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Oat Grasses of the Alice Springs Region

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The oat grasses are small annual or biennial grasses which are widespread and highly valued for cattle production. They respond to rain in any season, but grow primarily in the summer months.

Three species of Enneapogon or oat grasses are common in the Alice Springs district. They are:

- Oat grass (or common bottlewashers) - *Enneapogon avenaceus*, Figure 1.
- Woolly oat grass- *Enneapogon polyphyllus*.
- Limestone oat grass (or jointed nineawn) - *Enneapogon cylindricus*. Figure 5.

Some of the more important characteristics and distinguishing features of the grasses are listed in Table 1.

Figure 1.

PALATABILITY AND NUTRITION

Both oat and woolly oat grasses are highly palatable and nutritious and are readily grazed at all stages of growth. Oat grass is shortlived unless sustaining rains persist. Woolly oat grass will persist without rain, making it an important carry-over species, providing feed into the drier months.

While limestone oat grass has acceptable nutritional value, its low palatability and lower leaf bulk limit its performance as a pasture species. It does have some value, particularly when green.

Figures 3 and 4 show the changes in crude protein (%) and phosphorus (%) content for oat grass in a typical summer rainfall dominant year. Figure 2 An oat grass profile

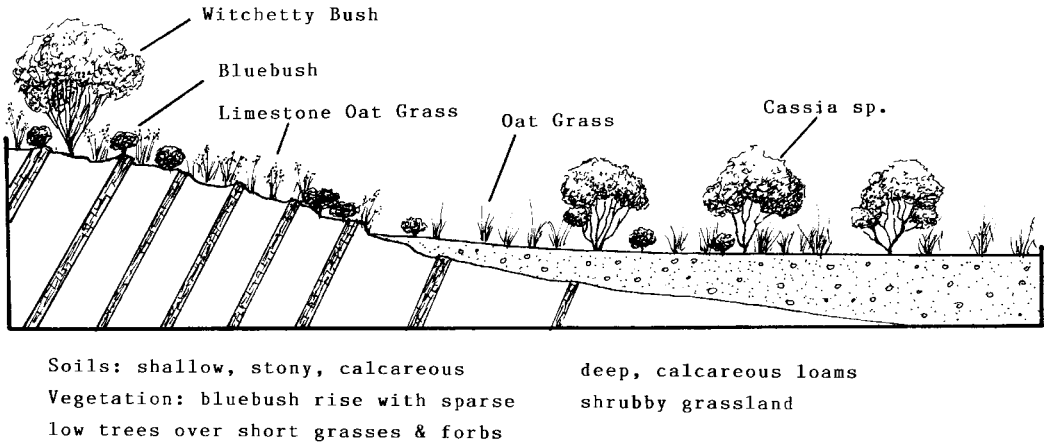

Figure 2. An oat grass profile

Both woolly oat and limestone oat grasses display a similar pattern of crude protein and phosphorus content through the year.

Dry matter digestibility fluctuates between 40% and 60% for the three Enneapogons.

As with other plant species there is considerable change through the year. The requirements of different classes of stock also vary significantly and they select a mixed diet made up of many species.

GRAZING IMPACT

Oat and woolly oat grass are two of the most valuable pasture species in the Alice Springs district and tend to decrease with uncontrolled grazing. Under persistent heavy grazing pressure they are replaced by less favoured species such as mulga grass or limestone oat grass, and short lived forbs such as copperburrs and indigoferas.

An example of changing pasture composition can be observed where limestone oat and oat grasses grow adjacent to each other on a slope (figure 2). The oat grass growing on the deeper loamy soils of the lower slopes is selectively grazed, sometimes to the extent where the species decreases in abundance. If this occurs the limestone oat grass, which is normally confined to the higher, more calcareous strike ridges, encroaches down the slope replacing the more desirable oat grass.

The changes described above occur quite slowly and are often concealed by changes due to good and bad seasons. Arresting such change requires spelling to allow plants to reach maturity and set seed. Recovery can be slow and may take several good seasons.

MANAGEMENT

Good management of the oat grasses and indeed any preferred pasture species, centres on the decision to periodically spell the better country.

An occasional rest may prevent:

- the loss of palatable species;
- herbaceous and woody weed increase;
- the loss of soil through erosion.

Woolly oat and oat grass can tolerate short periods of heavy grazing, but this is best delayed until after plants have matured and seeded.

