

## Managing Forages Under Drought

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The following are several factors to consider in managing your pastures and forage land under drought conditions.

### **Grazing Management**

Many of our grasses are weakened by drought caused by the lack of growth and the low level of stored carbohydrates in the root system. Under dry conditions it is important not to graze pastures too short. Close continuous grazing under drought conditions can cause significant damage to many grasses and legumes. Leaving 3 to 5 cm (2 inches) of stubble will help speed recovery of plant growth once the rain returns.

### **Clip Over-mature Pastures**

Following the drought, over-mature pastures should be clipped and fertilized to respond most effectively to moisture. Clipping grasses at 10 cm height will stimulate re-growth and increase utilization.

### **Grazing Hayland**

Care must be taken when grazing hayland. Overgrazing can cause serious long-term damage to red clover, alfalfa, timothy, and other species. Block grazing or strip grazing using temporary electric fencing will help control grazing, reducing trampling and prevent over grazing. The time spent on a hay field should be long enough to graze the area off evenly, but short enough to prevent the grazing of any re-growth. As a general rule seven days is the maximum time animals should be left on a hay field.

### **Nitrogen Fertilizer**

Once the rains return, if required, re-growth on forage fields and pastures can be increased with an application of ammonium nitrate (34-0-0). Response to nitrogen application is usually rapid if moisture conditions are favorable. It is important to allow at least three weeks between application and harvest or grazing. It is not economical to apply nitrogen fertilizer later than early September.

### **Nitrate Poisoning**

High nitrate levels in forage can poison livestock. Hay or silage harvested during drought periods could be high in nitrates. As a precautionary measure (especially if the forage makes up the bulk of the ration), hay, grass and corn silage harvested during or immediately following a drought should be tested for nitrates. Forage can be tested for nitrate nitrogen at the Provincial Lab at a cost of \$5.00 per sample (\$2.00 for the test and \$3.00 for sample preparation).

### **Set Mowers High to Encourage Quicker Re-growth**

Especially during hot dry periods forage mowers should be set to leave at least 5 cm of stubble. Cutting too close reduces the plants ability to re-grow and exposes the ground to greater drying.

### **Critical Fall Rest Period**

Many forages, particularly forage legumes, require a fall rest period for greater winter survival. During the fall rest period legumes and grasses store important starch reserves that provide energy in the winter and energy for spring growth. If at all possible forage legumes should not be harvested from September 1 until mid-October to allow the plant to build up a high level of root reserves. A better choice for a September harvest would be grasses such as meadow fescue, tall fescue, brome grass and orchardgrass.

### **Fall Seeding Forages**

The best time to fall seed forages is during mid to late August. Forages sown after early September do not have sufficient time to establish. Most legume seedlings and many grass seedlings other than timothy and brome grass are susceptible to winter kill when sown in the fall. As a general rule fall seeded mixtures should contain a high percentage of timothy and/or brome grass to ensure good winter survival.

### **Late Harvest of Undersown Forages**

An undersown forage crop can yield a late cut of forage providing the grain was harvested and the field is fertilized before the first week of September. Approximately 31 kg/ha of nitrogen should be applied to grass stands or 20 kg/ha nitrogen plus 60-70 kg/ha potassium to mixed forage or legume stands. Caution: Fall harvesting of new seeded forages can result in winterkill and reduced yield the following year.

### **Spring Cereals for Grazing**

Spring cereals can be seeded until late August to provide grazing approximately six weeks from planting. Oats have the fastest growth and are tolerant of light frosts. Care should be taken if grazing oats since oats tend to accumulate nitrates at early growth stages. Seeding rate for oats is 120 kg/ha. Ensure the seed has proper germination (has not been dried at temperatures that exceed 43C) and is clean of weed seed.

### **Fall Rye for Grazing**

Fall rye can be seeded until late August for grazing in late October. Fall rye is quite tolerant to frost and its re-growth is superior to other cereals. Fall rye can also be grazed very early the following spring long before any other pasture is available. Ensure the seed has proper germination and is clean of weed seed. For a source of fall rye call your local Crop Specialist.

For more information, please contact:

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