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Augmenting Farm Technology Transfer among Banana Growers using Mass Media Channels : Case Study from Tamil Nadu

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Abstract

Mass Communication refers to the process of disseminating and exchanging information through diverse media platforms to reach the masses. The role of mass media in dissemination of farm information to the farmers is vital. An attempt has been made to study the overall gratification on the functions of the media for Transfer of technology (ToT) on banana cultivation in Tamil Nadu. The overall gratification by the growers on the functions of the media for ToT on banana cultivation was documented using a five point scale. The variables such as farm experience and area of cultivation were selected as independent variables. The study revealed that the percentage of high level satisfaction on the functions of media for getting transfer of technology on banana cultivation was the highest 86.4 %among the banana farmers in 11-15 acres. The farmers having moderate experience 1-15 years were adopting maximum usage of mass media and central/ state agricultural institutes' information on banana cultivation.

Key words : *Farmer's Satisfaction, Mass Media Communication, Mass media exposure and area of cultivation*

Introduction

Banana and plantains are grown in about 120 countries. Total annual world production is estimated at 86 million tonnes of fruits. India leads the world in banana production with an annual output of about 14.2 million tonnes. Other leading producers are Brazil, Ecuador, China, Philippines, Indonesia, Costarica, Mexico, Thailand and Colombia. Irrespective of their commercial status, banana and plantains are referred as 'Poor man's apple'. Banana is globally ranked fourth, next to rice, wheat and maize in terms of gross value of production. It is a major staple food crop for millions of people as well as provides income through local and international trade. Among the starchy staple food crops, banana ranks third with respect to the total production (1)

In India banana ranks first in production and third in area among fruit crops. It accounts for 13% of the total area and 33% of the production of fruits. Production is highest in Maharashtra (3924.1 thousand tonnes) followed by Tamil Nadu (3543.8 thousand tonnes). In Tamil Nadu, Tiruchirappalli district is one of the major area and productions of banana in Tamil Nadu. The scientific efforts made by National Research Centre for Banana, Tiruchirappalli have overcome those constraints in banana cultivation and enhanced the production and productivity of banana. For wide spreading the banana production technologies, various extension agencies are functioning along with the knowledge centres. The mass media channels are also regularly reaching out banana growers with latest banana technologies. In this context, a study was conducted at Tamil Nadu for exploring the role of mass media channels in technology transfer.

Research Methodology

The single stage sampling method was used to select the samples from the major banana cultivating areas of Thottiaym, Lalgudi, Andanallur, Manachanallur, Tiruverambur, Manikandam, Uppliapuram, Musiri and Tiruchirappalli east & west blocks in Tiruchirapalli district. The correlation between variables area under banana cultivation and farm expereicne with the level of satisfaction was recorded using quantitative - Survey method. The relevant primary data was collected with the help of a well-structured questionnaire. The data was collected from 644 respondents and the responses were analyzed with SPSS version 11.5 statistical package.

Results and Discussion

Area under banana cultivation (in ac.) and level of satisfaction : The effect of area under banana cultivation (in ac.), the distributions of sample respondents according to area under banana cultivation (in ac.) the level of satisfaction on mass media channels (Table-1). It could be noted from the table that the level of satisfaction with respect to the total Banana cultivation of below 1 acre was

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Table-1 : Area under banana cultivation (in acres) Vs level of satisfaction.

Area under banana cultivation (in ac.)	N	Range		Mean	SD	Mean %	ANOVA	P
		Min	Max					
Below 1 acre	131	89	155	122.86	16.71	63.01	6.02	< 0.001**
2 - 5 acres	353	75	165	127.61	16.50	65.44		
6 - 10 acres	22	95	147	123.00	13.97	63.08		
11 - 15 acres	117	88	166	132.80	17.46	68.10		
16 - 20 acres	21	95	146	129.05	13.73	66.18		
Total	644	75	166	127.48	16.82	65.37		

* Significant at 5%; ** Significant at 1%

Table-1a : Area under banana cultivation (in acres) Vs level of satisfaction.

