REGISTRATION OF 'BELAIR' ZOYSIAGRASS

'Belair' zoysiagrass (Zoysia japonica steud.) (Reg. no. 104) was developed by the USDA-ARS at the Beltsville Agricultural Research Center (BARC), Beltsville, MD. Belair originated as a single plant selection in 1971 from F₂ polycross progeny of a promising vegetative selection from an old turf-grass nursery on the Beltsville Agricultural Research Center. Origin of the original material is unknown, but it is believed to have been introduced from North Korea. Belair was vegetatively increased in 1974 and tested as R52-25. It has been evaluated along with other promising selections and standard cultivars in several laboratory and field tests. These tests show that Belair has desirable turf-forming properties.

Belair is intermediate in growth habit between 'Meyer' and the more open-growing, coarse types of common Z. japonica. Established turf is medium coarse in texture, less dense than Meyer and other fine-leafed zoysiagrasses and has a medium dark-green color during the growing season. In field trials planted at Beltsville, MD., and in trials in Illinois and New Jersey, it has been superior to Meyer in rate-of-spread, rust (caused by Puccinia zoysiae Diet.) resistance, drought tolerance, fall color retention, and early spring growth. Actively growing plants of Belair are somewhat similar in appearance to the improved turf-type tall fescue (Festuca arundinacea Schreb.). It is easier to mow with homeowner rotary-type lawn mowers than other zoysiagrass cultivars and prone to thatching.

Belair has performed well at low to moderate fertility levels on various soil types and at mowing heights of 2.5 to 7.5 cm. Growth has been sufficient to establish turf at fertility levels from 5.4 to 7.0. It is similar to Meyer in adaptation. However, it is probably best adapted to the region of reduced internodes. This greatly reduces any plant breakage due to wind. The plants are also much more resistant to hail damage when compared with normal hollow stemmed plants.

Belair was released as a vegetatively propagated cultivar by the USDA-ARS in April 1985. It is highly self-sterile under conditions tested, but produces a few viable seed arising from seed are different from Belair. Breeder seed will be maintained by the USDA-ARS, Germplasm Quality and Enhancement Laboratory, Plant Genetic Resources Inst., Beltsville Agric. Res. Ctr., Beltsville, MD 20705. For information, contact the USDA-ARS, Germplasm Quality and Enhancement Institute, BARC, Beltsville, MD 20705.

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References and Notes

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REGISTRATION OF CM 221 SEMIDWARF BUCKWHEAT GERMPLASM

REGISTRATION OF CM 221 SEMIDWARF BUCKWHEAT GERMPLASM

A semidwarf line of buckwheat (Fagopyrum esculentum Moench), CM 221 (Reg. no. GP-2), was developed at the Agriculture Canada Research Station, Morden, Manitoba. CM 221 was developed from a single plant semidwarf mutation found in breeding line CD 7464 at Morden. This plant was crossed with a large-seeded line, CM 108, and the normal appearing F₁, was backcrossed to a cutting propagated from the semidwarf mutant. This was followed by three successive generations of sib-mating between the semidwarf progeny. The normal appearing plants in the first generation were discarded. Sib-mating was used as buckwheat has a heteromorphic, sporophytic incompatibility system, which precludes selfing. The progeny were selected for dwarfing, earliness, and a very upright growth habit.

CM 221 has been designated semidwarf in plant habit because it is about 80-cm tall compared with 110 cm for CM 108. This height difference is conditioned by a single recessive gene. Average lengths of the first eight internodes on 20 plants of CM 221 were 12, 20, 37, 47, 62, 75, 84, and 80 mm compared to 65, 87, 109, 101, 102, 94, 89, and 83 mm measured on a similar number of plants of 'Mancan', a commonly grown cultivar. The remaining internodal growth is monomorphic, sporophytic incompatibility system, which precludes selfing. The progeny were selected for dwarfing, earliness, and a very upright growth habit.

CM 221 has been very resistant to lodging, even under conditions of high soil fertility. It is later in maturity than Mancan by 4 days to 100% bloom and has a seed weight of 24 mg compared to 27 mg in Mancan. Another advantage of the semidwarf plant habit is the almost complete absence of reduced internodes. This greatly reduces any plant breakage due to wind. The plants are also more resistant to hail damage when compared with normal hollow stemmed plants.

Limited quantities of seed of CM 221 may be obtained from the Agriculture Canada Research Station, P.O. Box 3001, Morden, Manitoba, Canada R0G 1J0.

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References and Notes

1. Research scientist, Agriculture Canada Res. Stn., P.O. Box 3001, Morden, Manitoba, Canada R0G 1J0. Contribution from Research Station, Agriculture Canada, Morden, Manitoba, Canada. Registration and release are decided by the Crop Science Soc. of Am. Accepted 30 July 1986.