REGISTRATION OF PLATTE SOYBEAN

'Platte' soybean [Glycine max (L.) Merr.] (Reg. no. 169) originated as an F₃ plant selection from the cross C1421 × 'Amsoy 71'. The parental lines were developed by the Purdue Univ. Agric. Exp. Stn. and the ARS-USDA. C1421 was derived from 'Adephia' × 'Mukden'. The F₂ population was harvested in bulk and advanced to the F₃ generation by a modified single seed descent method (2 pods per plant) and to the F₄ generation by the bulk method at Nebraska Agricultural Experiment Station Lincoln Agronomy Farm. Single plants were harvested from the F₅ population. Prior to release, Platte was evaluated as U-56355 in yield tests from 1976 to 1978, and was entered into Nebraska intrastate tests and the Cooperative Preliminary and Uniform Tests II, Northern Region, from 1979 to 1981.

Platte is a Group II variety maturing two days earlier than 'Century' and is best adapted as a full season variety from about 40° to 43° N latitude. In Nebraska, Platte is superior to Century, 'Corsoy 79' and Amsoy 71 in yield and in resistance to lodging. However, under irrigation it has little advantage over Century. Platte has an indeterminate growth habit but has shorter internodes. It is similar to Century in mature plant height, but is 8 to 10 cm shorter than Corsoy 79 or Amsoy 71. Compared to Century, the seeds of Platte are smaller, have about 5% less protein and 4% more oil, but have similar seed quality scores. Platte has purple flowers, grey pubescence, brown pods at maturity, and yellow seeds with shiny luster and yellow (clear) hila. In high pH soils, Platte shows moderate chlorosis similar to that of Century. Platte has the Rps₁ gene and specific resistance to races 1, 2 and 10 to 16 to Phytophthora rot caused by Phytophthora megasperma Drechs. f. sp. glycinea Kuan and Erwin to which Vinton is susceptible.

Vinton 81 originated from BC₄F₅ plants of the cross L60-347-4-2-B × Vinton². Vinton is a specialty cultivar with about 45% protein and 22 g/100 seeds. L60-347-4-2-B was selected as an F₃ line by the Ohio Agricultural Research and Development Center for its resistance to phytophthora rot. The line originated from the cross Harosoy × Higan made by the USDA-ARS and the Illinois Agricultural Experiment Station. The four backcrosses to Vinton took place in Puerto Rico and Iowa. Tests for resistance to phytophthora rot were conducted for each backcross generation at Wooster, Ohio. BC₄F₅ plants from the population were selected and progeny tested. Lines homogeneous for resistance to phytophthora rot and with uniform appearance were tested in Iowa for yield, agronomic performance, oil and protein and oil composition. Seeds of four BC₄F₅-derived lines with similar appearance and performance were bulked to form Vinton 81.

Vinton 81 has purple flowers, grey pubescence, tan pods at maturity, and dull yellow seeds with yellow hila. It is of Group I maturity and is best adapted to approximately 42° to 44° N Lat. Vinton 81 and Vinton have similar characteristics, except for their resistance to P. megasperma and tolerance of the herbicide metribuzin. Vinton 81 is more sensitive to metribuzin injury than Vinton.

Breeder seed of Vinton 81 was distributed to the foundation seed organization in Iowa for planting in 1981. Breeder seed will be maintained by the Iowa Agriculture and Home Economics Experiment Station, Ames.

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References and Notes

REGISTRATION OF LAKOTA SOYBEAN

'Lakota' soybean [Glycine max (L.) Merr.] (Reg. no. 171) was developed by the Iowa Agriculture and Home Economics Experiment Station and the Puerto Rico Agricultural Experiment Station. It was released because of its high yield and resistance to iron-deficiency chlorosis on calcareous soil.

Lakota was derived from an F₆ plant in the population AP6 (1). The cultivar was identified after one cycle of re-