



CONSTRAINTS PERCEIVED AND SUGGESTIONS OFFERED BY THE INDIAN CASHEW GROWERS IN ADOPTION OF HIGH DENSITY PLANTING

R. Jayasankar¹ P.R. Sivapriyan² and R. Muthukumar³

^{1&3}Assistant Professors, ²PG Scholar, Department of Agricultural Extension,
Faculty of Agriculture, Annamalai University, Annamalai nagar – 608 002, Tamil Nadu.

Abstract

High Density Planting (HDP) in cashew cultivation is the important innovative tool in the hands of farmers to improve the production, productivity and income. It involves less spacing, more plant population, pruning, better irrigation and nutrient management to increase the yield. Unfortunately majority of the farmers are following primitive and traditional practices in cashew. An understanding of appropriate high yielding varieties, positive HDP in cashew cultivation practices and adoption are very much needed for the present situation.

An innovation to become popular among farmers, initially it has to face a lot of difficulties in terms of farmer's understanding the concepts, developing a favourable attitude, getting the required inputs and ensuring a good extension service. Unless the constraints are identified and appropriate actions taken, the adoption level will be less. Hence the present study was aimed to assess the constraints experienced by the cashew growers in adopting the recommended HDP practices and to suggest the remedial measures to overcome those constraints.

The study was conducted in Panruti and Kurinjipadi blocks of Cuddalore district in Tamil Nadu (India) and proportionate random sampling was employed to select 120 sample respondents from the eleven selected villages from the above blocks. Major constraints experienced by the respondents were "Fear about natural disaster" cent per cent, "Non availability of labour" (89.20 per cent), "High cost of labour" (71.60 per cent), "Inadequate credit facilities" (70.00 per cent), "Pest and diseases problems" (58.30 per cent), "Non availability of inputs in required quantity" (55.00 per cent), "Complexity of new practices" (48.30 per cent) and "Non availability of inputs in right time" (40.80 per cent). The suggestions offered by the respondents are Stop the MGNREGA in peak seasons or divert the labourers to works in private farms (93.30 per cent), Provide more credits at low interest rate (77.50 per cent), Need pest and diseases resistant varieties (70.80 per cent), Supply the inputs in correct time and required quantity (50.80 per cent).

Keywords: HDP, cashew growers, constraints, suggestions

Introduction

India occupies the first place in terms of area with 1.03 million ha under cashew cultivation and second place in production. India needs about 16 lakh metric tones of raw cashew nut to feed. But we produce about 6.70 lakhs metric tones of raw cashew nut annually (2015-16). Hence, the balance quantity of 8.0 to 9.0 lakh metric tones of raw cashew nuts has to be imported from African and South East Asian countries. Same time India also exports about 0.9634 lakh metric tonnes (2015-16) of cashew kernel to over 65 countries of the world. Quality of Indian cashew is rated as best in the global market. In Tamil Nadu cashew plantation covering 141.58 thousand ha and producing 67.65 metric tones per year. (www.dccd.gov.in)

To meet the future demand for cashew, the production of cashew has to be increased and sustained. The possibility of increasing the cashew area is limited due to various factors like lack of water availability, natural disaster etc., As a result, the cashew growers are shifting to other crops, leading to shortfall in cashew area. The only a way to step up supply side is to increase productivity per acre. It could be achieved only if concentrated efforts are taken in the improved method of cashew cultivation. HDP in cashew cultivation is the important innovative tool in the hands of farmers to improve the production, productivity, double the income of famers, and increase the export quality of nuts, by involving in the set of HDP practices in cashew cultivation that involves less spacing, more plant population, pruning, better irrigation and nutrient management to increase the yield. Unfortunately majority of the farmers are following primitive and traditional practices in cashew. An understanding of appropriate high yielding varieties, positive HDP in cashew cultivation practices and adoption are very much needed for the

present situation. Keeping this in view, the present study was aimed to assess the constraints experienced by the cashew growers in adopting the recommended HDP practices and to suggest the remedial measures to overcome those constraints.

Methodology

The study was carried out in Cuddalore district since it stands first in cashew production in Tamil Nadu. From the thirteen blocks of Cuddalore district, Panruti and Kurinjipadi blocks were purposefully selected based on the maximum area under cashew cultivation and it is the principal cashew growing blocks. In Panruti block, seven villages viz., Kelakollai, Vegakollai, Siruthondamadevi, Marungur, Keelakuppam, Kadampuliyur and Pathirakottai and in Kurinjipadi block five villages viz., Vengadampettai, Keelur, Ayipettai, Puliurkattusagai and Vasanankuppam which were having maximum area in HDP in cashew cultivation were selected for the study. The samples of one hundred and twenty respondents were selected from the twelve villages by using proportionate random sampling method.

