Table 1. Parental-line greenbug reaction and agronomic performance of sorghum hybrids made with greenbug-resistant N82 to N90 pollinator lines

Germplasm	Reg. No.	Male source	Rating Biotype† E	Rating Biotype† B	Pericarp color	Testcross pedigrees	Yield‡	Stalks§ lodging
							kg/ha^{-1}	%
N82¶	GP-361	833299	4.2	4.3	white	AKS57 × N82	7096	4
						ATx623 × N82	6215	8
N83	GP-362	833311	2.6	9.0	light red	ADS57 × N83	6045	3
						ATx623 × N83	5355	7
N84	GP-363	833323	2.7	8.3	red	AKS57 × N84	6440	1
						ATx623 × N84	6025	23
N85	GP-364	833341	2.5	1.8	white	AKS57 × N85	5815	12
						ATx623 × N85	6465	32
N86	GP-365	833350	3.2	6.3	red	AKS57 × N86	5420	5
						ATx623 × N86	5420	39
N87	GP-366	833380	2.8	5.2	light red	AKS57 × N87	5585	4
						ATx623 × N87	5715	20
N88	GP-367	833416	2.6	1.9	white	AKS57 × N88	5335	8
						ATx623 × N88	6125	36
N89	GP-368	833476	2.7	2.9	red	AKS57 × N89	5545	20
						ATx623 × N89	6655	30
N90	GP-369	833563	2.9	2.9	white	AKS57 × N90	6370	3
						ATx623 × N90	6340	72
Tx2783#			2.9	9.0				
Mean of four commercial check hybrids							5795	12
LSD (0.05)							NS	

† Pollinator lines rated in the seedling stage from 1 to 9. 1 = no damage, 9 = dead.
‡ Mean yield of three tests grown in 1984 and 1985.
§ Combined mean of stalk lodging notes taken 25 Oct 1984, 1 Nov. 1984, and 1 Mar. 1985 on the 1984 planting and 15 Nov. 1985 on the 1985 planting.
¶ N = designation used on Nebraska releases.
# Tx2783 and check hybrids included for comparison purposes only.

but additional testing may prove them only acceptable as germplasm sources. Although no specific pathogen complexes were tested, N85 displayed mottling and some leaf necrosis symptoms of Maize Dwarf Mosaic Virus (MDMV) in the field in 1986. Limited testcross data with AKS57 and ATx623 females lines are shown in Table 1. Data are means of tests in 1984 and 1985. Greenbug screening data are for the seedling stage under greenhouse conditions. Adult-plant resistance data (not shown) for Biotype E were generally similar, under greenhouse conditions, to seedling resistance reactions. All germplasms are restorers in A1 (milo) cytoplams in the North Platte environment. Breeders seed can be obtained from Paul T. Nordquist, West Central Research and Extension Center, Rt 4, Box 46A, North Platte, NE 69101. Greater quantities of seed can be obtained from the University of Nebraska Foundation Seed Division if notice is given prior to the next growing season.

P. T. NORDQUIST,* S. D. KINDLER, AND S. M. SPOMER (2)

References and Notes

1. The feeding habit of this greenbug is similar to the original Biotype B; however, none of the original biotype are available for positive comparison.
2. Paul T. Nordquist, West Central Res. and Ext. Ctr., North Platte, NE 69101; S.D. Kindler, USDA-ARS, Stillwater, OK; and S.M. Spomer, Dep. of Entomology, Univ. of Nebraska, Lincoln, NE 68583. Published as Paper No. 8592 Journal Series, Nebraska Agric. Res. Div. Registration by CSSA. Accepted 31 Jan. 1992. *Corresponding author.

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REGISTRATION OF ICGV 87121 PEANUT GERMPLASM

ICGV 87121 (Reg. no. GP-57, PI 478784) peanut (*Arachis hypogaea* L. subsp. *hypogaea* var. *hypogaea*) was released in 1989 by the Uttar Pradesh State Varietal Release Committee for rainy season cultivation in Uttar Pradesh state, India. It was designated as ICGS 5 during testing in the All India Coordinated Research Project on Oilseeds (AICORPO) trials.

