REGISTRATION OF HARDIN SOYBEAN
(Reg. No. 165)

W. R. Fehr, J. B. Bahrenfus, H. Tachibana, and L. C. Card

‘HARDIN’ soybean [Glycine max (L.) Merr.] was developed by the Iowa Agriculture and Home Economics Experiment Station, the Puerto Rico Agricultural Experiment Station, and USDA-ARS. It yields about 7% more than ‘Corsoy’ and other public cultivars of similar maturity, and has specific resistance to races 1 and 2 of phytophthora rot [caused by Phytophthora megasperma (Drechs.) var. sojae A. A. Hildebrand].

Hardin is a BC3F4 plant selection from the cross Corsoy X ‘Cutler 71.’ Resistance of BC1F1 plants to race 1 of phytophthora rot was evaluated in the greenhouse at Ames before the second backcross. Resistance also was evaluated in BC3F1 plants and their progeny during generation advance. Hardin was selected as a BC2F4 plant in Puerto Rico, and the line was maintained in bulk in subsequent evaluations. It was tested for yield in Iowa from 1975 to 1979, and in Northern Regional Soybean Tests from 1977 to 1979 under the designation A76-102009.

Hardin has purple flowers, grey pubescence, brown pods at maturity, and dull, yellow seeds with yellow hilum. It is of Group I maturity and best adapted to 43° to 44° N Lat. In comparison with Corsoy, Hardin is 3 days earlier for time of maturity, 5 cm shorter in mature plant height, and similar for lodging resistance, seed quality, seed weight, and protein and oil content of the seed.

Hardin is moderately resistant to pod and stem blight [caused by Diaporthe phaseolorum (Cke. & Ell.) var. sojae Wehm.]. It is moderately susceptible to purple stain [caused by Cercospora kikuchii (T. Matsu. & Tomoyasu) Chupp.] and susceptible to brown stem rot [caused by Phialophora gregata (Allington and Chamberl.) W. Gams].

Breeder seed of Hardin was distributed to foundation seed organizations in Illinois, Indiana, Iowa, Michigan, Minnesota, South Dakota, and Wisconsin for planting in 1980. Breeder seed will be maintained by the Iowa Agric. and Home Econ. Exp. Stn.

REGISTRATION OF H70-144 SUGARCANE
(Reg. No. 60)

Don J Heinz, Thomas L. Tew, Hans K. Meyer, and Kuo Kao Wu

CLONE ‘H70-144’ sugarcane (Saccharum spontaneum L.) was developed by the staff of the Experiment Station of the Hawaiian Sugar Planters’ Association, from a progeny derived from a cross of ‘H50-723’ in a polycross involving several public cultivars of similar maturity, and has specific resistance to races 1 and 2 of phytophthora rot [caused by Phytophthora megasperma (Drechs.) var. sojae A. A. Hildebrand].

H70-144 contains germplasm from ‘H59-3775’ and ‘H59-3775’, which it is replacing, and it is tolerant to s-triazine herbicides.

In replicated yield trials, H70-144 had slightly higher percent cane than did H59-3775, but produced more sugar per hectare due to higher cane tonnage. It is moderately susceptible to drought and saline conditions and the wet, windward ecological growing areas of the island, which occupy approximately 40% of the sugarcane acreage in Hawaii. In the leeward irrigated areas, however, H70-144 is only as good as the standard Hawaiian commercial clone, ‘H59-3775’, which it is replacing, and it is tolerance to herbicides.

H70-144 is intermediate in resistance to brown spot [caused by Bipolaris oryzae (apud., Butl. and Khan) Shoemaker], leaf scald [caused by Cercospora longipes (Ashby) Dowson], brown spot [caused by Cercospora albilineans (Ashby) Dowson], and rust [caused by Ustilago sclarinae (Ashby) Dowson].

Vegetative cuttings will be maintained by the Experiment Station, Hawaiian Sugar Planters’ Association, Aiea, 96701.

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1 Registered by the Crop Sci. Soc. of Am. Published with the approval of the Director as Paper No. 525 in the Journal Series of the Experimental Station, Hawaiian Sugar Planters’ Association, Aiea, Hawaii. In the leeward irrigated areas, however, H70-144 is only as good as the standard Hawaiian commercial clone, ‘H59-3775’, which it is replacing, and it is tolerance to herbicides.

2 Professor and research associate, Dep. of Agron., and research plant pathologist and agriculture research technician, USDA-ARS, Dep. of Plant Pathology, Seed and Weed Science, Iowa State Univ., Ames, IA, 50011, respectively.
