

## Forage Quality Dynamics of Warm Season Grasses during the Growing Season in West-Central Texas

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Nutritive quality of grass is important to livestock producers as they make pasture and grazing management decisions based on the nutritional needs of the grazing animal. Understanding the nutritive quality of warm season grasses throughout the growing season is needed in west-central Texas to assist livestock producers with forage management options. Our study objective is to compare nutritive distribution of five perennial grasses native to the southern plains, and one introduction from southern Africa to determine optimum forage harvest times to meet nutritional requirements of different classes of beef cattle. Plots of 'Alamo' switchgrass (*Panicum virgatum* L.), 'San Marcos' eastern gamagrass [*Tripsacum dactyloides* (L.) L.], 'Earl' big bluestem (*Andropogon gerardii* Vitman), 'Lometa' Indiangrass [*Sorghastrum nutans* (L.) Nash], 'Selection 75' kleingrass (*Panicum coloratum* L.), 'Haskell' sideoats grama [*Bouteloua curtipendula* (Michx.) Torr.] and an upland switchgrass (9065018) were evaluated every 30 days for percent *in vitro* dry matter digestibility (IVDMD) and crude protein (CP) beginning in April–November from 2007-2009 at the USDA-NRCS James E. "Bud" Smith Plant Materials Center, Knox City, Texas. Our results suggest these warm season grasses decline in nutritive quality as season and maturity progress, but can provide the nutritive requirements of different classes of beef cattle in west-central Texas. Switchgrasses, unlike most entries, declined in nutritive value more than others. Selection 75 and San Marcos CP (8 and 9%, respectively) remained above critical ruminant requirement thresholds even into November, indicating promise as standing winter hay.

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