



Plant Archives

Journal homepage: <http://www.plantarchives.org>

DOI Url : <https://doi.org/10.51470/PLANTARCHIVES.2025.v25.supplement-1.153>

RELATIONSHIP BETWEEN MANAGEMENT ORIENTATION AND THE PROFILES OF THE MEMBERS OF THE FARMERS PRODUCER COMPANY WITH REFERENCE TO POTATO PRODUCTION IN ASSAM INDIA

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(Date of Receiving : 29-08-2024; Date of Acceptance : 21-10-2024)

ABSTRACT

The present study was conducted in 2023 and it was carried out in two districts of Assam. It was conducted through Ex-post Facto research design. Multistage sampling method was used for selection of respondents. The study was conducted in Assam with the members of Satbhani Potato Producer Company limited, Sonitpur district and Sankar Azan Agro Producer Company limited, Nagaon district of Assam were chosen purposively due to the presence of two Farmer Producer Companies (FPCs) that are associated with the commercial potato production in Assam. Six villages were selected randomly for each of the FPC and thus all total 12 villages were selected. A total of 25 members were selected randomly from each villages constituting the sample size of 300 potato growing members. Correlation analysis revealed that several profile characteristics are positive and highly significantly related to the management orientation of the members of the FPC, including educational level, Potato farming experience, size of operational land holding, area under potato cultivation, net annual income from potato, social participation, farm mechanization, scientific orientation, leadership ability, decision making ability, risk orientation, achievement motivation, economic motivation, degree of information exposure, exposure to training on potato cultivation, adoption of improved potato production technology and knowledge on potato production practices. Additionally, Age, family type, family size and occupational status did not establish any significant relationship. The 11 independent variables fitted in the multiple regression analysis could predict 92.30 per cent of the variation in the management orientation of the members of FPC. Furthermore, path analysis indicated that scientific orientation, achievement motivation, net annual income from potato and degree of information exposure were crucial variables that have a direct, indirect effect on overall management orientation of the members of the FPC.

Keywords: Management Orientation, Farmers Producer Company, Correlation Co-efficient, Regression analysis, Direct-indirect effect

Introduction

Management has been described as the process by which a farmer can increase the farm's income over

time so that the family can reach its goals. To consistently generate high returns from a production system, effective management is essential. The

necessity to develop the management orientation of the farmers must be brought to the attention of the farmers and extension personnel. In a broader sense, management refers to the efficient utilization of resources such as people, money, equipment, materials, and processes. (Belshaw, 1974). As the managers of the potato cultivation enterprise, potato farmers are expected to produce the most with the resources at their disposal. The degree to which the farmers are able to meet this requirement is the test of validity for their management orientation. Management is a very important part of growing potatoes, and it takes expert management skills and technical knowledge to bring together all the different parts of production and make sure they work together to gain economic benefit every year. Management is the most important and difficult thing that affects how well a commercial potato crop does, especially as costs rise and natural disasters happen. To make more money from commercial potato farming, you need to be careful and have good management skills. It's not worth it for farmers to grow potatoes unless they can make enough money to cover their costs. Because of this, the level of management orientation is also an important part of any study about commercial potato crop production. In Assam potato is cultivated in an area of 103.44 thousand hectares during 2021-22 with a production of 761.80 thousand tonnes and productivity 7,365 Kg/hectare (AGRISTAT, 2023). A comparative analysis between Assam and the rest of the country indicates that Assam experiences a deficit in potato production. This is evident from the substantial import of potatoes from other regions of the country to meet the state's requirements on an annual basis.

In today's competitive business world, it's hard for small and marginal farmers to stay in business and keep doing farming on their own because they don't have enough skilled knowledge. Considering the above problem, a structural innovation was suggested for the small and marginal farmers where they would act like professional business entities by getting incorporated as Farmers Producer Companies under the Companies Act of 1956 (amended in 2002) on the recommendation of expert panel led by Y.K. Alagh. A Farmer Producer Company can be described as a hybrid entity that combines the characteristics of cooperative societies and private limited companies. The formation of farmers' producer companies involves the collective organisation of producers, particularly those who are classified as low-income or marginal farmers. This approach has emerged as an effective means for addressing the numerous challenges faced in the agricultural sector. Moreover, it has proven to be a promising strategy for enhancing

investments, technology adoption, access to inputs, and market opportunities (Sawairam, 2015). At present, Farmer Producers Companies might be seen as the best way for farmers to build their ability to use their combined output and marketing strengths. Since farmer-producer groups are focused on business, the members need to improve their management skills. Under this situation, it was thought that it will be important to look at the relationship level of management orientation and the profiles of the members of the farmers producer company with reference to potato production in Assam.

