

Register of Australian Herbage Plant Cultivars

A. Grasses

11. *Puccinellia*

Puccinellia ciliata Bor (*Puccinellia*) cv. Menemen

Reg. No. A-11a-1

Registered prior to December 1971

Published in the 2nd Edition of Register of Australian Herbage Plant Cultivars 1972

Origin

Derived from seed collected in 1951 by C.M. Donald and J.F. Miles at Kaklic Village, 12 kilometres from Menemen, north of Izmir in Turkey, and introduced by CSIRO as C.P.I.15034. It was determined at Kew Herbarium in 1961 as *Puccinellia capillaris* (Liljeb.) Tzvelov, but this determination was subsequently found to be erroneous. It was determined as a new species by Bor (1) in 1968.

It was selected by A.L. Rogers and E.T. Bailey, CSIRO, for its ability to establish and persist on severely salted land in trials carried out during 1954-59 in Western Australia (7). It was subsequently tested by the Departments of Agriculture in Western Australia (5), South Australia (3), Victoria (2), and New South Wales (4). Seed became commercially available in 1964 and the name Menemen was applied by the Western Australian Herbage Plant Liaison Committee in 1966.

Morphological description (1,6,8)

A densely tufted or tussocky, wiry perennial with thin leaves; tussocks up to 15 cm in basal diameter. Culms 3-4-noded, green or reddish at maturity, 15-60 cm long, spreading or prostrate in open situation, erect in sward. Leaves greyish green, glabrous; blades to 35 cm long, 1-4 mm wide, inrolled to almost flat, smooth below, minutely scabrous above, the tip acuminate and minutely scabrous; sheath rounded on back, smooth; ligule 3-5 mm long, membranous, acute. Inflorescence a pyramidal panicle, 35-40 cm long about 15 cm wide, loose and open, symmetrical; branches clustered, 2-5 per node, stiff, scabrous, bare for up to half their length, spreading and eventually reflexed (at least the lower ones); pedicels very short. Spikelets very narrow-oblong, to 12 mm long, 7-9 flowered, green, becoming purplish at anthesis. Glumes obtuse, ovate to elliptical, unequal; lower about 1.7 mm long, 1-nerved, upper about 2.5 mm long, 3-nerved. Lemmas overlapping, rounded on the back, broadly oblong-elliptic, about 2.5 mm long, apex obtuse to rounded, the central nerve sometimes extending to the broad white membranous tip; glabrous except for a few short basal hairs. Paleas approx. equal to lemmas, the two keels scabrous above and pilose below; anthers 1.5 mm long (at anthesis). The glume and palea investing the caryopsis fall with the rachilla and constitute the seed, which is straw-coloured tinged with purple, 2.0-2.5 mm long and averages 5 million per kg; the caryopsis is ellipsoidal, 1.25-1.50 mm in length, greenish amber, with small but prominent brown embryo, and averages almost 6.6 million per kg.

Agronomic characters (2-5,7)

Cv. Menemen is winter-growing and summer-dormant and adapted to soils with high salt content; on non-saline soils it often behaves as an unthrifty annual even under irrigation. Will establish and persist on bare summer-moist saline soils and withstand winter flooding; it survives on summer-dry salt pans with surface incrustations of crystalline salt, provided there is some subsurface moisture.

Growth is usually slow during first winter but very small seedlings can survive the summer; in second and subsequent years plants shoot vigorously after opening rains in autumn, make growth during winter and spring, and seed during late spring. Seed production is good and seed does not shatter. Cv. Menemen is palatable and when established will stand grazing. It is, however, essentially pioneer plant for the reclamation of badly salted lands, which are also usually badly eroded to the extent of having lost the surface soil.

References

1. Bor, N.L. (1968). Two New Grasses. Notes. R. Bot. Gdn. Edinb. **28**(3), 299-300.
2. Cade, J.W. (1971). Personal communication. Vict. Dep. Agric., Melbourne.
3. Crawford, E.J. (1965). Puccinellia - a new salt tolerant plant. *J. Dep. Agric. S. Aust.* **68**, 369-71.
4. Dann, P. (1970). Pastures for salt affected soils in the Yass Valley. *Agric. Gaz. N.S.W.* **81**(8), 447-9.
5. Malcolm, C.V., and Smith, S.T. (1965). Puccinellia - outstanding salt land grass. *J. Agric. West Aust.* **6** (4th Ser.), 153-6.
6. Rogers, A.L. (1967). Personal communication. CSIRO West. Aust. Regional Laboratory, Perth.
7. Rogers, A.L., and Bailey, E.T. (1963). Salt tolerance trials with forage plants in south-western Australia. *Aust. J. Exp. Agric. Anim. Husb.* **3**, 125-30.
8. Wilson, P.G. (1967). Personal communication. West. Aust. Herbarium, Dep. Agric., Perth.