

NH-352 x LRA-5166	14.91	0.41	0.41	0.02	0.28	0.28
NH-352 x Cul-1412	5.97	3.07	0.28	0.58	0.74	-0.37
PII-93 x 081	17.24	2.34	0.11	0.39	1.10	0.17
PII-93 x Purnima	2.3	0.05	-0.07	0.43	-0.59	0.73
PII-93 x NH-262 (b)	10.57	3.26	0.13	-0.23	0.79	-0.78
PII-93 x LRA-5166	2.47	-0.90	-0.14	0.36	-0.61	0.15
PII-93 x NH-258	1.72	-1.57	1.20	0.26	0.38	-0.38
NH-210 x 081	21.82	4.00	-0.03	0.50	0.37	1.25
NH-210 x Purnima	11.91	2.01	0.64	0.66	-1.1	0.41
NH-210 x NH-262(b)	3.07	2.02	-0.49	0.80	-0.79	0.29
NH-210 x LRA-5166	4.44	-0.44	-0.03	-0.47	-0.24	0.47
NH-210 x NH-262(a)	17.94	8.07	-0.54	0.22	0.16	-0.25
Suman x Purnima	4.31	-0.34	-0.13	-0.17	0.51	1.05
Suman x NH-262(b)	8.6	1.37	0.57	-0.28	-0.12	0.44
Suman x Cul-1412	13.23	4.97	0.10	-0.57	0.61	-0.68
Suman x NH-258	3.64	0.84	0.40	0.10	-0.07	0.92
081 x LRA-5166	15.4	2.99	0.10	0.90	0.15	-0.06
Purnima x LRA-5166	6.10	3.50	0.72	0.34	-0.29	0.12
Purnima x NH-258	11.14	-0.07	0.06	1.29	0.95	0.19
NH-262(b) x MCU-5	7.23	2.03	0.61	-0.22	-0.03	0.03
NH-262(b) x Cul-1412	2.74	0.46	-0.09	0.40	0.41	0.47
NH-262(b) x NH-258	2.56	1.84	-0.37	0.28	-0.62	0.78
LRA-5166 x MCU-5	15.75	-0.42	0.27	2.16	-0.23	0.25
LRA-5166 x NH-262(b)	7.59	4.26	-0.31	0.30	0.73	-0.34
MCU-5 x NH-258	5.82	1.5	-0.14	0.46	0.26	0.82
Cul-1412 x NH-262(a)	17.8	3.42	-0.72	0.47	1.16	0.81
SE+	0.49	0.4511	0.05	0.12	0.13	0.17

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**SVPR.1 - A NEW HIGH YIELDING WHITE SEEDED SESAME  
(SESAMUM INDICUM L)**

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## ABSTRACT

A high yielding short duration (75-80 days) white seeded sesame variety SVPR.1 has been released for general cultivation in southern districts of Tamil Nadu. This is an unit selection from the western ghat type and superior to TMV.3 and TMV.4 in yield and

quality. The incidence of phyllody, *Alternaria* leaf spot and leaf webber are relatively lesser in SVPR.1 than TMV.3 and TMV.4. SVPR.1 is suitable for cultivation during summer and cold weather seasons under irrigated conditions and gives in average yield of 1115 kg/ha. The seed oil content is 52 per cent in SVPR.1 as compared to 51 per cent in TMV.3 and 50 per cent in TMV.4.

Sesame (*Sesamum indicum L.*) also called as gingelly, is the most ancient oil seed crop of India and it is prized for its high quality oil besides nutritive protein and methionine content. The continuous use of the existing varieties like TMV.3 (rainfed) and TMV.4 (irrigated) and prevalence of diseases like 'phyllody' have affected the production of sesame in Tamil Nadu, with the object of developing a short duration sesame variety superior to TMV 3 and TMV.4 in yield and quality, intensified research works were carried out at Cotton Research Station, Srivilliputtur and the results obtained are reported hereunder.

