

Original Research Article

Management Efficiency of Tissue Culture and Conventional Banana Growers

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ABSTRACT

The present study was conducted to know the management efficiency of tissue culture and conventional banana growers in Nanded and Parbhani district of Marathwada region of Maharashtra state. Ten villages from each district thus total twenty villages were selected for the study. From each village, six tissue culture banana growers and six conventional banana growers, total of two hundred and forty respondents were selected for the study. Data were collected with the help of specially developed interview schedule. The statistical tools such as frequency, percentage, mean, standard deviation, co-efficient of correlation, multiple regression and 'Z' test for comparison were used for analysis of data. The findings showed that 71.66 per cent of the tissue culture and 73.33 per cent of the conventional banana growers were found with medium level of management efficiency. Independent variables namely education, experience in banana cultivation, land holding, training received, extension contact, mass media exposure, cosmopolitanism, scientific orientation, market orientation, competition orientation, risk orientation, economic motivation, innovation proneness and deferred gratification were positively and significantly related with management efficiency of tissue culture banana growers whereas, education, experience in banana cultivation, annual income, training received, extension contact, mass media exposure, cosmopolitanism, market orientation, competition orientation, risk orientation, economic motivation, achievement motivation, innovation proneness and deferred gratification established positive and significant relationship with management efficiency of conventional banana growers. Management efficiency of tissue culture and conventional banana growers was found positively and significantly related with their economic performance. The multiple regression analysis showed that education, experience in banana cultivation, annual income and extension contact were contributed significantly to explain variation in management efficiency of tissue culture banana growers and for conventional banana growers variables namely experience in banana cultivation, extension contact, competition orientation, risk orientation and deferred gratification contributed significantly for attaining variation in management efficiency.

Keywords

Conventional banana growers, Economic performance, Management efficiency, Tissue culture banana growers

Introduction

Banana is grown in many countries of the world. Though India ranks first in the world in banana production and Maharashtra tops the table locally, banana exports are negligible. India does not export even one per cent of the total production and thus

there is vast potential to increase this quantity.

Recently agriculture business is moving from primitive to sophistication. Therefore, it requires high degree of specialization,

high level of competence and improved technology. These all require efficient management so that agri-business runs rapidly with most efficient way. Gradual but steady development of society required the development of this agency i.e. management. Today, we find management at every place. In fact, the future of society depends upon the today's efficient management. That is why; we find that the pace of management development is faster than the other disciplines. Hence, the study of management is an important facet of human life. The farmers, as the managers of the enterprise, are expected to bring about maximum profit with available resources irrespective of the economic, social, cultural, physical and technological environment. The farmers manage the production system to get a return from it.

Managing is always concerned with productivity, which implies the effectiveness and efficiency of individuals, so management efficiency plays important role in every sector. There are several factors that affect the management efficiency such as knowledge of scientific cultivation, planning at different levels, organizing different things, supervision and budgeting, coordinating activities, use of communication skills, decision making etc.

There is a great scope for raising management efficiency. Therefore, considering importance of management efficiency present study was thought to be undertaken with a comparison between tissue culture and conventional banana growers. Raising the management efficiency is the fundamental problem. Therefore, the present study was undertaken to know the profile, management efficiency, relationship of personal, socio-economic, psychological and communicational characteristics with management efficiency and also to study

relationship of management efficiency of tissue culture and conventional banana growers with their economic performance.

Materials and Methods

The present investigation was conducted in Nanded and Parbhani district of Marathwada region of Maharashtra state. The districts were purposively selected for the study because these districts occupied major area of banana crop in Marathwada region than other districts. From Nanded district Ardhapur and Mudkhed talukas and Parbhani and Purna talukas of Parbhani district of Marathwada region of Maharashtra state were purposefully selected with highest area under banana crop.

Five villages from each selected taluka having highest area under banana crop were selected, thus a total of 20 villages were selected for the study.

A list of banana growers in selected villages was obtained from the talathi / patwari in respective villages and from each village six tissue culture banana growers and six conventional banana growers having minimum three year experience in banana cultivation were selected randomly by lottery method. From each village, six tissue culture banana growers and six conventional banana growers that means two hundred and forty respondents as a total sample for the study.

Ex-post facto research approach was used for the study. Kerlinger (1964) stated that 'Ex-post-facto' research approach is worthy to apply when independent variables have already acted upon. Data were collected with the help of specially developed interview schedule. The statistical tools such as frequency, percentage, mean, standard

deviation, co-efficient of correlation, multiple regression and 'Z' test for comparison were used for the analysis of data.

