

Register of Australian Herbage Plant Cultivars

B. Legumes

1. Clover

Trifolium repens L. (white clover) cv. Grasslands Pitau

Reg. No. B-1a-7

Registered February 1982

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Origin

Developed by the Grasslands Division of the DSIR, New Zealand, by breeding and selection from a population derived from a winter active Spanish white clover population and seven elite plants of the New Zealand cultivar Grasslands Huia. Progeny testing resulting from the hybridisation of these populations were selected and back-crossed to the New Zealand plants to improve density and persistence. Further selection gave a population known firstly as Grasslands 4700 and, later, as Grasslands Pitau.

Breeders' seed distribution by DSIR. Certified since 1975 by the Ministry of Agriculture and Fisheries, New Zealand. Recommended for registration in Australia by the Tasmanian Herbage Plant Liaison Committee, with approval of the Grasslands Division of DSIR. Registered February 1982.

Morphological description (1,7)

Similar to Grasslands Huia, being a medium leaved type, but taller and slightly less dense in swards, with much larger leaves in autumn and winter, slightly larger leaves in spring and summer and thicker stolons (1). Root system large with tap roots from both seedling and nodal root systems (7).

Agronomic characters (1,5,6,8-15)

In New Zealand, similar to Grasslands Huia in persistence and productivity, except that in the warmer regions it is more productive than Huia from late summer to early winter (1,8,11,13). In the southern half of the South Island of New Zealand, this cultivar may not equal Huia in the first two years, except in autumn (1,11). This regional adaptation is partly explained by differences in responses to temperature regimes by the two cultivars (9). The superior productivity is best expressed in high fertility situations and where grazing pressure is moderate (1,5,9,10,14). The more upright, open habit of Grasslands Pitau, compared with Grasslands Huia, appear to make it more sensitive to continuous, close grazing (14), and especially to heavy frequent grazing in summer (5).

In Tasmania, under rotational grazing, Pitau is often more productive than Huia, particularly in the autumn-winter period (12). However, it generally shows no advantage under set stocking. In regions with rainfall ranging from 1300 to 590mm and under irrigation, Pitau maintained a higher ground cover than Huia under both rotational grazing and set stocking. Haifa is not persistent in those regions.

In New Zealand Pitau is sometimes slightly slower to establish than Huia because it produces fewer but larger stolons. Good control of grass in newly established mixed pastures is necessary to avoid suppression of the clover in these cases (1). However, in other New Zealand trials (11), and in Tasmania (12), Pitau established better than Huia.

Pitau is more persistent and productive than Huia in Victoria, but is less productive in winter than Haifa, and also less productive than Irrigation and Ladino in summer and autumn (6). Annual herbage production from Pitau is less than that from Haifa and Ladino, but sometimes equal to Irrigation (6). On the central coast of New South Wales, Pitau is much less productive than Haifa in winter and early spring, but equals Haifa in late spring (15).

In New Zealand, herbage quality is equal to that of Huia and nitrogen fixation rates are at least equal to those of Huia (11).

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