those of Genesec. Yorkstar is adapted to the eastern soft white winter wheat areas.

The generation sequence of seed production will be Breeder, Foundation and Certified. Breeder seed will be maintained by the Ithaca station. Performance data and other information on Yorkstar were reported by Jensen.\(^3\)


REGISTRATION OF H 50-7209 SUGARCANE\(^1\)

(Reg. No. 1)

Don. J. Heinz and Rokuro Urata\(^2\)

The variety ‘H 50-7209’ of sugarcane (Saccharum sp.) was selected and propagated as a single clone selection from the cross ‘H 44-3098’ \(\times ?\) by the staff of the Genetics Department, Hawaiian Sugar Planters’ Association. The cross resulted from interpollination in a polycross nursery involving many selected clones, as outlined by Mangelsdorff\(^3\) and Warner.\(^4\) It has germplasm from S. officinarum L., S. spontaneum L., S. sinense Roxb, and possibly S. robustum Brandes and Jeswiet ex Grassl.

H 50-7209 is a recumbent, high-tonnage variety, most commonly harvested as a 24-month crop. Its ratio of tons sugar to tons cane is average when compared to other Hawaiian varieties; it has produced approximately 16.3 metric tons (18 tons) of raw sugar per acre from a 2-year crop. It is a medium-tillering, large-stalk, fast-growing variety, with reddish-brown internal tissue. Upon germination of vegetative cuttings the shoot development occurs prior to root primordia development. It is a luxury feeder of potash and responds to high levels of nitrogen in the first season of growth. Excessive nitrogen in the second season of growth can be detrimental to high yields.

This variety is resistant to red rot (Physalospora tucumanensis Spec.), mosaic (virus - Hawaiian strain), eye spot (Helminthosporium sacchari (van Breda de Haan) Butler), leaf scald (Xanthomonas albilineans (Ashby) Dowson), and tolerant to brown spot (Cercospora longipes Butler). It is susceptible to Fiji disease (virus) and downy mildew (Sclerostroma sacchari Miy) which are not present in Hawaii; the variety was tested for resistance to these diseases in cooperation with the South Pacific Sugar Mills, Limited, of Lautoka, Fiji. It is susceptible to ratoon stunting disease (virus), but this disease can be controlled through treatment of vegetative cuttings in water at 50 C for 2 hours. After the long hot-water treatment, phytosanitary measures will insure a disease-free source of vegetative cuttings for propagation. It is reported to be susceptible to smut (Ustilago scitaminea) in the Philippines.\(^5\)

H 50-7209 is drought resistant, producing high yields under semi-irrigated conditions where moisture may be deficient.

The higher-yielding H 50-7209 replaced ‘H 57-1935’ in the leeward regions of the Hawaiian Islands. It is adapted to the warm irrigated and semi-irrigated regions of Kauai, Oahu, Maui, and Hawaii, is being grown on 40% of the cane-producing land in Hawaii, and occupies approximately 85% of the land in its area of adaptation.\(^6\)

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


REGISTRATION OF C.P. 61-37 SUGARCANE\(^1\)

(Reg. No. 2)

P. H. Dunckelman, R. D. Breaux, H. P. Fanguy, and R. J. Matherne\(^2\)

‘C.P. 61-37’ sugarcane (Saccharum sp.), a tri-species hybrid involving Saccharum officinarum L., S. spontaneum L., and S. sinense Jeswiet, is a selection from the cross ‘C.P. 48-105’ \(\times \) ‘C.P. 55-58’. The cross was made at Canal Point, Fla., during the 1957 crossing season. C.P. 61-37 was developed through cooperative research of the U.S. Department of Agriculture, the Louisiana Agricultural Experiment Station, and the American Sugar Cane League.

Stalks of C.P. 61-37 are comparable in diamater to those of C.P. 52-68, the leading commercial variety. The variety is well adapted for machine harvesting; stalks have an erect-type growth and they are not brittle.

C.P. 61-37 is recommended for culture on light and heavy soils in Louisiana. Average yields of cane per acre are significantly higher than those of C.P. 52-68; the two varieties are equal in yields of sugar per ton of cane. C.P. 61-37 exceeded C.P. 52-68 in yields of sugar per acre; it has maintained high yields through two stubble crops.

C.P. 61-37 matures in time for harvesting as a mid-season or late-maturing variety. Milling and processing qualities are satisfactory.

C.P. 61-37 is rated as moderately resistant to the sugarcane mosaic virus, the same as C.P. 48-105. Spread of the virus in C.P. 61-37 can be readily controlled by roguing.

The rate of inversion of sucrose in C.P. 61-37 between the time of cutting and milling is equal to that of C.P. 52-68; it is more tolerant to cold injury than C.P. 52-68.

Seed cane of C.P. 61-37 will be maintained by the U.S. Department of Agriculture at the U.S. Sugarcane Field Station, Houma, La.

\(^\) Registered by the Crop Science Society of America. Published with the approval of the Director as Paper No. 195 in the Journal Series of the Experiment Station, Hawaiian Sugar Planters’ Association. Received June 3, 1968.

\(^2\) Head, Genetics and Pathology Department, and Associate Plant Breeder, respectively, Experiment Station, Hawaiian Sugar Planters’ Association, Honolulu, Hawaii.


\(^5\) Registered by the Crop Science Society of America. Received June 15, 1968.