Findings

It was revealed that majority of the tissue culture banana growers were educated upto secondary school level (42.50%), had medium level of experience in banana cultivation (80.00%) and belonged to joint family (60.83%). Majority of them were having medium family size (86.66%), land holding (30.84%), annual income (79.17%), extension contact (67.50%), mass media exposure (55.83%), cosmopolitaness (45.00%), scientific orientation (75.83%), market orientation (65.83%), competition orientation (62.50%), risk orientation (62.50%), economic motivation (57.50%), achievement motivation (56.67%), innovation proneness (62.50%), self-confidence (48.34%), deferred gratification (45.84%) and most of them had not received any training (51.66%).

It was found that majority of the conventional banana growers were educated upto secondary school level (38.34%), having medium level of experience in banana cultivation (58.33%) and belonged to joint family (71.67%). Majority of them were having medium family size (56.67%), land holding (35.83%), annual income (53.33%), extension contact (63.33%), mass media exposure (65.83%), cosmopolitaness (50.00%), scientific orientation (65.83%), market orientation (75.00%), competition orientation (54.17%), risk orientation (55.83%), economic motivation (60.83%), achievement motivation (65.83%), innovation proneness (49.17%), while most of them had not received any training (55.00%), had low level of deferred gratification (50.00%) and (39.17%) had high self-confidence.

Distribution of tissue culture and conventional banana growers according to their management efficiency

As tinted in Table 1 majority (71.66%) of the tissue culture banana growers were with medium level of management efficiency followed by 16.67 per cent were with high and 11.67 per cent were with low level of management efficiency and table also shows that majority (73.33%) of the conventional banana growers were with medium level of management efficiency, followed by 15.00 per cent were with low and 11.67 per cent were with high level of management efficiency. The calculated 'Z' value 10.06 was highly significant at 0.01 level, which indicates that the mean management efficiency of tissue culture banana growers was more than management efficiency of conventional banana growers.

Relationship of personal, socio-economic and psychological characteristics of tissue culture and conventional banana growers with their management efficiency

As stated in table 2 education, experience in banana cultivation, land holding, training received, extension contact, mass media exposure, cosmopolitaness, scientific orientation, market orientation, competition orientation, risk orientation, economic motivation, innovation proneness and deferred gratification were positively and significantly related with management efficiency of tissue culture banana growers. Independent variables namely education, experience in banana cultivation, annual income, training received, extension contact, mass media exposure, cosmopolitaness, market orientation, competition orientation, risk orientation, economic motivation, achievement motivation, innovation proneness, deferred gratification established positive and significant relationship with management efficiency.

Table.1 Distribution of tissue culture and conventional banana growers according to their management efficiency

Sr. No.	Category	Tissue Culture Banana Growers (n=120)		Conventional Banana Growers (n=120)		'Z' value
		Frequency	Percentage	Frequency	Percentage	
1	Low	14	11.67	18	15.00	10.06**
2	Medium	86	71.66	88	73.33	
3	High	20	16.67	14	11.67	
Total		120	100	120	100	
Mean		38.06		31.26		
SD		05.14		05.32		

** Significant at 0.01 level of probability

Table.2 Relationship of personal, socio-economic and psychological characteristics of tissue culture and conventional banana growers with their management efficiency

Sr. No.	Independent variables	Correlation coefficient (r)	
		Tissue culture	Conventional
1	Education	0.609**	0.371**
2	Experience in banana cultivation	0.439**	0.395**
3	Family type	0.016	- 0.099
4	Size of family	0.056	- 0.071
5	Land holding	0.387**	0.121
6	Annual income	0.172	0.228*
7	Training received	0.492**	0.217*
8	Extension contact	0.566**	0.432**
9	Mass media exposure	0.327**	0.278**
10	Cosmopolitaness	0.361**	0.399**
11	Scientific orientation	0.208*	0.045
12	Market orientation	0.299**	0.247*
13	Competition orientation	0.306**	0.545**
14	Risk orientation	0.339**	0.295**
15	Economic motivation	0.303**	0.319**
16	Achievement motivation	0.150	0.322**
17	Innovation proneness	0.352**	0.347**
18	Self confidence	0.188	0.109
19	Deferred gratification	0.414**	0.411**

*Significant at 0.05 level of probability **Significant at 0.01 level of probability

Table.3 Relationship between management efficiency of tissue culture and conventional banana growers with their economic performance

Sr. No.	Management efficiency	Correlation coefficient (r)
1	Tissue culture banana growers	0.216*
2	Conventional banana growers	0.243*

*Significant at 0.05 level of probability

Table.4 Multiple regression analysis of personal, socio-economic and psychological characteristics of tissue culture banana growers with management efficiency