## MATERIALS AND METHODS

In order to develop a short duration and high yielding sesame type, germplasm

collections were made besides wide hybridization programme. One white seeded genotype TSS.6 was identified to be promising. This culture was developed by unit selection from western ghat sesame type and evaluated in replicated yield trials at Cotton Research Station, Srivilliputtur in comparison with the existing strains TMV.3 and TMV.4 from 1983 onwards. The culture TSS.6 was also tested in University Research Stations at Tindivanam, Vridhachalam, Bhavanisagar, Paiyur and Vellore during 1986-88. The culture was also evaluated in All India trials during 1986. The performance of sesame TSS.6 was also assessed in 41 Adaptive Research Trials in seven districts and 22 onfarm trials in farmers holdings. Based on the superior performance, the culture TSS.6 SVPR.1 in different trials

Table 1. Mean performance of sesame SVPR.1 in different trials

Particulars	No. of trials	Mean seed yield (kg/ha)			Percentage on	
		SVPR.1	TMV.3	TMV.4	TMV.3	TMV.4
1. Cotton Research Station, Srivilliputtur	17	1115	848	879	131.5	126.8
2. TNAU-Research Stations (MLT)	12	534	456	506	117.1	105.5
3. Adaptive Research Trials	41	630	444	606	141.9	104.0
4. Onfarm trials	22	407	223	372	182.5	109.4
Mean	92	672	493	591	136.3	113.9
Weighted mean		654	467	587	132.6	113.7

Table 2. Economic characters of sesame SVPR.1

S.No.	Particulars	SVPR.1	TMV.3	TMV.4
1.	Duration in days	75-80	80-85	85-90
2.	Plant height (cm)	92.0	84.8	87.0
3.	Number of branches/plant	5.4	8.2	7.4
4.	Number of capsules/plant	64.5	55.2	47.2
5.	Capsule (a) Length (cm)	3.14	2.58	1.92
	(b) Breadth (cm)	0.83	0.58	0.72
6.	1000 seed weight (g)	3.42	2.80	2.72
7.	Mean seed yield (kg/ha)	1115	848	879
8.	Oil content (%)	52	51	50
9.	Seed colour	Pure white	Dark brown	Brown

Table 3. Reaction of sesamum SVPR.1 to major pests and diseases

S.No.	Particulars	SVPR.1	TMV.3	TMV.4
I.	<b>DISEASES</b>			
	1. Phyllody (%)	7.54	16.64	16.52
	2. Powdery mildew (Grade)	3.0	3.0	4.0
	3. Alternaria leaf spot (%)	34.8	38.5	50.7
II.	<b>INSECT PEST</b>			
	1. Leaf webber (%)	7.4	18.2	14.2

Table 4. Quality aspects of sesamum SVPR.1

S.No.	Particulars	SVPR.1	TMV.3	TMV.4	CO.1.
I.	<b>Chemical characteristics</b>				
	1. Moisture (%)	5.34	-	5.90	4.91
	2. Ash content (%)	5.40	-	5.00	5.30
	3. Protein content (%)	18.97	-	18.48	18.65
	4. Fat (%)	44.50	-	42.80	45.70
II.	<b>Organoleptic evaluation</b>				
	1. Colour and appearance	3.6	-	3.1	3.3
	2. Flavour	3.6	-	3.3	3.1
	3. Taste	3.7	-	3.1	3.3
	4. Overall acceptability	3.8	-	3.0	3.3

was released as sesamum SVPR.1 during 1992.

## RESULTS AND DISCUSSION

Sesamum TSS.6 (SVPR.1) was tested for its yield in 17 trials since 1983 at Cotton Research Station, Srivilliputtur. This culture recorded a mean seed yield of 1115 kg/ha as compared to 848 kg in TMV.3 and 879 kg/ha in TMV.4 representing an increase of 31.5 per cent and 26.8 per cent respectively (Table 1). In the 12 multilocation trials conducted at Research Stations, sesamum SVPR.1 gave a mean seed yield of 534 kg/ha which was 17.1 per cent and 5.5 per cent more than TMV.3 and TMV.4 respectively. In the 41 Adaptive Research Trials and in 22 onfarm trials also SVPR.1 showed its superiority over TMV.3 and TMV.4. The economic characters recorded in SVPR.1 are presented in Table 2. This variety is shorter in duration compared to TMV.3 and

TMV.4. The capsules and seeds are bold in nature. The colour of the seed is white having 52 per cent oil content.

The reaction of this culture to major pest and diseases under field conditions was tested (Table 3). In the case of incidence of leaf webber and phyllody, sesamum SVPR.1 showed relatively lesser incidence than TMV.3 and TMV.4. Since these two are major problems in this region, the introduction of this variety would help to enhance the production of sesamum in these tracts. The chemical characteristics and organoleptic evaluation also revealed the high preference of this variety (Table 4).

As this variety is having high yield, high oil content and seed quality coupled with tolerance to phyllody and leaf webber this can be cultivated during summer and cold weather seasons in the southern districts of Tamil Nadu.