cyst nematode [SCN (Heterodera glycines Ichinohe)] Races 3, 4, and 5. It is the first soybean cultivar to be released to have the multiple race resistance. Prior to release it was identified as D82-2397A.

Cordell was developed in a cooperative research program of the USDA-ARS with the Delta Branch, Mississippi Agricultural and Forestry Experiment Station and the West Tennessee branch of the Tennessee Agricultural Experiment Station. Parents are ‘Bedford’ and D72-8927. D72-8927 was originally developed to provide a more productive strain with resistance to SCN Race 2. It was later determined to have a high level of resistance to SCN Race 5. D72-8927 is from the cross D66-12392 × ‘Hill’3(3) × PI 90763. PI 90763 provided resistance to SCN Races 2 and 5. Cordell has not been evaluated for reaction to SCN Race 2. D66-12392 was a selection from D63-6100 × Dyer (2). D63-6100 was a selection from Hill4 × PI 171442. Of 200 F1 lines, each tracing to an individual F1 plant, from the cross ‘Bedford’ × D72-8927 selected for resistance to SCN Race 4, all but two were rated susceptible to SCN Race 5. D82-2397 gave a variable reaction to SCN Race 5. As an advanced F3 line in the F7 generation, 100 single plants were harvested and evaluated for reaction to SCN Race 5 in the greenhouse at Jackson, TN. Four progeny were grown in the greenhouse at Stoneville from plants rated resistant to SCN Race 5. The F3 lines were grown in the field at Stoneville. Progeny of each line was evaluated for reaction to SCN Races 3, 4, and 5. Four F3 lines, the progeny of a single F8 plant, rated resistant to SCN Races 3 and 5 and moderately resistant to Race 4, were composited to form D82-2397A.

Cordell is equal in productivity to Bedford in the absence of SCN Race 5, and superior when SCN Race 5 is present at a high level. It has a determinate growth type very similar to Bedford. Plants have white flowers, tawny pubescence, and tan pods at maturity. Seeds are yellow with black hila with a 100 seed weight of 10 g. It is resistant to the foliar disease bacterial pustule [caused by Xanthomonas phaseoli (E. F. Sm.) Dows var. sojensis (Hedges) Starr & Burkh]. It has field resistance to phytophthora rot [caused by Phytophthora megasperma Drechs. f. sp. glycinea Kuan and Erwin].

Seed were distributed for increase in Tennessee, Missouri, and Arkansas in 1988. The Tennessee Agricultural Extension Service will be responsible for maintaining breeder seed.

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References and Notes


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References and Notes