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Research Article

Training needs of farmers of cashew based dryland farming system on cashew cultivation and intercrops cultivation

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SUMMARY : The study was focused on cashew based dryland farming in an attempt to assess the training need and constraints faced by the cashew based dryland farmers. In Tamil Nadu ,Ariyalur district was selected purposively for this study. Cashew cultivation is a predominant one. Ariyalur district stands first in the cashew cultivation and with the coverage of 28,368 ha. Considering the above facts, Ariyalur district was selected purposively for this study .The most important constraints reported to have been faced by cent per cent of the respondents was non-availability of labour during harvesting. In cashew cultivation, during pruning and harvesting required huge labourers. There were eight aspects on which the respondents needed trainings on cashew cultivation. There were cent per cent respondents who needed training on pest and disease management, labour saving implements and value added products.

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KEY WORDS:
Cashew based dryland farming, Extent of adoption, Intercrops cultivation, Cashew, Constraints

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BACKGROUND AND OBJECTIVES

Cashew is an important plantation crop of India. India was the first country to exploit the international trade of cashew kernels a century ago and now India occupies a supreme position in the world and annually India export more than 1.25 lakh tonnes of cashew kernels and earns over Rs.2700 crores as foreign exchange. Cashew research started in India only during 1950s. .Large number of cashew varieties have been developed and released. Several useful agronomic and plant protection techniques have been developed. Improved package of practices is recommended. India has large number of cashew production technologies.

But there is a need to take sincere efforts for transferring these technologies to farmers' fields. Cashew is now fast spreading to non-traditional area and farmers are evincing keen interest in this crop. If cashew is produced at internationally competitive price we can easily face the challenges posed by the countries such as Vietnam and Brazil. There is great scope to expand area under cashew in north eastern hilly region. Cashew can organically be grown in this region which can fetch higher price in international market. By 2016, India can hopefully become self-sufficient in raw nut production which is anticipated at 18 lakh tons (Bhat, 2007). Keeping the above facts in mind, the present study was formulated with the specific objectives.

– To know the training needs of the farmers of cashew based dryland farming system.

– To identify the constraints encountered by the farmers of cashew based dryland farming system.

RESOURCES AND METHODS

The study was focused on cashew based dryland farming in an attempt to assess the training need and constraints faced by the cashew based dryland farmers. In Ariyalur district, cashew cultivation is a predominant one. Further, in the state, Ariyalur district stands first in the cashew cultivation and with the coverage of 28,368 ha. Considering the above facts, Ariyalur District was selected purposively for this study. There were 28 Panchayat Villages in Sendurai block. Among

these 28 villages, three villages were randomly selected following the random sampling procedure. The selected villages were Ponparappi, Sirukalathur and Maruvathur. There were 35 Panchayat villages in Jayamkondam block. Among these 35 villages, three villages were randomly selected by following the random sampling procedure. A preliminary investigation was made to identify the cashew based dryland farming. A sample of 20 cashew based dryland farm holdings were selected from each village by using simple random sampling technique. The total sample size was 120 for the study.

Training need in this study has been operationalised as the required level of training by respondents on various aspects of crop cultivation under cashew based dryland farming system. Training need will be assessed by focus group discussion supplemented by framed schedule.The respondents were asked to indicate the problems faced by them under cashew based dryland farming. The problems enlisted were ranked based on percentage analysis.

OBSERVATIONS AND ANALYSIS

Training needs of farmers of cashew based dryland farming system on cashew cultivation:

In agriculture, there always exist a scope in increasing the productivity and income. This required updating the knowledge and skill of the person engaged in such activities so that they can adopt them to the maximum extent possible.

There were eight aspects on which the respondents needed trainings on cashew cultivation. There were cent per cent respondents who needed training on pest and disease management, labour saving implements and value added products (Table 1). The prevalence of pest problems in cashew cultivation which inturn caused huge economic loss. Hence, the cent per cent of the farmers needed training on pest and disease management. Further, training on value addition has emerged as a important training need as reported by cent per cent of the respondents.

The price of cashew produce was found to be highly fluctuating and the farmers did not get remunerative prices. It makes general awakening among the cashew farmers about value addition to their produce to get better economic return. As farmers are not affordable to create infrastructural facilities for processing the produce to make value addition, infrastructural facilities need to be created by the government which in turn facilitate the farmers to go for value addition of produce.

Training on labour saving implements will enable them to considerably reduced the labour requirements for intercultural operations of cashew like pruning, weeding, fertilizer application etc., These factors would have caused the cent per cent of the respondents to perceive the training need on this aspect.

The other areas on which the respondents needed trainings were propagation (75.00%), post harvest technologies (75.00%), organic farming (58.33%), selection of variety (50.00%) and pruning (25.00%).

Training needs of farmers of cashew based dryland farming system on intercrop cultivation:

Four trainings on intercrops cultivation *viz*., namely use of plant protection chemicals, manures and fertilizer application, selection of tubers and preparation of value added products from gloriosa could be considered as the important areas as

Table 1 : Training needs on cashew cultivation **(n=120)**

Sr. No.	Subject areas	Needed	
		Number	Per cent
Training needs in cashew cultivation			
1.	Selection of crop variety	60	50.00
2.	Seed treatment	-	-
3.	Planting season	-	-
4.	Propagation	90	75.00
5.	Preparation of field	-	-
6.	Irrigation management	-	-
7.	Intercropping	-	-
8.	Pruning	30	25.00
9.	Weed management	-	-
10.	Pest and disease management	120	100
11.	Post harvest technologies	90	75.00
12.	Labour saving implements	120	100
13.	Organic farming	70	58.33
14.	Value added products	120	100

more than 50.00 per cent of the respondents have reported them (Table 2).

