

GROWTH AND FORAGE QUALITY OF WARM SEASON GRASSES DURING THE GROWING SEASON IN WEST-CENTRAL TEXAS

Gary L. Rea¹, Robert D. Ziehr², Joel L. Douglas³, and J.P. Muir⁴

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 nutritive quality of warm season grasses is needed in the Texas Rolling Red Plains to assist livestock producers with forage management options. Our study objective is to compare the seasonal growth and 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 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 ecotypes were evaluated every 30 days for percent *in vitro* dry matter digestibility (IVDMD) and crude protein (CP) beginning in April –November during 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 developing heifers, growing steers, and lactating, dry and mid pregnant cows in the Texas Rolling Red Plains through August in most years. Unlike most entries, especially the switchgrasses that declined in nutritive value more than others, 'San Marcos' CP remained above critical ruminant requirement thresholds even into November, indicating promise as a standing winter hay.

¹ USDA/NRCS, Knox City, TX

² USDA/NRCS, Knox City, TX

³ USDA/NRCS, Fort Worth, TX

⁴ Texas AgriLife Research, Stephenville, TX