Objectives

1. To study the relationship between management orientation and the profiles of the members of the farmers producer company
2. To study the contributory effects of selected independent variables on management orientation of the members of Farmer Producer Company
3. To study the direct and indirect effects of selected independent variables on the level of management orientation of the members of Farmer Producer Company

Materials and Methods

In this study, an *Ex-post-facto* research design was adopted. The study was conducted in 2023 in the Sonitpur and Nagaon district of Assam were chosen purposively due to the presence of two Farmer Producer Companies (FPCs) that are associated with the production of commercial potatoes are present in these two districts. These two FPCs were Satbhani Potato Producer Company limited from the Sonitpur district and Sankar Azan Agro Producer Company limited from the Nagaon district. The decision was made to choose six villages at random from each of the operational areas of the two chosen FPCs, taking into account the nature of the study. In total, twelve villages were chosen for the study: Pub Gingia, Pachim Gingia, Uttar Gingia, Rotua, Solmari, Tengabari in the Sonitpur district and Bengena-Ati, Sologuri, Pothia Chapori, Rajabari, Bilotia and Aauniati satra No. 3 in the Nagaon district. Then, from each of the chosen villages, the farmer members of the FPCs were selected randomly using the equal allocation method to get a sample size of 300 farmer members.

Variables

Independent Variable

We selected a list of 20 variables related to the profiles of the members of Farmer Producer Companies based on a review of literature and informal discussions with subject experts. Thus, the profile of members of Farmer Producer Companies

were, Age, Education level, Family size, Potato farming experience, Occupational status, Size of operational land holding, Area under potato cultivation, Net annual income from potato, Social participation, Farm Mechanization, Scientific orientation, Leadership ability, Decision making ability, Risk orientation, Achievement motivation, Economic motivation, Degree of information exposure, Exposure to training on potato cultivation, Adoption of improved potato production technology and Knowledge on potato production practices.

Dependent Variable

To measure the level of management orientation of the members of Farmer Producer Company with reference to potato production in Assam a scale was developed with Likert’s summated rating technique. A list of 90 statements resulted after edition of 110 statements as per the fourteen criteria suggested by Thurstone and Chave (1929). Statements were sent to 80 extension specialist working in various field of Assam Agricultural University for the critical evaluation of statements on a 3 point continuum. Based on the responses received from 60 out of 80 judges, the

relevancy percentage (RP), Relevancy Weightage (RW) and Mean Relevancy Scores (MRS) were estimated. 74 items with RP > 60, RW > 0.60 and overall MRS > 2.0 were considered for item analysis. These items were administrated to 40 farmers for item analysis and items with ‘t’ value equal or greater than 1.75 were selected and those with ‘t’ value below 1.75 were rejected. Out of 74 statements, 30 statements were retained on the final scale through t-test item analysis. Thus, the instrument developed to measure the level of management orientation of the members of farmer producer company with reference to potato production in Assam consists of 20 positive and 10 negative statements. The dependability coefficient was determined using Rulon's formula (Guilford, 1954) and it was 0.8994. As a result, the developed scale was proven to be highly reliable. The final scale was made of 30 statements administered on a three-point continuum, in which for positive statements, scores were assigned as ‘Agree’, ‘Undecided’ and ‘Disagree’, i.e., 3 to 1, and for negative statements, the scoring was reversed.

