

## **Bison Pasture Management** – Lorne Klein, PAg., Forage Specialist, Saskatchewan Ministry of Agriculture

“Rest” can be the single most important tool for managing perennial pastures. Adequate rest during the growing season gives forage plants a chance to fully recover after grazing and establish a protective litter layer on the soil surface. The beneficial results are vigorous roots, forage plant survival, soil protection from erosion, increased water infiltration and reduced water evaporation loss to name a few. With these things accomplished, a perennial forage stand can then produce to its full yield potential.

So what is required to ensure bison pastures are getting adequate rest? You need enough **acres** and enough **paddocks**.

### **Acres**

The number of pasture acres you need depends on many things including animal size, length of grazing season, native range type, tame pasture species, pasture condition, soil zone, soil type, soil fertility, pasture rotation and target litter level.

Assume the following scenario. You are a bison producer with cow/calf pairs located in the Dark Brown Soil Zone. You intend to graze for seven months. Your pasture is a 5 year old seeded pasture in good condition that is currently 40% alfalfa and 60% meadow brome grass. The stand was established on a loam textured soil and has not had commercial fertilizer or other fertility applied. You want to leave behind about 30% of the current season growth as litter on the soil surface. How many acres will you need per cow/calf pair?

The Saskatchewan Ministry of Agriculture publication “Initial Stocking Rate Recommendations for Seeded Pastures in Saskatchewan” provides estimates of stocking rates for various pastures. Using those numbers as a guideline, the scenario above requires about **6.5 acres per cow/calf pair**.

In the Brown Soil Zone you would need about 12 acres, and in the Black Soil Zone about 4.5 acres for the same scenario.

### **Paddocks**

Paddocks enable controlled grazing. The presence of paddocks does not guarantee good pasture management. Only when there are enough acres fenced, and when the rotation is managed properly can paddocks help to provide forage plants with adequate rest time to recover after grazing.

Generally, seeded pastures should be rotated through twice or less in a season. Ideally, bison would graze in a paddock 2 weeks or less when forage growth is relatively rapid (spring, early summer), and 4 weeks or less when forage growth is relatively slow (late summer, fall).

So how many paddocks per grazing group are required? If the cross fence is five foot page wire, a reasonable target is 4-5 paddocks per grazing group. Certainly more paddocks would enable greater management. If low cost materials for cross fence can be sourced, 6-8 paddocks per grazing group may be a reasonable target.



The pictures show roots of smooth and meadow bromegrass after 3 years of clipping treatments. Plants on the left (1X) were clipped once a year in early July. Plants in the middle (2X) were clipped twice a year in early June and mid August to simulate twice over grazing. Plants on the right (5X) were clipped each time they were 6-8 inches tall to simulate season long continuous grazing. After 3 years, the 5X roots are noticeably depleted.

Which root system will you manage for this year?