

# Register of Australian Herbage Plant Cultivars

## A. Grasses

### 4. Fescue

#### *Festuca arundinacea* Schreb. (tall fescue) cv. Kentucky 31

Reg. No. A-4a-1

Registered prior to December 1971

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#### Origin

A naturally occurring ecotype selected by Dr. E.N. Fergus in 1931 on the farm of William Suiter in Menifee County, Kentucky, U.S.A., where tall fescue had been growing since 1887. Selected because of its conspicuous green colour and abundant growth in the late autumn and winter. Tested by the Kentucky Agricultural Experiment Station, Lexington, and other Experiment Stations of the southern States of U.S.A. for a number of years. Its value recognized by Johnstone of the Kentucky College of Agriculture in 1938. Some years later it was released by the Kentucky Experiment Station. Introduced to Australia for trial by CSIR in 1947 and on a number of occasions subsequently.

#### Morphological description

A reasonably well tillered and tufted, glabrous perennial and numerous dark green basal leaves and comparatively few inflorescences; rather open and semi-erect when grown as single plant with culms to 90-120 cm (7). It is taller, the foliage coarser, and the root system deeper than *Festuca pratensis* Huds. Leaves harsh, upper surface dull with prominent veins, lower surface smooth and glossy and distinctly keeled at base; rolled in bud; sheaths split, red or pink at base; auricles with a number of conspicuous small hairs; ligule membranous, much reduced and blunt. Inflorescence, a large spreading compound panicle. Spikelets 4-8-flowered; outer glumes unequal, narrow, keeled, the first usually 1-nerved, the second 3-nerved; lemma faintly 5-nerved and scabrid (or serrated) on the veins with short straight awn. The seed is about the size and shape of ryegrass, the lemma, palea, and rachilla falling with the caryopsis; the basal half of both the lemma and palea are adherent to the caryopsis; the rachilla is straw-coloured, 1.0-1.25 mm long. The caryopsis is oblong, rounded on outer and flat or concave on inner surface, 3.0-3.5 mm long, and brownish purple in colour. Average 418,000 seeds per kg. Chromosomes,  $2n = 42$ .

#### Agronomic characters (1-9)

Best suited to relatively cool or elevated regions of 630-760 mm or more rainfall of which at least 50% falls in the summer half of the year. Reliable late summer-early autumn rains appear necessary for best performance. With adequate moisture and moderate maximum temperatures it will remain green all summer and has no period of true summer dormancy. It will also make good growth whenever the mean weekly temperature is above 5°C in winter and may remain green under quite a few degrees of frost. Under these conditions its yield may exceed that of Australian phalaris. Prefers medium-to-heavy-textured soils with organic matter, but is tolerant of poor drainage and relatively high salinity and alkalinity and will also thrive on acid soils.

Under conditions at Canberra it has much the same growth rhythm as phalaris; it responds better to mid-and late-summer rains but is not as resistant to drought (6). Under high temperature and summer drought it will die out, particularly if grazed heavily. Establishment and growth in seedling stage is relatively slow compared with the ryegrasses. At Canberra, autumn-sown plants have headed in 239 days (6).

There is no evidence that it is unpalatable and certainly no more so than the other registered fescue cultivars. There is now evidence of it causing serious lameness in stock such as has been reported from New Zealand ecotypes on low wet poorly drained sites (3). Its main virtues are ability to produce green forage in summer, autumn, and winter where summer rainfall is adequate and winter temperatures are not too low, and to thrive on poorly drained soils.

## References

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