The ability to spell country is much assisted by sensible fence placement, provision of sub-divisional fencing and additional watering points.

An Agnote entitled “Management of Native Pastures in the Alice Springs District” (E48) outlines these strategies in some detail.

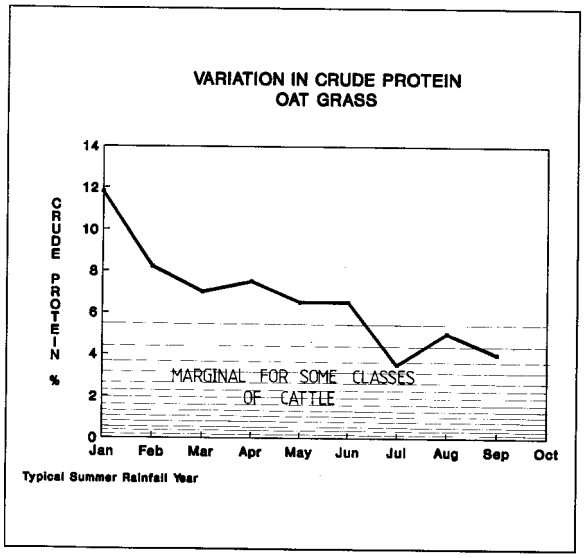

Figure 3.

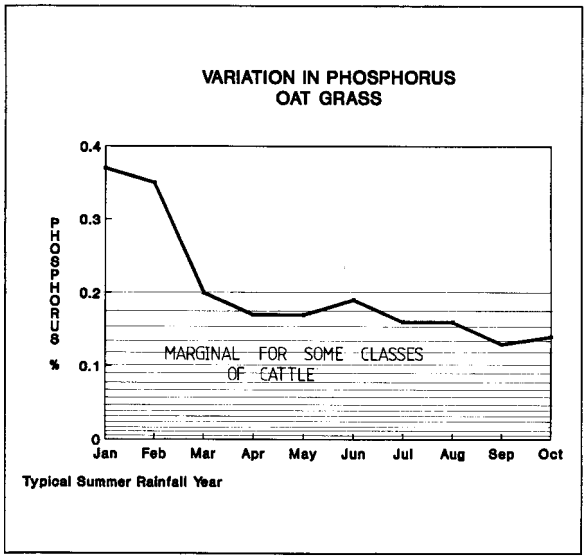

Figure 4.

Figure 5.

Table 1. Distinguishing Features of the Oat Grasses

	Oat Grass	**Woolly Oat Grass**	**Limestone Oat Grass**
Growth Form	Loose tufts with dense covering of long silver hairs and bearded nodes. Characteristic oat like appearance.	Large dense tufts with dense covering of soft hairs on most parts of the plant. Sticky to touch.	Tufted appearance. Butt is thickened by numerous scale-like projections. Stems slender, erect, hairy and sometimes purplish
Height	10-30 cm	Up to 35 cm	15 - 25 cm
Leaf Shape	Flat and taper to a point	Flat or folded and taper to a long fine point	Flat at base and inrolled at the extremity forming a long fine thread-like point. 7-15 cm long
Shape of Flowerhead	Oat like particularly when immature, 5 cm long x 3 cm wide in a loose panicle	5-9 cm long 0.5 to 1.5 cm wide. Denser than oat grass and often purplish in colour	Dense, cylindrical. 4-10 cm long and 0.5 to 1.0 cm wide
Favoured soil types	Alkaline, calcareous loam soils or alkaline sands pH 7.5 to 8.5. Lower slopes	Wide range. Acid or neutral red earths or alluvial soils. pH 7.0 or below	Shallow, stony strongly alkaline, calcareous solid pH 8.5 or above. Upper slopes
Vegetation Association	Calcareous shrubby grasslands. Bluebush slopes. Other oat grasses. Minor in Mitchell grass plains with Flinders and button grass. Minor on better spinifex country, and saline areas.	Widespread. Open woodland with whitewood, supplejack, mulga, witchetty bush. Sandy alluvial plains fringing larger creeks and rivers, with ironwood, suplejack whitewood and prickly wattle. Red earth mulga country. Gidyea country east of Alice Springs. Minor on better spinifex country and saline areas	Bluebush, rises and slopes with sparse low trees and/or short grasses and forbs.