



## RESEARCH PAPER

# Knowledge level of castor growing respondents of Sirohi district of Rajasthan

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**Abstract :** Castor is an important oilseed cash crop. Castor oil obtained from castor seed is non-edible, but is of great industrial importance. India is the largest castor growing country in the world. Gujarat state has highest area and production of castor. In Rajasthan, Sirohi district stands first in terms of area and production of castor. Therefore, a study was undertaken to assess the level of knowledge of respondents about castor production of Sirohi district. The study was conducted in 5 blocks. Further, 100 farmers were selected randomly from 10 villages. The findings of this study revealed that majority (52%) of the castor growers had medium to level of knowledge regarding recommended hybrid castor production technology. Predominantly the hybrid castor growers had good knowledge regarding castor cultivation practices viz., land preparation, harvesting, recommended rates of seed land preparation, manual weeding and FYM application.

**Key Words :** Castor growing respondents

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## INTRODUCTION

*Ricinus communis* L. is an important non-edible oilseed cash crop and is grown in arid and semi-arid region. Castor seeds contains 45-47 per cent non-edible oil, which is used for domestic, medicinal and industrial purposes. Castor oil is used as a lubricant in all moving parts of the machinery and particularly highspeed engines and Aeroplanes. Hydrogenated castor oil is used in polished, varnished, transparent paper, linoleum, plasticizers, ointments, waxes, printing ink, cosmetics and soaps, etc. Castor is globally cultivated in more than 30

countries, though India is the world's largest producer of castor seeds accounting for more than 85 per cent of world castor seed output. Total area under castor in India is taken to be 9,92,000 hectares and production of castor seed is near to 2 million ton, with the highest productivity of 1977 kg/ha. In India, major castor producing states are Gujarat, Rajasthan, Andhra Pradesh. Minor includes Karnataka, Tamil Nadu, Maharashtra, Orissa. Rajasthan is the second largest state in terms of production of castor. In Rajasthan, total area for the production of castor is 1,54,240 hectare and the production of castor seed was 2.37 lakh ton. In Rajasthan, Sirohi district stands first in

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terms of area and production of castor.

Recent researches indicate that the areas under castor cultivation have increased but the yield is decreasing year by year, because of it, there is a rift between the average yield of farmer's field and the potential yield of the crop. This alarms that the farmers lack proper knowledge regarding recommended hybrid castor production technology. Looking to the seriousness of this problem, this study was undertaken with the following objectives:

- To study the socio-personal characteristic of the Castor growing farmer respondents and
- To study the knowledge level of castor growing respondents of Sirohi district of Rajasthan.

Here Table 2 provide the information of Sirohi district which stands first in terms of area and production of Castor in Rajasthan. Total area castor in Sirohi is taken to be 43,296 hectares and production of castor seed is 62,747 ton, with the productivity of 1449 kg/ha.

## MATERIAL AND METHODS

The research study was conducted in jurisdiction of Krishi Vigyan Kendra, Sirohi under Agriculture University, Jodhpur. For this study, five blocks of the district were selected intentionally where castor farming

is being practiced. Two villages from each block were further selected purposively where castor farming is being practiced. Thus total 10 villages were selected for the purpose of study. Village wise list of farmers was prepared. From each village, 10 farmers were selected randomly. So accordingly, 100 farmers were selected for the research. Well-structured interview schedule was prepared and administered to fetch the required information in the light of objective of research.

Knowledge refers to know-how about recommended hybrid castor production technology possessed by the respondent farmers. Attaining Apt knowledge is essential for the farmers in order to gain success and have profitable cultivation of castor seed. Therefore, it was necessary to obtain information from the respondent farmers about their knowledge regarding hybrid castor production technology. The data regarding level of knowledge and practice wise knowledge are given in the Table 5.

Table 5 indicates that majority (52 %) of the castor growers had medium level of knowledge regarding recommended hybrid castor production technology, whereas, 27 per cent had possessed high level of knowledge and 21 per cent of them had low level of knowledge regarding recommended hybrid castor production technology, respectively. It may be due to their

**Table 1: Details of area, production and productivity of castor crop year 2019-20**

Sr. No.	Places	Castor acreage (*000 ha)	Castor yield (kg/ha)	Production (*000 tons)
1.	Gujarat	741	2231	1659.3
2.	Rajasthan	154	1593	237.3
3.	AP and Telangana	57	575	33.0
4.	Others	40	600	24.0
5.	India	992	1977	1961.6

