

# Register of Australian Herbage Plant Cultivars

## A. Grasses

### 2. Ryegrass

#### *Lolium perenne* L. (perennial ryegrass) cv. Grasslands Ruanui

Reg. No. A-2a-1

Registered prior to December 1971

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#### Origin

Developed by the Grasslands Division of the D.S.I.R., New Zealand, at Palmerston North, by individual plant selection of local ecotypes (Claridge 1940; Corkhill 1949); and prior to 1964 known as New Zealand perennial ryegrass (Corkhill 1964). The selections were made from ecotypes which had arisen in certain areas such as Hawkes Bay, Poverty Bay, and Sandton districts of the North Island, and had been certified in 1928 on a paddock basis as having a high degree of perenniality (Hadfield 1929; Levy 1932). The 'selection' was certified on a pedigree basis by the Department of Agriculture, New Zealand in 1940-1 (Claridge 1940). Uniformity and distinctness are preserved by a continuous supply of nucleus stock seed into the certification scheme by the Grasslands Division (Claridge 1958).

#### Morphological description

There are no satisfactory morphological features that may be used visually to distinguish the various cultivars of *Lolium perenne*. Grasslands Ruanui is densely tufted, multi-tillered and leafy, with an erect rather than a prostrate growth habit. Tillers are flat-stemmed. Leaves are dark, green, hairless, shiny below and evenly ribbed above; young leaves in bud are usually folded and narrowly V-shaped, though they are sometimes rolled, particularly in first year plants; leaf sheaths smooth, striated; auricles small; ligule membranous and transparent, short, blunt and hairless and adhering closely to the sheath. Inflorescence, stiff erect spikes with only a slight tendency to droop or arch in the seed head. Spikelets sessile, alternating on a slightly wavy axis, about eight-flowered with flowers in the plane of the spikelet axis and rachis. One empty glume, shorter than the spikelet is formed and the lemmas are glabrous, smooth, 5-nerved, and awnless. The lemmas, palea and rachis fall with the caryopsis and constitute the seed which is 6mm long and straw coloured; rachilla cylindrical, 1-2mm long; caryopsis oblong, outer side convex, inner flat or grooved, brown, enclosed in and often partly adherent to, palea and lemma; approximately 529,000 seeds/kg. Radicles of seedlings do not fluoresce under ultra-violet light.

#### Agronomic characters

Adapted to high fertility soils in areas of 710mm and over of well distributed rainfall where summer temperatures are relatively mild. Under these conditions it gives high yields of leafy herbage and hay, and is persistent. It is of mid-season maturity and most productive in spring and autumn (Cade 1969). Its winter and early spring growth is much less in New Zealand than that of Grasslands Manawa or Italian ryegrass but in late summer and early autumn it is much greater (Claridge 1958; Corkhill 1949)

In Victoria it performs comparably with cv. Victorian but is not recommended for areas with rainfall less than 630mm (Cade 1969).

In Tasmania it has been less productive than Tasmanian No. 1 and is considerably less productive than cv. Tasdale; this difference was most marked in autumn and winter growth and under conditions of less than 760mm rainfall. Grasslands Ruanui also did not form as dense a sward as the Tasmanian cultivars (Martin 1963, 1971)

In New South Wales performance has been satisfactory on the Central Tablelands in areas of 700 to 760mm rainfall and mild summer temperatures (Smart and Simpson 1970).

It is reported to have performed comparably under irrigation with cv. Victorian in Western Australia (Ryan 1966) and with Manawa at Milang in South Australia (Judd 1966).

Corkhill (1949) reported that it had low susceptibility to rust but Australian experience rates it as moderately susceptible and similar to cv. Victorian.

## References

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