Results and Discussion

Correlation Analysis profile of the members of the farmer producer company with management Orientation

Table 1: Relationship between profiles of the members of farmer producer company with management Orientation (n=300)

Sl. No.	Independent Variable	Coefficient of correlation (‘r’)
1.	Age	0.033
2.	Education level	0.149**
3.	Family size	0.105
4.	Potato farming experience	0.175**
5.	Occupational status	0.009
6.	Size of operational land holding,	0.550**
7.	Area under potato cultivation,	0.583**
8.	Net annual income from potato	0.744**
9.	Social participation	0.268**
10.	Farm Mechanization	0.824**
11.	Scientific orientation	0.865**
12.	Leadership ability	0.812**
13.	Decision making ability	0.873**
14.	Risk orientation	0.822**
15.	Achievement motivation,	0.877**
16.	Economic motivation	0.782**
17.	Degree of information exposure	0.888**
18.	Exposure to training on potato cultivation	0.178**
19.	Adoption of improved potato production technology	0.340**
20.	Knowledge on potato production practices	0.744**

**Significant at 0.01 level of probability

*Significant at 0.05 level of probability

1) Age with Management Orientation

Table 1 reveals that, there was no significant correlation between the age and management

orientation. The calculated correlation coefficient value of r = 0.033 was found positive and non-significant. This might have happened because there is wide

differences in the ages of the respondents in relation with the management orientation. This finding was supported by finding of Singh (2015) and Chaudhary (2024).

2) Education level with Management Orientation

It is observed from the above Table 1 that relationship between education level and management orientation of the members of the farmer producer company was positive and significant correlation. It depicts that farmer having higher education level shows higher level of management orientation. The calculated correlation coefficient value of $r = 0.149$ was positive and significant at 0.01 level of probability. This trend was observed due to educated growers had better access to farm information sources and the capacity to understand, analyze, and interpret information in a proper manner, but some beneficiaries were illiterate. Illiterate beneficiaries get the information through social media, friends and relatives regarding the crop cultivation practice, farm inputs, marketing of farm produce. This finding was supported by finding of Chopade (2019), Kharatmal (2021) and Nigade (2022).

3) Family size with Management Orientation

It is observed from the above Table 1 that relationship between family size and management orientation of the members of the farmer producer company was positive and non-significant correlation. This shows that family size has no influence on management orientation of the members of the farmers producer company. The calculated correlation coefficient value of $r = 0.105$, which is not significant. Potato farmers who have a smaller number of family members may be dependent on paid labour in order to handle cultivation activities, whereas farmers who have a larger number of family members are likely to use family members in the cultivation process. Therefore, the relationship between the family size of growers and their management orientation was found to be non-significant. This was due to the fact that growers with either a small or large family size were equally involved in managing the production of potatoes. This finding is found similar to the finding reported by Kumar (2018).

4) Potato farming experience with Management Orientation

It is observed from the above Table 1 that relationship between potato farming experience and management orientation of the members of the farmer producer company was positive and significant correlation. It depicts that farmer having more potato

farming experience shows higher level of management orientation. The calculated correlation coefficient value of $r = 0.175$ was positive and significant at 0.01 level of probability. Growing experience in potato cultivation enables farmers to accomplish planning, production, and marketing tasks accurately and efficiently. An individual has the opportunity to fix errors through trial and error with more experience, and this helps in attaining a good management orientation. This finding is found similar to the finding reported by Patel (2023).

5) Occupational status with Management Orientation

It was revealed from the Table 1 that there was positive and non-significant correlation between major occupational status of the growers and their management orientation. The calculated correlation coefficient value of $r = 0.009$ was positive and not significant. One possible explanation for this is that the vast majority of growers had farming as their primary activity; hence, it is safe to say that the sample was quite consistent with regard to this characteristic. As a result, there was no connection between these two different variables. This finding was supported by finding of Rathwa (2024).

6) Size of operational land holding with Management Orientation

It is observed from the above Table 1 that relationship between size of operational land holding and management orientation of the members of the farmer producer company shows positive and significant correlation. It depicts that farmer having higher size of operational land holding will higher level of management orientation. The calculated correlation coefficient value of $r = 0.550$ was positive and significant at 0.01 level of probability. This significant correlation was observed because with increasing operational land holding area management orientation was also enhanced due to large area farmers can grow different varieties of potato according to their need and take proper measures for different stages of planning, production and Marketing. This finding is found similar to the finding reported by Patel (2023).

