Registration of ‘Lyon’ Soybean

‘Lyon’ soybean [Glycine max (L.) Merr.] (Reg. no. CV-323, PI 576857) was released as a cultivar because of its productivity and multiple pest resistance. It is of Group VI maturity. Lyon was developed by the USDA-ARS in cooperation with the Mississippi Agricultural and Forestry Experiment Station and was approved for release as a cultivar in April 1993. Prior to release, it was identified as D87-5870.

Lyon is the increase of an F3 line from the cross D82-2218 × D82-3185 (‘Lamar’). D82-2218 is a selection from the cross ‘Bedford’ × ‘Tracy-M’ (1,2). An F2 population was space-planted in a field cage and exposed to a heavy population of soybean looper [Pseudoplusia includens (Walker)]. Defoliation ranged from <20 to >80%. Plants having <20% defoliation were tagged and harvested individually at maturity. The F3 and F4 lines were grown in the field at Stoneville, MS, for agronomic evaluation, and a single hill of each line was grown in the field cage for soybean looper feeding evaluation. Progeny of selected F3 plants were evaluated in the greenhouse at Jackson, TN, for reaction to soybean cyst nematode (SCN), Heterodera glycines Ichinohe, Races 3 and 14. Apparent SCN-resistant F4 plants were grown in the greenhouse at Stoneville during the winter months, and F5 lines were grown in the field in 1987. Lyon was evaluated in replicated trials at Stoneville in 1988 through 1992, in the Uniform Tests Southern Region Preliminary Group VI nursery at 8 southeastern U.S. locations in 1989, and in the Uniform Group VI nursery at ≈30 locations each year in 1990, 1991, and 1992. It was evaluated for reaction to Meloidogyne incognita (Kofoid & White) Chitwood and M. arenaria (Neal) Chitwood in the greenhouse at Athens, GA, and was further evaluated for reaction to SCN in the greenhouse at Jackson, TN. Lyon was evaluated in the Mississippi State University soybean yield trials in 1990–1992. In these trials, it had a mean seed yield of 2796 kg ha⁻¹, compared to 2700 kg ha⁻¹ for ‘Sharkey’ (3).

Lyon has a determinate growth type. Plants have white flowers and a smooth spike. The rachilla is glabrous, with tawny pubescence; pods are tan at maturity with black hila. Seed weight is 130 mg for Sharkey. Seed protein and oil contents were 204 g kg⁻¹ and 151 mg for Sharkey. Seed protein and oil contents were 204 g kg⁻¹ and 192 g kg⁻¹, respectively, in comparison with 433 and 192 g kg⁻¹ for Sharkey.

Foundation seed are being increased in Mississippi. Breeder seed will be maintained by the Mississippi Forestry Experiment Station. Seed of Lyon poses will be available for the next 5 yr from Soybean Production Research, P.O. Box 196, Stoneville, MS 38776.

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Registration of ‘Royal’ Barley

‘Royal’, a blue-aleurone, six-row spring barley [Hordeum vulgare L.] (Reg. no. CV-245, PI 576857) was released as a cultivar in the Minnesota Agricultural Experiment Station in February 1994. Royal, whose experimental designation was M74, has the pedigree ‘Morex’/Bonanza/‘Azure’. The four cultivars in the pedigree have performed well when grown in Minnesota. Short stature in Royal was derived from M32. M32 is a Minnesota selection whose origin traces back to the Minnesota selection M21. The short stature gene, sdw, derived from ‘Jotun’.

The final cross leading to Royal was made in 1990. There was no selection in the F2 generation, and the F3 generation was for short stature only. An F2:5 line that was selected for short stature in a two-location trial in 1991. The F2:5 line was grown in Arizona, winter 1991–1992, and had M74 trait. The F2:5 line was grown at St. Paul, AABF in HA, and the bulk of ten F5:6, head rows with similar head rows tracing to the

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References and Notes

5. E.E. Hartwig and T.C. Kilten, P.O. Box 196, Southern Insect Management Laboratory at Stoneville, MS 38776. Royal has smooth awns; its hulled kernels have short rachilla hairs. The spike is medium dense, medium short, and semierect. Royal is about 20 cm shorter and 2 d later than M74, has the pedigree ‘Morex’/Bonanza/‘Azure’.

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