Register of Australian Herbage Plant Cultivars

A. Grasses
4. Fescue
Festuca arundinacea Schreb. (tall fescue) cv. Demeter

Reg. No. A-4a-3
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Origin

Originated from a line of *Festuca arundinacea* introduced into Australia in 1931 by CSIR (C.P.I.1499) from Morocco, through France. This line showed promise in early row trials at Canberra in 1936-40, but in later testing under grazing proved less persistent than *Phalaris tuberosa*. In 1946 row trials were commenced at Armidale, N.S.W.; it was later tested in swards with clover for 6 years and finally as a grazing pasture. Basic seed is produced in South Australia and New South Wales; it was first certified in South Australia in 1965.

Morphological description

General morphological characters similar to cv. Kentucky 31 and it is not easy to distinguish from other cultivars. Its herbage is possibly more of an olive green colour than common tall fescue which has brighter green leaves with a shinier lower surface (7). It is slightly darker in colour than Kentucky 31 or S.170 and a higher percentage of tillers form flowering heads (2). Reported also to be a little denser and more leafy than Kentucky 31 (8).

Agronomic characters

Adapted to much the same climatic and edaphic conditions as Kentucky 31. Has grown well at Armidale, N.S.W., under a fairly uniform (60% summer) rainfall of 760 mm and a mean temperature of 13.7°C. When moisture is adequate makes good growth through mid summer with mean maxima of 26.7°C and some growth during July with a mean temperature of 6.1°C. It makes more growth than Australian phalaris during winter and autumn. Though it establishes a little more slowly than phalaris or ryegrass and production in the first year is comparatively low, it has a longer effective growing season and seems better adapted than these grasses to areas with adequate summer and autumn rainfall (5-7). Assessment at Armidale, N.S.W., rates it as palatable or even more palatable to stock than Australian phalaris, and animals grazing it are unlikely to contract "fescue foot" (7). It needs to be well grazed to prevent large clumps of tussock from developing (10). Seed matures uniformly but ergot may reduce yields in wet seasons (7).

At Armidale, it has given higher winter production and has not hayed off as much as cv. Alta. It has, however, given slightly lower yields than Alta in spring and summer (5).

On the Central Tablelands of New South Wales summer-autumn rainfall is too erratic for this cultivar and it has not performed as well as Australian phalaris (10).

In Tasmania summer production has not been as good as the perennial ryegrass cultivars; it has been more difficult to establish under competition and has made slower initial growth. It has, however, shown more winter vigour than Kentucky 31 (8).

In Victoria it is reported to have shown promise only in the south-west of the State and in the Alexandra-Mansfield-Yea district (3). In South Australia it has performed well under irrigation and in the higher summer rainfall areas (4).

Applications of ammonium nitrate in winter and spring have increased seed yields considerably (9).

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