Registration of Crop Cultivars

REGISTRATION OF KNOB BARLEY1
(Reg. No. 118)
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'Knob' winter barley, (Hordeum vulgare L. emend. Lam.) CI 11910, was developed by the Department of Agronomy, University of Kentucky. It originated from the cross 'Aizu 6' (CI 9010) x an awnless F2 plant from a cross of 'Kenbar' (CI 7574) x 'Wong' (CI 6728). The cross was made by the senior author in 1955. A head row pedigree breeding system was used to select the variety. Individual heads were selected in the F2 and progeny tested for trueness to type. Progenies that appeared to be true to type were bulked and constituted the seed source.

Date of release was July 1, 1969.

Description.—Six-rowed and short-awned on central spikelets, awnless on lateral spikelets, winter barley; early growth semi-prostrate to prostrate; plant early and short; basal leaf sheaths without hairs, green; upper leaf sheaths glabrous, yellow at maturity; auricles white; leaves short, narrow and upright; flagleaves short, narrow; stems yellow at maturity, exposed nodes green, neck smoky, distance flagleaf to spike 10 to 15 cm; collars closed; basal rachis internode straight, short; rachis tough with short hairs on edges; spike dense, short, parallel, nonwaxy and erect; lateral kernels seldom overlap even at tip of spike; lemma awn short on central spikelets awnless on lateral spikelets, awns rough, tips yellow; glume awn equal to length of glume, rough and yellow; glumes half the length of lemma; few short hairs at base of glumes; rachilla short-haired, seldom abortive; lemma yellow with few teeth on marginal nerves, with depression at base; kernels white, short to mid-long; hulls slightly wrinkled.

Knob has been evaluated in regional nurseries since 1967. In Kentucky, Knob, compared with Kenbar, has been equal in winter survival, 1 day earlier in heading, and several days earlier in ripening, 10 cm (4 in.) shorter, superior in lodging resistance, cleaner thrashing, higher yielding, and equal in test weight. Knob is susceptible to loose smut, has resistance to some races of mildew, and escapes damage from other barley diseases common in Kentucky because of its early maturity. Kernels are easily removed from the head by combine harvesting in high humidity areas but will tend to shatter under dry windy conditions.

The Kentucky Agricultural Experiment Station will maintain supplies of breeder seed of Knob.

1 Registered by the Crop Science Society of America. Journal Article 2045 of the Agricultural Experiment Station, Oklahoma State University, Stillwater, Okla. Received Nov. 16, 1970. Published as Journal article No. 70-3-82 with the approval of the Director of the Kentucky Agricultural Experiment Station.

REGISTRATION OF WESTBURN 70 COTTON1
(Reg. No. 54)
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'Westburn 70' cotton (Gossypium hirsutum L.) was developed by the Oklahoma Agricultural Experiment Station, Stillwater, Okla., in cooperation with the Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture, Beltsville, Md., in the following manner:

(a)—Five hundred individual plant selections based on general plant type and the stormproof boll were made within an increase block of 'Westburn'1 at Perkins, Okla., in 1965.

(b)—These 500 selections were grown in individual progeny rows at Chickasha, Okla., in 1966; and the upper 10% of those rows were chosen on the basis of their fiber length.

(c)—The 50 progenies selected at Chickasha and several check varieties, including Westburn, were then grown in replicated, randomized experiments in 1967 and 1968 at three locations. Those locations were Chickasha, where the fusarium wilt [Fusarium oxysporum Schlecht f. vasinfectum (Atk.) Snyder and Hansen] and root-knot nematode (Meloidogyne incognita var. acrita Chittwood) complex is not considered to be a problem; Elk City, Okla., where the complex induces moderate damage; and Hollis, Okla., where infestation is extremely severe. Selections were then made based on lint yield; pulled lint percent; earliness; fiber length, uniformity, coarseness, and strength; and resistance to the fusarium wilt-nematode complex. Particular emphasis was placed on fiber length and resistance to the disease. If a line had a short fiber or if it displayed susceptibility to the fusarium wilt-nematode complex at Elk City or Hollis or both, it was discarded. Thirteen of the lines which were increased in 1968 were bulked for the production of foundation seed in 1969. The bulk and several check varieties, including Westburn, were also tested in 1969 under eight sets of environmental conditions.

Experimental data from the 14 tests indicate that Westburn 70 has a fiber approximately .079 cm (1/32 inch) longer than that of Westburn, while data from the seven tests where earliness was measured indicate that Westburn 70 is also somewhat earlier in maturity than Westburn. In all other respects studied, the two varieties were very similar. Like Westburn, Westburn...