**Table 2 : Production data of castor crop in Sirohi district of Rajasthan year : 2020-21**

District	Castor acreage (ha)	Castor yeild (kg/ha)	Production (mt)
Sirohi	43296	1499	62747

**Table 3 : Details of selected blocks undertaken for study**

Sr.No.	Name of blocks	Respondents	(n=100)
1.	Sheoganj	20	
2.	Reodar	20	
3.	Pindwara	20	
4.	Abu road	20	
5.	Sirohi	20	
	Total	100	

**Table 4 : Distribution of respondents according to their personal socio- economic characteristic**

Sr. No.	Categories	Socio-personal characteristics	Frequency	Percentage
1.	Age	Young age (upto 35)	29	29%
		Middle age (36 to 50)	47	47%
		Old age (above 50 years)	24	24%
		Total	100	100%
2.	Education	Illiterate	16	16%
		Literate	22	22%
		Primary education	27	27%
		Secondary school	17	17%
		Higher secondary	11	11%
		Graduate and above	7	7%
		Total	100	100%
3.	Size of land holdings	Marginal farmers	21	21%
		Small farmers (above 1.0 ha to 2.0 ha)	32	32%
		Medium farmers (above 2.0 ha to 4.0 ha)	36	36%
		Big farmers (above 4.0 ha)	11	11%
4.	Social participation	No membership	43	43%
		Membership in one organization	46	46%
		Membership in more than one organization	11	11%
5.	Income of respondents	Rs. upto 50,000	09	09%
		Rs. 50,001 to 1,00,000	13	13%
		Rs. 1,00,001 to 1,50,000	35	35%
		Rs. 1,50,001 to 2,00,000	26	26%
		Rs. 2,00,001 to above	17	17%
		Total	100	100%
6.		Participate in extension	73	73%
		Non-participant	27	27%
		Total	100	100%
7.	Innovativeness	Immediately adoption	11	11%
		Follow when others successful adopted	38	38%
		Take time as per own adaptability	51	51%
		Total	100	100%

**Table 5 : Distribution of farmers according to their level of knowledge of hybrid castor production technology (n=100)**

Sr. No.	Knowledge level	Number	Percentage
1.	Low (Below 45.98 score)	21	21 %
2.	Medium (Between 45.98 to 69.38 score)	52	52 %
3.	High (Above 69.38 score)	27	27 %
	Total	100	100 %
	Mean score :57.68	SD: 11.70	

frequently being in contact with extension agencies and sporty participation in various extension activities. This result is found in line with Desale *et al.* (2011).

It is observed from Table 6 that predominantly the castor growers had great knowledge regarding castor cultivation practices *viz.*, land preparation (94%), timely

**Table 6 : Practice wise knowledge of the farmers about hybrid castor production technology (n = 100)**

Sr. No.	Knowledge	Frequency	Per cent
1.	Land preparation	94	94%
2.	Varieties	68	68%
3.	Time of sowing	71	71%
4.	Spacing	63	63%
5.	Seed rate	87	87%
6.	Fertilizer management		
	FYM	75	75%
	Chemical fertilizers	62	62%
7.	Interculture	69	69%
8.	Weed management		
	Manual weed control	81	81%
	Chemical weed control	52	52%
9.	Irrigation management	69	69%
10.	Plant protection measures		
	Pest control	61	61%
	Disease control	73	73%
11.	Integrated pest management (IPM)	65	65%
12.	Harvesting	91	91%

harvesting (91%), rates of seed (87%), manual weeding (81%) and followed by FYM (75), disease control (73%) and time of sowing (71%), irrigation management (69%), interculturing (69%) new and improved varieties (68%) spacing (63%) integrated pest management (65%). So far fertilizer management is concerned, (62%) of the farmers had knowledge about recommendations of chemical fertilizers and (61%) of them knew how to control pest. Whereas more than half (52%) had knowledge of chemical weed control.

## Conclusion:

Findings of this study shows (Table 4) that majority of the respondents (47%) belonged to middle age group, educated upto primary education (37%) and were medium size land owner (36%) and most of them (46%) had social participation and have actively attended extension programs. Majority of the respondents (35%) had their annual income extending from Rs. 10,0,000 to 1,50,000. They found favorable to take time as per own adaptability to adopt innovativeness.

Findings of this study revealed that (Table 5) majority (52%) of the castor growers had high level of knowledge regarding recommended hybrid castor production technology. Predominantly the hybrid castor growers had good knowledge regarding castor cultivation practices viz., land preparation, harvesting, recommended rates of seed land preparation, manual weeding and FYM application, which can be due to frequently being in contact with extension agencies and sporty participation in various extension activities.

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