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## Cultivation practices followed in brinjal in Ratnagiri district

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**Abstract**

In recent year in Konkan region area under brinjal cultivation is increasing. However, information regarding cultivation practices followed in brinjal is scanty. So efforts are made in the paper to study cultivation practices followed in brinjal. It is found that the important operations involved in the brinjal cultivation in Ratnagiri district are preparation of land, seedling preparation, transplanting, irrigation, weeding, earthing up, gap filling, fertilizer application, plant protection, and harvesting etc. Labour is an important input in cultivation of brinjal crop as its cultivation is labour intensive. At overall level it was found that among the operations highest labour were used for harvesting followed by weeding, Transplanting, fertilizer application, preparation of land, plant protection, gap filling, seedling preparation, irrigation and earthing up. It is also found that the utilization of input such as seed, fertilizer, manure, pesticide, fungicide, labour also increases with increasing size holding which result in increasing productivity.

**Keywords:** Brinjal, cultivation practices, labour, input etc.

**Introduction**

The brinjal or eggplant (*Solanum melongena*) is one of the most popular and principal vegetable crop grown in India and other part of world. The cultivated brinjal is presumed to be of Indian origin with China as secondary centre of origin. It is a member of solanaceae family and is closely related to tomato and potato. The brinjal contain approximately 92 percent moisture, 6 percent carbohydrate, 1 percent protein, 0.3 percent fats and some minerals. They are fairly good source of calcium, phosphorous, iron and vitamin B. Brinjal has been reported to have medicinal properties. In recent year in Konkan region area under brinjal cultivation is increasing. However, information regarding cultivation practices followed, cost and return from brinjal is scanty. In view of this the effort are made to study "Cultivation of brinjal in Ratnagiri district".

**Methodology**

The present investigation was carried out in Ratnagiri district. From the Ratnagiri district. Dapoli and Khed tahsils were selected for study and clusters of villages growing brinjal were identified. From the available clusters three clusters from each tahsil were selected randomly. From each cluster 10 farmers growing brinjal in Rabi season were selected randomly. Thus, the final sample consists of two tehsils, six clusters of villages and 60 brinjal growers. The data were collected by survey method with the help of specially designed schedules separately for brinjal cultivators the data were analyzed by using simple statistical tools like arithmetic mean and percentage.

**Result and Discussion**

The important operations involved in the brinjal cultivation are preparation of land, seedling preparation, transplanting, irrigation, weeding, earthing up, gap filling, fertilizer application, plant protection, and harvesting etc. Labour is an important input in cultivation of brinjal crop as its cultivation is labour intensive.

At overall level it was found that among the operations highest labour were used for harvesting (92 days) followed by weeding(82 days), Transplanting (47 days), fertilizer application (18 days), preparation of land (15 days), plant protection(14 days), gap filling (11 days), seedling preparation (10 days), irrigation(10 days) and earthing up (7 days).

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The analysis revealed that in small group the per hectare labour utilized for brinjal cultivation were 296 human labour days, in case of medium farmer it was 304 human labour day. And in case of large farmer it was 321 human labour day. The

utilization of other input such as seed, fertilizer, pesticide and fungicide increases with increasing size of holding.

The productivity of brinjal in case of small, medium and large farmer was 12.6t/ha, 13.5t/ha and 16.5 t/ha respectively.