Sr. No.	Independent variables	Tissue culture banana growers			Conventional banana growers		
		Regression coefficient	Standard error	Calculated 't' value	Regression coefficient	Standard error	Calculated 't' value
1	Education	0.298	0.090	3.302**	0.076	0.093	0.802
2	Experience in banana cultivation	0.109	0.045	2.380**	0.136	0.050	2.686**
3	Family type	0.384	0.842	0.456	-0.578	1.068	0.541
4	Size of family	-0.056	0.110	0.515	0.027	0.126	0.218
5	Land holding	0.092	0.055	1.661	-0.082	0.097	1.287
6	Annual income	0.001	0.005	2.296*	-0.124	0.001	0.777
7	Training received	0.1836	0.172	1.079	-0.308	0.285	1.079
8	Extension contact	0.116	0.048	2.425**	0.163	0.051	3.179**
9	Mass media exposure	-0.072	0.078	0.910	-0.216	0.157	1.376
10	Cosmopolitaness	0.433	0.309	1.400	0.111	0.384	0.289
11	Scientific orientation	0.057	0.118	0.900	-0.157	0.087	1.955
12	Market orientation	0.102	0.080	1.310	0.039	0.096	0.412
13	Competition orientation	-0.109	0.078	0.328	1.270	0.381	3.334**
14	Risk orientation	0.057	0.077	0.739	0.199	0.071	2.782**
15	Economic motivation	0.090	0.066	1.353	0.092	0.081	1.143
16	Achievement motivation	0.133	0.105	1.261	0.133	0.171	0.780
17	Innovation proneness	0.091	0.139	0.652	0.299	0.182	1.642
18	Self confidence	-0.170	0.293	0.583	0.125	0.215	0.580
19	Deferred gratification	0.318	0.194	1.643	0.529	0.227	2.329*
		R square= 60.09% ; F =07.92; B0=17.42			R square = 56.05%; F= 06.71; B0= 14.69		

*Significant at 0.05 level of probability **Significant at 0.01 level of Probability

It can be observed from table 2 that the management efficiency of tissue culture banana growers was found significantly higher than that of conventional banana growers.

Relationship between management efficiency and economic performance of banana growers

It is clear from Table 3 that management efficiency of tissue culture and conventional banana growers was positively and significantly related with their economic performance

It means that as the management efficiency of both tissue culture and conventional

banana growers' increases there is increase in their economic performance.

Multiple regression analysis of personal, socio-economic and psychological characteristics of tissue culture banana growers with management efficiency

Multiple regression analysis showed that education, experience in banana cultivation, annual income and extension contact were significant contributors for explaining variation in management efficiency of tissue culture banana growers.

The variation explained by nineteen independent variables with management efficiency was 60.09 per cent.

As tinted in table 4 experience in banana cultivation, extension contact, competition orientation, risk orientation and deferred gratification were the variables which contributed significantly for attaining variation in management efficiency of conventional banana growers. The explained variation of all the selected independent variables in case of management efficiency of conventional banana growers was 56.05 per cent.

It is also revealed that experience in banana cultivation, extension contact, competition orientation, risk orientation and deferred gratification had significant effect on management efficiency of conventional banana growers. The regression coefficient shown that one unit change in education, experience in banana cultivation, annual income and extension contact would affect 0.298, 0.109, 0.001 and 0.116 unit change in management efficiency of tissue culture banana growers, respectively and experience in banana cultivation, extension contact, competition orientation, risk orientation and deferred gratification would result into 0.136, 0.163, 1.270, 0.199 and 0.529 units change in management efficiency of conventional banana growers, respectively.

The study revealed that majority of the tissue culture and conventional banana growers were found with medium level of management efficiency. Education, experience in banana cultivation, land holding, training received, extension contact, mass media exposure, cosmopolitaness, scientific orientation, market orientation, competition orientation, risk orientation, economic motivation, innovation proneness and deferred gratification were positively and significantly related with management efficiency of tissue culture banana growers and education, experience in banana

cultivation, annual income, training received, extension contact, mass media exposure, cosmopolitaness, market orientation, competition orientation, risk orientation, economic motivation, achievement motivation, innovation proneness and deferred gratification established positive and significant relationship with management efficiency of conventional banana growers. The multiple regression analysis showed that education, experience in banana cultivation, annual income and extension contact were significant contributors for explaining variation in management efficiency of tissue culture banana growers, while experience in banana cultivation, extension contact, competition orientation, risk orientation and deferred gratification were the variables contributed significantly for attaining variation in management efficiency of conventional banana growers.

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