REGISTRATION OF CROP CULTIVARS

REGISTRATION OF TAMBAR 402 BARLEY1
(Reg. No. 181)

J. H. Gardenhire, M. E. McDaniel, and N. A. Tuleen

'TAMBAR 402' barley (Hordeum vulgare L.), P.I. 468115, was developed by the Texas Agricultural Experiment Station. It was selected from the cross 'Zora'/'3'/Goliad'/'Cordova'/'Omugi'/'4'/Tambor 401'. The cross was made at College Station, Tex., in 1972 and the F2 selection was made at Dallas. The F3 head-row was uniform in heading and height and was homozgyously resistant to biotype C of greenbugs (Schizaphis graminum Rond.). In subsequent tests it has been shown to be resistant also to biotype E. It was tested in state tests and the Uniform Barley Disease Nursery as selection TX75D2966. In 1977, approximately 100 head-rows were bulked for the initial increase.

Tambar 402 is a six-rowed, rough-awned, dense-headed, early-maturing, facultative winter cultivar. The juvenile plants have a semi-prostrate to intermediate growth habit with more upright growth and wider leaves than Tambor 401. The average width of the leaves is 13.2 mm vs. 9.4 mm for Tambor 401. The basal leaf sheaths are without hairs and the auricles are greenish-white. Head density is 2.1 mm for Tambar 402 vs. 3.9 mm for Tambor 401. The covered kernels have a blue aleurone and are large and slightly wrinkled on the dorsal side. In a 2-year comparison at Dallas, 88.4% of the seed remained on a 6/64 x 3/4 sieve as compared to 55.5% for Tambar 401 and 44.9% for 'Rogers'. The rachilla has long hairs and the rachis and glumes are hairy. Tambar 402 has medium stiff straw, semi-short stature, and a closed collar.

In central and north central Texas, Tambar 402 equaled the yield of Tambar 401 and exceeded the yield of 'Tamu-era', the previous highest yielding greenbug resistant cultivar, by 12%. It headed 7 days earlier and was 15 cm shorter than Tambar 401. In the Rolling Plains, Tambar 402 equaled the yield of Tambar 401 and was 7 days earlier and 6 cm shorter. In irrigated trials in the High Plains, it outyielded Tambar 401 by 5% but was exceeded in yield by 'Post' and 'Will' by 18 and 4%, respectively. Post and Will are the two most winter hardy cultivars presently grown in the High Plains. Tambar 402 equaled Tambar 401 in winter hardiness.

Under field conditions, Tambar 402 is moderately resistant to powdery mildew, caused by Erysiphe graminis (DC.) Merat hordei Em. Marchal, and leaf rust, caused by Puccinia hordei (Ooth.). In greenhouse tests it was susceptible to both diseases. Tambar 402 has shown mixed reactions to net blotch, caused by Pyrenophora teres (Died.) Drechs., and spot blotch, caused by Helminthosporium sativum Pann., King, and Bakke, in the Uniform Winter Barley Disease Nursery.

Tambar 402 was released by the Texas Agricultural Experiment Station in 1981. Foundation seed will be maintained by the Foundation Seed Service, Texas Agric. Exp. Stn., College Station, TX 77845.

REGISTRATION OF OLATHE BEAN1
(Reg. No. 36)

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'Olathe' pinto bean (Phaseolus vulgaris L.) was developed and released by the Colorado State University Experiment Station in 1979; it was tested in the Cooperative Dry Bean Nursery as Colo 3439. The Plant Variety Protection Certificate number is 8000077. Olathe is resistant to many races of bean rust caused by Uromyces phaseoli (Pers.) Wint. var. typica, resistant to the Type and the New York 15 strains of bean common mosaic virus, and resistant to curly top virus.

Olathe is a semi-vine plant that matures in 88 days at Ft. Collins, which is 4 to 6 days later than 'U.I. 111' and about the same maturity as 'U.I. 114'. Stems of Olathe are thicker, the leaves are darker green, and the plants are more upright than the above named cultivars. Five years of testing (1974-1978) at Ft. Collins showed that Olathe yielded 3,689 k/ha which was not significantly different from U.I. 114 but about 352 kg/ha more than that of U.I. 111. Olathe seed weight was 39g per 100 seeds which was smaller than that of U.I. 111 and U.I. 114. Olathe seed is slightly darker in color and rounder than the seed of U.I. 111 and U.I. 114.

Olathe resulted from a single plant selection made in 1972 from a bulk population (bulk 23). The bulk was comprised of the pinto seeds of an F2 generation of crosses made in 1962 of a rust resistant progeny selected from an F1 population (5958-B-1),