Original Research Article

Managerial Ability of the Members of Agnigarh Producer Company Limited in Sonitpur District of Assam with Reference to Commercial Litchi Production

ABSTRACT

Farmer Producer Company is a company formed by a group of farmers who are producers come together to form a company. The present investigation was conducted out with the objective to measure the managerial ability of the members of Agnigarh Producer Company Limited in Sonitpur district of Assam with reference to commercial litchi production.Agnigarh Producer Company Limited was selected purposively, as the Farmer Producer Company dealing with commercial litchi production was operating in this district.A sample of 80 respondents was chosen from 13 selected villages in Sonitpur district using a proportionate random sampling method.To assess the managerial ability of the FPC members, the Managerial Ability Scale created by Jadav (2005) was used. The findings of the study revealed that majority of the respondents (43.75%) belonged to middle aged category with higher secondary level of formal education (41.25%).Majority of respondents (41.25%) belonged to small size of operational land holdings category and (60.00%) had medium level of litchi yield index with medium level of farm mechanization (70.00%) and medium level of irrigated area under litchi cultivation (77.50%). Majority of them (80.00%) had medium level of farm wage payment related to litchi cultivation with (53.75%) of respondents had medium level of experience in litchi cultivation.Whereas (63.75%) of respondents had medium level of attitude towards modern agriculturewith high level of training exposure (50.00%). The findings revealed that the majority of the respondents (61.25%) had medium level of managerial ability index.

Keywords:Farmer Producer Company (FPC),Farmer Producer Organization (FPO), Managerial ability, Tezpur Litchi

1. INTRODUCTION

In India, cooperatives have primarily been state-promoted, with an emphasis on welfare rather than business or commercial objectives, making the cooperative experience unpleasant (Prabhakar *et al.,* 2012). In 1999, a high-powered committee was set up by the Government of India under the chairmanship of Y. K. Alagh to formulate a solution to the problems faced by earlier farmer's organizations. In 2002 the Alagh Committee came up with the solution that cooperatives should be reorganized as a corporate body with a hybrid mixture of both cooperative and a company. Farmer Producer Companies were subsequently introduced into the Companies Act of 1956 as a direct consequence of this. Through the modification of Section 581 of the Companies Act of 1956, farmer producer companies were established in the year 2003. This concept was proposed in order to empower farmers and enable them to work together

in the organization. Farmer Producer Company is a company formed by a group of farmers who are producers come together to form a company (Barman, 2021).

There is a need to facilitate our farmers with access to improved technology, credit, better input and more markets to incentivize them to produce better quality commodity.The grouping of small, marginal, and landless farmers into Farmer Producer Organizations (FPOs) strengthened their economic position and market connections, thereby increasing their revenue. In light of this, the Government of India has initiated a new Central Sector Scheme named "Formation and Promotion of 10,000 Farmer Produce Organizations (FPOs)," which includes a definitive strategy and allocated resources to establish and promote 10,000 new FPOs nationwide, with a financial allocation of Rs 6865 crore. Up to 2022, 25 numbers of FPCs have been formed in Assam under the Central Sector Scheme "Formation and Promotion of 10,000 FPOs" with financial support from NABARD. Technical and handholding supports are being provided to these FPCs by Assam Agricultural University (AAU). For this purpose, a number of CBBOs have been set up at the state and cluster level to form and promote the FPCs in the state. At the state level there is Programme Implementation Unit (PIU) of CBBO, located at AAU-HRS, Kahikuchi, Guwahati, Assam which is coordinating among all the CBBOs of the state under AAU(PIB, 2021).

The present study covered the members of Agnigarh Producer Company Limited, located at Sonitpur district of Assam which is dealing with commercial litchi cultivation.The litchi crop has special climatic requirements, which likely accounts for its commercial cultivation being restricted to a small number of tropical and subtropical countries. India is the second-largest producer of litchi globally, after China. Litchi cultivation provides livelihood security for a substantial population in litchi-producing states by offering both on-farm and off-farm work opportunities (Sahni *et al.*, 2020). In India, 7, 20,200 metric tons of litchis are produced annually from 98,000 hectares in 2020-21. Assam produces 60181 metric tons of litchis covering an area of 6095 hectares in 2020-21.(Statistical handbook of Assam, 2022).