ICGV 87121 was bred at ICRISAT Center, Patancheru, India. It was selected from a cross between the adapted cultivar Robut 33-1 (also known as 'Kadiri 3') and the introduced germplasm line NC Ac 316, following the bulk selection method in each generation. NC Ac 316 was selected from NC 4 at North Carolina State University, Raleigh. The full pedigree of ICGV 87121 is (Robut 33-1 × NC Ac 316)F_2B_2-B_1-B_1-NIB_1-B_1-B_1-B_1-B_1-B_1-B_1-B_1.

ICGV 87121 has a pod yield potential of 2.7 t ha^{-1}. It showed an average pod yield superiority of 56 and 12% over 'TMV 10' and Kadiri 3, respectively, in various AICORPO trials during 1981–1984 rainy seasons in Zone I, which includes the states of Punjab, Hisar, Rajasthan, Bihar, and Uttar Pradesh. It produced 109 to 141% greater pod yield than the local cultivars Kaushal and T 64 during the 1985 to 1987 summer seasons (February through June) in Uttar Pradesh. T 64 and Kaushal produced average pod yields between 0.9 to 1.0 t ha^{-1} in these trials. (2).

ICGV 87121 has Decumbent 2 growth habit with alternate branching pattern, and small to medium-size dark green elliptic leaves (1). It has five to seven primary and two to four secondary branches. The main axis height is ≈16 cm and crop canopy breadth is ≈37 cm at harvest. It matures in ≈120 d in the rainy season, with a meat content of 68%. It has mainly two-seeded pods, with none to slight beak

and reticulation but slight to moderate constriction. The average pod length and breadth are 25 and 12 mm, respectively. Its seeds have tan testa, with a 100-seed mass of 38 g. Seeds average 49.6% oil and 22.0% protein, with an oleic/linoleic fatty acid ratio of 1.54. In a drought-tolerance field screening nursery at ICRISAT Center, ICGV 87121 recorded a significantly ($P < 0.05$) greater growth rate for pod yield (5.96 g m^{-2} d^{-1}) over the trial mean (4.5 g m^{-2} d^{-1}), indicating its above average performance at all levels of water deficits (2). ICGV 87121, although a virginia botanical type, would be traded as a spanish market type because of its low seed mass.

The ICRISAT Center, Patancheru, AP 502 324, India, maintains the breeder seed.

S.N. NIGAM, S.L. DWIVEDI,* Y.L.C. RAO, AND R.W. GIBBONS (3)

References and Notes

1. IBPGR and ICRISAT. 1985. Descriptors for groundnut. Rev. ed. IBPGR, Rome, and ICRISAT, Patancheru, India.
2. ICRISAT. 1991. Groundnut variety ICGV 87121 (ICGS 5). ICRISAT Plant Material Description no. 28:1–4.
3. Nigam, S.N., S.L. Dwivedi, and Y.L.C. Rao. Legumes Program, ICRISAT, Patancheru P.O., Andhra Pradesh 502 324, India; and R.W. Gibbons, ICRISAT Sahelian Center, Niamey, Niger. ICRISAT J.A. no. 1206. Registration by CSSA. Accepted 31 Jan. 1992. *Corresponding author.

The assistance of the Project Director (Oilseeds), Directorate of Oilseeds Research, Rajendranagar, Hyderabad, India, and various AICORPO scientists in evaluating ICGV 87121 (ICGS 5) is gratefully acknowledged. The help of ICRISAT scientists, particularly that of R.C. Nageswar Rao and R. Jambunathan in providing information on drought resistance and nutritional quality, respectively, is highly appreciated.

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REGISTRATION OF FOUR SUGARBEET GERMPLASMS SELECTED FROM THE NC-7 *BETA* COLLECTION

Four sugar beet (*Beta vulgaris* L.) germplasms, F1011 to F1014 (Reg. no. GP-134 to GP-137; PI 555454, PI 552532, PI 552533, and PI 552534), were developed by the USDA-ARS and the North Dakota Agricultural Experiment Station and released 8 July 1988. These germplasms make readily available a portion of the genetic diversity within the USDA National Plant Germplasm System *Beta* collection.

