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TRAINING NEEDS OF CASHEW GROWERS ON FARM PRACTICES OF MAJOR SUBJECT MATTER AREAS IN INDIA

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Abstract

India has the largest area in cashew followed by Brazil. India is the largest producer, processor, exporter, and consumer of cashew in the world. Raw cashew nuts are imported from countries like Vietnam, Tanzania, Ivory Coast continued to be major exported raw nuts into India. Hence there is an urgent need to increase the production to meet the requirement of the processing factories. The average productivity of raw cashew nut in Tamil Nadu is 420kg per hectare per year. Compare to other cashew production states in India it is the lowest productivity. Ariyalur district ranks first in the area with 30,343 ha during 2015-2016 than other cashew producing districts in Tamil Nadu. Majority of the cashew farmers are still practicing traditional technologies in cashew on farm practices. This may be due to considerable gap between the technology developed on the research farms and its application at the field level by the farmer. Transfer of technology is a function of many factors training being a crucial one. Keeping this in view, the present study was taken into Ariyalur District of Tamil Nadu with hundred and twenty cashew growers as respondents and ranked the training needs of cashew growers on major subject matter areas in cashew on farm practices among plant protection, nutrient management, weed management, flowering management, market avenues, inter-cropping, planting techniques, selection of varieties, land preparation, irrigation management and harvesting.

Key words: Cashew growers, training needs

Introduction

Cashew (*Anacardium occidentale*) belongs to the family Anacardiaceae. It's otherwise called as wonder nut, zero cholesterol nuts, dollar earning crop and gold mine of wasteland. Cashew is generally described as poor man's crop and rich man's food. Cashew is a native of Brazil, which was spread by Portuguese to different parts of the world primarily for soil conservation, afforestation, and wasteland development. Cashew was introduced to India in the Malabar Coast in the 16th century and subsequently dispersed to other parts of the country. The cashew industry provides employment to more than 5 lakhs people in the farms and factories, most of them in the rural areas. In cashew processing factories, over 95 per cent of the workers are women from the lowest strata of society, mainly belonging to socially and economically backward communities. Thus, apart from its economic significance, cashew industry has the potential to play a leading role in the social and financial uplift of rural poor. India has the largest area in cashew followed by Brazil. India is the largest producer, processor, exporter, and consumer of cashew in the world. In India cashew is mainly grown in Maharashtra, Kerala, Andhra Pradesh, West Bengal and Orissa. It's also grown in non-traditional areas like Madhya Pradesh, Manipur, Tripura, Meghalaya and Andaman and Nicobar islands. Madhya Pradesh has the largest area followed by Andhra Pradesh (150000 ha) and Kerala (102000 ha). The highest productivity of Cashew nut was reported from Maharashtra (1200 kg/ha/year) followed by Kerala (900kg/ha/year).

The average productivity of raw cashew nut in Tamil Nadu is 420 kilogram per hectare per annum; it is the lowest productivity among the States. Ariyalur district ranks first in the area with 30,343 ha during 2015-2016 than other cashew producing districts in Tamil Nadu. Majority of the cashew farmers are still practicing traditional technologies in cashew on farm practices. This may be due to considerable gap between the technology developed on the research farms and its application at the field level by the farmer. The transfer of technology plays a vital role in bridging the gap between the research farms and farmer's farm. Transfer of technology is a function of many factors training being a crucial one. An attempt to design a suitable extension strategy to stabilize the cashew productivity requires a complete understanding of the existing level of knowledge of cashew farmers and their training needs. With this background, the present study entitled training needs of cashew growers on major subject matter areas in cashew growers on farm practices was carried out with the practices viz., plant protection, nutrient management, weed management, flowering management, market avenues, inter-cropping, planting techniques, selection of varieties, land preparation, irrigation management and harvesting.

