World Academy of Science, Engineering and Technology
International Journal of Agricultural and Biosystems Engineering
Vol:2, No:10, 2008

Entrepreneurial Characteristics and Attitude of Pineapple Growers

Kaushal Kumar Jha

Open Science Index, Agricultural and Biosystems Engineering Vol:2, No:10, 2008 publications.waset.org/8585/pdf

***Abstract*—**Nagaland, the 16th state of India in order of statehood, is situated between 25° 6′ and 27° 4′ latitude north and between 93º 20′ E and 95º 15′ E longitude of equator in the North Eastern part of the India. Endowed with varied topography, soil and agro climatic conditions it is known for its potentiality to grow all most all kinds of horticultural crops. Pineapple being grown since long organically by default is one of the most promising crops of the state with emphasis being laid for commercialization by the government of Nagaland. In light of commercialization, globalization and scope of setting small-scale industries, a research study was undertaken to examine the socio-economic and personal characteristics, entrepreneurial characteristics and attitude of the pineapple growers towards improved package of practices of pineapple cultivation. The study was conducted in Medziphema block of Dimapur district of the Nagaland state of India following ex post facto research design. Ninety pineapple growers were selected from four different villages of Medziphema block based on proportionate random selection procedure. Findings of the study revealed that majority of the respondents had medium level of entrepreneurial characteristics in terms of knowledge level, risk orientation, self confidence, management orientation, farm decision making ability and leadership ability and most of them had favourable attitude towards improved package of practices of pineapple cultivation. The variables age, education, farm size, risk orientation, management orientation and sources of information utilized were found important to influence the attitude of the respondents. The study revealed that favourable attitude and entrepreneurial characteristics of the pineapple cultivators might be harnessed for increased production of pineapple in the state thereby bringing socio economic upliftment of the marginal and small-scale farmers.

***Keywords*—**Attitude, Entrepreneurial characteristics, Pineapple, Socio economic upliftment.

I. Introduction

THE word "pineapple", first recorded in 1398, was originally used to describe the reproductive organs of conifer trees (now termed pine cones). When European explorers discovered this tropical fruit, they called them "pineapples" (term first recorded in that sense in 1664) because it resembled what is known as pine cones. The term "pine cone" was first recorded in 1694 to replace the original meaning of "pineapple". In the scientific binomial *Ananas comosus*, *ananas*, the original name of the fruit, comes from the Tupi (Rio de Janeiro, Brazil) word for pine *nanas*, as recorded by André Thevenet in 1555 and *comosus* means "tufted" and refers to the stem of the fruit (Pineapple Wikipedia).

Pineapple is an important fruit crop of North East (NE) region of India, occupying an area of 47,236 ha and producing 4,80,406t annually [1]. Cultivation of pineapple in the NE region and in the state of Nagaland has been practiced since time immemorial but initiatives for commercialization and adoption of modern technology have been started recently. The Government of India having identified the potentiality of NE region for horticultural crops started a project 'Horticulture Technology Mission' in the year 2001 which has resulted in phenomenal growth in horticulture sector in the region in general and the Nagaland state in particular. Government of Nagaland has identified pineapple as one of the main horticultural crop and various steps have been taken under this mission to boost up pineapple cultivation. This has resulted in substantial increase in area and production of pineapple to the tune of 140.72 % increase in area (1535 ha in 2001-02 to 3695 ha in 2005-06) and 141.16% increase in production (16885 t in 2001-02 to 40720 t in 2005-06) [2].

A. Concept of Entrepreneurship

The concept of entrepreneur found expression in the works of French economists in the nineteenth century. The first major work on entrepreneurship came from Joseph. A. Schumpeter (1934) who for the first time put the human agent at the centre of the process of the economic development and assigned a critical role to the entrepreneurship in the 'Theory of Economic Development'. In Schumpeter theory, the entrepreneurship is essentially a creative activity. The entrepreneur is the innovating individual who introduces some thing new into the economy, a method of production not yet tested by experience in the branch of manufactured concern, a production with which consumers are not familiar, a new source of raw material or of new market hitherto unexploited, and other innovations in the strict sense of the term. According to Schumpeter, an entrepreneur is the agent who provides economic leadership that changes the initial conditions of the economy and causes discontinuous dynamic changes. By nature he is neither a technician nor a financier, but he is considered an 'innovator'. Entrepreneurship has been conceived in many ways, viz; personality characteristics, innovative activities and managerial abilities. The French economists of the nineteenth century reduced it to the risk-taking involved in the capital investment; Schumpeter took it for innovative activities and Carroll conceived it as coordinating function, i.e. bringing together the various sources and factors of production.[3] Entrepreneurship

Open Science Index, Agricultural and Biosystems Engineering Vol:2, No:10, 2008 publications.waset.org/8585/pdf

doesn't emerge or grow spontaneously; rather it is dependent upon several factors such as economic, social, political, psychological etc. that may vary with individual, place and time. A state or a country rich in terms of entrepreneurs can attain faster economic development. The entrepreneurs organize the economic ventures for producing goods and services at lower cost with objects of maximization of new employment and setting up new business [4].