The data were collected with the help of a well structured and pre-tested interview schedule. The collected data were analyzed with statistical tools viz., percentage analysis and cumulative frequency method in this study

Results and Discussion

An innovation to become popular among farmers, initially it has to face a lot of difficulties in terms of farmer's understanding the concepts, developing a favourable attitude, getting the required inputs and ensuring a good extension service. Unless the constraints are identified and appropriate actions taken, the adoption level will be less. Hence, the

constraints analysis is an important objective of any social study. The constraints experienced by the respondents in adopting the recommended HDP practices in cashew cultivation in Cuddalore district were studied.

I. Constraints Experienced by the Respondents in Adoption of the Recommended HDP Practices

The constraints experienced by the respondents in adoption of recommended HDP practices were ranked according to the number of respondents reported and the salient findings are presented in Table 1.

Table 1 : Constraints experienced by the respondents in adoption of recommended HDP practices (n=120)

Sl.No.	Constraints	Number*	Per cent	Rank
1	Lack of interest	17	14.20	X
2	Lack of confidence towards various HDP practices	34	28.30	IX
3	Fear about natural disaster	120	100.00	I
4	Non availability of inputs in right time	49	40.80	VIII
5	Non availability of inputs in required quantity	66	55.00	VI
6	Inadequate credit facilities	84	70.00	IV
7	Non availability of labour	107	89.20	II
8	High cost of labour	86	71.60	III
9	Pest and diseases problems	70	58.30	V
10	Complexity of new practices	58	48.30	VII

*Multiple responses

Table 1 revealed that cent per cent of the respondents reported “Fear about natural disaster” as their first and foremost constraint followed by “Non availability of labour” as their second constraint (89.20 per cent). “High cost of labour” was the third important constraint expressed by 71.60 per cent of the respondents. “Inadequate credit facilities”, “Pest and diseases problems” “Non availability of relief material in required quantity”, “Complexity of new practices” and “Non availability of relief material in right time” whereas found to be the fourth, fifth, sixth, seventh and eighth constraints expressed by 70.00, 58.30, 55.00, 48.30 and 40.80 per cent of the respondents respectively.

“Lack of confidence towards various HDP practices” and “Lack of interest” whereas found to be the ninth and tenth constraints expressed by 28.30 and 14.20 per cent of the respondents respectively.

1.1. Fear about natural disaster

“Fear about natural disaster” was the major constraint reported by cent per cent of the cashew growers. The Cuddalore district belongs to one among the costal districts of Tamil Nadu and prone to natural calamities. In 2011, the cyclone ‘Thane’ was damaged the entire Cuddalore district severely. The outcome of the disaster crucially destroyed the old cashew trees which were high yielding, leading to complete economic loss. The initial investment is high for replanting as well as income generation occurs after a long period, also subjected to natural disasters often being near the coastal areas. So the respondents were psychologically feared about the natural disaster. This is agreement with the findings of Balarubini *et al.* (2017)

1.2. Non availability of labour

The second and foremost constraint expressed by 89.20 per cent of the respondents was “non-availability of labour”. During the peak period of every season all the farmers would start their work at the same time hence they would have been a heavy demand for labours. Further now-a-days the agricultural labourer prefers to work on the MGNREGA, Ministry of Rural Development scheme. In addition these, absence of adequate number of family labourers due to the nuclear family systems would have also contributed the

labour scarcity. Farm labourers are slowly moving to other occupations. Even though the labourers are available, they were not skillfully trained, so they were not sincere in carry out the farm operations in time and wastage the inputs.

These may be the reason for the above constraint. This finding is in concordance with findings of Gokul Pranesh (2017).

1.3. High cost of labour

“High cost of labour” was the third important economic constraint reported by around three-fourth (71.60 per cent) of the respondents. The respondents felt that the increased wages for labourers was an important aspect which increases the cost of production. The agricultural labourers demand higher wages irrespective nature of work. This might be due to the guaranteed and high wages employment in industry and other sectors. Farm labourers are slowly migrating to cities results in the non-availability of labourers for the agricultural operations. Hence, higher wages are demanded. This finding is in accordance with findings of Rajiv Gandhi (2010).

