



CONNOTATION OF MANAGERIAL EFFICIENCY OF COCONUT PLANTATION GROWERS

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Abstract- The study was conducted in Coastal area of Saurashtra region of Gujarat state with ex-post facto research design. Three districts viz. Junagadh, Bhavnagar and Porbandar from the coastal area of Saurashtra region were selected. Five talukas were selected which had the highest coconut growing area from the districts randomly. From each selected taluka three villages were selected by purposively. Total number of 150 farmers, 10 farmers from each selected villages were selected by using purposive random sampling technique. To know the relationship of managerial efficiency of coconut plantation growers with their personal, socio-economical, psychological and extension-communicational characteristics. The finding revealed that the selected independent variables viz education, farm size, area under coconut, annual income, access to market facilities, innovativeness, risk orientation, perception, symbolic adoption, attitude toward coconut cultivation, information seeking behaviour and extension participation had significant relationship with managerial efficiency of coconut plantation growers. All the 16 independent variables together explained total variation in managerial efficiency to the extent of 69.90 per cent. The calculate 't' value for partial regression co-efficient was positive and significant with age, educational status, area under coconut cultivation, annual income, access to market facilities and innovativeness, negative and significant with farm size, social participation, risk orientation and participation in training programme of coconut plantation growers.

Keywords- Coconut plantation, Coconut plantation growers, Multiple regression analysis

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Introduction

The coconut palm (*Cocos nucifera* Linn.) is the most useful palm in the world. Every part of the tree is useful. It is much attached to the emotions of the people in the South East Asia that it forms a part of the mythology and culture and is auspicious in various ceremonies. Coconut tree is ranked among one of the 10 most useful trees of the world and is often termed as 'kalpavriksha', the "tree of life". The crop assumes considerable significance in the national economy in view of rural employment and income generation. Its fruit is called "Lakshmi Phal" and is used in social and religious functions in India irrespective of whether palm is locally grown or not. Coconut plantation growers perform many functions in carrying out the better production such as: preparing a plan of work, giving clear instructions, integrating the work, taking proper decision at right time, implementing the decision etc. in carrying out the management activity in coconut plantation. All the above functions involve in one or the other way, many management components viz. planning, organizing, directing, controlling, human relation, leading, coordinating and decision making. To make coconut plantation more productive, proper management of scientific coconut plantation practices should be adopted by coconut plantation growers. Many factors like Personal, Socio-Economical, Psychological and Extension-Communication were affected to managerial efficiency of coconut plantation growers. Therefore, the present study was designed "Relationship between Selected Characteristics of coconut plantation growers and their managerial efficiency."

Materials and Methods

The present study was undertaken in three districts like Junagadh, Bhavnagar and Porbandar of Coastal area of Saurashtra region of Gujarat state. Among all 21 talukas, Mangrol, Veraval, Una, Mahuva and Porbandar talukas were purposively selected. From each selected taluka, three villages having highest number of

coconut growers were selected purposively. Thus, total numbers of 15 villages were selected for the study. From each village ten farmers were selected randomly. Thus, a total sample size of 150 respondents at random. The data of this study were collected with the help of structural interview schedule. The collected data were classified, tabulated, analyzed and interpreted in order to make the findings meaningful. The statistical measures such as co-efficient of correlation and multiple regression were used in the study. The ex-post-facto research design was used for the study.

Coefficient of correlation

It was computed to find out the relationship between each of the independent variable and dependent variable by employing following formula:

$$r = \frac{\sum xy}{[\sum x^2 \cdot \sum y^2]^{1/2}}$$

Where,

r = Coefficient of correlation

$\sum xy$ = Correlated sum of products between x and y variables

$\sum x^2$ = Correlated sum of square for x variable

$\sum y^2$ = Correlated sum of square for y variable

Multiple regression analysis

This analysis was done to know the combined effect of the independent variables in explaining the variation in the dependent variable. The prediction equation used

was:

$$\hat{Y} = a + \sum_{i=1}^k b_i x_i$$

Where,

\hat{Y} = Predicted dependent variable
a = Intercept or constant

$\sum_{i=1}^k b_i x_i$ = Sum of partial regression coefficient of Y with X_1, \dots, X_k variables

x_1, \dots, x_k = Number of independent variables included in multiple regression analysis.