Area under banana cultivation (in ac.)	Level of satisfaction						Total
	Low		Medium		High		
	N	%	N	%	N	%	
Below 1 acre	15	11.5	100	76.3	16	12.2	131
2 - 5 acres	21	5.9	248	70.3	84	23.8	353
6 - 10 acres	6	5.1	70	59.8	41	35.0	117
11 - 15 acres	1	4.5	19	86.4	2	9.1	22
16 - 20 acres	1	4.8	15	71.4	5	23.8	21
Total	44	6.8	452	70.2	148	23.0	644

Table-1b : Chi square Test.

Factor	Calculated Chi-square value	Degrees of freedom	'p' Value	Remarks
Area under banana Cultivation (in ac.)	24.58	8	0.002	Highly Significant

ranged between 89 and 155 with an average of 122.86 (63.01%). The level of satisfaction among 2-5 acres was ranged between 75 and 165 with an average of 127.61 (65.44%). The level of satisfaction among 11-15 acres was with an average of 123 (68.10%) and the level of satisfaction among 16-20 yrs was ranged between 95 and 146 with an average of 129.05 (66.18%). Thus, it is inferred from the above analysis that the maximum level of satisfaction was among 11-15 acre respondents.

With a view to findingout the degree of association between area under banana cultivation (in ac.) of the respondents and level of satisfaction, a two-way table was prepared and the results are shown in the following table 1a. It is found from the table that the percentage of high level of satisfaction of the respondents was the highest (35 %) among the respondents with banana cultivation of 6-10 acres and the same was lowest (9.1 %) with respect to the total banana cultivation of 11 - 15 acres.

The percentage of medium level of satisfaction over the availability was the highest (86.4 %) with respect to the banana cultivation of respondents in 11-15 acres and the same was lowest (70.3 %) with respect to the banana cultivation of 2-5 acres respondents. The percentage of the low level satisfaction was the highest (11.5 %) with respect to the banana cultivation of Below 1 acre respondents and the same was lowest (4.5 %) with respect to the banana cultivation of 11-15 acres. In order to find out the relationship between the area under banana cultivation (in ac.) of the respondents and the level of satisfaction, a Chi-square test was used and result of the test is shown in the following table 1b.

It is noted from the above table that the 'p' value is less than 0.01 and hence the result is significant at 1 %. Hence, it is concluded that there is a highly significant association was found between the Area under banana cultivation (in ac.) of the respondents and the level of satisfaction.

Experience (in years) Vs level of satisfaction in banana cultivation : To study the effect of experience in banana cultivation (in years), the distributions of sample respondents according to experience in banana cultivation (in years) the overall satisfaction on the activities / functions of media for getting information & technology on banana cultivation are shown in the following table-2.

It could be inferred from the table-2 that the level of satisfaction among the Experience in banana cultivation (in years) of 0-5 was ranged between 89 and 150 with an average of 123.17 (63.16%) , the level of satisfaction among the experience in banana cultivation (in years) of 6-10 was ranged between 93 and 164 with an average of 126.46 (64.85%), the level of satisfaction among the experience in banana cultivation (in years) of 11-15 was ranged between 85 and 166 with an average of 130.86 (67.11%), the level of satisfaction among the experience

Table-2 : Experience in banana cultivation (in years) Vs level of satisfaction.

Experience in banana cultivation (in years)	N	Range		Mean	SD	Mean %	ANOVA	P
		Min.	Max.					
0 - 5	71	89	150	123.17	14.71	63.16	2.19	0.042*
6 - 10	130	93	164	126.46	17.47	64.85		
11 - 15	133	85	166	130.86	18.31	67.11		
16 - 20	118	75	158	127.80	15.84	65.54		
21 - 25	62	89	160	129.77	15.84	66.55		
26 - 35	88	91	165	126.59	17.73	64.92		
Above 35 years	42	94	155	124.79	13.52	63.99		
Total	644	75	166	127.48	16.82	65.37		

* Significant at 5%; ** Significant at 1%.

Table-2a. Experience in banana cultivation (in years) Vs Level of satisfaction.