B. Rationality of the Present Study

The philosophy of entrepreneurship development is based on the assumption that entrepreneurs are not only born but can also be identified, trained and thus created. Entrepreneurs can be visualized as change agents who are eager to break away from present economic activity to take up a relatively new line of activity of doing business at their own. Pineapple cultivation has tremendous potential to generate gainful employment, promoting trade practices, avenues of setting processing industries and tremendous export potential which can bring progressive improvement in the socio- economic status of farmers in Nagaland. Further entrepreneurship is a function of several factors. The various concepts and theories advocated by the researchers envisage that the emergence of entrepreneurs in a society depends upon closely inter-linked economic, social, religious, cultural and psychological variables. Keeping these points in view a research study was undertaken with following specific objectives:

1. To study the socio-economic and personal characteristics of the pineapple growers.

2. To examine the entrepreneurial characteristics of pineapple growers.

3. To know the attitude of the pineapple growers towards improved package of practices of pineapple cultivation.

II. Methodology

Nagaland attained its statehood as 16th state of India. It is situated between 25° 6′ and 27° 4′ latitude north and between 93º 20′ E and 95º 15′ E longitude of equator in the North Eastern part of the India. Out of eleven districts in the state of Nagaland, pineapple cultivation is widely practised in Dimapur district. Therefore, Dimapur district was selected purposively for the present study. Dimapur district has four rural development blocks out of which pineapple is grown at a large scale in Medziphema rural development block. Further climatic condition and edaphic factors are also very conducive in this block. Besides this, Medziphema rural development block is credited with the production of best variety of pineapple in Nagaland in terms of quality and taste. Moreover farmers are adopting improved package of practices of pineapple cultivation in this district. Therefore, Medziphema rural development block was purposively selected for the presented study. In Medziphema block, the District Horticulture office Dimapur has identified twelve progressive villages for pineapple cultivation. Out of these, four villages viz; Bungsang, Medziphema, Molvom and Pherima, which are prominent in growing pineapple at a large scale, were selected randomly for the present study. A list of all pineapple growers in these four selected villages was prepared and 90 respondents were selected from these villages based on proportionate random sampling method. Ex – post facto research design was followed for the present research investigation.

Socio-economic and personal characteristics of the respondents were studied in terms of variables age (X_1), education (X_2), family size (X_3), experience in improved pineapple cultivation (X_4), farm size (X_5), annual income (X_6) and utilisation of information sources (X_7). The entrepreneurial characteristics of the respondents were studied in terms of variables knowledge level (Y_1), risk orientation (Y_2), self confidence (Y_3), management orientation (Y_4), farm decision-making ability (Y_5) and leadership ability (Y_6). The variable entrepreneurial characteristics was empirically measured by developing entrepreneurship index, knowledge level was measured by developing knowledge index, risk orientation by using modified scale of Supe (1969) [5], self confidence by using the scale of Basavanna (1971)[6], management orientation by using scale developed by Samanta (1977)[7], farm decision making ability by using scale developed by Nanda Purkar (1980)[8]. The variable attitude was empirically measured with the help of attitude index developed by Rongsentemjen and Jha (2001)[9]. Primary data were collected from the selected respondents with the help of a pre-tested semi structured schedule following personal interview method and secondary data were collected from books, journals, government records etc. The collected data were coded, decoded, tabulated, classified and analysed by calculating mean, standard deviation, correlation and regression coefficients using SPSS (Statistical Program in Social Sciences) software. Categorisation of the attributes as well as classification of the levels of the entrepreneurial characteristics of pineapple growers were done based on mean and standard deviation values. T- test was done to ascertain the level of significance of the selected independent variables.

III. Findings

A. Profile of the Respondents

Table I envisaged that most (66.67%) of pineapple growers belonged to middle age between 34-54 years having education up to high school level (33.34%) with an average family size of 5-10 members (75.56%). Majority (62.22%) of the selected pineapple growers had 3 - 6 years of experience in improved pineapple cultivation while (70%) of them possessed 1-2.5 ha of land solely under pineapple cultivation. Majority of the respondents comprising 71.11 percent had medium level of annual income ranging from Rs 53,190 to Rs 1,26,450 while 66.66 percent of them exhibited medium level of utilization of information sources.