Results and Discussion

Table-1 Zero order correlation coefficient of independent variables with managerial efficiency of coconut plantation growers

Sr. No	Independent variables	'r' value
I	Personal	
1	X_1 Age	-0.14605 ^{NS}
2	X_2 Educational status	0.41688 ^{**}
II	Socio-economical	
3	X_3 Farm size	0.20605 [*]
4	X_4 Area under coconut	0.38635 ^{**}
5	X_5 Herd size	0.12365 ^{NS}
6	X_6 Annual income	0.38496 ^{**}

7	X_7	Social participation	0.14919 ^{NS}
8	X_8	Access market facility	0.65940 ^{**}
III		Psychological	
9	X_9	Innovativeness	0.58575 ^{**}
10	X_{10}	Risk orientation	0.19517 [*]
11	X_{11}	Perception	0.37978 ^{**}
12	X_{12}	Symbolic adoption	0.20034 [*]
13	X_{13}	Attitude towards coconut cultivation	0.47283 ^{**}
IV		Extension – communication	
14	X_{14}	Information seeking behaviour	0.39754 ^{**}
15	X_{15}	Extension participation	0.49045 ^{**}
16	X_{16}	Participation in training programme	0.15894 ^{NS}

* = Significance at 0.05 level (0.160)

** = Significance at 0.01 level (0.208)

NS = Non significance

It is clear from [Table-1] that the characteristics of the respondents like education status, area under coconut, annual income, access market facility, innovativeness, perception, attitude towards coconut cultivation information seeking behaviour and extension participation had positive and highly significant association with the managerial efficiency of coconut plantation growers. Farm size and risk orientation were positive and significant association with the managerial efficiency of coconut plantation growers. Age was negatively and non-significantly related with the managerial efficiency of coconut plantation growers. While, herd size, social participation and participation in training programme were positive and non-significantly related with the managerial efficiency of coconut plantation growers.

Table-2 Multiple regression analysis of managerial efficiency (n = 150)

Sr.No	Variables	Regression coefficient (bi)	S.E. of bi	't' value
1	Age (X_1)	0.3568	0.1680	2.124 [*]
2	Educational status (X_2)	3.8316	0.9935	3.857 ^{**}
3	Farm size (X_3)	-3.2572	0.7823	-4.164 ^{**}
4	Area under coconut (X_4)	2.3958	0.8539	2.806 ^{**}
5	Herd size (X_5)	-0.8328	0.5248	-1.587 ^{NS}
6	Annual income (X_6)	0.0001	0.0001	2.101 [*]
7	Social participation (X_7)	-1.4422	0.7025	-2.053 [*]
8	Access to market facilities (X_8)	1.7276	0.3020	5.721 ^{**}
9	Innovativeness (X_9)	10.2866	1.8767	5.481 ^{**}
10	Risk orientation (X_{10})	-0.9130	0.3078	-2.966 ^{**}
11	Perception (X_{11})	-0.5652	0.3322	-1.701 ^{NS}
12	Symbolic adoption (X_{12})	-0.3489	0.1883	-1.853 ^{NS}
13	Attitude towards coconut cultivation (X_{13})	0.3032	0.2652	1.143 ^{NS}
14	Information seeking behaviour (X_{14})	0.3103	0.2127	1.459 ^{NS}
15	Extension participation (X_{15})	-0.0045	0.0789	-0.058 ^{NS}
16	Participation in training programme (X_{16})	-2.5241	0.8582	-2.941 ^{**}

NS = Non significant

* = Significance at 0.05 level (1.960)

** = Significance at 0.01 level (2.576)

$R^2 = 0.6990$

All the independent variables mentioned in [Table-2] explained as much as 69.90 per cent of total variation in the managerial efficiency. The unexplained variation was of 30.10 per cent may be due to the factors outside the scope of the study. It can also be revealed that the 't' values of seven variables viz., educational status, farm size, area under coconut cultivation, access to market facilities, innovativeness, risk orientation and participation in training programme were highly significant at 0.01 level of significance and the 't' value of three variable i.e. age, annual income and social participation was significant at 0.05 level of significance. These ten variables significantly contributed in explaining the variation in managerial efficiency. Remaining variables have failed to contribute significantly in managerial efficiency of coconut growers about scientific cultivation of coconut plantation.

Conclusion

From above discussion, it could be concluded that nine independent variables viz, education, area under coconut plantation cultivation, annual income, access to market facilities, innovativeness, perception about quality and damaged cause by eriophyid mite, attitude toward coconut cultivation, information seeking behaviour and extension participation had highly significant and another three independents variables viz. farm size, risk orientation and symbolic adoption had significant relationship with managerial efficiency of coconut plantation growers. The finding also revealed that the seven variables viz., educational status, farm size, area under coconut cultivation, access to market facilities, innovativeness, risk orientation and participation in training programme were highly significant at 0.01 level of significance and the 't' value of three variable i.e. age, annual income and social participation was significant at 0.05 level of significance. All the 16 independent variables together explained total variation in managerial efficiency to the extent of 69.90 per cent.

Conflict of Interest: None declared

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