Minnesota - Annual Ryegrass Fall Grazing Strategies for Non-Lactating Beef Cows in Northern Minnesota

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Fall-grazed windrowed vs. stockpiled annual ryegrass were evaluated for forage quality and beef cow performance over 2 years at the North Central Research and Outreach Center in Grand Rapids, MN. In 2007 and 2008, two 6-ac paddocks were seeded with annual ryegrass in early spring, rotationally grazed during summer, and fertilized with 46 lb N/ac and stockpiling initiated in August. In mid-October, forage from half of each replicated 6-ac paddock was clipped while the other half was left standing. Two windrows in each clipped paddock were raked together 1 day following swathing to represent the windrow treatment.

Each fall, 32 non-lactating, pregnant Angus beef cows were assigned to one of four 3-ac paddocks representing one of two grazing treatments: 1) windrowed annual ryegrass, and 2) stockpiled annual ryegrass. In fall 2007, cows averaged 1,435 lb, 5 yrs of age, 125 days pregnant, and 5.5 body condition score. In fall 2008, cows averaged 1,283 lb, 4 yrs of age, 131 days pregnant, and 5.0 body condition score. Forage quality and animal performance data were collected each year and analyzed.

Windrowed annual ryegrass had greater CP, ADF, and NDF; and lower TDN and RFV than stockpiled annual ryegrass over time both years (Table 1). Cattle grazed stockpiled paddocks ~9 days longer than windrowed paddocks. In 2007, cow gains were not affected by treatment, averaging -3.2 lb/head total and 0.04 lb/day, respectively. In 2008, however, cows grazing stockpiled annual ryegrass gained more weight over the season and per day (89 vs. 45 lb/head and 2.3 vs. 1.5 lb/day) than cows grazing windrowed annual ryegrass.

Results indicate that fall grazing system affects annual ryegrass forage quality. Nevertheless, either stockpiling or windrow-grazing annual ryegrass appear to be viable fall grazing systems to retain forage quality and maintain non-lactating, pregnant beef cows in northern Minnesota.

Table 1. *Forage quality of stockpiled (STK) vs. windrowed (WIN) annual ryegrass during 2 autumns at Grand Rapids, MN.*

Parameter	Treatment	2007		2008	
		October	December	October	November
		----------%DM----------			
CP	STK	22	18	14	13
	WIN	23	19	14	16
TDN	STK	63	67	65	64
	WIN	64	62	65	59
ADF	STK	33	28	30	32
	WIN	32	35	30	38
NDF	STK	54	48	50	52
	WIN	53	54	50	61
RFV	STK	109	131	122	114
	WIN	113	108	122	90