



PRINCIPLES OF EXTENDING THE GRAZING SEASON

John Duynisveld, Michel McElroy, Yousef Papadopoulos, Bill Thomas

Over-wintering accounts for 60%-80% of the cost of production. The expenses associated with barns, bedding and manure handling, in addition to supplying livestock with conserved feed is a major cost for producers. A more economical solution to this problem is to adopt management techniques to extend the grazing season, giving livestock access to cheaper, more nutritious feed in the months before and after the 'traditional' grazing season.

Extended-season grazing reduces the costs and labour associated with housing animals. In short, by providing suitable pastures in the extended season the animals efficiently harvest their own feed.

***Good planning and flexibility are key to
successful extended grazing***

Here are the key principles for extended season grazing, and specific pasture and grazing strategies for the times of year beyond the traditional grazing season (late fall, winter).

Seasonality and Animal Needs

When grazing in the extended season, it is important to remember that an animal's feed energy needs change with the weather. Increasing energy requirements are met through either higher intake or higher quality feed.

Temperature: All animals have a minimum air temperature below which it takes more feed energy for basic survival. The effects of wind, rain, and snow can considerably raise an animal's energy needs. Providing access to shelter, either by pasturing them in naturally protected areas or near barns and other artificial shelters, can reduce this problem.

Mobility: The other major energy cost for livestock in the extended season comes from snow or wet ground. These ground conditions can impede the animal's ability to move, and it takes more feed energy to get from place to place. This problem is compounded by the distance to the pasture. Keeping livestock close to their food source reduces energy requirements.

Reproductive Management: Energy requirements of an animal will change during its life cycle. For example, a ewe in early gestation only requires about 15% more dry matter intake than usual; during flushing she requires 50% more. Take this into account when planning for the extended season.

LATE FALL

October-December

Pasture Management

Grazing in late fall will depend on stockpiled pastures that have been left to grow from late July/mid August. Aim for a 20-30cm sward height before a killing frost arrives. Take care not to let the forage over-mature and lose its quality. Good fertility is essential for increasing the quantity and quality of stockpiled forages. If nitrogen is limiting, an application of 50kg/ha of fertilizer nitrogen in late August will help increase yields. Legumes, at 30% of the sward, can also provide the same amount of nitrogen.

Perennial Pasture Mixtures recommendations (sown @ 20kg/ha):

Kentucky Bluegrass (30%)	Tall Fescue (35%)
Meadow Bromegrass (20%)	Kentucky Bluegrass (30%)
Meadow Fescue (20%)	Trefoil (25%)
Timothy (20%)	Red Clover (10%)
Red Clover (10%)	

Timothy (20%)
Reed Canarygrass (20%)
Kentucky Bluegrass (30%)
Trefoil (30%)

Annuals, such as annual ryegrass, brassicas (kale, turnip, rape) or cereals (oats, fall rye) can also be grazed in the late fall. They yield well and are an excellent source of energy, but are more costly and provide a weaker sod than perennial pastures.

Grazing Management

To get the most out of late fall pastures, use a grazing management plan that will increase utilization and reduce selectivity. Block or strip grazing with polywire fencing can be used to ration out 3- or 4-day allotments of feed at a time.

Take care when large animals graze in wet weather: punching or “pugging” of soil by hooves can cause serious damage to pastures. To avoid mud, try to have as much pasture available as possible and keep animals moving to new ground frequently.

Lactating and growing/finishing animals require more energy, and will benefit from fall annuals as feed.



Cattle grazing stockpiled tall fescue in December in Nappan, NS

WINTER

December-March

Pasture Management

Stockpiled pastures can be preserved under snow to provide forage even into the winter, but hardier species are required to maintain quality through the cold and freeze-thaw cycles of Atlantic Canada. Fescues are recommended for winter grazing owing to their tough, waxy cuticles.

Using crops tall enough to poke through the snow is another alternative. Early maturing varieties of silage corn can provide high energy feed for cows during the winter months. However, wildlife can be a problem; crows and raccoons may consume the cobs before the cows are able to graze them.

Grazing Management

Snow can provide challenges to the grazer, but there are pasture opportunities even in the winter months. Cows are able to graze through 15 cm of loosely packed snow, and sheep up to nearly 30 cm, so stockpiled pastures can be grazed even after the onset of winter.

When snow is too deep to graze through or if the field is iced over, feed can be made available in other ways. One option is bale grazing: letting animals feed on hay bales in the field rather than indoors. With this method, there is less work hauling manure and bedding, with the added benefit of more nutrients being returned to the pasture for spring growth. Nutrient return from bale grazing is particularly effective in established perennial pastures when bales are evenly spaced to ensure uniform distribution of manure. Ration out the bales every 3 or 4 days to minimize waste. Polywire can be used for this; temporary posts can be placed in the bales rather than driving posts into frozen ground.

