Production Problems Faced by Castor Growers of Gujarat

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The study was conducted in Banaskantha district of Gujarat, India covering five talukas viz., Tharad, Vav, Dhanera, Kankrej and Palanpur with the objective to analyse the production problems faced by castor growing farmers. Primary data were collected from 225 castor growing farmers. From each taluka based on cluster approach three villages were selected and in each village, based on random sampling method 15 farmers were selected for survey purpose. Availability of labour in time (91.11%), cost of labour (85.33%), instability of yield (81.33%) and price variation in the hybrid castor seed are the major production problems faced by the castor growing farmers of Gujarat.

Key words: *Problems, castor, production.*

INTRODUCTION

Oilseed crops have been one of the most significant contributors of the agricultural economy of India from time immemorial. The major oilseeds grown in India are groundnut, soybean, rapeseed, sesame, linseed, safflower, castor, sunflower and niger. Castor (*Ricinus communis* L.) is an important non-edible oilseed crop of arid and semi-arid regions of the world. Castor seed contains 48 to 56 percent oil. Castor oil is obtained through pressing the seeds followed by solvent extraction of the pressed cake. The average castor production in India was approximately 11.15 lakh tonnes in 2008-09. The states of Gujarat and Rajasthan contribute 90% of the total castor produced in India.

The districts in Gujarat namely Mehsana, Banaskantha, Sabarkantha, Gandhinagar, Ahmedabad and Kutch are the main production centres of castor. Andhra Pradesh and Rajasthan follow Gujarat in production of castor seed. Gujarat state is pioneer in the development and release of hybrids where the first castor hybrid GCH-3 was released for general cultivation in 1968–69. Subsequently six more hybrids GAUCH-1, GCH-2, GCH-4, GCH-5, GCH-6 and GCH-7 have been released for general cultivation, among which GCH-7 is nematode and wilt resistant high yielding hybrid. Gujarat, Rajasthan, and Andhra Pradesh contribute 96% of the total castor seed production in India. Gujarat ranks first in area, production, and productivity (area, 433.90 thousand ha; production, 852.00 thousand tonnes). Banaskantha, Gandhinagar, Kutch, Mahesana, Patan, Rajkot, Sabarkantha, and Surendranagar are the major castor growing districts in Gujarat.

As far as area and production of castor in North Gujarat is concerned, Banaskantha ranked first followed by Sabarkatha and Mehsana (Table 1). However, in respect of crop productivity with limited area under cultivation, Gandhinagar district with productivity of 1890 kg ha^{-1} ranked first followed by Mehsana (1886 kg ha^{-1}) and Sabarkantha (1884 kg ha^{-1}). The present study was therefore conceived with a general objective of analysing production problems faced by the castor growing farmers in Banaskantha district of Gujarat, India.

Table 1: Area (ha) of castor during *kharif* 2011 in selected talukas of Banaskantha district

Sr. No	Taluka	Area (ha)	Per cent contribution
1	Tharad	33,000	18.47
2	Vav	32,000	17.91
3	Dhanera	17,100	9.57
4	Kankivj	17,000	9.51
5	1'alaiipur	16,050	8.98
Banaskantlia District		1,78,700	-

METHODOLOGY

Research methodology is a systematic plan or schedule or programme of research done. The operational area of the project was confined to the five talukas of Banaskantha district viz., Tharad, Vav, Dhanera, Kankrej and Palanpur. In each taluka based on cluster approach three villages were selected and in each village, based on random sampling method 15 farmers were selected for survey purpose. Hence a total of 225 farmers constituted the sample size for the survey work.

In order to proceed with investigation as per the objectives stated, it was necessary to adopt an appropriate sampling design so as to focus the importance of objective in tacking the problems in castor production. It was proposed at the outset to study the area under castor crop in primary stage. For this purpose the secondary source data published by the Directorate of Economics and Statistics, Banaskantha was used. A multistage random sampling was adopted as appropriate sampling procedure for the study. The Castor crop is mainly grown in the Bansakantha district. Bansakantha ranks first in terms of area and production of castor among all the districts of Gujarat. Hence the study was focused on Banaskantha District.