Tezpur is particularly renowned for its horticulture crop, Litchi, due to its distinctive attributes. The prevalent cultivars of Litchi trees cultivated in Tezpur include Bombay, Bilati, Shahi, Elaichi, Piyaji, and China.Tezpur Litchi is distinguished by its delightful flavor, succulent pulp (aril) with appealing coloration, and diminutive seed enveloped in firm pulp, setting it apart from other litchi types cultivated in the country, hence earning it the esteemed Geographical Indication (GI) status in 2015 (Gogoi*et al.*, 2020). After getting the Geographical Indication (GI) tag of Tezpur litchi in 2015, the domestically demand of the crops has grown rapidly. Because of this, there is a pressing requirement to raise the level of Tezpur litchi output and productivity within the state.For achieving this, the members of Agnigarh Producer Company Limited should emphasize on their managerial ability as proper management of litchi orchard is vital for sustainability of the organization. According to McGregor (1967), specific attributes such as knowledge, skills, motivation, attitude, and certain external factors determine an individual's managerial capability.The technique via which the farmer can consistently

increase farm returns to meet family objectives is known as management. For a manufacturing system to consistently yield good returns, effective management is essential. (Kumar *et al.*, 2021).It is of the utmost importance that the farmers be made aware of the necessity of strengthening the managerial abilities that they have. This study was taken up to evaluate the profile characters of the respondents and to make them aware of the need for developing their managerial ability and to provide valuable insights for devising suitable policy interventions to promote large-scale adoption of the best production technologies, to achieve the required production level of litchi through higher productivity.

2. METHODOLOGY

The study was undertaken in 2023 in theSonitpur district of Assam which was selected purposively, as the Farmer Producer Company dealing with commercial litchi production was operating in this districtnamely, Agnigarh Producer Company Limited. A sample of 80 respondents was selected from the 13 selected villages following a proportionate random sampling technique. The primary information for the study were gathered through personal interviews utilizing a predefined research schedule. In accordance with the study's objectives, 16 independent variables and 1 dependent variable were included into the research. The primary data for the study were collected during the month of February, 2023 and June, 2023.

The dependent variable included in the study was the managerial ability of the members of Agnigarh Producer Company Limited with reference to commercial litchi production which was measured by using the scale developed by Jadav (2005).Stoner and Wankle (1987) define management as the activity of planning, organizing, leading, and managing the work of organizational members, together with utilizing all other organizational resources to attain specified organizational objectives.For measuring the managerial ability of the farmers, Jadav considered 10 indicators *viz,* knowledge on scientific cultivation, planning, organizing the activities, supervising, budgeting, coordinating the activities, communication, controlling the activities, decision making and human relationship. Each indicator has several statements along with maximum score value and scale value. The indicator knowledge of scientific cultivation had 35 statements, planning had 9 statements, organizing the activities had 3 statements; supervising had 11 statements, budgeting had 4 statements, coordination the activities had 5 statements, communication had 3 statements, controlling the activities had 4 statements, decision making had 5 statements and human relationship had 6 statements along with maximum score value and scale value.The designed schedule was implemented for each respondent. The complete response was obtained from every respondent, and the managerial ability index was calculated. The ultimate managerial skill index was calculated by averaging the indices from the corresponding litchi cultivators.

The formula used for calculating the managerial ability index (MAI) for one indicator was as under:

$$MAI=\frac{\text{Score obtained for indicator X Scale value of indicator}}{\text{MaximumscoreforindicatorXScalevalueofindicator}} X100$$

$$MAI=\frac{OSi\ X\ SVi}{MSi\ X\ SVi}X100$$

Formula used for calculating the overall managerial ability index (MAI) was as under:

$$MAI=\frac{\sum OSi\ X\ SVi}{\sum MSi\ X\ SVi}X100$$

Where,

OS_i= Obtained score value for i^{th} indicator

SV_i = Scale value of i^t indicator

MS_i = Maximum score value of i^t indicator

i= 1, 2, 3……..n

n= Number of indicators = 10

2.1 Procedure for Determining the Scale Value

Jadav (2005) employs a method to determine the scale value of each indicator and sub indicator ranked by the judges, the centile position 'P' based on the method suggested by Guilford (1954) was computed. The 'C' values, 'Rj' values and finally scale values i.e. 'Rc' value were worked out by using the following formula:

$$Rc = 2.357\ Rj - 7.01$$

Table 1. List of 10 Indicators of Managerial ability along with the scale value and maximum score value

Sl. No.	Indicators	Scale value (SV_i)	Maximum score value (MS_i)
1	Knowledge of scientific cultivation	8.70	35
2	Planning	8.35	27
3	Organizing the activities	3.75	7
4	Budgeting	5.84	24
5	Supervising	6.19	12
6	Coordinating the activities	3.24	11
7	Communication	0.53	6
8	Controlling the activities	3.52	8
9	Decision making	6.42	10
10	Human relationship	1.20	12

3. RESULT AND DISCUSSION

For the purpose of this study, a total of 16 personal, socio-economic, and psychological variables of the respondents were taken into consideration. These were- Age, Education level, Size of operational land holding, Area under litchi cultivation, Annual net farm income, Litchi yield,Farm mechanization, Irrigated area under litchi cultivation, Level of farm wage payment related to litchi cultivation, Experience in litchi cultivation, Social Participation, Achievement motivation, Orientation towards the competition, Attitude towards modern agriculture, risk orientation and Exposure to training on litchi cultivation.

