



ANIMAL NUTRITION IN THE EXTENDED GRAZING SEASON

John Duynisveld, Michel McElroy, Bill Thomas, Yousef Papadopoulos

Proper planning is the key to grazing in the extended season. The first concern of any grazer should be whether there is enough feed available for the herd or flock. Differences in quality of stockpiled forages, as well as different energy demands by animals in colder weather, can provide challenges in calculating the amount of pasture required and the nutrition animals will receive from it.

The first step is to determine how much stockpiled pasture (stockpiled from mid-August), hay land (stockpiled from mid July), or winter/fall annuals are required. The number of acres required for each month of grazing can be calculated using the dry matter yield of stockpiled pastures, hay land or corn and comparing it to animal intake (assuming utilization of forage will be close to 70%). Table 1 outlines some sample calculations for sheep and beef cows.

Table 1: Expected acreage required per month for sheep and beef cows for rotationally grazed perennially pasture, hay land and corn in the extended grazing season

	Stockpiled perennial pasture		Annuals
	Rotational Grazing	Hay Land	Corn
SHEEP (Assume 100 ewes, April lambing)			
Forage yield, lbs Dry Matter/acre	2,500	4,500	10,000
Graze 70% available feed = ? lbs/acre	1,750	3,150	7,000
Each ewe eats 3 lbs/day, or 300 lbs/day total, so 1 acre will last how many days?	6	11	23
How many acres/month?	5	3	1.4
BEEF COWS (Assume 50 cows, March-June calving)			
Forage yield, lbs Dry Matter/acre	2,500	4,500	10,000
Graze 70% available feed = ? lb/acre	1,750	3,150	7,000
Each cow eats 24 lbs/day, or 1200 lb/day total, so 1 acre will last how many days?	1.5	2.6	5.8
How many acres/month?	21	11	5

The diet must be sufficient to meet the animal's energy and protein demands. Demands change through the production cycle. Use Table 2 to compare the energy (TDN) and protein (CP) of extended season forage with the needs of sheep and beef cows, and note the difference between them. A finishing lamb, for example, will require roughly 10% more energy than perennial grasses offer, which may necessitate a grain supplement if your sheep are feeding on a stockpiled pasture. On the other hand, standing corn, while a terrific source of energy, will not meet the protein needs of any animal without the addition of a high quality silage/hay or soybean meal to the diet. Make sure to be aware of the differences in animal metabolism in colder weather, as discussed in the "Principles of Extending the Grazing Season" factsheet. Animals expend more energy in the fall/winter than they do in the summer, which has consequences for their diet.

Table 2: Quality of stockpiled forages and fall/winter annuals vs the nutrition requirements of sheep and beef cows (assuming unrestricted intake)

	%TDN	%CP
Tall Fescue	64	14
Timothy	62	15
Meadow Fescue	62	13
Bluegrass	62	15
Reed Canarygrass	61	11
Alfalfa	53	17
Red Clover	53	17
Annual Ryegrass	65-75	20
Brassicas	75-84	18-35
Winter cereals	65-80	20-25
Standing Corn	60-71	5-7
Maintaining Ewe	55	9
Flushing Ewe	59	9
Finishing Lamb (30kg)	72	14
Growing Heifer	63	12
Nursing Cow	62	12
Dry Mature Cow	54	8

For more information, please visit www.extensioncentral.com or www.nsac.ca/pas/instind/biodiversity/