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## Winter Grazing Activity and Forage Intake of Range Cows in the Northern Great Plains

In the mid-1980's Don Adams and others conducted research at the ARS-Ft. Keogh Research Station to determine how cold weather influenced grazing behavior and forage consumption. The objectives were to determine relationships between winter weather variables, grazing activities and forage intake of 3- and 6-year-old cows on native range in eastern MT. The following two tables are a summary of their research and show at what time during the day, cows spent grazing and how snow cover influenced forage intake and digestibility of native range. The temperature during these studies ranged from about -31 F to 32 F.

### Effects of Cow Age and Snow Cover on Time of the Day (expressed as a percentage of the 24 hour period) Cows Spent Grazing Native Range

Time of day	Cow Age		Snow Cover	
	3 yr old	6 yr old	No	Yes
Percentage of the total day spent grazing				
12 am- 6 am	8	7	7	9
6 am- Noon	38	37	39 <sup>a</sup>	36 <sup>b</sup>
Noon- 6 pm	46	49	46	50
6 pm- midnight	8	7	7	8
Total hours spent grazing				
Total hours spent grazing	6.9 <sup>b</sup>	7.4 <sup>a</sup>	7.3	7.0

<sup>a,b</sup> Significantly different, P<0.05

### Dry matter intake and forage digestibility by 3 and 6 year old cows grazing fall-winter native range from November 28 to December 30

Date of collection	Dry matter intake, lbs		Dry matter digestibility, %	
	Cow age: 3 year old	6 year old	3 year old	6 year old
11/28- 12/2	24	27	55	52
12/5- 12/9	25	27	60	56
12/12- 12-16	21	21	56	51
12/19-12/22	19	19	53	49
12/26- 12/30	15	15	38	36

No differences due to cow age  
 Period is different, P<.05

Cow age is different, P<.05  
 Period is different, P<.05

Grazing time was affected by cow age, snow cover, wind velocity and daily temperature. Forage intake was decreased at colder mean daily temperatures. It was concluded that adverse winter weather reduced grazing activity and forage intake of cows grazing on native rangelands.

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