Registration of ‘WW-B.Dahl’ Old World Bluestem

‘WW-B.Dahl’ Old World bluestem [Bothriochloa bladhii (Retz) S.T. Blake] (Reg. no. CV-50, PI 300857) was released jointly by the USDA-ARS, USDA-SCS, Texas Tech University, and the Texas Agricultural Experiment Station in March 1994. Seed of WW-B.Dahl was collected near Manali, India, and forwarded to the Oklahoma Agricultural Experiment Station at Stillwater, OK, in 1960. It was grown in experimental Old World bluestem nurseries by Oklahoma Agricultural Experiment Station personnel under the designation, A-8965, until the mid-1960s at which time it was sent to the Southern Regional Plant Introduction Station at Experiment, GA. Seed of WW-B.Dahl was received from Experiment, GA, by the Southern Plains Range Research Station, Woodward, OK, in 1976 as part of Regional Project S-9. It was evaluated under the Woodward designation, WW-857. Following 15 yr of adaptation and production testing, WW-B.Dahl was selected as a superior Old World bluestem strain worthy of release in central and south Texas.

WW-B.Dahl Old World bluestem is a warm-season, tufted, perennial bunchgrass with an upright growth habit. It has dark-green foliage, with basal and cauline leaves 5 to 10 mm wide and 25 to 50 cm long at maturity. Foliage height averages approximately 0.70 to 0.90 m, with seed stalks reaching heights of 1.25 to 1.75 m. WW-B.Dahl is 3 to 5 wk later in maturity, more robust, and has larger cauline leaves than ‘Plains’, ‘WW-Spar’, ‘WW-Iron Master’, ‘Ganada’ (all *B. ischaemum* Keng) and ‘Caucasian’ (*B. caucasica* C.E. Hubb.) Old World bluestems. The outer glumes of WW-B.Dahl are distinctly pitted, whereas the above-mentioned cultivars, as well as Old World bluestem cultivars in the genus *Dichanthium* such as ‘Angleton’, ‘Gordo’, ‘Kleberg’, and ‘Pretoria 90’, do not have pitted outer glumes. The central axis of the panicle of WW-B.Dahl is longer than the longest raceme. It has sparse glandular hairs on the upper leaf surface, which emit a strong aromatic odor when foliage is crushed.

Adaptation trials in Oklahoma, Colorado, Kansas, Illinois, Kentucky, and Mississippi have shown WW-B.Dahl to have more winterhardiness than other accessions of *B. bladhii*, but less winterhardiness than the *B. ischaemum* cultivars WW-Spar, WW-Iron Master, Plains, or Ganada. WW-B.Dahl has good winterhardiness in Texas and New Mexico, as demonstrated by greater forage production compared with released cultivars of *B. ischaemum*.

WW-B.Dahl produced greater forage yields than other Old World bluestem cultivars in dryland trials at Justiceburg, TX, during 1988 (1), 1991 (2), and 1992 (3) and in irrigated yield trials at Los Lunas, NM, in 1982 and 1983 and at Las Cruces, NM, during 1983, 1984, and 1985. Crude protein content was similar to that of other Old World bluestem cultivars at the same stages of plant development at Woodward in 1982, 1983, and 1984 and in trials at Las Cruces in 1983, 1984, and 1985.

Palatability of WW-B.Dahl was similar to that of Plains, WW-Spar, and Caucasian bluestem based on free choice by stocker steers in animal acceptance trials at Woodward during 1979, 1980, and 1981. Average daily gains of steers grazing WW-B.Dahl were greater than for ‘Plains’, ‘WW-Spar’, and Caucasian bluestem in trials at the Southern Plains Range Experimental Range, Ft. Supply, OK. It is later in maturity, with a higher ratio of leaf to stem in late summer, which promotes increased weight gains this time.

Stand establishment of WW-B.Dahl has been successful on soil types ranging from sandy loams to clays at soil pH ranges from 6.7 to 8.4. In a greenhouse study, WW-B.Dahl exhibited more top and root growth on a pH 4.1 soil than other Old World bluestem accessions (5). It is not recommended for use on coarse sandy soils. WW-B.Dahl is resistant to ergot caused by *Claviceps purpurea* (Fr.:Fr).

Plants of WW-B.Dahl are uniform, since seeds are produced apomictically and seedlings are genetically identical to the maternal parent. Seed has been increased through 10 generations, and off-type or variant plants have not been observed. WW-B.Dahl will continue to breed true even when grown in close proximity to related strains of the same species.

WW-B.Dahl was named after the late Dr. Bill E. Dahl, long-time professor in the Department of Range and Wildlife Management at Texas Tech University, Lubbock.

Breeder seed of WW-B.Dahl will be maintained by the USDA-ARS Southern Plains Range Research Station, Woodward, OK; upon request, the corresponding author will provide a list of registered seed producers. WW-B.Dahl is a public cultivar; U.S. plant variety protection for this cultivar will not be sought.

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References and Notes