Register of Australian Herbage Plant Cultivars

A. Grasses
1. Cocksfoot
Dactylis glomerata L. (cocksfoot) cv. Currie

Reg. No. A-1a-3
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Origin

Derived from seed collected near Maison Caree, Algeria, by Dr. G.A. (later Sir George) Currie, CSIR, in 1937. The introduction was designated CPI 6845 and grown at CSIR Plant Introduction nurseries at Muresk, and later at Kelmscott and Perth in Western Australia. Showing promise in these row trials, seed from the original planting at Muresk was passed on the Dairying Division of the Western Australian Department of Agriculture in 1946. Early trials by the Department of Agriculture were made at the Research Stations of Wokalup and Denmark. In 1954 the introduction was named Currie and it was planted in various trials on farms throughout the south-west dairying districts (Bridgman and Woodward 1955). First certified by the Department of Agriculture, WA, in 1958. Certified on a pedigree basis by the South Australian Department of Agriculture on seed supplied by the Western Australian Department of Agriculture in 1962-3, and after 1965 from progeny of seed supplied by the Waite Agricultural Research Institute obtained from Western Australia in 1955. Certified in Victoria in 1964 and in New South Wales.

Morphological description

Currie has fewer tillers than Brignoles and Grasslands Apanui but its tillers are larger and more strongly flattened than these and the north European types generally; its crown is smaller. Its leaves are broader and shorter and it tends to become erect earlier than these two cultivars. In winter its leaves are deep green and their tips burn less than Brignoles; in late spring they may be blue green like Brignoles. Seed size is small at approximately 1.6-1.8 million/kg.

Agronomic characters

Currie is intermediate in summer dormancy characteristics between the non-dormant European cultivars and the strongly dormant North African ecotypes ((Knight 1968; Silsbury and Carpenter 1963; Smart and Simpson 1970). It is able to survive hot, dry summers reasonably well; at Adelaide, survival after 5 years is recorded as 13%, compared with 0.1% for Akaroa (Silsbury and Carpenter 1963). Under moderately hot summer conditions and low to medium rainfall (450-635mm) it may be more productive in summer and autumn than phalaris because it responds more quickly when rain falls (Broue 1965; Cade 1970; Cade and Curnow 1969). Under these conditions its spring and winter yields, however, are less than phalaris and in dry years it will not persist as well. It comes into production more quickly than phalaris, but it is not as persistent under continuous grazing (Cade 1970; Cade and Curnow 1969).

Under cooler moister summer conditions it yields less in the summer than Brignoles, Cressey and Grasslands Apanui, but it recovers well during the autumn (Broue 1965; Martin 1970). Germination and seedling vigour are exceptionally good for a cocksfoot variety (Broue 1970; Cade 1970; Cade and Curnow 1969; Martin 1970). Its growth during the first year is better than Cressey or Grasslands Apanui, and it is also more productive in Tasmania (Martin 1970) in late autumn and winter in the following year.

Under irrigation at Milang, S.A., it is less productive than S.26 during late spring and summer but more productive during autumn and early spring (Judd 1966).

Like most cocksfoots, Currie will not thrive on poorly drained soils as well as phalaris (Cade 1970; Cade and Curnow 1969; Tiver 1964). Best growth is obtained under high fertility conditions but it will grow reasonably well on soils of lower fertility. It is earlier heading (late September-early October in South Australia) than Grasslands Apanui and Brignoles and produces many flowering culms (Knight 1968). Seed production is high and seed retention is also good (Broue 1965).

Currie is used successfully in the coastal dairying districts of Western Australia with an annual rainfall of 635mm (Judd 1966). Preliminary evidence suggests that it is well adapted to the south-east and wetter Mount Lofty ranges

of South Australia (Triver 1964), also to large areas in Victoria (Cade 1970; Cade and Curnow 1969), to sections of the south-western slopes of New South Wales where the annual rainfall exceeds 560mm (Broue 1965; Smart and Simpson 1970) and areas in Tasmania receiving less than 635mm (Martin 1970).

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