Materials and Methods

This study was conducted in Ariyalur district, where cashew is the predominant crop and cultivated as a major crop. Ariyalur district occupies the first position in the state based on area under cashew cultivation. Further, the district is familiar to the student researcher and such familiarity has

been considered necessary for the successful conduct of the study. Ariyalur district has six blocks *viz*., Andimadam, Ariyalur, Jayamkondam, Sendhurai, T.Palur, Udaiyarpalayam. Of the six blocks, Andimadam block is selected based on the maximum area under cashew in the District. A list of villages undertaking cashew cultivation was collected from the office of the ADH of Ariyalur district. Out of this, 120 cashew growers were selected from five villages based on the maximum area under cashew cultivation with proportionate random sampling method.

It could be revealed from the Table 1, that the training needs for 'plant protection'(MS-2.84), 'nutrient management' (MS-2.76), 'weed management' (MS-2.10), 'flowering management' (MS-2.01), 'market avenues' (MS-1.96), 'inter-cropping' (MS-1.79), 'planting techniques' (MS-1.51), 'selection of varieties' (MS-1.23), 'land preparation' (MS-1.22), 'irrigation management' (MS-1.08) and 'harvesting (MS-1.07) were perceived in the descending order of importance. It could be inferred that out of the eleven major subject areas cashew cultivation, 'plant protection' (MS-2.84) and 'nutrient management' (MS-2.76) were the most needed areas ranged from 2.25 to 3.00. 'weed management' (MS-2.10), 'flowering management' (MS-2.01), 'market avenues' (MS-1.96), 'inter-cropping' (MS-1.79) and 'planting techniques' (MS-1.51) were the technologies for which the respondents expressed need for training as the scores for these areas were ranging from 1.50 to 2.24. Training was not needed in the remaining four areas viz. , 'selection of varieties' (MS-1.23), 'land preparation' (MS-1.22), 'irrigation management' (MS-1.08), and 'harvesting ' (MS-1.07), as the scores for these areas ranged from 0.75 to 1.49.

It could be reported form the Table 3, that training need was expressed for the time and method of application of FYM (MS-2.78), time and method of application of NPK fertilizers (MS-2.80), time and method of application for foliar spray (MS-2.78), time and method of application of micronutrients (MS-2.76), indicators of nutrient deficiency in cashew (MS-2.71) are in the descending order of preference with relate to the various operations in nutrient management practices. Correct quality of NPK fertilizers have to be applied at the appropriate time in order to boost up the nut yield. The farmers were aware of the importance of the nutrient application. In order to avoid the immature nut droppings and flower droppings farmers needed training on micro nutrient application NAA 50 ppm concentration. In the above practices respondents demanded more number of training.

It could be revealed from the Table 4, that training need was expressed for the manual methods (MS-1.49), followed by applied for herbicide mention the name (MS-2.71). As day-by-day, the availability of labour is becoming difficult, that farmers expressed training need for weed management.

It could be inferred from the Table5, that training needs were expressed for the time of deblossming (MS-1.18), followed by mention the control measures of flower shedding (MS-2.85). Flowering management is very essential that will influence the yield. In this case farmers had expressed training needs for the flowering management in cashew growers on farm practices.

It could be observed from the Table 6, that training was expressed for the regulated market for marketing of cashew nuts (MS-1.00) followed by market intelligence(MS-2.93). Most of the cashew farmers sell their nut to the middle man, so good portion of their profit is usually shared by the middle man and brokers. Naturally the cashew growers preferred to have more training on regulated market for marketing of cashew nut and training on market intelligence to avoid middle man and brokers.

It could be concluded from the Table 7, that training needs were expressed the time of intercrop (MS-1.44), followed by nutritional competency of cashew crop with intercropping (MS-1.42). Most of the cashew growers were interested to do intercrop withy cashew, but they did not have adequate information about the time of intercrop, nutritional competency and spacing requirement of intercrop. So they needed training in above practices.

It could be revealed from the Table 8, that training need was expressed for the planting season (MS-1.96) followed by the depth at which the graft has to be kept insider the pit (MS-1.07). Planting techniques is very essential that will influence the yield. In this case farmers had expressed training needs for the best planting techniques in cashew growers on farm practices.