Experience in banana cultivation (in yrs.)	Satisfaction Level						Total
	Low		Medium		High		
	N	%	N	%	N	%	
0 - 5	7	9.9	57	80.3	7	9.9	71
6 - 10	9	6.9	93	71.5	28	21.5	130
11 - 15	7	5.3	79	59.4	47	35.3	133
16 - 20	6	5.1	87	73.7	25	21.2	118
21 - 25	5	8.1	39	62.9	18	29.0	62
26 - 35	8	9.1	63	71.6	17	19.3	88
Above 35 years	2	4.8	34	81.0	6	14.3	42
Total	44	6.8	452	70.2	148	23.0	644

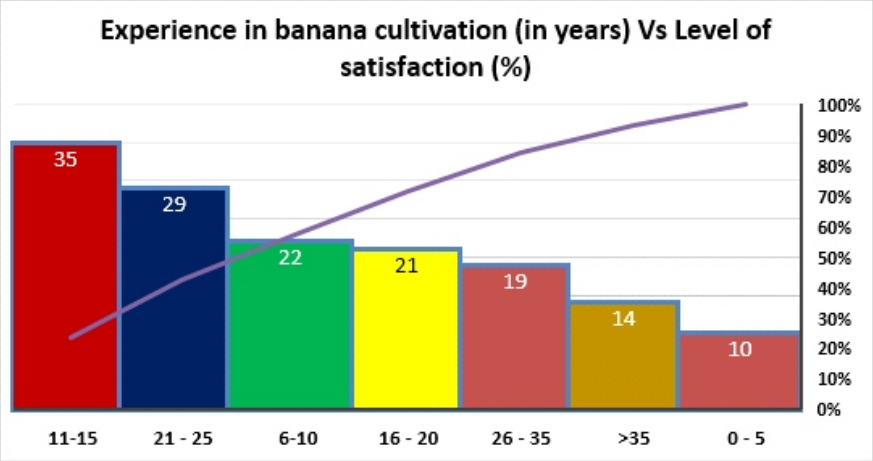

Fig.-1

Table-1b : Chi square Test.

Factor	Calculated Chi-square value	Degrees of freedom	'p' Value	Remarks
Area under banana Cultivation (in ac.)	25.01	12	0.015	Significant

in banana cultivation (in years) of 16-20 was ranged between 75 and 158 with an average of 127.80 (65.54%) , the level of satisfaction among the experience in banana cultivation (in years) of 26-35 was ranged between 91 and 165 with an average of 126.59 (64.92%) and the level of satisfaction among the experience in banana cultivation (in years) of above 35 years was ranged between 94 and 155 with an average of 124.79 (63.99%).

Further to test the significant difference between the mean scores among the demographic variable of experience in banana cultivation the ANOVA test was used and the result is shown in table-2. Since the p value is less than 0.05 there is a significant difference in the mean scores regarding satisfaction found with respect to experience in banana cultivation.

Thus, it is inferred from the above analysis that the maximum level of satisfaction was found among the Experience in banana cultivation (in years) of 11-15 years.

With a view to finding out the degree of association between experience in banana cultivation (in years) of the respondents and level of satisfaction, a two-way table was prepared and the results are shown in the following table-2a. and Fig.-1.

It is found from the table that the percentage of high level of satisfaction of the respondents was the highest (35.3 %) among the experience in banana cultivation (in years) of 11-15 years, whereas the lowest (9.9%) was found among the experience in banana cultivation (in years) of 0-5 years. The percentage of medium level of satisfaction of the respondents was the highest (81%) among the experience in banana cultivation (in years) of above 35 years, whereas the lowest was found in 11-15 years. The percentage of low level satisfaction of respondent was highest (9.9%) among the experience in banana cultivation (in years) of 0-5, whereas the lowest (4.8%) was found among the experience in banana cultivation (in years) of above 356 years.

In order to find out the relationship between the experiences in banana cultivation (in years) of the respondents and the Level of satisfaction a Chi-square test was used and result of the test is shown in the following table-2b.

It is noted from the above table that the 'p' value is less than 0.05 and hence the result is significant at 5%. Hence, it is concluded that there is a significant association found between the experience in banana cultivation (in years) of the respondents and the level of satisfaction.

Conclusions

The findings of the research study suggested that delivery of the socio economic status of the respondents such as land holding and farm experiences pattern also have an impact of satisfaction level of the respondents. Though smallholder farmers mainly depend on informal channels, mass media channels delivers agricultural information and knowledge in quicker span of time to larger audience. Very few respondents 3.26% cultivate banana crop with maximum area of 16-20 acres. A small group of respondents 19.72% are cultivating banana in contracting land. The farmers having moderate experience 1-15 years were adopting maximum usage of mass media and central/ state agricultural institutes' information on banana cultivation than the highly experienced 16–35 years farmers.

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