Constraints faced by Tamil Nadu farmers in cultivation and value addition of cashew

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ABSTRACT

Cashew (*Anacardium occidentale* L) is an economically important tropical crop. India is the single largest producer and exporter of cashew kernels accounting for about 40 per cent of the global share. Cashew is a highly labour intensive industry in terms of both production and processing. Tamil Nadu is the sixth largest producer state of cashew nut in India. But the productivity is way behind the country's average productivity. The study was conducted to see the demographic characteristics of cashew farmers and identify the constraints faced by them in cashew cultivation and value addition. Pest and disease occurrence, high demand for labour during harvesting and unfavourable climate were the constraints faced in cultivation. Lack of adequate capital and lack of awareness on the different value addition practices were identified as the constraints in taking up value addition in cashew.

Keywords: Cashew; cultivation; value addition; constraints

INTRODUCTION

Cashew (*Anacardium occidentale* L) a native of Brazil has acclimatized and adapted well to Indian climate and praised the world over for its delicious and nutritious kernels (Bhoomika and Sudha Rani 2018). Cashew is an economically important tropical crop. The crop earns a considerable amount of foreign exchange. India is the single largest producer and exporter of cashew kernels accounting for 40 per cent of the global share (https://www. mordorintelligence. com/industry-reports/india-cashew-market). Cashew is highly a labour intensive industry in terms of both production and processing. The production of cashew nuts in India has increased considerably during the years and the present production is about 7.79 lakh MT from an area of 10.40 lakh hectares. There has been considerable increase in the productivity of nuts also during the decades and the present productivity is 753 kg/ha (Hubballi 2018). But the cashew productivity in Tamil Nadu is around 500 kg/ha only.

The major distribution of cashew in India is in the states of Kerala, Karnataka, Goa and Maharashtra along the West Coast, Tamil Nadu, Andhra Pradesh and Orissa along the East Coast and to some extent in the states of West Bengal, Chhattisgarh, Gujarat, Jharkhand and northeastern states (Anon 2018).

With large number of farmers depending on the cashew cultivation it was important to understand the constraints faced by the farmers in cashew cultivation. The study was aimed at understanding the demographic characteristics of cashew farmers and to identify the constraints faced by them in cashew cultivation and value addition activities in cashew.

METHODOLOGY

Tamil Nadu was purposively selected for the study. Totally six major cashew growing districts falling under eastern, central and southern regions of Tamil Nadu viz Cuddalore, Villupuram, Ariyalur, Pudukkottai, Theni and Thanjavur were considered. From each district, two blocks were selected based on the maximum cashew area under cultivation during 2017-18. In villupuram district, only one block was selected as the area under cashew was limited. One village from each block was selected based on the maximum area under cashew cultivation. Secondary data of each

district was collected from the district statistics office. Total 180 farmers (30 farmers from each district) were selected randomly and were interviewed directly using a structured-questionnaire.

Conventional percentage analysis was employed to analyse the general demographic characteristics of the sample farmers. Constraints faced by the farmers were identified and ranked using Garrett's ranking technique (Garrett 1979). The formula used is as follows:

$$\text{Per cent position} = \frac{100\,(R_{ij} - .05)}{N_j}$$

where R_{ij} = Rank given to the i^{th} factor by j^{th} individual, N_j = Number of factors ranked by j^{th} individual

By referring to the Garrett's table the estimated per cent position was converted into score, for each factor the scores of all the respondents were added and the mean value was estimated. The mean scores were arranged in a descending order. The attribute with the highest mean value was considered as the most important one and first rank was given to it and the others followed in order.

RESULTS and DISCUSSION

Profile characteristics of sample farmers

Profiling of respondents was carried out to understand their general characteristics. The collected data were analysed and are presented in Table 1.

Most of the cashew growing farmers were in the age group of above 50 years (30.55%) followed by 46-50 (20.56%). Thus it could be concluded that maximum number of farmers had been involved in cashew cultivation for many years and were experienced in cashew cultivation.

Most of the cashew farmers had primary education (33.33%) followed by higher secondary (25.56%). About one-fourth of them were uneducated (24.44%). Thus dissemination of information related to cultivation and marketing of cashew to the farmers was easier as most of them were educated.

Most of the sample farmers depended on agriculture alone (36.67%) followed by 33.89 per cent who were daily wage earners and self-employed (22.22%). Only 7.22 per cent of the sample cashew nut producers were employed in government jobs. Thus majority of the farmers depended on agriculture and related activities for their livelihood.

Most of the farmers who cultivated cashew were small (38.33%) with less than 2 ha landholding followed by medium size farmers (37.78%). Therefore government and other agencies should consider the existence of large number of small and medium size farmers in cashew cultivation while formulating the policies.

Majority of the farmers (31.67%) had more than 25 years of experience in cashew cultivation followed by farmers with 16-20 years of experience (21.11%). Only 15.00 per cent of the sample farmers had less than 10 years of experience in cashew farming.

