

EVALUATING WARM-SEASON GRASS PERFORMANCE IN EASTERN MONTANA¹

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Abstract. There is interest in the Northern Great Plains to use warm-season grasses to extend the “green period” for mid- and late-summer grazing and to increase species’ diversity in the revegetation of deteriorated rangelands, mineland reclamation, and conservation practices applied through Farm Bill programs. The Wayne Berry field evaluation planting was established in May 1994 on a dryland site in east-central Montana to study the adaptation, performance, and use of newly-released native and introduced pasture plants in comparison to commonly used species/cultivars. Twenty-two accessions of seven warm-season grasses, plus three different mixtures of selected warm-season entries, were planted in 2-acre blocks. The east end of each block was cross-seeded with *Astragalus cicer*, *Atriplex X aptera*, *Medicago sativa*, *Onobrychis viciifolia*, and *Sanguisorba minor*. All plots were monitored for plant adaptation, grazing preference and utilization, and cattle performance over nine years. The top performing entries were *Panicum virgatum*, *Andropogon hallii*, *Andropogon gerardii*, *Schizachyrium scoparium*, *Bouteloua curtipendula*, and *Bouteloua gracilis*. Results showed that the warm-season cultivars were slow to establish, but adapted to the area and that the warm-season species could increase plant diversity and provide late summer grazing. Cattle seemed to prefer and utilize the most immature entries during each late summer grazing event, regardless of cultivar type. *Andropogon gerardii*, *Bouteloua curtipendula*, and *Bouteloua gracilis* were preferred at all phenology stages and the legume mixtures increased livestock preference. As a result of this research, warm-season grasses are currently being recommended and used in eastern Montana native plantings.

Additional Key Words: native, forages, summer grazing, livestock preference

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