1.4. Inadequate credit facilities

“Inadequate credit facilities” were reported by 70.00 per cent of the respondents. Most of the respondents did not have adequate savings for the purchase of vital inputs. They always depend on co-operative credit societies and commercial banks. The amount sanctioned by these agencies was not adequate to purchase vital inputs and machineries. Hence, the respondents would have expressed this as a constraint. This finding is in accordance with findings of Loganathan (2015)

1.5. Pest and disease problems

“Pest and disease problems” was reported by 58.30 per cent of the respondents. Damages caused by the stem and root borer leads to permanent wilting, withering and drying of branches. Fruit and nut borer causes direct loss of economic produce leading to inferior quality and reduced yield. Diseases like powdery mildew and anthracnose also contribute to yield loss and quality of produce. This finding derives support from the findings of Nightingale (2017)

1.6. Non availability of inputs in required quantity

“Non availability of inputs in required quantity” was felt as constraint by 55.00 per cent of the respondents. Mostly all the respondents started their farm operations under Government schemes at a same time. Supplying of inputs to all beneficiaries at a same time leads non availability of inputs in required quantity. This finding is in accordance with findings of Siddharthan (2011)

1.7. Complexity of new practices

“Complexity of new practices” was reported by nearly half (48.30 per cent) of the respondents. The basic important practices of HDP in cashew cultivation like planting cashew grafts, maintaining correct spacing in the field, staking, drip irrigation, fertigation, deblossing pruning and practicing intercropping to utilize land effectively are difficult to following by the respondents. This may be the reason for the reported constraint. This findings draws its support from the findings of Ram Sundar (2016).

1.8. Non availability of inputs in right time

“Non availability of inputs in right time” was the eighth important constraint reported by two-fifth 40.80 per cent of the respondents. Mostly all the respondents started their farm operations under Government schemes at a same time. Supplying of inputs to all beneficiaries at a same time leads non availability of inputs in right time.

Table 2 : Suggestions offered by the respondents to adopting overcome the constraints in adoption of recommended HDP practices (n=120)

Sl. No.	Suggestions offered to overcome the constraints	Number *	Per cent
1	Stop the MGNREGA in peak seasons or divert the labourers to works in private farms	112	93.30
2	Provide more credits at low interest rate	93	77.50
3	Need pest and diseases resistant varieties	85	70.80
4	Supply the inputs in correct time and required quantity	61	50.80
5	Need more technical advices for complexity practices	32	26.60

*Multiple responses.

It could be seen from the Table that the respondents offered five major suggestions in accordance with the constraints expressed by them.

To overcome the foremost constraints like ‘non availability of labour’ and ‘high cost of labour’, majority of the respondents (93.30 per cent) suggested ‘stop the MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act) in peak seasons or divert the labourers to works in private farms’. If the Government officials to stop the scheme during the peak crop season or divert the labourers works under this scheme to do agricultural operations in private farms, it will highly helpful to farming community.

‘Provide more credits at low interest rate’ was suggested by more then three-fourth of the respondents (77.50 per cent) to solve the constraint ‘inadequate credit facilities’. Since majority of them was needed more credit points that may incur heavy losses due to unavailability of agriculture loan and high rate of interest. Hence, the State and Central Government and Co-op credit societies should make an intensive effort to provide credits with low rate of interest through proper credit points to manage their farm economically. This is agreement with the findings of Ram Sundar (2016).

1.9. Lack of confidence towards various HDP practices

“Lack of confidence towards various HDP practices” was reported by only 28.30 per cent of the respondents. It is having demerit of lack of visual impact and hence it would not serve the principle of seeing is believes. These conditions might have tempted the respondents to express the constraint. Moreover inadequate information on HDP practices like fertigation etc., in turn would have lead to lack of confidence. Loganathan (2017) also reported that lack of confidence in the new technologies was one of the most important constraints for adopting the new practices.

1.10. Lack of interest

Among all the identified problems, “lack of interest” was the meagre problem faced by the HDP farmers (14.20 per cent), because some of the respondents reported that they were not to change their usual culture operations followed traditionally. This may be the probable reasons for the constraint. This observation is in agreement with the earlier findings of Prithiviraj (2009).

II. Suggestions Offered by the Respondents to Overcome the Constraints in Adoption of Recommended HDP Practices

Suggestions offered by the respondents to overcome the constraints experienced by them in the adoption of recommended HDP practices are presented in Table 2.

