New Herbage Plant Cultivars

Authorised by the Standing Committee on Agriculture

A. Grasses

2. Ryegrass

(b) *Lolium multiflorum* Lam. (Italian ryegrass) cv. Aristocrat

Reg. No. A-2b-4. Registered 20 May 1992.
Originator: K.F. Lowe, Queensland Department of Primary Industries, PO Box 96, Ipswich, Qld 4305, Australia.
Registrar: R.N. Oram, CSIRO Division of Plant Industry, GPO Box 1600, Canberra, ACT 2601, Australia.
Released by Queensland Department of Primary Industries.
Australian Journal of Experimental Agriculture, 1992, **32**, 000.

Origin

Developed in Queensland by natural selection over a four-year period from cv. Midmar by Mr K.F. Lowe of the Queensland Department of Primary Industries. The selection pressure was exerted by storm rains during seed ripening in January and occurred over 4 generations of breeders' seed production in subtropical south-east Queensland. Basic seed was produced at Gatton Research Station in summer 1984–85. Recommended for registration by the Queensland Herbage Plant Liaison Committee at the request of the Queensland Department of Primary Industries. Breeders' seed will be produced by Queensland Department of Primary Industries.

Morphological description

A narrowly erect, leafy, diploid (2n = 14), annual cultivar, rarely persisting into the second year. However, it has shown good regeneration from seed under Queensland and Victorian conditions (K.F. Lowe, unpublished observations; J. McPherson, pers. comm.). Aristocrat seed matures 2 weeks earlier than Midmar and a month earlier than Concord in south-east Queensland, with seed being ready for harvesting in the first week of January. At harvest time, the stand is less prone to lodging than Midmar. In all other respects, it resembles cv. Midmar.

Agronomic characters

Aristocrat has produced equivalent forage yields to Midmar and Concord in Queensland in experiments from 1984 to 1988. In 1989 and 1991 it significantly outyielded both in mild winters. Aristocrat has produced superior spring yields compared with Midmar and Concord at Gatton (K.F. Lowe and T.M. Bowdler, unpublished observations), Taree (T. Launders, pers. comm.) and Bega (H. Kemp, pers. comm.). Aristocrat is adapted to a wide range of soils from light textured sandy soils, through red earths to heavy cracking clay soils. It has produced high yields from Atherton Tableland in the north of Queensland to Bega in southern NSW, appearing to be more suited to the milder, coastal areas of eastern Australia.

Rust resistance is higher than for cv. Tetila and similar to cvv. Midmar and Concord (K.F. Lowe, unpublished observations; T. Launders, pers. comm.). Milk production from Aristocrat is expected to be similar to that from cv. Midmar which was 10% higher than from cv. Tama in experiments at Mutdapilly (Lowe *et al.* 1985).

Flowering time in Victoria was 8–10 weeks later than cv. Wimmera, and the period of flowering was of short duration (J. McPherson, pers. comm.). Aristocrat is more resistant to lodging than cv. Midmar and retains seed in the head better than these cultivars.

Seed production of Aristocrat is up to 50% higher than that of Midmar. Seed yields of up to 3000 kg/ha have been recorded in south-east Queensland for Aristocrat, compared with 2000 kg/ha for Midmar (T.M. Bowdler and K.F. Lowe, unpublished observations). Seed yields of up to 700 kg/ha have been achieved commercially (J.D. McPherson, pers. comm., L. Bahnisch, pers. comm.).

References

LOWE, K.F. and BOWDLER, T.M. (1986) Ryegrass cultivar assessment. In *Pasture Agronomy Technical Annual Report, 1986. Queensland Department of Primary Industries, Brisbane* p. 55.

LOWE, K.F., REASON, G.K., BOWDLER, T.M., BIRD, A.C., MCKEOGH, P. and MOSS, R.J. (1985) The performance of ryegrass cultivars under cutting and grazing in coastal south-east Queensland. In *The Challenge: Efficient Dairy Production, 1985 Dairy Production Conference, Albury-Wodonga.*

17. Bothriochloa
(b) *Bothriochloa insculpta* (Hochst. ex A. Rich) A. Camus (creeping bluegrass) cv. Bisset

Reg. No. A-17a-2. Registered 29 May 1992.

Originators: W.J. Scattini[A], D.S. Loch[B], B.G. Cook[B]

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Registrar: R.N. Oram, CSIRO Division of Plant Industry, GPO Box 1600, Canberra, ACT 2601, Australia.

Released by Queensland Department of Primary Industries.

Origin

Bisset is a composite of two apparently identical accessions collected by R.W. Strickland, CPI 59584 from 1 °S at altitude 1667 m in Kenya and CPI 59585 from 3 °S at altitude 1273 m in Tanzania. Soils at the collection sites were near neutral loams to sandy loams, and rainfall 850 and 625 mm respectively.

These two components were selected following agronomic evaluation at 11 sites in southern inland Queensland (W.J. Scattini, B. Johnson and M.J. Conway, unpublished data). Initial seed increase was carried out at QDPI, Toowoomba, and subsequently at Cinnabar near Kilkivan.

Submitted by the Queensland Department of Primary Industries and recommended for registration by the Queensland Herbage Plant Liaison Committee. Breeders' seed will be maintained by the Queensland Department of Primary Industries. The cultivar has been protected by Plant Variety Rights (Anon. 1990).

Morphological description

Weakly tufted perennial with erect and geniculately ascending culms to 1.4 m, and numerous prostrate culms with a strong tendency to produce plantlets and roots at the nodes. Both prostrate and erect culms finer than those of Hatch. Culms channelled on one side with exposed portions often pigmented reddish pink to mauve. Erect culms often branched at the nodes. Nodes yellowish with a ring of erect white hairs 3–4 mm long. Leaf sheaths largely glabrous, except for hairs to 2 mm long along the whole or part of the margin, sometimes flushed with purple. Ligule a fibrous papery membrane 1–1.5 mm long and 4–5 mm broad. Leaf blades generally longer than, but the same width as those of Hatch, light green with purple finely serrate margins, with a hairy yellow transverse band, narrowing towards the midrib, on both surfaces at the blade-sheath junction above the ligule. Leaves and stems often not as glaucous as in Hatch. Inflorescence of few to 15 racemes, 4–6.5 cm long, on a central axis 1.5–3 cm long. Spikelets borne in pairs, one sessile, the other pedicelled, except for a terminal triad of one sessile and two pedicelled spikelets. Sessile spikelets with a ring of white hairs to 2 mm long arising from the callus at the base of two florets enclosed by two glumes. Lower glume 11–13 nerved, glabrous, light green flushed with purple, 3.5–4 mm long, with a row of bristles on the marginal keels in the apical ¼ and a single deep pit (concave gland) ¼ of the glume length from the apex. Upper glume 3 nerved, *ca* 3.5 mm long, softly hairy on the margins and with a row of bristles on the keel in the apical ¼. Lower floret sterile, reduced to a membraneous, nerveless lemma 3–3.5 mm long. Upper floret fertile; lemma linear, *ca* 2 mm long, extending to a two tone brown, scabrid, hygroscopically active awn 20–25 mm long. Pedicelled spikelet sterile or rarely staminate, slightly larger than the sessile spikelet. Lower glume 4–5 mm long, multinerved, with 2 (sometimes 1 or 3) shallow pits and a row of bristles on the margins that become smaller towards the base, and on the median keel at the apex. Upper glume 3–3.5 mm long, 3 nerved,