It could be inferred from the Table 9, that training need was not expressed for the recommended varieties for the area (MS-1.21), followed by characteristics of recommended varieties (MS-1.25). The data reveals that the respondents had not expressed any training need for selection of varieties. The reason for majority of the respondents not needed category. This is clearly indicates that the respondents were already familiar with the selection of varieties.

It could be observed from the Table 10, that training was not expressed for the land preparation (MS 1.06), followed by designing a layout for a cashew field (MS 1.10) and forming a pit (MS 1.50). Traditionally they have been following similar practices. So they have not the expressed need training in above practices.

It could be concluded from the Table 11, that training was not expressed for the time of irrigation (MS-1.05) and method of irrigation (MS-1.125). Traditionally they have been following similar practices. So they have not the expressed need training in above practices.

It could be reported from the Table12, that training was not expressed for the right stage for harvest (MS-1.00). This was followed by training need for method of harvest (MS-1.15). If the cashewnut harvested before colour change that means immature pseudo part) the weight of the nut would be drastically reduced. The fat content is also reduced when compared to well mature nut. The respondents have not expressed any training need for harvesting.

Conclusion

From the above finding and discussion the respondents expressed high level of training needs for the 'plant protection' (MS-2.84), 'nutrient management' (MS-2.76) were the most needed areas on which training was demanded as the score for these areas ranged from 2.25 to 3.00. 'weed management' (MS-2.10), 'flowering management' (MS-2.01), 'market avenues' (MS-1.96), 'intercropping' (MS-1.79) and 'planting techniques' (MS-1.51) were the technologies for which the respondents expressed need for training as the scores for these areas were ranging from 1.50 to 2.24. Training was not needed in the remaining four areas viz., 'selection of varieties' (MS-1.23), 'land preparation' (MS-1.22), 'irrigation management' (MS-1.08) and 'harvesting' (MS-1.07) as the scores for these areas ranged from 0.75 to 1.49.

Results and Discussion

Table 1: Training needs of cashew growers on major subject matter areas in cashew on farm practices

n= (120)

Sl.No .	Major subject matter areas	Mean score	Rank
1.	Plant protection	2.84	I
2.	Nutri ent management	2.76	II
3.	Weed management	2.10	III
4.	Flowering management	2.01	IV
5.	Market avenues	1.96	V
6.	Inter-cropping	1.79	VI
7.	Planting techniques	1.51	VII
8.	Selection of varieties	1.23	VIII
9.	Land preparation	1.22	IX
10.	Irrigation management	1.08	X
11.	Harvesting	1.07	XI

Table 2: Training needs of cashew growers on specific subject matter areas in plant protection

(n=120)

Sl. No.	Items	Most needed		Needed		Not needed		Mean score
		No.	percent	No.	Percent	No.	Percent	
1.	**Major pest** 1.Tea mosquito bug 2.Stem borer 3.Root borer 4.Fruit borer	120	100	0	0.00	0	0.00	3.00
2.	**Major diseases** 1.Powerdy mildew 2.Anthracnose	96	80.00	24	20.00	0	0.00	2.80
3.	Chemicals control pest and diseases	104	86.66	16	13.34	0	0.00	2.86
4.	Preparation of spray fluids	84	70.00	36	30.00	0	0.00	2.70
Average mean score								**2.84**

Table 3: Training needs of cashew growers on specific subject matter areas in nutrients management

Sl. No .	Items	Most needed		Needed		Not needed		Mean score
		No .	Percent	No .	Percent	No . Pe	Percent	
1.	The time method of application FYM	94	78.33	26	21.67	0	0 .00	2.78
2.	The time and method of application NPK fertilizers	97	80.83	23	19.17	0	0.00	2.80
3.	The time and method of foliar spray	94	78.34	26	21.66	0	0.00	2.78
4.	The time and method of micronutrien ts	92	76.67	28	23.33	0	0.00	2.76
5.	Indicators of nutrients deficiency in cashew	86	71.70	34	28.30	0	0.00	2.71
Average mean score								**2.76**

