

Table S1. Details of genotypes and source of collection

Accession number	Genotypes	Source
SG 1	VRSG -1-14	IIVR – Varanasi
SG 2	VRSG -1-15	IIVR – Varanasi
SG 3	VRSG -2-15	IIVR – Varanasi
SG 4	VRSG -3-5	IIVR – Varanasi
SG 5	VRSG -3-12	IIVR – Varanasi
SG 6	VRSG -3-14	IIVR – Varanasi
SG 7	VRSG -3-17	IIVR – Varanasi
SG 8	VRSG -5-15	IIVR – Varanasi
SG 9	VRSG -5-17	IIVR – Varanasi
SG 10	VRSG -13-17	IIVR – Varanasi
SG 11	VRSG -15	IIVR – Varanasi
SG 12	VRSG -24-17	IIVR – Varanasi
SG 13	VRSG -25-17	IIVR – Varanasi
SG 14	VRSG -26	IIVR – Varanasi
SG 15	VRSG -46	IIVR – Varanasi
SG 16	VRSG -50	IIVR – Varanasi
SG 17	VRSG -51	IIVR – Varanasi
SG 18	VRSG -66	IIVR – Varanasi
SG 19	VRSG -68	IIVR – Varanasi
SG 20	VRSG -68-1	IIVR – Varanasi
SG 21	VRSG -78	IIVR – Varanasi
SG 22	VRSG -84	IIVR – Varanasi
SG 23	VRSG -140	IIVR – Varanasi
SG 24	VRSG -186	IIVR – Varanasi
SG 25	VRSG -199	IIVR – Varanasi

SG 26	Kashi Jyoti	IIVR – Varanasi
SG 27	Kashi Kalyani	IIVR – Varanasi
SG 28	Kashi Shreya	IIVR – Varanasi
SG 29	Kashi Vandana	IIVR – Varanasi
SG 30	L. C. - 1	Karaikal
SG 31	L. C. - 3	Karaikal
SG 32	L. C. - 4	Karaikal
SG 33	L. C. - 5	Karaikal
SG 34	L. C. - 6	Karaikal
SG 35	L. C. -7	Karaikal
SG 36	L. C. - 8	Karaikal
SG 37	L. C. - 9	Karaikal
SG 38	Pusa Chikni	IARI – New Delhi
SG 39	Pusa Sneha	IARI – New Delhi
SG 40	Pusa sponge gourd 29	IARI – New Delhi
SG 41	Pusa Supriya	IARI – New Delhi
SG 42	Anaikattu Local	Anaikattu, Vellore
SG 43	Embalam Local	Embalam, Nettapakkam, Pondichery
SG 44	Edaiyapalayam Local	Edaiyapalayam, Kunnathur, Tiruppur
SG 45	Naduvalasu Local	Naduvalasu, Perundurai, Erode
SG 46	Nallampatti Local	Nallampatti, Erode
SG 47	Oddanchatram Local	Oddanchatram, Dindigul
SG 48	Ulundurpet Local	Ulundurpet, Kallakurichi

Table S2. Variability, heritability and genetic advance for various characters of sponge gourd genotypes

	GCV	PCV	Heritability (%)	Genetic advance as percent of mean (%)
DFMFA	3.38	4.08	68.66	5.78
DFFFA	2.1	3.46	36.78	2.62
NBFMF	9.88	10.13	95.11	19.84
NBFFF	7.27	7.59	91.72	14.34
VL	7.31	7.75	88.96	14.2
NPBV	11.56	11.81	95.75	23.3
DFFH	2.52	3.89	41.95	3.37
FL	14.95	15.17	97.15	30.36
FG	7.27	7.72	88.69	14.11
WIF	15.86	16.08	97.2	32.2
FD	8.48	8.95	89.76	16.54
NFV	10.43	10.82	92.91	20.7
FYV	21.26	21.42	98.63	43.49

*Note: DFMFA: Days to first male flower anthesis; DFFFA: Days to first female flower anthesis; NBFMF Node bearing first male flower; NBFFF: Node bearing first female flower; VL: Vine length at the time of flowering; NPBV: Number. of primary branches vine⁻¹ at the time of flowering; DFFH, Days to first fruit harvest; FL: Fruit length (cm); FG: Fruit girth (cm); WIF: Weight of individual fruit (g); FD: Fruit diameter (cm); NFV: Number of fruits vine⁻¹; FYV: Fruit yield vine⁻¹(kg)