



A collaboration between AWI, GRDC, MLA, RIRDC and Dairy Australia

## Queensland Bluegrass

### Scientific name(s)

*Dichanthium sericium*

### Strengths

- Native grass.
- Persistent under low soil nitrogen conditions.
- Provides less competition to companion legumes than other sown grasses.
- Establishes relatively easily on heavy cracking-clay soils.
- Very palatable to livestock.
- Easily ploughed out if land needed for annual cropping.
- Rapid early spring growth.
- Can be harvested from native pasture stands.

### Limitations

- Short term perennial and seeding and new plants required for long term persistence.
- Fluffy seed difficult to harvest, handle and sow.
- Slow seedling growth compared with many sown grasses and low production in the establishment year.
- Early maturity and low autumn feed quality.
- Not suited to acid sandy and other low fertility soils.
- Intolerant of waterlogging.

### Plant description

**Plant:** A tufted, erect perennial grass. Tufts never very large, generally 10-15 cm diameter and with a fairly weak root system.

**Stems:** Stems are 30-80cm long, generally rather slender, typically 4-noded with channelled internodes and nodes with a ring of long erect white hairs. Stems are densely branched at the base and often from the upper nodes.

**Leaves:** Leaf sheaths are round, close to the stem and may be almost as long as the internodes. Ligules are short, membranous and ragged. Leaf blades are flat, 8-15 cm long, 2-4 mm wide, mid-green to bluish-purple, typically without hairs, but in some forms densely covered with white hairs and then the sheaths likewise.

**Seedhead:** Seedheads have 2-6 stalkless erect branches, 4-7 cm long and a silky-hairy appearance. Seed has a brownish, twisted hydroscopic awn about 2.5 cm long. Old stems often bear a remnant white tuft of seed head on the tip.

**Seeds:** 850,000 seeds/kg

### Pasture type and use

A widespread component of native pastures in subtropical inland Australia on heavy soils. It colonises abandoned cultivation on these soils and on cleared woodland such as brigalow scrub. It invades improved pastures as soil nitrogen availability decreases. Very limited sowings from seed harvested from native pasture stands have occurred in inland southern Queensland and northern New South Wales. It is suitable for all types of grazing stock and for hay.

### Where it grows

Rainfall

It is sown in areas receiving a minimum average annual rainfall of 500mm in inland Qld and NSW.

### **Soils**

It is adapted on deep, fertile heavy textured soils of neutral to alkaline pH.

### **Temperature**

It grows during the warm season and tops are killed by heavy frost. Spring growth potential is greater than for many tropical grasses.

## **Establishment**

### **Companion species**

Grasses: purple pigeon grass, Bambatsi (both at low sowing rates).

Legumes: lucerne (at low sowing rate), desmanthus, annual medics, burgundy bean.

### **Sowing/planting rates as single species**

2-4 kg/ha.

### **Sowing/planting rates in mixtures**

1-2 kg/ha.

### **Sowing time**

It can be sown from late winter to late summer and best sown from August to October where annual weeds are minimal or in January to February if early summer fallow is required to minimise annual grass and broadleaf weeds before sowing.

### **Inoculation**

Not applicable.

### **Fertiliser**

No fertiliser is required for establishment on suitable soils. Established swards will respond to application of nitrogen fertiliser.

## **Management**

### **Maintenance fertiliser**

It has a low requirement for plant nutrients for stand self-regeneration from seed and persistence, with production usually limited by moisture stress. Suitable basaltic soils rarely need additional phosphorus but some nitrogen would improve production on run-down cropping land. Sulphur may be needed on some basalt soils if high rates of nitrogen are applied.

### **Grazing/cutting**

Periodic seeding every second or third year is required for stand persistence and can be achieved by rotational spelling of paddocks following good spring or early summer rain. It can be cut for hay yielding 2-5 t/ha DM depending on age of stand, soil fertility and rainfall.

### **Seed production**

It can be harvested with brush harvesters. Seed yield of 50-100 kg/ha may be achieved. Freshly harvested seed may have a high germination rate at harvest or a short period of dormancy.

### **Ability to spread**

It spreads by seed, through wind dispersal, on animal coats and in mud on hoofs.

### **Weed potential**

It has minimal weed potential and this valuable native grass is under threat from expanding cropping.

### Major pests

There are no known major pests.

### Major diseases

There are no known major diseases.

### Herbicide susceptibility

It is killed by glyphosate and tolerant of atrazine.

## Animal production

### Feeding value

It provides good quality feed when young and green. Quality drops on maturity to low levels in winter especially when tops are killed by frost.

### Palatability

It is very palatable while green and mature slender stems are more palatable than those of mature coarser grasses.

### Production potential

The carrying capacity on native bluegrass pastures is about one beast to 5 ha in the 600-700 mm rainfall areas of Queensland. Carrying capacity is more than double on pastures in first two years following sowing and where 100 kg N/ha is applied to older stands.

### Livestock disorders/toxicity

It has no known toxic effects.

## Cultivars

| Cultivar   | Seed source/Information                      |
|--|--|
| Scatta  | Progressive Seeds<br>Plant Varieties Journal |
|  |  |

 Denotes that this variety is protected by Plant Breeder's Rights Australia

## Further information

Grassland Species Profiles  
Tropical Forages database (SoFT) - Queensland bluegrass  
Native Seeds Pty Ltd  
GrassBase  
NSW DPI 'Grassed up-Dichanthium sericeum (Queensland bluegrass)'

## Acknowledgements

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## Author and date

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