Registration of Crop Cultivars

REGISTRATION OF MILTON BARLEY

(Reg. No. 177)

C. F. Murphy

'Mil ton' barley (Hordeum vulgare L.), C. I. 15732, is a winter type barley developed by the North Carolina Agricultural Research Service. It is a pure line selection from the cross 'Keeoor' × 'Volbar.' The cross was made in 1969 with the final selection (F₃) having been made in 1975.

Milton was evaluated in 44 North Carolina yield tests during the period 1977-1980, and in the Uniform Winter Barley Nursery of Semiaridly Cultivars from 1978-1980. It is especially well adapted to the piedmond region of North Carolina, which is the primary barley production area in the state. Milton yielded 2% more than 'Boone' and 18% more than 'Clayton' in the North Carolina piedmont. Boone appears to yield more consistently than Milton over a broader range of environments but yields of Milton exceed those of Clayton by 13% in all North Carolina tests. Test weight of Milton exceeds that of Boone by 2% and that of Clayton by 8% when averaged over all North Carolina environments. Milton has excellent straw strength (exceeding Boone by 50%), and winter hardiness at least comparable to Boone.

The most serious disease affecting barley in North Carolina is barley yellow dwarf virus. None of the cultivars grown in North Carolina are resistant to this disease, but all, including Milton, do show some tolerance. The only disease to which Milton has shown particular susceptibility is scald, caused by Rhynchosporium secalis (Oud.) J. J. Davis. Milton is resistant to some cultures of this pathogen but is quite susceptible to others.

Milton should be adapted throughout the southeastern winter barley production area. It is expected that it will play a particularly important role in the North Carolina piedmont, where it should be an alternative to the widely grown cv. Boone. Like Boone, Milton offers easy threshability.

Milton has a semi-prostrate growth habit and is characterized by a leaf sheath without hairs, a closed collar, and non-overlapping lateral kernels. The spike is erect, the rachis edge is glabrous, and the rachis internode is short and curved. The glumes are glabrous, and the rough glume awn is shorter than the glume. Awns are short and rough. The stigma is hairy and the short kernels have few lemma teeth, a depression in the lemma base, slightly wrinkled hulls, and a short haired rachilla.

The name Milton was selected to draw attention to a noted nineteenth century Black craftsman, Thomas Day, and his interesting life in Milton, N.C. Breeder seed of Milton will be maintained by the North Carolina Agricultural Research Service, North Carolina State Univ., Raleigh, NC 27650.

REGISTRATION OF AU LOTAN SERICEA

(Reg. No. 11)

E. D. Donnelly

'AU Lotan' [Lespedeza cuneata (Dumont) G. Don] was released in 1980 by the Auburn Univ. (Alabama) Agricultural Experiment Station. It is a tall growing, fine-stemmed cultivar similar to 'Serala' in stem type and height, but unlike Serala, it is low in tannin. AU Lotan (tested as 73-63-2) is a line cultivar developed from a single plant selected in 1975. It was derived from the cross Belsville 23-864 x AL 2193 made in 1959. Belsville 23-864 was developed by AR-SEA-USDA. This parent was genetically low in tannin, but low in vigor, stemmy, light green in color, and generally undesirable otherwise. In subsequent generations, crosses were made to Serala, AL 1573, AL L11, AL L14, and AL L15 with continuous selection for low tannin. AL L11, AL L14, and AL L15 are root-knot nematode (Meloidogyne spp.) resistant lines developed cooperatively with AR-SEA-USDA, Tifton, Ga. During the breeding program most of the low-tannin material was damaged by a foliar disease caused by Rhizoctonia spp. Thus, breeding for resistance to this pathogen became an important objective. Other objectives were low-tannin content, high dry matter digestibility, high forage and seed yields, and persistence.

AU Lotan contains approximately one half the tannin found in normal, high-tannin sericea, averages 27% higher in digestible dry matter, and 7.0% higher in crude protein at the hay stage. It has shown good resistance to Rhizoctonia spp. and to the root knot nematode, M. incognita acrita Chitwood, 1949. AU Lotan forage yield is approximately 85% that of Serala, and it is recommended for grazing and hay on most soils of Alabama. It probably is adapted to other areas with similar soil and climate.

Three classes of seed beyond breeder seed are recognized: foundation, registered, and certified. Breeder seed will be maintained by Auburn University Agriculture Experiment Station.

1 Registered by the Crop Sci. Soc. Am. 1975.
2 Professor of Crops, Dep. of Agronomy-Soils, Auburn Univ., Auburn, AL 36849.

REGISTRATION OF MARSHALL

ANNUAL RYEGRASS

(Reg. No. 72)

B. L. Arnold, C. E. Watson, Jr., and N. C. Edwards, Jr.

'Marshall' annual ryegrass (Lolium multiflorum Lam.) was released by the Mississippi Agricultural and Forestry Experiment Station in 1980. Marshall is the result of 29 years of natural selection from 'Common' ryegrass grown as a reseeding stand under grazing conditions at the North Mississippi Branch Station at Holly Springs, MS. During the evaluation phase, this cultivar was tested as 'North Mississippi Reseeding.'

Marshall is a late-maturing, diploid (2n = 14) annual. It matures approximately 2 weeks later than 'Gulf' in Mississippi. As a result of late maturity, Marshall will produce longer than...