

Saltland Agronomy Update for the Upper South East, SA

2. Feed Value of Puccinellia

By Kate Morris, Saltland Agronomist

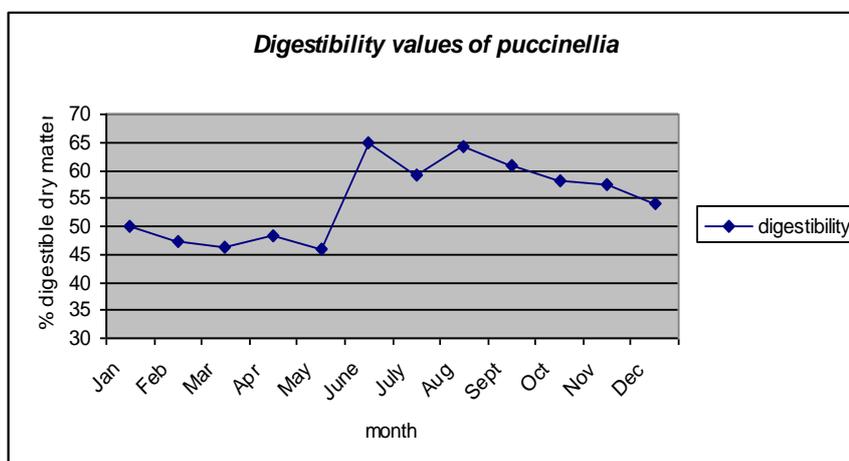
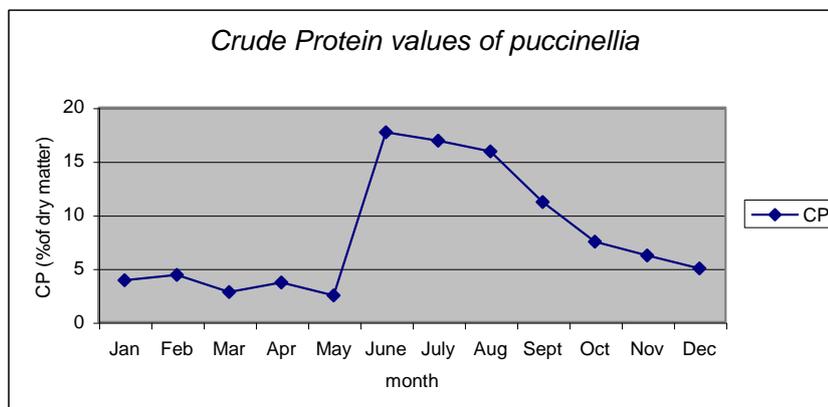
Background

Puccinellia (Restora ®sweetgrass) is the saltland pasture of choice in the Upper South East for a variety of reasons. One is that stock do well on it and find it very palatable. In paddocks where there are different combinations of pasture species associated with different soil types, puccinellia is almost always preferentially eaten by stock. Puccinellia also has a much higher salinity and waterlogging tolerance than other salt-tolerant pastures which is essential on many properties.

Feed-value

So how good is it really? The feed value of puccinellia was monitored during 1998 on three properties every two months, and during 1999 on another three properties, with varying levels of salinity. Some were fertilised, some where not. Overall there was very little variability between the different sites in terms of feed quality.

The two years data has been averaged together and graphed, which is illustrated below



The two years data shows that the feed value of puccinellia in the June to October period is at it's best, with crude protein up to 18% dry matter and digestibility of 60-65% dry matter.

Seasonal influence?

Although the data graphed was sampled and tested in seasonally dry years, some cross-check samples taken in January 2001 following a year of average rainfall indicate that the data is reasonably consistent across different seasons.

Although moisture levels were a lot higher, crude protein values remained consistent and digestibility levels improved slightly. This can give confidence to using the data already collated in years of different seasonal conditions.

Grazing management implications

Grazing of saltland pastures requires great flexibility according to the season in the Upper South East. The degree of inundation of pastures is unpredictable and consequently saltland pastures needs to be utilised in an opportunistic fashion.

During wet periods, stock should be rotationally grazed on the higher ground out of the water in the winter and brought down to the saltland pasture flats for the late summer- autumn period.

The following aspects need to be considered when managing saltland pastures.

Winter

While puccinellia is at it's best through the winter to late spring period, saltland pastures in the region can be inundated in an average to wet year. As a consequence it is important that puccinellia is carefully grazed in early winter, maintaining some height to survive the effects of waterlogging. Nitrogen

fertiliser application on the break can boost feed production for livestock through the early winter period (see Saltland Agronomy Update 1. Fertilisers and puccinellia).

Spring & Summer

It is also important to maintain cover through the late spring and summer period to reduce the salinity level through this period, in which soil salinity peaks. Groundcover over saline areas is critical in minimising the rise of salts to the surface. Cover minimises evaporation from the soil surface and consequent 'crusting of salts'. It is for this reason that most landholders will carryover feed into the autumn on saltland, utilising it as their autumn 'haystack'.

While feed quality declines as the plant dries off over the summer period, it still compares favourably with other dry pasture feeds such as hay which are made available through the summer-autumn period when feed is scarce. The pasture can

be supplemented with an appropriate ration of lupins if stock are considered to be protein deficient.

What grass-seeds - where?

The puccinellia plant maintains a green stem at maturity, which ensures pasture palatability. In a thick stand it can dominate to such an extent that barley grass is out-competed and the pasture becomes virtually seed-free.

The late summer and autumn period is usually the time the flats are grazed and the puccinellia can then be grazed hard without detrimental productivity or persistence effects on the pasture.

The grass-seed free environment can be used to advantage for a change to spring lambing time, or as a 'seed-free' zone during the spring-summer for wool and sheep-meat production.

Mixed saltland pastures

The variability of salinity across a paddock and the undulating nature of the landscape can sometimes mean that different pastures such as puccinellia, tall wheat grass and even lucerne need to be managed together. It is not always practical to fence off the different areas.

When this occurs, the pasture can be rotationally grazed to maintain lucerne growth and quality. Puccinellia can tolerate this, however this may mean that tall wheat grass will become rank. Cattle will graze the pasture better than sheep once it gets into this state. The tall wheat grass can be slashed to improve quality or can be left for stock wind-protection.

A paddock with mixed puccinellia, tall wheat grass and veldt grass needs to be managed according to the needs of the puccinellia as stock show a preference for it and can possibly impact on the production of the pasture.

Further Information from

Tracey Strugnell, Saltland Agronomist
Combined South East Soil Conservation Boards on
8755 3166 AT Keith Primary Industries Office
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