Table 4: Training needs of cashew growers on specific subject matter areas in weed management

(n=120)

Sl . No .	Items	Most needed		Needed		Not needed		Mean score
		No.	Percent	No .	percent	No.	Percent	
1.	Manual methods	11	9.17	38	31.66	71	59.17	1.49
2.	Applied for herbicide mention the name	86	71.70	34	28.30	0	0.00	2.71
Average	**mean score**							**2.10**

Table 5: Training needs of cashew growers on specific subject matter areas in flowering management

(n=120)

Sl . No. .	Items	Most needed		Needed		Not needed		Mean score
		No.	Percent	No.	percent	No.	Percent	
1.	Time of deblossming	0	0.00	23	19.17	97	80.83	1.18
Mention the control measures of flower shedding		102	85.00	18	15.00	0	0.00	2.85
Average mean score								**2.01**

Table 6: Training needs of cashew growers on specific subject matter in market avenues (n=120)

SI. No.	Items	Most needed		Needed		Not needed		Mean score
		No .	Percent	No .	percent	No .	Percent	
1.	Regulated market for marketing of cashew nuts	0	0.00	0	0.00	12 0	100	1.00
2.	Market intelligence	98	81.66	22	18.34	0.00	0.00	2.93
Average mean score								**1.96**

Table 7: Training needs of cashew growers on specific subject matter areas in inter-cropping

Sl. No.	Items	Most needed		Needed		Not needed		Mean score
		No.	Percent	No.	percent	No.	Percent	
1.	The time of intercrop	10	8.33	34	28.34	76	63.33	1.44
2.	The nutritional competency of cashew crop with intercropping	73	60.83	37	30.83	10	8.34	2.51
3.	Spacing requirement for intercropping	14	11.67	23	19.16	83	69.17	1.42
Average mean score								**1.79**

Table 8: Training needs of cashew growers on specific subject matter areas in planting techniques (n=120)

Sl. No.	Items	Most needed		Needed		Not needed		Mean score
		No.	Percent	No.	percent	No.	Percent	
1.	Planting season	18	15.00	80	66.66	22	18.34	1.96
2.	The depth at which the graft has to be kept inside the pit	0	0.00	9	7.50	111	92.50	1.07
Average mean score								**1.51**

Table 9: Training needs of cashew growers on specific subject matter areas in selection of varieties (n=120)

Sl. No.	Items	Most needed		Needed		Not needed		Mean score
		No.	Percent	No.	Percent	No.	Percent	
1.	Recommended varieties for the area	0	0.00	26	21.66	94	78.34	1.21
2.	Characteristics of recommended varieties	0	0.00	30	25.00	90	75.00	1.25
Average mean score								**1.23**

Table 10: Training needs of cashew growers on specific subject matter in land preparation

(n=120)

Sl. No.	Items	Most needed		Needed		Not needed		Mean score
		No.	Percent	No.	percent	No.	Percent	
1.	Designing a layout for a cashew field	0	0.00	8	6.67	112	93.33	1.06
2.	Forming a pit	0	0.00	12	10.00	108	90.00	1.10
3.	The spacing requirement	9	7.50	42	35.00	69	57.50	1.50
Average mean score								**1.22**

Table 11: Training needs of cashew growers on specific subject matter areas in irrigation management

(n=120)

Sl. No.	Items	Most needed		Needed		Not needed		Mean score
		No.	Percent	No.	Percent	No.	Percent	
1.	Time of irrigation	0	0.00	6	5.00	114	95.00	1.05
2.	Method of irrigation	0	0.00	15	12.50	105	87.50	1.125
Average mean score								**1.08**

Table 12: Training needs of cashew growers on specific subject matter areas in harvesting

(n=120)

Sl. No.	Items	Most needed		Needed		Not needed		Mean score
		No.	Percent	No.	Percent	No.	Percent	
1.	Right stage for harvest	0	0.00	0	0.00	120	100	1.00
2.	Method of harvest	0	0.00	19	15.83	101	84.17	1.15
Average mean score								**1.07**

References

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