Agnote

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Pasture Grasses of the Barkly Tableland

Part 4. Spider Grass (Native Couch)

(Brachyachne convergens)

S. Streeter, Pastoral Production, Tennant Creek

DISTRIBUTION AND OCCURRENCE

Spider grass *(Brachyachne convergens)* occurs most commonly on the heavy cracking clays of the Barkly "downs" country, and in similar cracking clays in western Queensland, the VRD and the Kimberley region. It may also be found on other soil types, in areas receiving extra moisture. The abundance of this annual grass is greatest in the "annual" pastures that intersperse the perennial Mitchell grass country. In these pastures, it is usually co-dominant with Flinders grasses *(Iseilema* spp.) or pepper grass *(Panicum laevinode).* Mitchell grass communities also support spider grass, but in relatively low abundance. Most frequently, spider grass grows with weeping Mitchell grass *(Astrebla elymoides)* in the lower lying areas.

Like Flinders grasses, the abundance of spider grass in all communities is very dependent on rainfall, it being highest after above average seasons.

DESCRIPTION

Spider grass is very similar in appearance to the introduced "couch grass" *(Cynodon dactylon)* which is common on turkey nests and in lawns. The introduced species is a perennial, and is much more slender, with shorter stems and seed heads.

Spider grass is a weakly rooted annual, with numerous sprawling, semi-erect stems, and grows to about 30 cm tall. The leaf sheaths overlap along the stem, and are often purple-tinged. Leaf blades are short and flat, standing erect on the stems. The seed head consists of three to five flattened branches (or digits), radiating from the tip of the stems. Each digit may be up to 8 cm long and has two overlapping rows of flower spike-

lets or seeds on the underside. When flowering, the papery spikelets may be purplish, but the colour changes to pale yellow as the seed forms and the plant dries out.

PASTORAL VALUE

Spider grass is a palatable and nutritious species, which forms an important component of the pasture when abundant. Its rapid growth after summer rain provides excellent early feed, often before Flinders grasses and perennials are ready. Spider grass however, is not as palatable and nutritious as Flinders grasses. Nonetheless, like Flinders grass species, it remains moderately palatable even when it has hayed off.

A comparison of the range of nutrient levels and digestibility observed in three regions is shown in Table 1. The lower figures for each item in the table represent levels in the dry season, while the higher figures represent levels during the growing season or shortly afterwards.

Table 1. Nutrient status of spider grass (*Brachyachne convergens*) in three regions

Region	Crude protein range (%)	Phosphorous range (%)	Digestibility range (%)
Barkly	2.5 – 12.5	0.03 – 0.23	24 – 43
Western QLD	4 – 12.5	0.09 – 0.20	-
Kimberley	3 – 8.6	0.01 – 0.04	35 - 60

Lower range: represents dry season levels
Upper range: represents approximate growing season levels

MANAGEMENT

The abundance and bulk of spider grass in a pasture sward will vary depending on seasonal conditions. Greatest abundance occurs following high summer rainfall.

Seed head of spider grass

The effect of grazing on spider grass varies depending on the pasture type in which it is growing. When growing in **perennial** Mitchell grass pastures, continued heavy grazing will reduce competition from the Mitchell and other perennials and cause an increase in the relative abundance of spider grass (and other annual species like Flinders grass). Such changes in pasture composition are particularly apparent when high stocking rates are maintained over extended dry spells. Hence, spider grass is commonly seen around watering points which have had continued heavy grazing pressure.

Although spider grass and Flinders grasses are highly nutritious, their increasing abundance in perennial pastures is not particularly favorable. The annuals will provide a boost in nutritional value during the wet – early dry period; however, they are of little value for the remainder of the year. It is ideal to maintain a good mix of annuals and palatable perennials for year round productivity and sustainability of the pasture.

In **annual** pasture situations, continued heavy grazing over the long term will decrease the proportion of spider grass and other preferred annuals (e.g. Flinders grass). This will encourage the increased abundance of unpalatable `weedy' species, thus decreasing the value of the pasture.

The most appropriate management strategy for both perennial and annual pastures is to ensure that stocking rates are reduced during dry times and that pastures get a spell during the growing season every few years. For Mitchell grass pastures, this allows an increase in vigor of the perennial species and improved drought resistance. For annual pastures, it allows sufficient seed-set, thus ensuring a good bank of seed in the soil.

TOXICITY FACTORS

Observations have shown that spider grass produces prussic acid when digested and has caused stock deaths in several instances. It is usually only toxic during the initial growth stage and only likely to kill stock if large quantities are consumed, which happens when other feed is unavailable. The plant has been blamed for causing liver disease in cattle and deaths of horses and calves. In normal circumstances, when a mixed stand of pasture is available, spider grass is unlikely to be a threat to stock.

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