Only few farmers had membership in farmers' associations (26.67%) and in SHGs (5.55%) and most of the sample famers were not members of any group (67.77%). Therefore efforts should be made to bring farmers together to form groups for their betterment. The sample farmers cultivated cashew for its suitability to agro-climatic conditions (31.67%), cost effectiveness (31.67%) and profitability (21.67%).

Constraints faced in cashew production

Different constraints faced by the farmers in cahew production were identified, ranked using Garrett's ranking technique and the data are presented in Table 2.

Pest and disease occurrence (mean score 60.25) was identified as the major constraint faced by the farmers. Tea mosquito bug, a sucking insect was the major pest. Flowering and fruiting in cashew take place during November-February. During this period tea mosquito bug reaches its maximum population and causes major loss to the cashew production. Harvesting of cashew nuts is done during May-June. Untimely harvest reduces the quality of nuts. But during that season demand for labour was high. Hence farmers felt huge labour scarcity (mean score 53.73) as one of the constraints in production. Other constraints were unfavourable climatic conditions (mean score 47.79) that included decreased ground water level, lack of rainfall and unexpected showers during flowering and lack of capital (mean score 38.23) that restrained farmers in adopting drip irrigation and establishment and rejuvenation of the orchards etc.

Table 1. Profile characteristics of sample farmers

Characteristic	Category	Respondents (n= 180)
Age (years)	25-35	34 (18.89)
	36-40	29 (16.11)
	41-45	25 (13.89)
	46-50	37 (20.56)
	>50	55 (30.55)
Educational status	Uneducated	44 (24.44)
	Primary	60 (33.33)
	Higher secondary	46 (25.56)
	Graduate	30 (16.67)
Employment	Government	13 (7.22)
	Self-employed	40 (22.22)
	Daily wage worker	61 (33.89)
	Agriculture alone	66 (36.67)
Landholding (ha)	Small (<2)	69 (38.33)
	Medium (2-5)	68 (37.78)
	Large (>5)	43 (23.89)
Experience in cashew farming (years)	<10	27 (15.00)
	10-15	26 (14.44)
	16-20	38 (21.11)
	21-25	32 (17.78)
	>25	57 (31.67)
Membership	Farmers' association	48 (26.67)
	SHG	10 (5.55)
	None	122 (67.77)
Reason for cultivating cashew	Suitability	57 (31.67)
	Profitability	39 (21.67)
	Cost effectiveness	57 (31.67)
	Sustainability	27 (15.00)

Figures in parentheses indicate per cent values to the total

Table 2. Constraints faced by farmers in cashew cultivation

Constraint	Garrett's mean score	Rank
Pest and disease incidence	60.25	I
Labour scarcity	53.73	II
Unfavourable climate	47.79	III
Lack of capital	38.23	IV

Constraints related to value addition

The farmers in the study area carried out only primary value addition activities such as separation of fruits and drying of nuts. Cashew apples have great potential for processing and producing value-added products which was not done. The farmers did not take up value addition of cashew nuts and apples. The reasons for the same were identified, ranked and are presented in Table 3.

Lack of capital (mean score 60.01) to establish processing units was felt as the major constraint by the farmers and hence ranked first. This was followed by lack of awareness on processing (mean score 50.09). Farmers also felt that lack of physical facilities (mean score 44.02) to store, process and distribute processed products would be major issues if they took up value addition activities. Labour scarcity (mean score 28.63) and lack of government support (mean score 25.89) were the other constraints faced by farmers in taking up value addition.

Shinde-Desai et al (2013) also reported that harvesting of immature cashew by the farmers,

Table 3. Constraints faced by farmers in value addition of cashew

Constraint	Garrett's mean score	Rank
Lack of capital	60.01	I
Lack of awareness on processing	50.09	II
Lack of physical facilities	44.02	III
Labour scarcity	28.63	IV
Lack of government support	25.89	V

degraded quality of raw material, irregular supply of electricity, increasing prices of electricity, shortage of capital, high rate of interest on loan, low price in local market, shortage of labourers were the major constraints reported by the cashew nut processors.

CONCLUSION

Most of the cashew producing farmers were above 50 years of age and were primarily educated. Maximum number of farmers had more than 25 years of experience. Large number of farmers were small and marginal having less than 2 ha of land. For many of the farmers, agriculture was their lone employment followed by daily wages. This explained the farmers' dependence on agriculture and cashew crop for employment and income generation.

Pest and disease occurrence was the major constraint faced by the cashew farmers. High demand of labour for harvesting and unfavourable climate such as failure of rainfall, decreased ground water level and untimely showers were the other major constraints faced by the farmers in cashew cultivation. In taking up processing of cashew apple and primary value addition activities of cashew nut, farmers stated lack of adequate capital and lack of awareness on the different value-added products as their major constraints. Government could consider the large number of small and marginal farmers while taking decisions on cashew promotion measures. Promotion of high yielding pest and disease resistant varieties would help the farmers. Government would also take proper policy measures to create awareness and promote value addition activities among the cashew farmers for realizing better income.

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