REGISTRATION OF HARDIN SOYBEAN
(Reg. No. 165)

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‘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 BC2F4 plant selection from the cross Corsoy × ‘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 BC2F1 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 hila. 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)

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CLONE ‘H70-144’ sugarcane (Saccharum spp.) was selected by the staff of the Experiment Station and the Puerto Rico Agricultural Experiment Station, from a progeny derived from the first generation of ‘H50-723’ in a polycross involving many clones high in sucrose content. H70-144 contains germplasm of ‘Cutler 71’, ‘H59-3775’ and ‘H50-723’.

Hardin is intermediate in resistance to brown spot (caused by Bipolaris sacchari apud., Butl. and Khan) Shoemaker], leaf scald (caused by Cercospora longipes Ashby) Dowson), brown rot (caused by Phytophthora megasperma L., S. spontaneum L., S. sinense Roxb.), and rust (caused by Ustilago scitaminea L., S. robustum H. & P. Syd.)

In replicated yield trials, H70-144 had slightly lower sucrose per hectare due to higher cane tonnage. It is resistant to eye spot (caused by Bipolaris sorokiniana (Butl. and Khan) Shoemaker], leaf blight (caused by Cercospora sojina L.) and pod and stem blight (caused by Diaporthe phaseolorum L.), which occupy approximately 40% of the sugarcane acreage in Hawaii. In the leeward irrigated areas, however, H70-144 has more percent cane than did H59-3775, but produced 8 to 10% more sugar per hectare due to higher cane tonnage.

H70-144 is a 24-month crop clone with high average sucrose content. Germination of vegetative cuttings is satisfactory. The clone is heavy-tillering, fast-growing, and flowering, with an average diameter stalk. It is resistant to herbicides.

H70-144 is intermediate in resistance to brown spot (caused by Ustilago scitaminea) and resistant to eye spot (caused by Bipolaris sorokiniana). It is also resistant to leaf blight (caused by Cercospora sojina L.), pod and stem blight (caused by Diaporthe phaseolorum L.), and rust (caused by Ustilago scitaminea L.).

In replicated yield trials, H70-144 had slightly lower sucrose per hectare due to higher cane tonnage. It is resistant to eye spot (caused by Bipolaris sorokiniana), leaf blight (caused by Cercospora sojina L.), and pod and stem blight (caused by Diaporthe phaseolorum L.), which occupy approximately 40% of the sugarcane acreage in Hawaii. In the leeward irrigated areas, however, H70-144 has more percent cane than did H59-3775, but produced 8 to 10% more sugar per hectare due to higher cane tonnage.