



Knowledge level of hybrid castor growers regarding its production technology

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ABSTRACT

The present investigation was conducted in Kheda district of Gujarat state where it has maximum area under hybrid castor cultivation than the other districts. For this study, 10 villages were selected out of which 120 farmers were selected by proportionate random sampling technique. The findings of this study revealed that majority (79.17 per cent) of the castor growers had medium to high level of knowledge regarding recommended hybrid castor production technology. Cent per cent of the hybrid castor growers had good knowledge regarding castor cultivation practices *viz.*, land preparation, interculturing, manual weeding and timely harvesting.

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INTRODUCTION

Castor (*Ricinus communis* L.) plant belongs to Euphorbiaceae family. According to available literature, castor is indigenous to Eastern Africa and most probably originated in Ethiopia. Castor is an important industrial non-edible oilseed crop. Castor seed 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 high-speed engines and aeroplanes. Hydrogenated castor oil is used in polished, varnished, transparent paper, linoleum, plasticizers, ointments, waxes, printing ink, cosmetics, hairdressing, soaps etc. In dyeing industries and disinfectants, it is used for the preparation of Turkey red castor oil. It is also used as purgative.

Total area under castor crop in Gujarat during 2007-08 was 3,54,000 hectares and it has increased by 26% as compared to previous year. Area under castor crop has increased in North Gujarat (37%) and Saurashtra (34%). Total production of castor seeds in Gujarat during 2007-08 was 6,51,000 tones, which has

increased by 32% as compared to previous year (Anonymous, 2008).

Recent data of area and production of the district shows that areas under castor cultivation have increased however the yield is falling down year by year. Therefore, there is a wide gap between the average yield of farmer's field and the potential yield of the crop. This indicates that the farmers did not have proper knowledge regarding recommended hybrid castor production technology. Looking to the importance and urgency of this problem, this study was undertaken with the following objectives to study the knowledge level of castor growers regarding recommended hybrid castor production technology and to study the practice wise knowledge level of castor growers regarding recommended hybrid castor production technology.

METHODOLOGY

Present study was conducted in Kapadwanj Taluka of Kheda district because it has the maximum area under cultivation of hybrid castor than the other Talukas of district. On the basis of area under hybrid castor

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cultivation, a list of villages was obtained from the Assistant Director of Agriculture and Taluka Panchayat; out of it 10 villages having maximum area under castor cultivation were selected randomly. From these 10 villages, 120 farmers were selected by proportionate random sampling technique.

The information pertaining to this study was collected through well structured and pretested Gujarati interview schedule. Ex-post facto design was applied for this study. Statistical measures *viz.*, frequency, percentage, mean score and standard deviation were used for analysis and interpretation of the data. Knowledge level of castor growers regarding recommended hybrid castor production technology was measured by using structure schedule.

RESULTS AND ANALYSIS

Knowledge refers to know-how about recommended hybrid castor production technology possessed by the respondent farmers. Adequate knowledge is essential to farmers for the success and profitable cultivation. Therefore, it was felt 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 Table 1.

Table 1 : Distribution of farmers according to their knowledge of hybrid castor production technology (n= 120)

Sr. No.	Knowledge level	Number	Per cent
1.	Low (below 49.90 Score)	25	20.83
2.	Medium (between 49.90 - 71.88 Score)	75	62.50
3.	High (above 71.88 Score.)	20	16.67
	Total	120	100
Mean = 60.89		S.D = 10.99	

Table 1 indicates that majority (62.50 per cent) of the respondent castor growers had medium level of knowledge regarding recommended hybrid castor production technology, whereas, 20.83 and 16.67 per cent of them had low and high level of knowledge regarding recommended hybrid castor production technology, respectively. It might be due to their higher educational level, frequent contact with extension agencies and active involvement in various extension activities.

It is observed from Table 2 that cent per cent of the castor growers had very good knowledge regarding castor

cultivation practices *viz.*, land preparation, interculturing, manual weeding and timely harvesting, followed by improved varieties and irrigation (83.33 per cent), time of sowing (76.67 per cent), spacing (70.33 per cent). So far fertilizer management is concerned, majority (68.33 per cent) of the farmers had knowledge of FYM application and more than half (54.67 per cent) of them had knowledge about recommendations of chemical fertilizers. Whereas more than half (54.16 per cent) and half of the respondents (50.00 per cent) were knowing pest control measures and recommended seed rate, respectively. One fourth (25.00 per cent) had knowledge of diseases control. It is interesting to note that very few (16.66 per cent) had knowledge of chemical weed control.

Table 2 : Practice wise knowledge of the farmers about hybrid castor production technology

Sr. No.	Knowledge	Frequency	Per cent
1.	Land preparation	120	100.00
2.	Varieties	100	83.33
3.	Time of sowing	92	76.67
4.	Spacing	85	70.33
5.	Seed rate	60	50.00
6.	Fertilizer management		
	- FYM	82	68.33
	- Chemical fertilizers	65	54.67
7.	Interculturing	120	100.00
8.	Weed management		
	- Manual weed control	120	100.00
	-Chemical weed control	20	16.66
9.	Irrigation management	100	83.33
10.	Plant protection measures		
	- Pest control	65	54.16
	- Disease control	30	25.00
11.	Harvesting	120	100.00

Conclusion:

Findings of this study revealed that majority (79.17 per cent) of the castor growers had medium to high level of knowledge regarding recommended hybrid castor production technology. Cent per cent of the hybrid castor growers had good knowledge regarding castor cultivation practices *viz.*, land preparation, interculturing, manual weeding and timely harvesting. It might be due to their higher educational level, frequent contact with extension agencies and active involvement in various extension activities.

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