadan 99B’ and ‘Sweet Sioux WMR’ in middle and south region of Korea

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### Abstract

This study was carried out to introduce of agronomic characteristics, forage yields and quality of Sorghum × Sudangrass hybrids ‘Cadan 99B’ and ‘Sweet Sioux WMR’ from 2015 to 2016 in middle and southern regions of Korea. The field experiment design was randomized complete block in seven varieties with three repetitions. Sorghum × Sudangrass hybrids were sown in mid-May in middle region, and end-May in southern region of Korea, 2015 and 2016. And, the first harvests were from the end of July to the beginning of August, and the second harvests were from the end of September to the beginning of October in middle and southern regions of Korea. The observed average heading date of Sorghum × Sudangrass hybrids Cadan 99B and Sweet Sioux WMR were July 22. The heading date of Cadan 99B and Sweet Sioux WMR were 8 days earlier than heading control variety SX-17 and 5 days earlier than BMR control Revolution. The sugar contents of Cadan 99B and Sweet Sioux WMR were 6.5 and 6.9 Brix°, respectively. Comparison with brown mid-rib (BMR) variety, the sugar contents of Cadan 99B and Sweet Sioux WMR were 0.2 and 0.6 Brix° higher than Revolution, respectively. The average of dry matter (DM) yield for 2 years and 2 regions of Cadan 99B (24,587kg/ha) was the highest among the seven varieties, but there was no significant difference among other varieties except headless control variety Jumbo (19,119kg/ha) and test variety LATTE (20,778kg/ha) ( $p>0.05$ ). The crude protein (CP) and *in vitro* dry matter digestibility (IVDMD) of Cadan 99B were 7.5% and 60.2%, and Sweet Sioux WMR were 6.9% and 60.7%, respectively. The results of this study indicated that Sorghum × Sudangrass hybrids Cadan 99B and Sweet Sioux WMR were recommended that earlier heading date than other varieties, suitable for silage because of high sugar contents, and high yields of DM in middle and southern regions of Korea.

Keywords: Cadan 99B, Sweet Sioux WMR, Sorghum × Sudangrass hybrids, agronomic characteristics

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