

Register of Australian Herbage Plant Cultivars

A. Grasses

14. Veldt Grass

Ehrharta calycina Smith (perennial veldt grass) cv. Mission

Reg. No. A-14a-1

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Origin

Bred by R.M. Love of the University of California Agricultural Experiment Station from material selected by R.C. Rossiter of CSIRO, Perth (3). Rossiter (6) discovered three plants at Guildford, W.A., in 1939, which were characterized by a compressed panicle and the capacity to retain mature seed. He collected open pollinated seed from these plants and sent some to R.M. Love in 1950 (3). Mission is a composite of nine clones derived by selection from this material (3). The selection and evaluation of the clones was done at the California Experiment Station at Davis, and elsewhere since 1961. Mission was registered in the U.S.A. (3) in 1963. Foundation seed is maintained by the California Experiment Station and is available through the Experiment Station and the United States Soil Conservation Service (3,4).

Recommended for registration by the Western Australian Herbage Plant Liaison Committee. Registered February 1968. Proposed for certification by the Western Australian Department of Agriculture in 1968.

Morphological description

An ascending to erect tufted perennial; culms slender and glabrous, 30-76 cm high and a little shorter than in the unselected species and other cultivars of it (4). Leaf sheaths glabrous, tight; leaf blades flat, narrow, dull or blue-green in colour, often tinged with purple, glabrous and frequently crinkled along one margin; ligule short, membranous, torn, and often ciliate; auricles present and bear a few long hairs; auricles and ligule purplish in colour when mature. Inflorescence is a narrow panicle and in cv. Mission the branches of the panicle are shorter than in the unselected species and the panicle is therefore more compact (3,4). Spikelets 5-6 mm long with two outer glumes and two sterile and one fertile lemma. Glumes glabrous, sub-equal, narrow, oblong, 7-nerved, often purplish; the first sterile lemma slightly shorter than the second, narrow, oblong, acute, awnless, and loosely villous; the second sterile lemma also villous, shortly awned, and with basal callus appendage; the fertile lemma oblong, obtuse, obscurely 5-7 nerved, glabrous or scantily hairy. Seed enclosed in persistent lemma and palea. In cv. Mission the seeds are larger, heavier, and darker brown in colour than in other varieties and do not shatter as readily at maturity (3,4). Approx. 220,000 seeds per kg.

Agronomic characters

Adapted to the same environment as unselected material of the species (3), i.e. light-textured soils of low fertility in a Mediterranean climate with a rainfall range of 330-890 mm (6). Grows longer into summer and more quickly in autumn than *Phalaris aquatica* (2), but production is not as high in spring or winter (2). It is highly drought-tolerant and persistent (2,6) but responds well to rains in spring, summer, and autumn (1,5,6). It becomes dormant in winter under heavy frosts. It establishes and reseeds relatively easily (2). Is highly palatable and careful grazing management is necessary to preserve it in the pasture (1,2,5,6). Has greatest potential on sandy or light-textured soils under rainfalls of 350-500 mm; this rainfall is marginal to most other winter-growing perennial grasses (1,2,5). The non-shattering character of cv. Mission is reflected in higher seed yields. Seed yields are reported in California four times as great as a commercial standard type (3,4).

References

1. Cook, J.L. (1946). Perennial veldt grass (*Ehrharta calycina*). *J. Dep. Agric. S. Aust.* **49**, 542-6.
2. Jones, H.R. (1965). Testing perennial veldt grass (*Ehrharta calycina* Sm.) for soil conservation. *J. Soil Conserv. Serv. N.S.W.* **21**, 146-51.
3. Love, R.M. (1963). Registration of Mission veldt grass (Reg. No. 10). *Crop Sci.* **3**, 367-8.
4. Love, R.M. (1963). Mission veldt grass. *Calf. Agric.* **17**, 2-3.
5. Michelmore, W.A. (1961). Perennial veldt grass. *J. Dep. Agric. S. Aust.* **64**, 474-9.
6. Rossiter, R.C. (1947). Studies on perennial veldt grass (*Ehrharta calycina* Sm.). Coun. Scient. Ind. Res. Aust. Bull. No. 227.