The prevalence of tuber rot in gloriosa may be the reason for the farmers perceiving the need for training in it. With the increased cost of various pesticides and chemical fertilizers, the farmers were found confused in striking at a compromise between the cost and application of recommended doses of fertilizers and pesticides. Hence, the training on plant

Table 2 : Training needs on gloriosa and black gram cultivation

Sr. No.	Training needs	Number	Per cent
Training needs in gloriosa cultivation (n=50)			
1.	Selection of tubers	26	52.00
2.	Tubers treatment	-	-
3.	Season and planting	-	-
4.	Ridges and furrows	-	-
5.	Panthal establishment	-	-
6.	Manures and fertilizer application	27	54.00
7.	Irrigation management	-	-
8.	Hand pollination	-	-
9.	Plant protection chemicals used	28	56.00
10.	Preparation of value added products from gloriosa	26	52.00
Training needs in black gram cultivation (n=60)			
1.	Field preparation	-	-
2.	Seed treatment	20	33.33
3.	Sowing of seeds	-	-
4.	Irrigation management	-	-
5.	Spraying of DAP	-	-
6.	Weed management	-	-
7.	Use of plant protection chemicals	18	30.00
8.	Post harvest technology	-	-

Table 3 : Constraints as perceived by the farmers of cashew based dryland farming system on crop husbandry (n=120)

Sr. No.	Constraints	Number	Per cent
Crop husbandry			
1.	Non-availability of labour during harvesting	120	100
2.	Crop insurance not covering cashew.	118	98.33
3.	Lack of management measure for stem borer	115	95.83
4.	High cost of plant protection chemicals	110	91.66
5.	High cost of labour	110	91.66
6.	Low price for nuts	108	90.00
7.	High cost of inputs like fertilizers	105	87.50
8.	Lack of proper marketing channel	100	83.33
9.	Lack of infrastructure facilities for value addition	98	81.66
10.	Water scarcity	95	79.16
11.	Poor yield	90	75.00
12.	Lack of adequate extension support	90	75.00
13.	Non-availability of institutional loan	90	75.00
14.	Lack of knowledge on plant protection management	80	66.66
15.	Yield loss due to inconsistent climatic conditions	75	62.50
16.	Lack of knowledge on fertilizer management	60	50.00
18.	Lack of availability of good quality planting material	50	41.66
19.	Nonavailability of high yield and bold nuts variety	50	41.66

protection needed by 56.00 per cent of the gloriosa growers.

With respect to training needs on black gram cultivation, two areas namely seed treatment and use of plant protection chemicals in which respondents needed training. Gloriosa is a commercial crop with high economic value. This might be the reason for gloriosa farmers needed trainings on various aspects with high level of economic motivation as compared to black gram growers.

Constraints as perceived by the farmers of cashew based dryland farming system:

The most important constraints reported to have been faced by cent per cent of the respondents was non-availability of labour during harvesting (Table 3). In cashew cultivation, during pruning and harvesting required huge labourers. In the study area, prevalence of high wages for labour coupled with non availability of labour during peak season necessitated the respondents (100%) to expressed this constraint.

Majority of the cashew respondents (98.33%) reported that cashew crop was not included under crop insurance coverage .Further, recently huge damage was occurred in cashew crop due to Dhane Storm in the study area. Hence, this constraint perceived by large majority of the respondents.

The third important constraint was lack of management measure for cashew stem borer (95.83%). Majority of the farmers stated that root feeding of monocrotophos is not an effective management practice for cashew stem borer management. Hence, majority of them reporting it as a constraint.

High cost of plant protection chemicals and high cost of labour were expressed as constraints by majority of the respondents (91.66%). Hence, the Department of Horticulture has to take concrete extension efforts to transfer of technology on pest management and utilization of labour saving implements to solve these problems. Further, Government has to make necessary arrangements to supply of labour saving equipments to cashew growers on hired basis.

Low price of cashew nuts (90%), high cost of fertilizer (87.50%), lack of proper marketing channel (83.33 %) and lack of infrastructural facilities for value addition (81.66%) were also felt as other constraints by majority of the respondents.

Water scarcity could also be considered as the major constraints reported by majority of the respondents (79.16%). Other constraints encountered by the respondents were poor yield (75.00%), lack of adequate extension support (75.00%), non-availability of institutional loan (75.00%), lack of knowledge on plant protection management (66.66 %), yield loss due to inconsistent climatic conditions (62.50%), lack of knowledge on fertilizer management (50.00%), lack of availability of good quality planting material (41.66%) and nonavailability of variety with high yield and bold nuts (41.66%).

Conclusion:

From the above constraints, it could be concluded that the integrated form of transfer of technology on various dimensions of cashew cultivation was very much needed for their socio-economic upliftment of cashew growers. Four trainings on intercrops cultivation *viz*., namely use of plant protection chemicals, manures and fertilizer application, selection of tubers and preparation of value added products from gloriosa could be considered as the important areas of training need to be imparted to the cashew growers . Further, Government has to make necessary arrangements to supply of labour saving equipments to cashew growers on hired basis

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