

Seed quality and oil yield of rocket-salad (*Eruca sativa*) as influenced by date of sowing and row spacing

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Received: May 1992

A field experiment was conducted with rocket-salad or *taramira* (*Eruca sativa* L.) during the winter (*rabi*) seasons of 1988–90 and 1990–91. The experiment was laid out in split-plot design with 4 sowing dates (25 September, 10 and 25 October and 9 November) and 3 row spacings (30 35 and 40 cm) in the main plots and 3 varieties ('T 27', 'ITSA' and 'TMH 52') in the subplots, replicated thrice. The soil was sandy loam slightly alkaline in reaction, with low available N, medium P and high K. The rainfall was distributed between September and March (48.5 mm and 283.2 mm in the respective year).

The quality of seed as judged by protein and oil contents was affected significantly by sowing dates. Crop sown on 25 September had the highest contents of these components and the crop sown on 9 November the lowest percentage. It is actually that early sowing utilized more efficiently the conserved soil moisture coupled with optimum temperature at seed-development stage, which is the most

essential for oil and protein synthesis in seeds.

Significantly highest protein and oil yields were recorded with earliest sowing on 25 September compared with rest of the sowing dates (Table 1) and this being a function of seed yield and their contents in seed finally led to higher productivity of these components. Similar results were also reported by Raja and Bishnoi (1988). 'T 27' ranked the first in protein and oil yields and this was apparently due to higher seed yield of this variety. These results confirm the findings of Maliwal *et al.* (1985). Row spacing had no effect of any of these contents including S and yields.

REFERENCES

- Maliwal, P. L. 1985. Effect of dates of sowing on yield and quality of *taramira* (*Eruca sativa* L.) varieties. *Indian Journal of Agronomy* 30 (1) : 112–113.
- Raja, V. and Bishnoi, K. C. 1988. Studies on seed yield, quality and oil yield of toria genotypes under varying irrigation schedules. *Indian Journal of Agronomy* 33 (1) : 77–83.

Table 1. Seed quality, oil yield and protein production of rocket-salad varieties as affected by sowing date and row spacing

Treatment	S content (%)		Protein content (%)		Oil content (%)		Oil yield (q/ha)		Protein production (q/ha)	
	1989-90	1990-91	1989-90	1990-91	1989-90	1990-91	1989-90	1990-91	1989-90	1990-91
<i>Sowing date</i>										
25 September	0.66	0.65	20.43	20.25	36.4	36.8	2.83	3.06	3.06	3.26
10 October	0.62	0.62	20.33	20.21	36.2	35.8	2.54	2.97	2.76	3.23
25 October	0.63	0.63	20.11	20.14	35.5	35.3	1.72	2.17	1.94	2.40
9 November	0.65	0.64	19.80	20.05	35.1	34.9	1.38	1.50	1.50	1.67
CD (P = 0.05)	NS	NS	0.23	0.14	0.4	0.6	0.17	0.05	0.15	2.02
<i>Row spacing (cm)</i>										
30	0.65	0.65	20.18	20.14	35.8	35.6	2.12	2.43	2.29	2.64
35	0.65	0.64	20.24	20.18	35.8	35.7	2.16	2.43	2.36	2.63
40	0.62	0.62	20.08	20.17	35.8	35.7	2.08	2.42	2.30	2.64
CD (P = 0.05)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
<i>Variety</i>										
'T 27'	0.64	0.65	20.17	20.17	36.0	35.8	2.34	2.65	2.53	2.78
'ITSA'	0.64	0.63	20.18	20.15	35.7	35.6	2.04	2.41	2.24	2.62
'TMH 52'	0.64	0.64	20.16	20.17	35.7	35.6	1.98	2.22	2.18	2.52
CD (P = 0.05)	NS	NS	NS	NS	NS	NS	0.09	0.03	0.06	0.02

NS, Not Significant