Registration of ‘ALR 2’ Peanut

‘ALR 2’ Spanish peanut (Arachis hypogaea L. subsp. fastigiatata Waldran var. vulgaris Hartz) (Reg. no. CV-61, PI 599975) is a pure-line selection from an advanced breeding line, ICGV 86011, developed at the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), ICRISAT Asia Center (IAC), Patancheru, AP, India. The original population of ICGV 86011 was supplied to the Agricultural Research Station, Aliyarnagar, Tamil Nadu, India, in 1984. It was tested during the rainy (Chitrai season: April sowing, no irrigation), postrainy and summer (Adi season: June sowing, irrigated) seasons of 1986 to 1993 in various yield trials in Tamil Nadu. ALR 2 was selected from the original F$_3$ population of ICGV 86011, which was developed from a three-way cross made at IAC in 1981. Its pedigree is Dh 3-20/USA 20//NC Ac 2232 F$_2$. Dh 3-20 and USA 20 are high-yielding breeding lines -B and -B$_2$, Dh 3-20 and USA 20 are high-yielding breeding lines developed in India and the USA, respectively. NC Ac 2232 is a low-yielding virginia germplasm line (4). It is resistant to thrips (Frankliniella schultzei Trybom) and jassids or leafhoppers (Empoasca kerri Pruthi) (1). After 8 yr of evaluation, ALR 2 was released in 1994 by the state varietal release subcommittee of the Tamil Nadu Agricultural University, Coimbatore, for cultivation in the rainy and irrigated postrainy and summer seasons in the Pollachi tract of Tamil Nadu (3).

ALR 2 was selected from the original F$_6$ population of ICGV 86011, which was developed from a three-way cross made at IAC in 1981. Its pedigree is Dh 3-20/USA 20/NC Ac 2232 F$_3$-B$_3$-B$_2$. Dh 3-20 and USA 20 are high-yielding breeding lines developed in India and the USA, respectively. NC Ac 2232 is a low-yielding virginia germplasm line (4). It is resistant to thrips (Frankliniella schultzei Trybom) and jassids or leafhoppers (Empoasca kerri Pruthi) (1). After 8 yr of evaluation in over 59 environments (31 test locations during 1986–1993), ALR 2 produced an average pod yield of 1.74 t ha$^{-1}$, compared with 1.52 t for the highest-yielding control cultivar VRI 2 in Tamil Nadu. It also produced 25% greater haulm yield than VRI 2 (3.77 t ha$^{-1}$). The foliage of ALR 2 remains green even at maturity (105–110 d) in Tamil Nadu.

ALR 2 has an erect growth habit (2), with sequential flowering and oblong-elliptic, dark green leaves. Its plant height averages about 35 cm, and it has six primary branches but no secondary branches. ALR 2 has mostly two-seeded small pods, which are characterized by slight pod beak, slight to moderate pod constriction, and moderate pod reticulation. Its seeds are tan in color, with a 100-seed weight of 38 g. The seeds contain 520 g oil kg$^{-1}$ dry seed. It has fresh seed dormancy of only 15 d.

ALR 2 is moderately resistant to rust (caused by Puccinia arachidis Speg.), late leafspot [caused by Phaeoisariopsis personata (Berk. & M.A. Curtis) Deighton], and jassids, and is highly resistant to stem rot (caused by Sclerotium rolfsii Sacc.) (3). In adaptive trials conducted over 20 locations during the 1992–1993 seasons in Tamil Nadu, ALR 2 showed on average 46% rust (33–59%) and 45% late leafspot (30–65%) disease incidence. The susceptible control VRI 2 recorded on average 78% rust (68–98%) and 79% late leafspot (60–94%) disease incidence. In artificially inoculated trials under glasshouse conditions, ALR 2 showed 2% stem rot incidence, compared with 53% in the susceptible control ‘CO 21’.

Small quantities of seed of ALR 2 can be obtained without restriction on use from the Agricultural Research Station, Aiyarnagar, Tamil Nadu 642 101, India, or the Genetic Resources Division, ICRISAT Asia Center, Patancheru, Andhra Pradesh 502 324, India. Seeds of ALR 2 have been placed in long-term storage at the U.S. National Seed Storage Lab., 1111 S. Mason St., Fort Collins, CO 80521-4500.


References and Notes

3. ICRISAT. 1997. Groundnut variety ALR 2. ICRISAT Plant Material Description no. 72. ICRISAT, Patancheru, AP, India.


References and Notes


Registration of ‘ICSV 111’ Sorghum Cultivar

‘ICSV 111’ sorghum [Sorghum bicolor (L.) Moench] (Reg. no. CV-133, PI 601815) is a pure-line cultivar developed at ICRISAT Asia Center, Patancheru, AP, India, through pedigree selection in a three-way cross [(SPV 35 × E35-1) × CS 3541] with the selection number 8-1 and origin number M90019 between 1980 and 1984. The parents SPV 35 and CS 3541 are converted photoinsensitive three-gene dwarf zerazera types originating from Ethiopia and Sudan, respectively, while E35-1 is a zerazera type originating from Ethiopia. ICSV 111 was tested in the All India Coordinated Sorghum Improvement Project (AICISP) preliminary and advanced trials under the designation SPV-472 and later in

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References and Notes

2. J.W. Johnson, D.E. Bland, Dept. of Crop and Soil Sciences; G.D. Buntin, Dept. of Entomology; B.M. Cunfer and J.J. Roberts, Dept. of Plant Pathology, University of Georgia, Griffin Campus, Griffin, GA 30223-1797. This contribution was supported by State and Hatch funds allocated to the Georgia Agric. Exp. Stn. and USDA-ARS. Registration by CSSA. Accepted 31 May 1998. *Corresponding author (jjohnson@geaer.griffin.peachnet.edu).


References and Notes