One hundred sixty-seven accessions from the *B. vulgaris* collection (NC-7) maintained by the USDA-ARS at Ames, IA, were evaluated for sucrose concentration. The sucrose concentration of individual roots was determined from a small sample of the taproot. The original accessions were evaluated in unreplicated field plots with a commercial hybrid ('ACH-14') check every fifth plot. Twenty six accessions with relatively high sucrose were identified. Four to six roots with relatively high sucrose concentration from each accession were induced to flower and were interpollinated within an accession. Progeny were evaluated in replicated field plots. Individual roots with high sucrose concentration from lines with high sucrose were induced to flower and crossed in pairs within a line. Four additional cycles of mass selection within lines formed by paired crosses followed. High-sucrose individuals from desirable lines were selected in all selection cycles except the fifth. Fifth-cycle selection was based solely on line performance and a random sample of individuals from selected lines provided seed for the sixth cycle. Approximately 10 plants per line were increased each cycle. Root weight was added as a selection criterion in the last three cycles. Visual selection eliminated severely sprangled or colored roots.

Both F1011 (GP-134) and F1012 (GP-135) were selected from PI 266100, an accession from Poland. F1013 (GP-136) was selected from PI 169025, an accession that originated from Turkey, and F1014 (GP-137) from PI 355959 from Russia. F1012, F1013, and F1014 segregate for pink and green hypocotyl color; F1011 has pink hypocotyls. All four lines are diploid and produce multigerm seed. In the initial screening, the original four accessions were 15 to 22 g kg^{-1} lower in sucrose concentration than ACH-14. Comparisons of the parental accessions with F1013 and F1014 indicate that selection had increased sucrose concentration by $\approx$25 g kg^{-1}. Sucrose concentrations of the four germplasms were equal to the commercial hybrids used as checks. Root yield differences were not significant in all cases but, in general, yields were $\approx$75% of that observed for the commercial hybrids. F1011 and F1012 originated from the same parental accession, but exhibited contrasting performance throughout the selection and testing process. F1011 had consistently high sucrose concentration, while F1012 was consistently one of the higher-yielding lines. Root yields of F1014 were approximately equal to those observed for F1011 and less than F1013.

These lines are intended to increase the genetic diversity available for the development of populations and parental lines with improved agronomic performance. Breeder seed will be maintained by USDA-ARS and provided in quantities sufficient for reproduction upon written request to Sugarbeet Research, USDA-ARS, Northern Crop Science Laboratory, Fargo, ND 58105-5677.

L. G. CAMPBELL* (1)

References and Notes

1. USDA-ARS, Northern Crop Science Lab., Fargo, ND 58105-5677. Joint contribution of the USDA-ARS and North Dakota Agric. Exp. Stn. Registration by CSSA. Accepted 31 Jan. 1992. *Corresponding author.

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REGISTRATION OF FIVE CHICKPEA GERMPLASM LINES RESISTANT TO ASCOCHYTA BLIGHT

TWO KABULI (large, oval or pea-shaped, light-colored seeds) germplasm lines, ILC 200 (Reg. no. GP-103, PI 559359) and ILC 6482 (Reg. no. GP-104, PI 559360), and three desi (small, angular, dark-colored seeds) germplasm lines, ICC 4475 (Reg. no. GP-105, PI 559361), ICC 6328 (Reg. no. GP-106, PI 559362), and ICC 12004 (Reg. no. GP-107, PI 550363) of chickpea (*Cicer arietinum* L.), resistant to ascochyta blight [incited by *Phoma rabiei* (Pass.) Khune & J.N. Kapoor; = *Mycosphaerella rabiei* Kovachevski (telomorph); syn. *Ascochyta rabiei* (Pass.) Labrousse], were released by the joint kabuli chickpea improvement program of ICARDA, Syria, and ICRISAT, India.