**Table 1:** Operation wise per hectare labour used for brinjal cultivation (Figures in days)

Sr. No.	Operation	Small			Medium			Large			Overall		
		M	F	Total	M	F	Total	M	F	Total	M	F	Total
A	<b>Human labour</b>												
1	Preparation of land	18 (15.13)	6 (3.37)	22 (7.43)	12 (9.92)	2 (1.09)	14 (4.61)	10 (7.75)	0 (0.00)	10 (3.12)	13 (10.57)	2 (1.09)	15 (4.89)
2	Seedling Preparation	2 (1.68)	7 (3.93)	9 (3.04)	3 (2.48)	8 (4.37)	11 (3.62)	3 (2.33)	8 (4.17)	11 (3.43)	3 (2.44)	8 (4.35)	11 (3.58)
3	Transplanting	8 (6.72)	36 (20.22)	44 (14.86)	9 (7.44)	38 (20.77)	47 (15.46)	10 (7.75)	40 (20.83)	50 (15.58)	9 (7.32)	38 (20.65)	47 (15.31)
4	Irrigation	9 (7.56)	0 (0.00)	9 (3.04)	10 (8.26)	0 (0.00)	10 (3.29)	11 (8.53)	0 (0.00)	11 (3.43)	10 (8.13)	0 (0.00)	10 (3.26)
5	Weeding	24 (20.17)	56 (31.46)	80 (27.03)	24 (19.83)	58 (31.69)	82 (26.97)	25 (19.38)	60 (31.25)	85 (26.48)	24 (19.51)	58 (31.52)	82 (26.71)
6	Earthing Up	2 (1.68)	5 (2.81)	7 (2.36)	2 (1.65)	5 (2.73)	7 (2.30)	2 (1.55)	6 (3.13)	8 (2.49)	2 (1.63)	6 (3.26)	7 (2.28)
7	Gap filling	2 (1.68)	8 (4.49)	11 (3.72)	3 (2.48)	8 (4.37)	11 (3.62)	3 (2.33)	8 (4.17)	11 (3.43)	3 (2.44)	8 (4.35)	11 (3.58)
8	fertilizer application	17 (14.29)	0 (0.00)	17 (5.74)	18 (14.88)	0 (0.00)	18 (5.92)	20 (15.50)	0 (0.00)	20 (6.23)	18 (14.63)	0 (0.00)	18 (5.86)
9	Plant protection	13 (10.92)	0 (0.00)	13 (4.39)	13 (10.74)	0 (0.00)	13 (4.28)	15 (11.63)	0 (0.00)	15 (4.67)	14 (11.38)	0 (0.00)	14 (4.56)
10	Harvesting	24 (20.17)	60 (33.71)	84 (28.38)	27 (22.31)	64 (34.97)	91 (29.93)	30 (23.26)	70 (36.46)	100 (31.15)	27 (21.95)	64 (34.78)	92 (29.97)
11	Total	119 (100)	178 (100)	296 (100)	121 (100)	183 (100)	304 (100)	129 (100)	192 (100)	321 (100)	123 (100)	184 (100)	307 (100)
B	<b>Machinery and bullock labour</b>												
1	power tiller	0	0	0	0	0	0	0	0	2.25	0	0	0.75
2	bullock labour	0	0	2	0	0	3	0	0	1.5	0	0	2.17

**Table 2.** Per hectare physical input use for brinjal cultivation.

Sr. No	Particulars	Group			
		Small (N= 24)	Medium (N=17)	Large (N=19)	Overall (N=60)
<b>Hired labour (days)</b>					
1	Male	49	62	80	64
	Female	82	96	110	96
	Total	135	158	190	161
<b>Family labour (days)</b>					
2	Male	70	59	49	59
	Female	96	87	82	88
	Total	161	146	131	146
<b>Total labour (days)</b>					
3	Male	119	121	129	123
	Female	178	183	192	184
	Total	296	304	321	307
<b>Machinery and bullock labour</b>					
4	power tiller	0	0	2	1
	Bullock labour	2	3	2	2
5	Seed (kg.)	0.70	0.75	0.80	0.75
6	Manures (tonnes)	3.50	4.50	5.00	4.33
<b>Fertilizer (kg.)</b>					
7	N	124	136	155	138
	P <sub>2</sub> O <sub>5</sub>	60	68	72	67
	K <sub>2</sub> O	60	68	72	67
8	Insecticide (lit)	1.3	1.95	2.15	1.8
9	fungicide (Kg)	1.12	1.5	1.9	1.51

## Conclusion

It is found that the important operations involved in the brinjal cultivation in ratnagiri district are preparation of land, seedling preparation, transplanting, irrigation, weeding,

earthing up, gap filling, fertilizer application, plant protection, and harvesting etc. At overall level productivity of brinjal was increased with increasing size of farm due to increasing use of manure, fertilizer and pesticide.

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