This is also the season to pay close attention to weather: providing windbreaks or other forms of shelter may be necessary in adverse conditions.

Early weaning of calves will improve the cow's body condition, reduce the daily nutrition requirement and decrease the amount of forage required per animal.

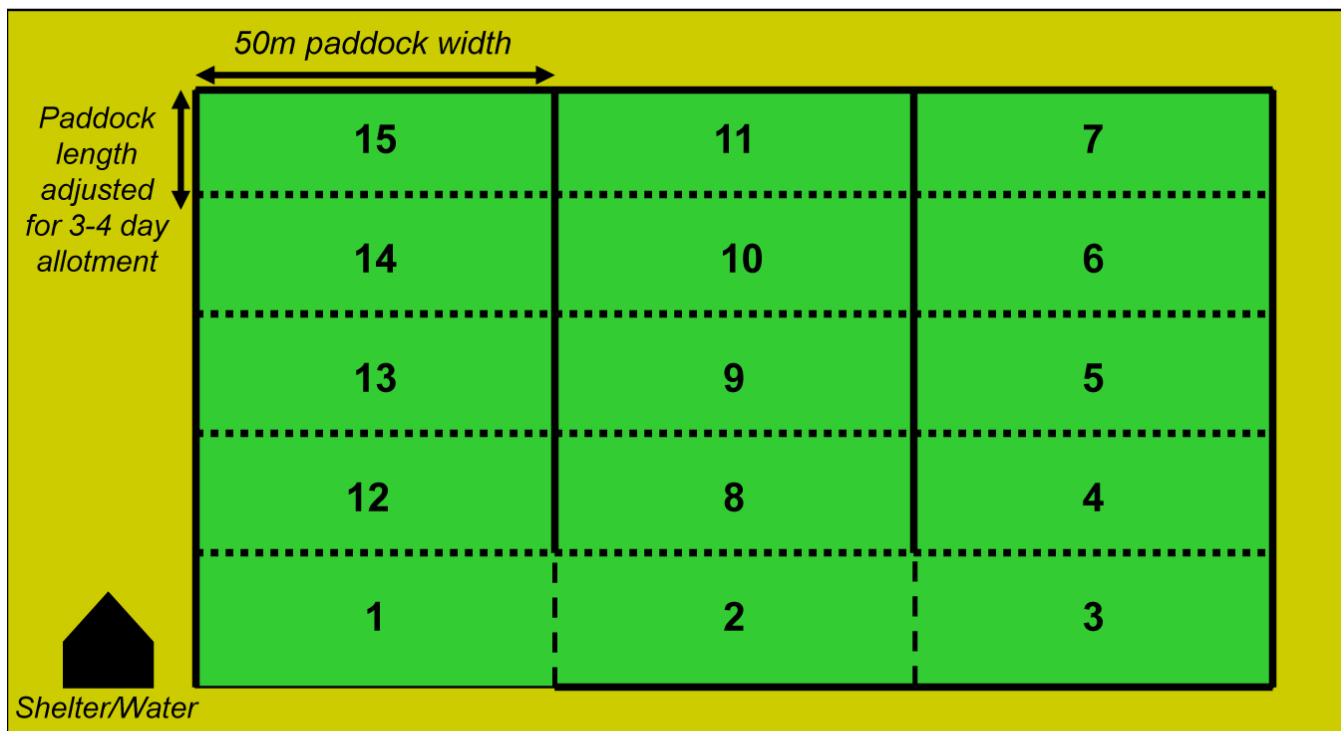


Winter bale grazing provides higher nutrient return in Nova Scotia

RATIONING FEED

Feed rationing is crucial when dealing with limited resources in the extended season. A well-planned rotation system can make the most of available forage and reduce damage to pastures.

A 15 paddock system that can provide 50 days of grazing is outlined below. By using permanent high tensile wire for the perimeter fence (which will stand under snow) and temporary polywire between paddocks, the size of the grazing area can be easily adjusted to ensure the animals have 3-4 days of feed.



..... Temporary Fencing ——— Permanent Fencing - - - Permanent Gate

Paddocks in this system are grazed in sequence (1-15) so that no area will be trampled before it is grazed. Since regrowth in areas already grazed is not an issue, each row of paddocks can be strip-grazed, leaving a path open to return to shelter and a water source. The furthest strip of paddocks should be grazed first in case of heavy snow, when movement to and from the grazing area will be more difficult. Pay careful attention to the amount of forage animals are eating and adjust the spacing of polywire fences to get the highest possible utilization of the pasture.

For a more in depth look at extended-season pasture mixtures and animal nutrition, see "Pasture Mixtures for Atlantic Canada" and "Animal Nutrition in the Extended Grazing Season" factsheets.

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