

**Table 2. Genotypic variation in germination and seedling vigor of spanish varieties of groundnut in response to drought conditions simulated with different concentrations of polyethylene glycol (PEG).**

Variety	Germination (%)				Seedling vigor index			
	T <sub>1</sub> <sup>1</sup>	T <sub>2</sub>	T <sub>3</sub>	T <sub>4</sub>	T <sub>1</sub>	T <sub>2</sub>	T <sub>3</sub>	T <sub>4</sub>
J 11	89	95	94	80	1156	396	310	125
TG 17	97	94	96	63	840	276	320	70
RSHY 1	98	83	97	76	1029	373	373	125
TG 3	97	92	94	70	746	352	263	59
DH 3-30	98	98	96	37	885	259	390	55
CO 1	95	94	93	58	1104	455	493	87
S 206	82	94	96	56	830	499	520	82
Spanish improved	95	95	81	57	1418	1140	459	43
Pollachi 2	95	98	82	52	1260	728	396	122
Girnar 1	98	82	92	88	667	451	588	171
VRI 2	70	94	96	62	810	305	481	66
TAG 24	100	96	98	92	833	706	414	209
Jawan	93	92	81	52	885	477	229	17
TMV 7	98	96	67	72	1158	834	216	93
Akola selection	96	96	46	20	1295	589	84	28
AK 12-24	98	95	62	70	1118	822	320	75
JL 24	98	93	92	50	905	532	613	36
GAUG 1	96	98	96	65	902	586	530	121
KRG 1	83	96	94	77	1029	590	331	137
ICGS 11	84	82	93	27	938	227	400	29
Jyoti	98	92	92	72	1078	553	502	119
TMV 2	97	98	95	38	976	459	365	14
ICGS 44	98	98	94	37	1486	474	314	17
DH 8	83	96	46	20	987	499	128	4
VRI 3	95	84	80	28	895	544	495	5
Kisan	96	93	94	55	545	903	452	28
GG 2	71	72	79	45	552	180	510	56
MH 1	98	93	82	58	1153	665	491	57
ICG 45	95	81	94	65	1290	616	327	54
SG 84	69	94	79	48	755	826	272	40
SEm		±8.38				±140.50		
LSD (P=0.05)		16.42				275.37		

1. T<sub>1</sub> = seeds germinated with distilled water (control); T<sub>2</sub> = seeds germinated with -0.3 MPa of PEG solution; T<sub>3</sub> = seeds germinated with -0.75 MPa of PEG solution; and T<sub>4</sub> = seeds germinated with -1.0 MPa of PEG solution.

## Reference

Slavik, B. 1974. Methods of studying plant-water relations. Ecological studies 9. Springer-Verlag, Berlin, Heidelberg, Germany and New York, USA. 449 pp.

## Development of a Greenhouse Screening Technique for Stem Rot Resistance in Groundnut

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An experiment was conducted on seven inoculation methods in a greenhouse at ICRISAT Asia Center to identify an effective inoculation technique to screen groundnuts for resistance to stem rot caused by *Sclerotium rolfsii* Sacc.

The inoculum was multiplied on autoclaved sorghum grains (soaked in water for 24 h) in 1 L conical flasks. It was incubated at 25°C for 10 days. Alfisol and sand (3:1) were filled in plastic pots (diameter 15 cm), and eight surface-sterilized seeds of groundnut cultivar Robut 33-1 were sown in each pot. Each method of inoculation was tested in four pots, each representing one replication. The inoculation methods that were evaluated are listed in Table 1.

Ten-day-old groundnut seedlings were inoculated with 10-day-old inoculum according to each inoculation method. Five seedlings were retained in each pot at the time of inoculation. The inoculum (15 g) was spread on the soil surface in the pots in treatments 1 and 2. Five *S. rolfii*-infested sorghum grains were kept around the collar region of the plant in treatments 3 and 4. In treatments 5 and 6, 25 g of the inoculum was mixed in 1 kg of soil in which five surface-sterilized seeds were sown. Ten grams of dried groundnut leaves were spread on the soil surface after inoculation in treatments 2, 4, and 6. The plants were irrigated twice a day. This experiment was run twice. The minimum and maximum temperatures inside the greenhouse ranged from 16–18°C to 28–31°C and relative humidity ranged from 40–54.5%.

The plants were observed for 30 days after inoculation for stem rot development. Observations on dead plants

were recorded and mortality percentage and days to maximum mortality were calculated (Table 1). The maximum mortality (100%) due to stem rot was observed in treatment 2, in which inoculum was spread on the soil surface and covered with organic matter. So, it is concluded that treatment 2 is the most effective method for screening against *S. rolfii* under greenhouse conditions.

## Parasitism of Groundnut by *Striga* sp in Mozambique

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*Striga* spp are root parasites of cereals and legumes. More than 60 species of *Striga* have been reported on different plant hosts. *Striga hermonthica* and *S. ges-*

**Table 1. Effect of seven inoculation methods on stem rot development in groundnut under greenhouse conditions, ICRISAT Asia Center.**

Treatment number	Inoculation method	Run 1		Run 2	
		Mortality (%)	Days to mortality	Mortality (%)	Days to mortality
1	Inoculum spread on the soil surface	81 (65) <sup>1</sup>	30	78 (63)	30
2	Inoculum spread on the soil surface and covered with organic matter	100 (90)	10	100 (90)	10
3	Inoculum placed around the collar region of the plant	72 (58)	30	75 (60)	30
4	Inoculum placed around the collar region of the plant and covered with organic matter	78 (63)	30	81 (65)	30
5	Inoculum mixed in the soil	100 <sup>2</sup> (90)	30	100 <sup>2</sup> (90)	3
6	Inoculum mixed in the soil and covered with organic matter	100 <sup>2</sup> (90)	30	100 <sup>2</sup> (90)	30
7	Control (Noninoculated)	0	30	0	30
	SE	± 2.87 (1.98)	±0.11	± 3.41 (2.4)	±0.10
	CV (%)	7.6 (6.1)	0.8	8.9 (7.3)	0.7
	LSD (at <i>P</i> = 1%)	11.68 (8.04)	0.444	13.87 (9.68)	0.384

1. Figures in parentheses refer to angular transformed values.

2. Preemergence rotting.