Findings revealed that majority of the respondents (43.75%) were in the middle-aged group followed by 36.25 per cent of respondents in old group and 20.00 per cent of the respondents in young group. Most of the respondents (41.25%) had higher secondary/ PU level of education followed by 31.25 per cent respondents with high school level of education. Majority of the respondents (41.25%) belonged to the small farmer category followed by 33.75 per cent in marginal and 17.50 per cent of the respondents in medium land holding category. Only 7.50 per cent of the respondents belonged to the semi-medium land holding category. In case of area under litchi cultivation, majority of the respondents (50.00%) were having a land area above 0.10-1.5 ha followed by 37.50 per cent respondents having land area up to 0.10 ha. Only 12.50 per cent of the respondents were having a land area above 1.5 ha under litchi cultivation. Most of the respondents (60.00%) had medium annual net farm income ranging from Rs 94278.32 to Rs 156528.93 followed by 23.75 per cent respondents with high annual net farm income above Rs 156528.93. Majority of the respondents (60.00%) had medium level of litchi yield followed by 23.75 per cent respondents with low level of litchi yield. Most of the respondents (70.00%) had medium level of farm mechanization followed by 16.25 per cent respondents with low level of farm mechanization. Majority of the respondents (77.50%) had medium level of irrigated area under litchi cultivation followed by 12.50 per cent respondents with low level of irrigated area under litchi cultivation. Most of the respondents (80.00%) had medium level of wage payment related to litchi cultivation followed by 15.00 per cent respondents with high level of wage payment related to litchi cultivation. Majority of the respondents (53.75%) had 10-20 years' experience in litchi cultivation followed by 31.25 per cent respondents with up to 9 years of experience in litchi cultivation. In case of social participation, majority of the respondents (55.00%) were member of one organization, followed by 22.50 per cent respondents having membership with more than one organization institutions. Majority of the respondents (68.75%) had medium level of achievement motivation followed by 17.50 percent respondents with high level of achievement motivation and 13.75 per cent respondents with low level of achievement motivation. Majority of the respondents (67.50%) had medium level of orientation towards the competition followed by 23.75 per cent respondents with low level of orientation towards the competition and 8.75 per cent respondents with high level of orientation towards the competition. A large number of the respondents (63.75%) had medium level of attitude towards modern agriculture followed by 23.75 per cent respondents with low level of attitude towards modern agriculture and 12.50 per cent respondents with high

level of attitude towards modern agriculture. Majority of the respondents (67.50%) had medium level of risk orientation followed by 18.50 per cent respondents with high level of risk orientation. Most of the respondents (50.00%) had medium level of exposure to training on litchi cultivation followed by 37.50 percent respondents with high level of exposure to training on litchi cultivation and 12.50 percent respondents with low level of exposure to training on litchi cultivation.

Table 2. Socio-economic profile of the members of the Agnigarh Producer Company

Sl. No.	Variables	Categories	Score range	Frequency	Percentage
1.	Age	Young	Upto 35 years	16	20.00
		Middle	36-50 years	35	43.75
		Old	51 years& above	29	36.25
2.	Education level	Primary school level	1	4	5.00
		Middle school level	2	12	15.00
		High school level	3	25	31.25
		Higher secondary passed	4	33	41.25
		Graduate/diploma & above	5	6	7.50
3.	Size of operational land holding	Marginal	Up to 1.0 ha	27	33.75
		Small	1.1-2.0 ha	33	41.25
		Medium	2.1-4.0 ha	14	17.50
		Semi-medium	4.1-10 ha	6	7.50
4.	Area under litchi cultivation Mean - 0.83 S.D. - 0.73	Up to 0.10 ha	Up to 0.10	30	37.50
		0.10 to 1.5 ha	0.10-1.5 ha	40	50.00
		Above 1.5 ha	Above 1.5 ha	10	12.50
5.	Annual net farm income Mean – 125403.62 S.D. –31125.31	Low annual net farm income	Up to Rs. 94278.31	13	16.25
		Medium annual net farm income	Rs. 94278.32-Rs. 156528.93	48	60.00
		High annual net farm income	Above Rs.156528.93	19	23.75
6.	Litchi yield	Low litchi yield	Below 65.50	19	23.75