7) Area under potato cultivation with Management Orientation

It is revealed from the above Table 1 that relationship between area under potato cultivation and management orientation of the members of the farmer producer company was positive and significant correlation. It depicts that farmer having more area under potato cultivation shows higher level of

management orientation. The calculated correlation coefficient value of $r = 0.583$ was positive and significant at 0.01 level of probability. This trend was observed due to more area under potato cultivation means more production in potato cultivation which increases the management orientation of the members. This finding was supported by finding of Desai (2024).

8) Net annual income from potato with Management Orientation

The information seen in Table 1 indicates that relationship between net annual income from potato and management orientation of the members of the farmers producer company was positive and significant correlation. The calculated correlation coefficient value of $r = 0.744$ was found positive and significant at 0.01 level of probability. This could be due to the fact that if potato farmers had larger incomes, they would have greater purchasing power, which would allow them to make more investments in specialized farming methods. Net annual income from potato itself encouraged growers to look for new technology to increase their farming. This finding was supported by finding of Bhoi (2016) and Nair (2021).

9) Social participation with Management Orientation

It is revealed from the above Table 1 that relationship between social participation and management orientation of the members of the farmer producer company was positive and highly significant correlation. It depicts that farmer having more social participation shows higher level of management orientation. The calculated correlation coefficient value of $r = 0.268$ was positive and significant at 0.01 level of probability. This significance was observed due to a greater number of respondents are involved in social events and member of the organizations which help them to gather information related to enhancement of management orientation of the members of the farmers producer company. This finding was supported by finding of Pise (2017) and Dhulgand (2020)

10) Farm mechanization with Management Orientation

The information seen in Table 1 indicates that relationship between farm mechanization and management orientation of the members of the farmer producer company shows positive and significant correlation. The calculated correlation coefficient value of $r = 0.824$ was found positive and significant at 0.01 level of probability. As we know potato is a short

duration crop and within short period of time potato need to cultivated and harvested so farm machinery plays a major role here to substitute the labour shortage problem and helps the members in management orientation in different stages of planning, production and marketing. This finding was supported by finding of Das (2013).

11) Scientific orientation and Management Orientation

As it is apparent from the data presented in the Table 1 that scientific orientation had positive and highly significant correlation with the management orientation of the members of the farmer producer company. The calculated correlation coefficient value of $r = 0.865$ was found positive and significant at 0.01 level of probability. It can be concluded that with more adoption of scientific practices of potato cultivation level of management orientation also enhances as it helps to reduces the losses caused by diseases, pests and proper nutrient supplement to the crop. This finding was supported by finding of Bhoi (2016).

12) Leadership ability and Management Orientation

It is revealed from the above Table 1 that relationship between leadership ability and management orientation of the members of the farmer producer company was positive and highly significant correlation. It depicts that farmer having good leadership ability shows higher level of management orientation. The calculated correlation coefficient value of $r = 0.812$ was positive and significant at 0.01 level of probability. This correlation was observed because being a good leader have the ability to have more information about the different aspects of the society as well as information related to cultivation which helps in attaining high management orientation. This finding was supported by finding of Barman (2021).

13) Decision making ability and Management Orientation

The information seen in Table 1 indicates that relationship between decision making ability and management orientation of the members of the farmer producer company shows positive and significant correlation. The calculated correlation coefficient value of $r = 0.873$ was found positive and significant at 0.01 level of probability. It can be concluded that with good decision-making ability of the members used to help in taking proper decisions whenever needed in related to cultivation of potato which includes from sowing, intercultural operations, harvesting, storage and marketing all together it finally helps to enhance the

management orientation. This finding was supported by finding of Barman (2021).

14) Risk orientation with Management Orientation

It is revealed from the above Table 1 that relationship between risk orientation and management orientation of the members of the farmer producer company was positive and highly significant correlation. The calculated correlation coefficient value of $r = 0.822$ was positive and significant at 0.01 level of probability. This correlation was significant because having a good risk bearing ability helps a member to take some bold steps during the whole procedure of potato growing, which helps in maintain a proper management orientation. This finding was supported by finding of Kale (2020), Akbari (2023), and Kemekar (2023)

15) Achievement motivation with Management Orientation

As it is apparent from the data presented in the Table 1 that achievement motivation had positive and highly significant correlation with the management orientation of the members of the farmer producer company. The calculated correlation coefficient value of $r = 0.877$ was found positive and significant at 0.01 level of probability. It can be concluded that with high level of achievement motivation members are encouraged to increase their production as compared to previous year, which helps in increasing the management orientation. This finding was supported by finding of Desai (2024).

