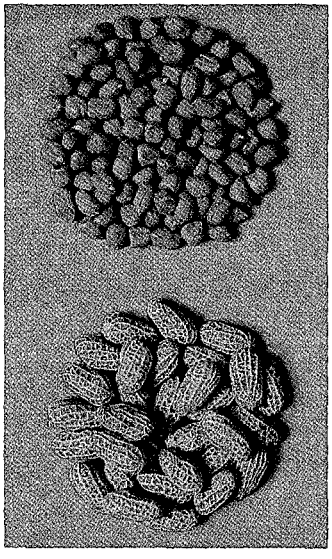
PN-ACA-278

Groundnut Variety ALR 2



- A spanish variety with 15-day seed dormancy
- Matures in 105–110 days in Tamil Nadu, India
- Moderately resistant to rust and late leaf spot
- Resistant to sclerotium root rot
- Moderately resistant to jassids
- Shelling turnover 70%
- Average 100-seed mass 38 g
- Oil content 52%
- Released for cultivation in the Pollachi tract of Tamil Nadu

ICRISAT
Plant Material Description no. 72

International Crops Research Institute for the Semi-Arid Tropics
Patancheru 502 324, Andhra Pradesh, India

1997

Purpose of description

ALR 2 was released in 1994 for cultivation under rainfed (April sowing), irrigated rabi (October sowing), and summer (June sowing) conditions in the Pollachi tract in Tamil Nadu, India.

Origin and development

ALR 2 is a pure line selection from an insect-pest-resistant variety, ICGV 86011. The original population of ICGV 86011 was developed from a three-way cross at ICRISAT Asia Center (IAC), Patancheru, India, and supplied in 1986 to the Agricultural Research Station, Aliyarnagar, Tamil Nadu. Its pedigree is [(DH 3-20 × USA 20) × NC AC 2232] F_2-B_3-B_2-B_2-B_2. While Dh 3-20 and USA 20 are improved breeding lines, NC Ac 2232 is a low-yielding virginia runner germplasm possessing resistance to thrips and jassids.

Performance

ALR 2 was tested under the designation ALG 56 in Tamil Nadu. In 8 years (1986–1993) of yield trials conducted over 59 environments during rainy, rabi, and summer seasons in Tamil Nadu, ALR 2 produced an average pod yield of 1.74 t ha^{-1} compared with 1.52 t ha^{-1} of the highest yielding control cultivar, VRI 2 (Table 1). It produced an average of 25% more haulm than VRI 2 (13.77 t ha^{-1}) at Aliyarnagar during rainy (1991–93) and rabi (1992/93) seasons. The haulm quality of ALR 2 is excellent because its foliage remains green even at maturity.

Table 1. Pod and haulm yield of ALR 2 and control cultivar, VRI 2 in different trials in Tamil Nadu, India, rainy, rabi, and summer seasons 1986–1993.

Trial	Environments	Mean pod yield (t ha^{-1})		Mean haulm yield[1] (t ha^{-1})	
		ALR 2	VRI 2	ALR 2	VRI 2
Station	12	1.98	1.63	-	-
Multilocational	23	1.43	1.35	17.23	13.77
Adaptive	24	1.92	1.64	-	-
Mean		1.74	1.52	-	-
% increase over VRI 2		-	14.5	-	25.1

1. Recorded at four environments (only at Aliyarnagar) during the rainy (1991–93) and rabi (1992/93) seasons.

Source: Vindhiya Varman et al. 1994.

Plant characters

ALR 2 belongs to the spanish botanical group. It has an erect growth habit, and elliptic, dark green leaves. It matures in 105–110 days. It has an average of six primary and no secondary branches.

ALR 2 is resistant to sclerotium root rot (*Sclerotium rolfsii*), and moderately resistant to rust (*Puccinia arachidis*) and late leaf spot (*Phaeoisariopsis personata*) (Table 2). It is also moderately resistant to jassids. It possesses a seed dormancy of 15 days.

Table 2. Leaf area damage by foliar diseases, and sclerotium root rot incidence in ALR 2 and control VRI 2.

Variety	Rust[1] (%)	Late leaf spot (%)[1]	Sclerotium root rot (%)[2]
ALR 2	46.2	45.4	1.7
VRI 2	78.1	79.1	49.6

1. Rust and late leaf spot disease incidence recorded from adaptive trials conducted during 1992–93 seasons, Tamil Nadu.
2. Recorded from an artificially inoculated trial conducted under greenhouse conditions.

Source: Vindhiya Varman et al. 1994.

Pod/seed characters

ALR 2 usually has small, 2-seeded pods with a slight pod beak; slight to moderate pod constriction; and moderate pod reticulation. The average shelling turnover is 70%. It has tan-colored seeds with a 100-seed mass of 38 g. The seeds contain 52% oil.

Reference

Vindhiya Varman, P., John Joel, A., Mylswami, V., Nagaraj, P., and **Ravindran, T. S.** 1994. Proposal for the release of groundnut culture ALG 56 as ALR 2. Agricultural Research Station, Tamil Nadu Agricultural University, Aliyarnagar 642 101, Tamil Nadu, India. (Limited distribution.)

ICRISAT

Plant Material Descriptions
from the
International Crops Research Institute for the Semi-Arid Tropics

Brief descriptions of crop genotypes identified or developed by ICRISAT, including:

- germplasm accessions with important agronomic or resistance attributes
- breeding materials, both segregating and stabilized, with unique character combinations
- cultivars that have been released for cultivation.

These descriptions announce the availability of plant material, primarily for the benefit of the Institute's cooperators. Their purpose is to facilitate the identification of cultivars and breeding lines and to promote their wide utilization. Requests for seed should be addressed to the Director General, ICRISAT, or to appropriate seed suppliers. Materials for research are sent by ICRISAT to cooperators and other users free of charge.

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