

Register of Australian Herbage Plant Cultivars

A. Grasses

2. Ryegrass

Hybrid Ryegrass cv. Grasslands Manawa (*L. perenne* × *L. multiflorum*)

Reg. No. A-2c-1

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Origin

Originally called Short Rotation ryegrass, this cultivar was renamed H1 ryegrass by J.H. Claridge in 1943 (1). Later, however, the name Short Rotation was again used and frequently it has been called Short Rotation H1 ryegrass. In 1964 its name was changed to Grasslands Manawa (3).

It was bred by the Grasslands Division, D.S.I.R., New Zealand, by hybridization of perennial ryegrass (*Lolium perenne* L.) and Italian ryegrass (*Lolium multiflorum* Lam.). Some natural, though mostly artificial, hybrids were used in maternal line selection for plants possessing the high winter and spring growth and palatability of Italian ryegrass combined with some of the density and persistence of perennial ryegrass (2). It was certified by the Department of Agriculture of New Zealand in 1944. Preservation of the characters of Grasslands Manawa is achieved by the continuous supply of nucleus stock seed into the certification scheme by the Grasslands Division, D.S.I.R., Palmerston North, New Zealand. A comparison between plants produced from seed harvested three generations removed from the original showed no appreciable change in plant type from the first to fourth generation (2).

Morphological description

This cultivar is practically identical in morphological characters with Grasslands Paroa Italian ryegrass. It has a rather erect growth habit with large wide-leaved tillers; the young leaves are rolled; and the flowering glumes have well-developed awns. There is, however, a small proportion of unawned seeds (2). Approximately 500,000 seeds per kg.

Agronomic characters (2, 4-9)

Adapted to conditions of high rainfall and high soil fertility in a temperate environment, it is intermediate in general agronomic characters between cv. Grasslands Paroa, and cv. Grasslands Ruanui.

Compared with Grasslands Paroa total production of Grasslands Manawa for the first year is generally higher although growth in the first winter after autumn sowing is usually less. It has a greater degree of perenniality than cv. Grasslands Paroa; and better development of basal buds during the second year gives a denser sward. Under good management Grasslands Manawa may give high yields for 3-4 years and persist for 6-8 years. Hard continuous grazing, hay-cutting, dry summers, and lack of soil fertility may, however, reduce its perenniality to little better than that of Italian ryegrass. It may thin out markedly during a dry summer.

Compared with Grasslands Ruanui it gives better winter production and is more palatable; it is, however, less persistent. It flowers slightly later and reaches maximum spring production a little later than perennial ryegrass (cv. Grasslands Ruanui); but makes more rapid recovery after cutting for hay or silage. It may produce twice as much forage during winter but yields much less during autumn than the perennial cultivars.

In environments with relatively high summer temperatures it grows well under irrigation; under these conditions it persists through summer heat. When grown in association with white clover and under conditions of high soil fertility and normal grazing, it lasts for 4-6 years. It may withstand heavy trampling without serious damage and withstands wet conditions well. Grasslands Manawa is less susceptible to leaf rust and possibly less susceptible to ergot and blind seed disease than perennial ryegrass. It is prone to shed its seed more readily than perennial ryegrass.

References

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