

A Promising Sesame (*Sesamum Indicum* L.) Culture YLM-66

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Sesame is one of the important oilseed crops grown for its rich source of oil. The presence of antioxidants *viz.*, *sesamin* and *sesamol* increases the shelf life of the oil and no other vegetable oil possesses this type of phenomenon. The oil also contains vitamin E, hence a good nourishment to the skin. Although the quality of oil is unique, the productivity in India has been fluctuating around 300kg/ha. against the world average of 410 kg./ha. and China's average of 1050 kg/ha. Therefore an attempt was made to increase the seed yield by developing a variety better than the existing ones.

The culture YLM66 is a cross between YLM -17 x P.S. 201 developed through pedigree method of plant breeding (Allard,1960) and tested in *kharif* 2000, 2002 and 2003 along with other 19 entries against the checks Gouri, Madhavi, YLM -11 and YLM -17 in a randomised block design replicated thrice. The trial conducted in *kharif* 2001 was not successful due to insufficient rainfall and prolonged dryspells. The spacing adopted was 30 cm between the rows and 15 cm. between the plants. A fertilizer schedule of 10 tons of farm yard manure, 40 kg. nitrogen, 20kg. phosphorus and 20 kg. potash per hectare was adopted as recommended by ANGR Agricultural University, Andhra Pradesh. Other package of practices was also adopted as recommended by ANGRAU. The characters *viz.*, days to maturity, 1000 seed weight, seed yield and oil percent were recorded. The oil percent was tested by Nuclear Magnetic Resonance

(NMR) at Directorate of Oil Seeds Research, Rajendranagar, Hyderabad. The Bartlett's test for homogeneity of error variances *i.e.* chisquare was calculated as 5.60 for days to maturity, 121.90 for 1000 seed weight, 24.94 for seed yield and 4.80 for oil percent. Therefore analysis for individual year was done and discussed here under.

The culture YLM66 seed yield (1216 kg/ha.) was found significantly superior to the better check YLM-17 (843 kg / ha.) in *kharif* 2000, *kharif* 2002 (YLM - 66: 1225 kg/ha.; YLM-17 1079 kg/ha.) and *kharif* 2003 (YLM-66 - 920 kg/ha.; YLM - 17 672 kg/ha.). The mean seed yield over seasons was 1120 kg/ ha, when compared to the better check YLM-17 (865 kg/ha). However the culture YLM -66 was not significantly superior in oil% to the better check YLM-11 in *kharif* 2000, 2002 and 2003. The mean oil % over the seasons is 47.10 when compared to the better check YLM-11 (48.70%).

Regarding the duration YLM-66 was found early in *kharif* 2000 (80 days), *kharif* 2002 (88 days) but late in *kharif* 2003 (79 days) when compared to the better check YLM-17. The mean duration of YLM-66 over the seasons was 82.33 days when compared to the better check YLM-17 (81 days). The 1000 seed weight of the culture was also found significantly superior to the better check YLM-17 in *kharif* 2000 (3.13g) but not in *kharif* 2002(3.62 g). However in *kharif* 2003 (4.24 g) the culture was found significantly superior

Table 1. Performance of Sesame culture YLM-66.

S.No.	Entry	<i>Kharif</i> 2000	<i>Kharif</i> 2002	<i>Kharif</i> 2003	Mean
Seedyield (kg ha-1)					
1.	YLM-66	1216	1225	920	1120
2.	YLM-11(c)	643	934	669	749
3.	YLM-17(c)	843	1079	672	865
	CD	90.85	131.25	87.65	
	CV%	12.22	8.40	9.00	
Oil (%)					
1.	YLM-66	42.30	48.30	50.70	47.10
2.	YLM-11(c)	43.20	49.90	53.00	48.70
3.	YLM-17(c)	43.10	49.30	51.70	48.03
	CD	0.32	0.38	0.44	
	CV%	0.50	0.50	0.50	
Duration (days)					
1.	YLM-66	80.00	88.00	79.00	82.33
2.	YLM-11(c)	84.00	90.00	75.00	83.00
3.	YLM-17(c)	82.00	89.00	72.00	81.00
	CD	1.00	1.50	1.00	
	CV%	1.00	1.00	0.80	
1000 seed weight (g)					
1.	YLM-66	3.13	3.62	4.24	3.66
2.	YLM-11(c)	2.82	3.62	3.15	3.20
3.	YLM-17(c)	3.00	3.70	2.71	3.14
	CD	0.11	0.04	0.27	
	CV%	2.30	0.80	5.40	

to the better check YLM -11(3.15 g). The mean 1000 seed weight over three seasons was 3.66 in YLM-66 against the better check YLM-11 (3.20 g).

The cutlure YLM-66 also performed well in AICRP trials during *rabi*/summer 2003 (932 kg/ha.) in Initial Verietal Trial over locations. In Advanced Varietal Trial also it performed well (810 kg/ha.) in zone -3 in *kharif* 2003. It was moderatly resistant to phyllody, Phytophthora blight, Macrophomina stem root rot, Cercospora leaf spot and Alternaria leaf spot.

References

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