16) Economic motivation with Management Orientation

The information seen in Table 1 indicates that relationship between economic motivation and management orientation of the members of the farmer producer company shows positive and significant correlation. The calculated correlation coefficient value of $r = 0.782$ was found positive and significant at 0.01 level of probability. This significant correlation might be due to the fact that higher the level of economic income the members will have more purchasing power of the required equipment for their cultivation purposes leads to higher level of management orientation. This finding was supported by finding of Nigade (2022) and Shelake (2022).

17) Degree of information exposure with Management Orientation

As it is apparent from the data presented in the Table 1 that degree of information exposure had positive and highly significant correlation with the

management orientation of the members of the farmer producer company. The calculated correlation coefficient value of $r = 0.888$ was found positive and significant at 0.01 level of probability. It can be concluded that higher the degree of information exposure helps the members to be updated with the new technology and practices which helps the members to maintain a high level of management orientation. This finding was supported by finding of Adsul (2016) and Nair (2021)

18) Exposure to training on potato cultivation with Management Orientation

It is revealed from the above Table 1 that relationship between exposure to training on potato cultivation and management orientation of the members of the farmer producer company was positive and highly significant correlation. The calculated correlation coefficient value of $r = 0.178$ was positive and significant at 0.01 level of probability. This correlation was significant because some of the members having good training exposure which helps them to maintain a good management orientation in potato cultivation as compared to the members who have not attended any training programme. This finding was supported by finding of Lade (2024).

19) Adoption of improved potato production technology with Management Orientation

The information seen in Table 1 indicates that relationship between adoption of improved potato production technology and management orientation of the members of the farmer producer company shows positive and significant correlation. The calculated correlation coefficient value of $r = 0.340$ was found positive and significant at 0.01 level of probability. It can be concluded that adoption of improved potato production technology means following the practices in line with the proper scientific package and practices helps the members to get a good yield as a result it leads to a well-developed overall management orientation. This finding was supported by finding of Das (2013).

20) Knowledge on potato production practices with Management Orientation

As it is apparent from the data presented in the Table 1 reveals that knowledge on potato production practices had positive and highly significant correlation with the management orientation of the members of the farmer producer company. The calculated correlation coefficient value of $r = 0.744$ was found positive and significant at 0.01 level of probability. This significant

correlation might be due to the fact that as members are cultivating potato from the last few decades, they were having a good knowledge on potato production practices helps the members to have a higher level of management orientation. This finding was supported by finding of Das (2013).

Multiple regression analysis

The correlation analysis gives us information on the nature and magnitude of the relationship between the independent variables and the management orientation among the members of the farmer producer company. It does not give us any information about the relative contributory effects of the independent

variable in explaining the variation of the members of the farmer producer company in management orientation. Therefore, the statistical tool multiple regression analysis was done for this purpose. The independent variable which was significantly correlated with the management orientation were only considered for multiple regression analysis. Multiple regression analysis was utilized in order to investigate the contributory effects of selected independent variables in explaining the variation in the level of management orientation. Detailed results of the multiple regression analysis are presented in the subsections to follows:

Table 2: Relative contribution of selected independent variables towards management orientation of the members of farmers producer company (n=300)

Sl. No.	Independent Variable	beta Co-efficient	't' value
1.	Education level	-0.032	1.774
2.	Potato farming experience	-0.012	0.669
3.	Size of operational land holding	-0.070	1.754
4.	Area under potato cultivation	-0.108*	2.284
5.	Net annual income from potato	0.288**	7.579
6.	Social participation	-0.006	0.329
7.	Farm Mechanization	0.132**	3.591
8.	Scientific orientation	0.118**	2.943
9.	Leadership ability	-0.043	1.221
10.	Decision making ability	0.182**	5.008
11.	Risk orientation	0.150*	2.307
12.	Achievement motivation	0.261**	6.237
13.	Economic motivation	-0.159**	2.651
14.	Degree of information exposure	0.224**	5.291
15.	Exposure to training on potato cultivation	-0.039*	2.174
16.	Adoption of improved potato production technology	-0.006	0.305
17.	Knowledge on potato production practices	0.090**	3.525