In the second stage, it was proposed to select five talukas in Banaskantha district which were top ranking talukas in respect of area under castor in the district. These talukas are: Tharad, Vav, Dhanera, Kankrej and Palanpur (Table 1). In the third stage, three villages from each taluka were randomly selected where the castor was predominantly cultivated during kharif season. In all 15 villages were surveyed. From each village 15 hybrid castor growing farmers were randomly selected to obtained information on different aspects of the study (Table 2). Keeping in view the objective of the study, the questionnaire was prepared for the castor growing farmers to know the production related problems faced by them.

RESULTS AND DISCUSSION

The data collected were subjected to statistical analysis and the results obtained regarding the production problems confronted by the castor growers in five talukas of Banaskantha district have been presented in the Table 2.

Table 2: Production problems faced by farmers cultivating hybrid castor n = 225, n = 45

Sr. No.	Production problem	Tharad	Vav	Dhanera	Kankrej	Palanpur	Overall
1	Untimely supply of Seed	30 (66.67)	33 (73,33)	26 (57.78)	32(71.11)	16(35.56)	137(60.89)
2	Instability of yield	33(73.33)	42 (93.33)	40 (88.89)	36 (80.00)	32(71.11)	183(81.33)
3	Viability of seed	05(11.11)	15(33.33)	08(17.78)	05(11.11)	07 (15.56)	140(62.22)
4	Germination Losses	04 (08.89)	18(40.00)	10(22.22)	1 1 (24.44)	09 (20.00)	52(23.11)
5	Pest and Diseases attacks	02 (04.44)	07(15.56)	08(17.78)	09 (20.00)	05(11.11)	31(13.78)
6	Weather Changes	40 (88.89)	41(91.11)	36 (80.00)	32(71.11)	27 (60.00)	176(78.22)
7	Lack of Technical guidance	1 1 (24.44)	35 (77.78)	15 (33.33)	41 (77.78)	08(17.78)	120(53.33)
8	Price variation in the hybrid Castor Seed	37 (82.22)	36(80.00)	32(71.11)	26 (57.78)	23(51.11)	154(68.44)
9	Availability of fertilizer in time	38 (84.44)	41 (91.11)	35 (77.78)	37 (82.22)	29 (64.44)	180(80.00)
10	Availability of labour in time	39 (86.67)	40 (88.89)	41 (91.11)	41 (91.11)	44 (97.78)	205(91.11)
11	Cost of labour	42 (93.33)	34 (75.56)	37 (82.22)	39 (86.67)	40(88.89)	192(85.33)
12	Lack of irrigation facility	07(15.56)	36 (80.00)	09 (20.00)	24 (53.33)	04 (08.89)	80 (35.56)
13	High cost of Seed	36 (80.00)	35 (77.78)	26 (57.78)	18(40.00)	15 (33.33)	115(51.11)

Figures in parenthesis indicate percentage of sample respondents.

As many as 13 important problems are listed so as to know their intensity faced by the castor growing farmers. The results clearly show that majority of the farmers of Tharad taluka opined that cost of labour (93.33%) followed by weather changes (88.89%), availability of labour in time (86.67%) and availability of fertilizer in time (84.44%) were the major problems faced by the farmer. The castor growers in Vav taluka opined that instability of yield (93.33%) followed by weather changes and availability of fertilizer in time (91.11%) and availability of labour in time (88.89%) were the major problems faced by the farmers. Since irrigation sources are limited in Vav taluka and large area is under rain fed farming, instability of castor yield was of major concern.

The farmers of Dhanera taluka opined that availability of labour in time (91.11%) followed by instability of yield (88.89%) and cost of labour in cultivation (82.22%) of castor were the major problems faced by them. Similarly in Kankrej taluka, availability of labour in time (91.11%), cost of labour (86.67%) and availability of fertilizer in time (82.22%) were the major problems faced by the castor growers.

As far as the castor growing farmers of Palanpur taluka are concerned, availability of labour in time (97.78%) followed by cost of labour (88.89%) and instability of yield (71.11%) were the major production constraints.

In the present studies, across the talukas, the top ranking problem was availability of labour in time (91.11%) followed by cost of labour (85.33%) and instability of yield (81.33%). The production problems of lower intensity include pest and disease attack, germination losses and lack of irrigation facility. This is because, larger area under castor cultivation in the study area has assured irrigation facility through tube wells, canals or both canal and tube well. Pest and diseases are not the major problems in castor cultivation in these talukas since the recommended hybrids possess appreciable level of resistance towards pest and diseases (wilt resistance).

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