REGISTRATION OF IRRIDUR DURUM WHEAT
(Reg. No. 667)
D.W. Sunderman and Brendan O'Connell

‘IRRIDUR’ (Triticum turgidum L. var. durum), CI 17423, is a spring durum wheat that evolved from the cross ‘Yaktana 54’/‘Norin 10’/‘Brevor’, Sel 21-1c/3/‘Sinaloa’#2/4/‘Thatcher’/5/‘Sentry’ made by Drs. C.O. Qualset and Y.P. Puri in California. It was among 300 head selections made from F2 lines grown in the Tulelake, Calif., durum program in 1970. F4 and F5 head rows of these selections were grown in the 1971 and 1972 Aberdeen rust nurseries and Irridur resulted from a bulk of one of the stripe rust resistant F2 rows. Irridur was tested as ID0093 in the Western Durum Nursery from 1974 until released and was grown in large commercial size acreages in 1978 and 1979 to determine the feasibility of growing good quality irrigated durums in southern Idaho. Irridur was released in 1980 by the Idaho Agric. Exp. Stn. and USDA-ARS.

Irridur is a semidwarf, medium-maturing cultivar with moderately short, stiff straw. The spike is awned, oblong, dense, and erect to inclined. Awns have a tendency to dehisce at maturity. Glumes are glabrous, yellowish white, long and wide. Shoulders are narrow and elevated and the beaks are midwide, acuminate, and 2 to 3 mm long. Awns are yellowish white and 5 to 13 cm long. The kernels are amber, hard, long, and elliptical with a middized germ, a narrow mid-deep crease, rounded cheeks, and a very short brush (essentially none). Irridur has been resistant to the prevalent races of stripe rust (caused by Puccinia striiformis), leaf rust (caused by Puccinia recondita Eriks.), and leaf rust (caused by Erysiphe graminis Fries. & Marchal).

Irridur is the first durum wheat grown under field conditions that produced grain with acceptable spaghetti processing characteristics and produced yields that were comparable to other durum wheats. It has been used in blends of hard red spring wheats (Triticum aestivum L.) and durum wheats. Irridur has equaled that of ‘Wandell,’ a low protein durum; ‘Borah,’ a commercially grown hard red spring wheat; and ‘Sentry’ made by Drs. C.O. Qualset and Y.P. Puri in California. Irridur has been resistant to the prevalent races of stripe rust (caused by Puccinia striiformis) found in the Pacific Northwest, but is susceptible to leaf rust (caused by Puccinia recondita Eriks.) found in the eastern U.S. and southern Idaho.

When fertilized and irrigated properly, Irridur produced grain with satisfactory protein content and spaghetti processing characteristics.

Breeder seed of Irridur will be maintained by the Idaho Agric. Exp. Stn. at Aberdeen, ID 83210.

REGISTRATION OF KS145 ALFALFA GERMPLASM
(Reg. No. GP 123)

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KS145 alfalfa [Medicago sativa L.] was released by the Kansas Agric. Exp. Stn. and USDA-ARS in November 1981. It provides resistance to anthracnose caused by Colletotrichum trifolii Bain, race 1; bacterial wilt caused by Corynebacterium insidiosum (McGill.) H. L. Jens.; downy mildew caused by Peronospora trifoliorum d. By.; Fusarium wilt caused by Fusarium oxysporum Schlecht. f. sp. medicaginis (Weimer) Synd. and Hans.; Phytophthora root rot caused by Phytophthora megasperma Drechs., pea aphid [Acyrthosiphon pisum (Harris)], and spotted alfalfa aphid [Theroaphis maculata (Buckton)] in one germplasm pool.

KS145 was derived from Chilean (‘Cody’) and Flemish (‘DuPuits’) alfalfa germplasm. Approximately 75 pea aphid-resistant plants selected from DuPuits were intercrossed (hand pollinated in greenhouse) with 75 spotted alfalfa aphid-resistant Cody plants. The resultant population was subjected to cyclic selection for resistance to pea aphid, spotted alfalfa aphid, and spotted alfalfa aphid in one germplasm pool.

2 seed was produced by intercrossing 450 seed plants of KS145 alfalfa in a field cage.

In an anthracnose (race 1) seedling-resistance test, the percentage of resistant plants for the susceptible control ‘Arc,’ and the susceptible control ‘Saratoga’ were 3 and 4, respectively.

Seedling tests to evaluate resistance to downy mildew, pea aphid, and spotted alfalfa aphid were conducted at Manhattan, Kan. KS145 and resistant and susceptible controls were tested in the following percentages of resistant plants for the downy mildew isolates: KS145 = 84, Saranac = 20, ‘Sentry’ = 1, for isolate I-5; KS145 = 36, Saranac = 4, ‘Sentry’ = 0, for isolate I-7; KS145 = 74, Saranac = 55, ‘Sentry’ = 0, for isolate I-8. Percentages of plants resistant to bacterial wilt were: KS145 = 45, ‘Vernal’ (resistant control) = 38, ‘Narragansett’ (susceptible control) = 1. Percentages of seedlings surviving after infestation with pea aphid biotypes found in Kansas were 77, 72, and 70, respectively.

Registration of Germplasms