

# Register of Australian Herbage Plant Cultivars

## A. Grasses

### 13. Rhodes

#### *Chloris gayana* Kunth. (Rhodes grass) cv. Pioneer

Reg. No. A-13a-1

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#### Origin

The circumstances of the introduction of this line of Rhodes grass to Australia are not known precisely but it is probably derived from a small seed sample brought from South Africa by a Colonel Mackay around the turn of the century. It was tested at the Wagga Experiment Station in New South Wales in 1902-3 and seed distributed to farmers in 1903. Mr. Sylvester Browne, a grazier near Singleton, appears to have been the first to prominently promote it (2). It spread quickly to northern New South Wales and had reached Queensland by 1905 (10). Previously known as commercial Rhodes grass it was given the cultivar name Pioneer by the Queensland Herbage Plant Liaison Committee in 1966.

#### Morphological description (6 et al.)

Pioneer is an erect tufted perennial growing to a height of 1.5 m and spreading by means of stolons; these readily root, resulting in the rapid spread of the plant. Two to four leaves are borne at each node of the stolons. The leaf sheaths are glabrous, smooth, and strongly compressed. Leaf blades are generally glabrous, flat or folded, and up to 45 cm in length and 4-6 mm wide; they taper to a fine point and have a somewhat scabrous surface. The ligule is a fringe of hairs about 5 mm long; auricle absent. The inflorescence is a digitate panicle consisting of 6-15, though more commonly 8-12, one-sided sessile spikes clustered at the apex of the rachis. Spikes are 6-10 cm long with numerous spikelets which are straw-coloured at maturity. Spikelets are 3-4 mm long with from 3-5 florets, only the lowest of which is fertile. Florets are unequal, the fertile floret being 3 mm long with a straight scabrid awn of up to 5 mm and its lemma hispid on the margin near the apex. The upper florets are smaller and sterile. The glumes are unequal and persist on the spike axis at maturity. The seeds are small, averaging about 3.3 to 4.4 million per kg. Chromosome number  $2n = 20$ . It is not such a robust form as Callide.

#### Agronomic characters

Summer-growing and best adapted to subtropical conditions with an annual rainfall of 630-1000 mm, Pioneer requires soils of reasonably high fertility such as support native scrub vegetation or rain forest. On these soils it may form very persistent monospecific swards; it does not perform as well on sandy or low fertility soils (5). It is tolerant of high (0.8%) soil salinity (9). It shows a high degree of frost resistance when growing vigorously under high fertility conditions but is more susceptible to frost damage when grown under low fertility conditions (6).

It establishes easily from seed, makes early rapid growth, and is palatable and nutritious until frosted (5). It does not make quick growth during warm spells in winter as do buffel and green panic. It flowers from November to May in Queensland. It probably produces apomictic seed (7) but this has been questioned by Bogdan (1) who maintains that the species is cross pollinated with a self compatibility of 1-4%. Pioneer is earlier maturing than Callide or Samford, and does not continue growth as late into the autumn as these cultivars. One of its principal disadvantages is the production of flower stalks through the growing season with a lowering of nutritive value and palatability (8). It covers bare ground quickly and this ability makes it useful for combating soil erosion and as a pioneer pasture variety following the clearing of scrub land (4,5)

Pioneer pastures, like those of all Rhodes grass cultivars, are not greatly harmed by pests or diseases (3). White grub (*Rhopoea* sp.) infestations have occurred on basaltic scrub soils; coccid

infestations may be of some consequence; while red spider occasionally causes slight damage (3). Leaf striate mosaic virus is more wide-spread but its economic significance is not yet known (3).

### References

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