R² = 0.92 **Significant at 0.01 level of probability

*Significant at 0.05 level of probability

It is evident from the Table 2 that 11 independent variables were significantly correlated with the management orientation of the members of the farmers producer company. Among the 17 independent variable, 8 variables viz., net annual income from potato (b=0.288**), farm mechanization (b=0.132**), scientific orientation (b=0.118**), decision making ability (b=0.182**), achievement motivation (b=0.261**), economic motivation (b=0.159**), degree of information exposure (b=0.224**) and knowledge on potato production practices (b=0.090**) had positive and significant relationship with the management orientation of the members of farmers producer company at 0.01 level of probability and 3

variables viz., area under potato cultivation (b=0.108*), Risk orientation (b=0.150*) and exposure to training on potato cultivation (b=0.039*) showed significant and positive relationship with the management orientation of the members farmers producer company of at 0.05 level of probability. These 11 independent variables were found to contribute significantly towards variation in the management orientation of the members of FPC. The value of R² (0.923) indicated that 11 independent variables selected for the study were efficient in predicting the management orientation of the members of FPC. The 11 independent variables fitted in the multiple regression

analysis could predict 92.30 per cent of the variation in the management orientation of the members of FPC.

Path Analysis

In the path analysis, the independent variables were those whose partial regression values were significant in the multiple regression analysis. Path analysis was done to get a clear picture of how the chosen independent variables affected both directly and indirectly the level of management orientation of

the members of the Farmer Producer Company. Variables through which substantial indirect effects were channeled were also found out. The path analysis was done with respect to different role dimensions under considerations and also with respect to the overall level of management orientation and productivity of potato by the members of the farmers producer company.

Table 3: Path Analysis Showing the effects of selected independent variables on the management orientation of the members of the farmers producer company (n=300)

Sl. No.	Independent Variables	Total Effect	Direct Effect	Total Indirect Effect	Substantial Indirect Effect	
					1	2
1.	Area under potato cultivation (X ₁)	0.724	-0.158	0.882	0.234 (X ₂)	-0.067 (X ₈)
2.	Net annual income from potato (X ₂)	1.194	0.274	0.920	0.156 (X ₇)	0.131 (X ₉)
3.	Farm Mechanization (X ₃)	1.273	0.126	1.147	0.202 (X ₂)	0.187 (X ₇)
4.	Scientific Orientation (X ₄)	1.312	0.094	1.218	0.207 (X ₇)	0.197 (X ₂)
5.	Decision Making Ability (X ₅)	1.284	0.169	1.115	0.208 (X ₇)	0.185 (X ₂)
6.	Risk Orientation (X ₆)	1.283	0.147	1.136	0.230 (X ₇)	0.170 (X ₉)
7.	Achievement Motivation (X ₇)	1.302	0.263	1.039	0.173 (X ₉)	0.163 (X ₂)
8.	Economic Motivation (X ₈)	0.933	-0.154	1.087	0.226 (X ₇)	-0.069 (X ₁)
9.	Degree of Information Exposure (X ₉)	1.524	0.209	1.315	0.218 (X ₇)	0.172 (X ₂)
10.	Exposure to training on potato cultivation (X ₁₀)	0.434	-0.047	0.481	0.053 (X ₇)	-0.025 (X ₈)
11.	Knowledge on potato production practices (X ₁₁)	1.093	0.091	1.002	0.184 (X ₇)	0.150 (X ₉)

Total Effect

It was revealed from the Table 3 that, the profile of the members of the farmer producer company have highest positive total effect on management orientation were exerted by degree of information exposure (1.524), scientific orientation (1.312), achievement motivation (1.302), Decision Making Ability (1.284), Risk Orientation (1.283), Farm Mechanization (1.273), net annual income from potato (1.194), knowledge on potato production practices (1.093), economic motivation (0.933), area under potato cultivation (0.724). Whereas exposure to training on potato cultivation (0.434) exerting low positive total effect on overall management orientation. It means that total of the direct effect and indirect effect exerted by all independent variable on management orientation of the members of the Farmer Producer Company.