	Mean – 100.00 S.D. –34.40	Medium litchi yield	65.50- 134.40	48	60.00
		High litchi yield	Above 134.40	13	16.25
7.	Farm Mechanization Mean – 72.36 S.D. – 9.52	Low farm mechanization	Up to 62.84	13	16.25
		Medium farm mechanization	62.84-81.88	56	70.00
		High farm mechanization	Above 81.88	11	13.75
8.	Irrigated area under litchi cultivation Mean – 49.52 S.D. – 31.09	Low irrigated area	Up to 18.43	10	12.50
		Medium irrigated area	18.43-80.61	62	77.50
		High irrigated area	Above 80.61	8	10.00
9.	Level of wage payment related to litchi cultivation Mean – 18891.72 S.D. – 12537.78	Low level of wage payment	Up to 6353.94	4	5.00
		Medium level of wage payment	6353.94-31429.50	64	80.00
		High level of wage payment	Above 31429.50	12	15.00
10.	Experience in litchi cultivation Mean – 13.55 S.D. – 5.26	Up to 8 years	3- 8	25	31.25
		9-19 years	9-19	43	53.75
		20 years & above	20-28	12	15.00
11.	Social participation	Membership in one organization	1	44	55.00
		Membership in more than one organization	2	18	22.50
		Office bearers of one organization	3	12	15.00
		Office bearer of more than one organization	4	6	7.50
12.	Achievement motivation Mean – 17.43 S.D. – 3.08	Low achievement motivation	Up to 14.35	11	13.75
		Medium achievement motivation	14.35-20.53	55	68.75
		High achievement motivation	Above 20.53	14	17.50

13.	Orientation towards the competition Mean – 15.73 S.D. – 3.54	Low orientation towards the competition	Up to 12.19	19	23.75
		Medium orientation towards the competition	12.19-19.27	54	67.50
		High orientation towards the competition	Above 19.27	07	8.75
14.	Attitude towards modern agriculture Mean – 29.66 S.D. – 5.01	Low favorable attitude	Up to 24.65	19	23.75
		Medium Favorable attitude	24.65-34.71	51	63.75
		High favorable attitude	Above 34.7	10	12.50
15.	Risk Orientation Mean – 14.15 S.D. – 3.42	Low risk orientation	Up to 10.73	11	13.75
		Medium risk orientation	10.73-17.57	54	67.50
		High risk orientation	Above 17.57	15	18.50
16.	Exposure to training on litchi cultivation	Low training exposure	0-1	10	12.50
		Medium training exposure	2-3	40	50.00
		High training exposure	4-5	30	37.50

Managerial ability of the members of Agnigarh Producer Company Limited

Findings revealed that majority of the respondents (61.25%) had medium level of managerial ability, followed by 21.25 per cent of the respondents had high level of managerial ability and 17.50 per cent of the respondents had low level ofmanagerial ability. The mean overall managerial ability score (56.61) indicated that on an average the respondents had medium level of managerial ability with standard deviation of 15.69. The value of co-efficient of variation (27.72) indicated that the respondents were relatively homogenous with respect to their level managerial ability.This finding was in agreement with the findings of those Mehta and Madhuri (2012), Wagh (2015), Santosh and Bheamappa (2016), Dehenge (2018), Hussain (2023) and disagreement with the findings of Prabhu (2006), Archana and Natikar (2014).

Table 3. Distribution of respondents according to overall managerial ability

Category	Score Range	Frequency	Percentage	Mean	S.D	C.V.
Low managerial ability	Up to 40.92	14	17.50	56.61	15.69	27.72
Medium managerial ability	(40.92-72.30)	49	61.25			
High managerial ability	Above 72.30	17	21.25			
Total		**80**	**100.00**			

