Summer Annuals for Stocker Cattle Grazing in the High Plains

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BACKGROUND

Stocker cattle grazing is a primary part of the cattle industry in the High Plains. The forage base for these programs includes rangeland, introduced perennial pastures, winter annual forages and summer annual forages. In the late 1990's, interest in sorghum and sorghumXsudangrass forages carrying the brown midrib (bmr) trait was renewed. The bmr trait is associated with lower lignin content in the plant and higher fiber digestibility, therefore the energy value of the forage should be improved compared to varieties without the bmr trait. Photoperiod sensitive (PS) varieties of these forages have also been released. The PS trait delays maturation of the plant and therefore should maintain nutritive value over a longer timeframe during the summer; in addition, our work with silages has suggested that the PS varieties yield more forage than standard and bmr varieties. In 1999, we began a series of grazing studies to compare these bmr and PS varieties with standard varieties.

OBJECTIVE

Determine if bmr and PS varieties provided any advantages compared to standard varieties for stocker grazing systems.

RESULTS

In comparisons of a bmr and standard variety, steers gain on bmr was 0.32 lb/d higher than daily gains on the standard variety. Carrying capacity was similar for the two varieties, therefore gain/acre was also higher for the bmr variety.

In comparisons of bmr and PS varieties, daily gains were 0.5 to 0.7 lb higher for bmr varieties compared to a PS variety. However, carrying capacity was 13-20 percent higher for the PS variety. Weight gain/acre was not different for the bmr and PS varieties.

Results of these trials demonstrate that producers have flexibility to select a variety that meets their production objectives. Bmr varieties will improve weight gain of cattle but lower carrying capacity, while PS varieties will provide more carrying capacity but lower weight gains.

Current studies are focused on developing stocking rate decision models that interface weight gain response curves and partial budgeting.