

New Trombay groundnut variety TG 51 for commercial cultivation in India

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A new Trombay groundnut (TG) variety, TG 51, was released in 2008 by the Central Sub-Committee on Crop Standards, Release and Notification of Varieties, Ministry of Agriculture, Government of India for cultivation in *rabi*/summer season (October–May) in Orissa, West Bengal, Bihar and northeastern states of India (Zone IV). TG 51 is a Spanish bunch (*Arachis hypogaea* ssp *fastigiata* var *vulgaris*) variety bred at the Bhabha Atomic Research Centre (BARC), Trombay by crossing TG 26 with Chico in 1998 (Fig. 1). TG 26 is an early maturing, semi-dwarf, erect variety with high shelling outturn, high pod growth rate, high harvest index and greater partitioning efficiency (Kale et al. 1997, Badigannavar et al. 2002). Chico is an early maturing germplasm line selected from PI 268661 (Bailey and Hammons 1975).

In the All India Coordinated Research Project – Groundnut (AICRP-G) trials in Zone IV in *rabi*/summer season during 2003/04–2005/06, TG 51 recorded a mean pod yield of 2675 kg ha⁻¹ and seed yield of 1824 kg ha⁻¹ with a superiority of 12.0% and 10.8%, respectively over the best check, TAG 24 (Table 1). It also had low dry root rot (*Macrophomina phaseolina*) incidence of 13.0% as against 43.0% in TAG 24 at Kadiri during the 2003/04 *rabi* season.

TG 51 has an erect growth habit with sequential branching, semi-dwarf height and medium-size green leaflets. Its pods are mainly two-seeded but invariably each plant contains one to two three-seeded pods. Pods have slight beak, moderate constriction and slight reticulation with average shelling outturn ranging between 72 and 75%. Seeds are more spheroidal and rose



Figure 1. Groundnut variety TG 51: (a) plant, (b) pods and (c) seed.

Table 1. Mean performance of TG 51 in the All India Coordinated Research Project – Groundnut trials in Zone IV during rabi/summer season, 2003/04–2005/06¹.

Year of testing	No. of trials	TG 51	Check variety		% increase over	
			TAG 24	ICGS 44	TAG 24	ICGS 44
Pod yield (kg ha⁻¹)						
2003/04	3	3093	2755	2664	12.2	16.1
2004/05	3	3722	3185	3071	16.8	21.1
Pooled	6	3407	2970	2867	14.7	18.8
2005/06	5	1943	1807	1734	7.5	12.0
Mean		2675	2388	2301	12.0	16.3
Seed yield (kg ha⁻¹)						
2003/04	3	1975	1866	1817	5.8	8.7
2004/05	3	2574	2185	2080	17.7	23.7
Pooled	6	2274	2026	1949	12.2	16.6
2005/06	5	1374	1269	1187	8.2	15.7
Mean		1824	1647	1568	10.8	16.3

1. Trials were conducted at Jhargram, Mohanpur, Beharampur, Manipur and Chiplima.

colored with average size ranging between 50 and 55 g 100 seeds⁻¹. Seeds contain 49% oil with 42.9% oleic acid, 36.5% linoleic acid and 13.0% palmitic acid.

References

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