4. CONCLUSION

The study revealed prevalence of diverse profile characteristics among the members of AgnigarhProducer Company with reference to commercial litchi production in Assam, emphasizing several key insights. The majority of farmers belonged to the middle-aged category, possessed higher secondary level of education, with marginal and small land holdings with majority of the respondents area lies in the range of small farmers. Almost (60.00%) of the litchi growers had medium annual net farm income and medium litchi yield.Farm mechanization revealed that majority of the respondents had medium level of farm mechanization (70.00%), so the farmers should take advantage of the farm machineries and implements provided to FPC by NABARD. The shareholders should also be encouraged to take advantage of the machineries and implements provided by the concerned agencies.Majorly near about (70.00%) of the respondents were having a good experience in litchi cultivation which helps them to follow a good package and practices including irrigation facilities with medium level of wage payment.Despite a predominance of social participation with only membership one organization, the majority respondents exhibited medium level of achievement motivation, risk orientation, attitude towards modern agriculture, and orientation towards the competition fostering a positive attitude towards new ideas, practices and varieties. Nearly (87.50 %) of the respondents received medium to high level of training exposure.The concerned department should initiate action to conductmore numbers of massive trainingor capacity building programmes for members of FPC so that they are motivated to adopt the recommended scientific practices of litchi.The findings on overall managerial ability index revealed that the majority of the respondents had medium level of managerial ability (61.25) followed by high level of managerial ability (21.25). It implies that with proper extension strategies, training programmes and required demonstrations the production of litchi can be enhanced. The concerned state department and agencies should motivate the members of FPC by providing appropriate guidance and necessary essential in proper time.In future directions, the same could be administered to any other litchi growers in

other districts of Assam for measuring the managerial ability of the litchigrowers. The limitation of the study is that considering the restraint of time and resources of the investigator, only one district and one FPC is covered in one agro climatic zones of the state of Assam were brought under the purview of the study. In future a similar study may be undertaken covering more number of districts in all the agro climatic zones of Assam with a larger sample size.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writingor editing of this manuscript.

Disclaimer (Artificial intelligence)

Option 1:

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

REFERENCES

1. Archana K N, Natikar K V. Entrepreneurial behaviour of commercial seed growers and other farmers. Karnataka Journal of Agricultural Sciences.2014;27(4):548-550.
2. Barman M. A study on the factors influencing entrepreneurial behaviour of the members of Farmer Producer Company with reference to commercial potato production. M.Sc. Thesis,Assam Agricultural University, Jorhat, Assam; 2021.
3. Dhenge SA, Kadam JR, Sarap NS, Dhekale JS. Determining the effect of independent variables on commercial mango growers management orientation using path coefficient analysis. Agricultural Research. 2021;10(4):626 633.
4. Gogoi S, Kotoky U, Baruah S. A Comparative Morphological Study of Tezpur Litchi. International Journal of Current Microbiology and Applied Sciences. 2020;9(11):567-575.
5. Guilford JP. Psychometric methods, Tata McGraw-Hill Publication Company Limited, Bombay, India. 1954;55-60.
6. Hussain I. A Study on Management Orientation and Productivity of the Members of Farmers Producer Company with reference to Potato Production in Assam. Ph.D. Thesis,Assam Agricultural University, Jorhat, Assam; 2023.

7. Jadav N B. Managerial ability of mango growers about scientific cultivation of mango orchard. Ph.D. Thesis, Junagadh Agricultural University, Gujrat;2005.
8. Kumar A, Sharma M, Singh R P, Sharma N. Measurement of Managerial Ability of Guava Growers about their Knowledge Regarding Scientific Cultivation of Guava Grower in Flood-Prone Eastern Plain Zone of Rajasthan. International Journal of Current Microbiology and Applied Sciences.2021;3886-3895.
9. McGreger D.The professional manger. New York, McGrew Hall. 1967;5-7.
10. Mehta B M, Madhuri S. Characteristic and adoption behaviour of mango growers in Valsad district of Gujarat. Agriculture Update.2012;7(1/2):37-41.
11. Prabhakar I, Manjunatha B L, Nithyashree M L, Hajong D. Farmers Producer Company-An innovative farmers' institution. Environment and Ecology. 2012;30(2):427-430.
12. Prabhu S. A study on management orientation and economic performance of chrysanthemum growers in North Karnataka. M.Sc. Thesis, University of Agricultural Sciences, Dharwad, Karnataka; 2006.
13. Press information Bureau (PIB). Government of India, Ministry of Agriculture & Farmers Welfare. 2021.
14. Sahni RK, Kumari S, Kumar M, Kumar M, Kumar A. Status of litchi cultivation in India. International Journal of Current Microbiology and Applied Sciences.2020;9(04):1827-1840.
15. Santosh N A, Bheemappa A. Entrepreneurial characteristics among the beneficiaries of national horticulture mission in Dharwad district. Journal of Farm Sciences. 2016;29(2):278-279.
16. Statistical Hand Book Assam; 2022.Available:https://des.assam.gov.in/portlets/statistical-handbook.
17. Stoner A F J, Wankle C I. Management Prentice Hall of India private limited, New Delhi. 1987.
18. Wagh P D. Study on entrepreneurial behaviour of mango growers in Ratnagiri district of Konkan region. M.Sc. Thesis, Dr. BalasahebSawantKonkanKrishi Vidyapeeth, Maharashtra. 2015.