

Forage Productivity of Three Introduced Sorghum × Sudan grass Hybrids under Irrigation in three Arid Areas in Oman

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ABSTRACT

Three varieties of Sorghum × Sudan grass hybrids viz. Sweet Jumbo, Speed Feed and Super Dan introduced from Australia were investigated during the year 2004 for their growth performance (plant height, green forage and dry matter yields) at three agricultural research stations situated in diverse locations of Oman. These locations are Al-Kamil Research Station (Al-Kamil), Sohar Research Stations (Sohar) and Jimah Research Station (Jimah) located in the eastern, northern and interior parts of Oman, respectively. Results indicated that there were highly significant ($p < 0.01$) differences between locations, hybrid varieties, and their interactions (location × hybrid varieties) in respect to plant height while only main effects of location and hybrid varieties were significant for the total green matter yield. However, location differences were only highly significant ($p < 0.01$) for total dry matter yield. The hybrid Sweet Jumbo produced significantly higher green forage yield (232.08 t/ha) than Super Dan (207.28 t/ha) and Speed Feed (178.87 t/ha) over four cut-harvests throughout the growing season. However, the hybrid Super Dan was only numerically ($p > 0.05$) superior (54.85 t/ha) to Sweet Jumbo (47.57 t/ha) and Speed Feed (35.13 t/ha) in respect of the dry matter yield. Jimah location was found to be more favorable in terms of better soil and moisture availability for growth and development of these Sorghum × Sudan grass hybrids. This fact is also evidenced by the superior performance of all these hybrids in this location in respect of all the studied parameters.

Keywords: Sorghum × Sudan grass hybrids, forage, green matter, dry matter, productivity.