‘Need pest and diseases resistant variety’ was suggested by nearly three-fourth of the respondents (70.80 per cent) to solve the constraint ‘Pest and disease problems’. The respondents expected the scientists of various research institutions release more pest and disease free varieties and the Officials of State Horticulture Department provide the new pest and disease resistant varieties at time. This finding derives support from the findings of Rajeswari (2011).

More than half of the respondents who expressed the constraints ‘non availability of inputs in required quantity’ and ‘non availability of inputs in right time’ suggested to ‘supplying the inputs in correct time and required quantity’ (50.80 per cent). Mostly all the respondents started their farm operations under Government schemes at a same time. The Extension functionaries assure the availability of inputs and supplying that to all beneficiaries in right time with required quantity.

The respondents faced ‘complexity of new practices’, ‘lack of confidence towards HDP practices’ and ‘lack of interest’ as important constraints and for one fourth of the respondents wanted ‘need more technical advices for complexity practices’ (26.60 per cent). They expect the extension workers conduct various programmes to create awareness, interest and convey the technical matters about

the HDP in cashew cultivation and it will build the confidants.

Conclusion

Major constraints experienced by the respondents were “Fear about natural disaster” cent per cent, “Non availability of labour” (89.20 per cent), “High cost of labour” (71.60 per cent), “Inadequate credit facilities” (70.00 per cent), “Pest and diseases problems” (58.30 per cent), “Non availability of inputs in required quantity” (55.00 per cent), “Complexity of new practices” (48.30 per cent) and “Non availability of inputs in right time” (40.80 per cent)

Secondary constraints were “Lack of confidence towards various HDP practices” (28.30 per cent) and “Lack of interest” (14.20 per cent).

The suggestions offered by the respondents are Stop the MGNREGA in peak seasons or divert the labourers to works in private farms (93.30 per cent), Provide more credits at low interest rate (77.50 per cent), Need pest and diseases resistant varieties (70.80 per cent), Supply the inputs in correct time and required quantity (50.80 per cent), Need more technical advices for complexity practices (26.60 per cent).

References

- Balarubini, M.; Karthikeyan, C. and Sujeetha, T.N. (2017). “A Detailed Study of Identification and Categorization of Various Constraints Faced by Cashew Growers in Growers in Cuddalore District of Tamil Nadu - Post Impact of Thane Strom”, *International Journal Current Microbiology Applied Sciences*, 6 (11): 3992- 4000.
- Gokul Pranesh, M. (2017). A Study on Entrepreneurial Performance of Turmeric Growers in Erode District of Tamil Nadu, Unpublished M.Sc. (Ag.) Thesis, Annamalai University, Annamalai Nagar.
- Loganathan, R. (2015). A Study on Knowledge and Extent of Adoption of Groundnut Growers in Vilupuram District, Unpublished M.Sc. (Ag.) Thesis, Annamalai University, Annamalai Nagar.
- Loganathan, B. (2017). A Study on Technological Gap and Yield Gap Analysis Among the Cotton Growers in Perambalur District, Unpublished M.Sc. (Ag.) Thesis, Annamalai University, Annamalai Nagar.
- Nightingale, K. (2017). Training needs of Groundnut Growers of Cuddalore District, Unpublished M.Sc. (Ag.) Thesis, Annamalai University, Annamalai Nagar.
- Prithiviraj, M. (2009). A Study on Adoption of Bio-Fertilizer in Sugarcane, Unpublished M.Sc. (Ag.) Thesis, Annamalai University, Annamalai Nagar.
- Rajeswari, K. (2011). Production Processing and Marketing Behaviour of Cashew nut Growers, Processors and Traders in Cuddalore District, Unpublished M.Sc. (Ag.) Thesis, Annamalai University, Annamalai Nagar.
- Rajivgandhi, A. (2010). Yield Gap Analysis in Paddy Among the Farmers of Cuddalore District, Unpublished M.Sc. (Ag.) Thesis, Annamalai University, Annamalai Nagar.
- Ram Sundar, T. (2016). A Study on Sustainable Sugarcane Initiative (SSI) Among the Cane Growers of Cuddalore District, Unpublished M.Sc. (Ag.) Thesis, Annamalai University, Annamalai Nagar.
- Siddharthan, R.R. (2011). A Study on Adoption of Integrated Nutrient Management Technologies by Paddy Farmers, Unpublished M.Sc. (Ag.) Thesis, Annamalai University, Annamalai Nagar.