Direct Effect

It was revealed from the Table 3 that, the highest direct positive influence on overall management orientation were exerted by net annual income from potato (0.274), achievement motivation (0.263), degree

of information exposure (0.209), decision making ability (0.169), risk orientation (0.147), farm mechanization (0.126). Other considerable, direct positive effect was also exerted by scientific orientation (0.094), and knowledge on potato production practices (0.091). A considerable direct effect on overall management orientation was not exerted by area under potato cultivation (-0.158), economic motivation (-0.154) and exposure to training on potato cultivation (-0.047). It means that association of independent variable i.e., net annual income from potato with other independent variable of the direct paths specified in the table.

Total Indirect Effect

It was revealed from the Table 3 that, the highest total indirect positive influence on overall management orientation were exerted by degree of information exposure (1.315), scientific orientation (1.218), Farm Mechanization (1.147), Risk Orientation (1.136), Decision Making Ability (1.115), Economic Motivation (1.087), Achievement Motivation (1.039), Knowledge on potato production practices (1.002), Net

annual income from potato (0.920) and Area under potato cultivation (0.882). Whereas Exposure to training on potato cultivation (0.481) exerting low positive total indirect effect on overall management orientation. Total indirect effect means association of one independent variable i.e., degree of information exposure, with other mediated through the other variable. It represents as the product of path linking variable.

Substantial Indirect Effect

Data further revealed that out of 22 substantial indirect effects, nine each routed through achievement motivation, six each routed through net annual income from potato, four each routed through degree of information exposure, two each routed through economic motivation, one each routed through area under potato cultivation. With regards to substantial indirect effect the first substantial negative indirect effect on management orientation was put forth by economic motivation (-0.069) through area under potato cultivation, area under potato cultivation (-0.067) through economic motivation and Exposure to training on potato cultivation (-0.025) through economic motivation. However, first substantial positive indirect effect on management orientation was put forth by area under potato cultivation (0.234) through net annual income from potato. It could be concluded that scientific orientation was exerted highest total effect and achievement motivation was exerted as highest substantial indirect effect, where net annual income from potato was exerted highest direct effect and degree of information exposure was exerted highest total indirect effect on management orientation.

Conclusion

Correlation analysis revealed that several factors positively and highly significantly related to the management orientation of the members of the FPC, including educational level, Potato farming experience, size of operational land holding, area under potato cultivation, net annual income from potato, social participation, farm mechanization, scientific orientation, leadership ability, decision making ability, risk orientation, achievement motivation, economic motivation, degree of information exposure, exposure to training on potato cultivation, adoption of improved potato production technology and knowledge on potato production practices. While age, family size and occupational status did not establish any significant relationship. Multiple regressions showed that 92.30 per cent of the total variation in the overall management orientation of the members of the FPC was explained by selected 17 independent variables

examined in the study. Furthermore, path analysis indicated that scientific orientation, achievement motivation, net annual income from potato and degree of information exposure were crucial variables influencing the overall management orientation of the members of the FPC.

In conclusion, the study provides valuable insights into the factors influencing the management orientation of the members of both the FPCs. It highlights the importance of various socio-economic and psychological factors in determining the impact of FPCs on management orientation and various potato cultivation practices. These findings can inform policymakers and agricultural practitioners in designing targeted interventions to maximize the potato production of the members and promote sustainable potato production in those areas as well as in the state.

Recommendations

In the path analysis it was observed that the independent variable exposure to training on potato cultivation was having the lowest negative direct and total indirect effect on management orientation of the members of the FPC. Based on this finding of the study, it is recommended that various extension agencies like state agricultural department, KVKs, Regional Research Stations and NGOs should take the lead in promoting wider participation of FPC members in different programs such as knowledge and skill-oriented potato training, study tours, field visits, exhibitions, field demonstrations, and meetings to enhance their potato production.

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