Open Science Index, Agricultural and Biosystems Engineering Vol:2, No:10, 2008 publications.waset.org/8585/pdf

TABLE I
SOCIO-ECONOMIC AND PERSONAL CHARACTERISTICS OF THE PINEAPPLE GROWERS

Attributes	Category	Frequency	Percentage
Age (X_1)	Below 34 years	14	15.55
	34-54 years	60	66.67
	More than 54 years	16	17.78
Education (X_2)	Illiterate	03	3.33
	Functional literate	19	21.11
	Primary school	09	10.00
	Middle school	18	20.00
	High school	30	33.34
	College education	11	12.22
Size of family (X_3)	Up to 4 members	10	11.11
	5-10 members	68	75.56
	More than 10 members	12	13.33
Experience in improved pineapple cultivation (X_4)	Less than 3 years	24	26.67
	3-6 years	56	62.22
	More than 6 years	10	11.11
Farm size (X_5)	Less than 1 ha	07	7.78
	1-2.5 ha	63	70.00
	More than 2.5 ha	20	22.22
Annual income (X_6)	Low	12	13.33
	Medium	64	71.11
	High	14	15.56
Degree of information sources utilized (X_7)	Low	60	66.66
	Medium	16	17.78
	High	14	15.56

B. Entrepreneurial Characteristics

TABLE II
LEVEL OF ENTREPRENEURIAL CHARACTERISTICS OF PINEAPPLE GROWERS

Dimensions of entrepreneurial characteristics	Level	Frequency	Percentage
Knowledge (Y_1)	Low	15	16.66
	Medium	54	60.00
	High	21	23.34
Risk orientation (Y_2)	Low	16	17.78
	Medium	49	54.44
	High	25	27.78
Self confidence (Y_3)	Low	11	12.23
	Medium	60	66.66
	High	19	21.11
Management orientation (Y_4)	Low	24	26.23
	Medium	38	42.66
	High	28	31.11
Farm decision making ability (Y_5)	Low	17	18.89
	Medium	48	53.33
	High	25	27.78
Leadership ability (Y_6)	Low	19	21.12
	Medium	50	55.55
	High	21	23.33

Table II envisaged that majority (60%) of the pineapple growers had medium level of knowledge about improved package of practices of pineapple cultivation followed by high and low knowledge levels as evident in case of 23.34 percent and 16.66 percent of the respondents. Majority (54.44%) of the pineapple growers had medium level of risk orientation; whereas 27.78 percent of them had high level of risk orientation and 17.78 percent of them exhibited low level of risk orientation. Thus it may be inferred that most of the entrepreneurs undertook a moderate level of risk in respect of new ventures and initiatives.

These findings are in line with the findings of Landes (1949)[10], Devi (1986)[11], Murali and Jhamtani (2003)[12] and Loyi and Jha (2008)[13].

Majority (66.66%) of the pineapple growers had moderate level of self confidence whereas 21.11 percent of them had high level of confidence followed by (12.23%) of them having low level of confidence. Majority (42.66%) of the respondents had medium level of management orientation followed by 31.11 percent of them having high level and 26.23 percent of them having low level of management orientations. Majority (53.33%) of the pineapple growers had medium level of farm decision making ability followed by 27.78 percent of them having high level and 18.89 percent of them having low level of farm decision making ability. In context of leadership ability majority (55.55%) of the respondents had medium level, 23.33 percent of them had high level, and 21.12 percent of them had low level of leadership ability.

C. Association of Socio-Economic and Personal Variables with Selected Entrepreneurial Variables

Association of socio-economic and personal variables with selected entrepreneurial variables was ascertained by correlation analysis, as presented in Table III.

TABLE III
ASSOCIATION OF SOCIO-ECONOMIC AND PERSONAL VARIABLES (X_i) WITH SELECTED ENTREPRENEURIAL VARIABLES (Y_i)

	Y_1	Y_2	Y_3	Y_4	Y_5	Y_6
X_1	-.325**	-.504**	-.346**	-.437**	-.062	.046
X_2	.561**	.374**	.547**	.378**	.124	-.032
X_3	-.032	-.034	.024	-.035	.053	-.030
X_4	.268**	.064	.452**	-.024	.016	-.053
X_5	.023	.041	.036	.025	.058	-.061
X_6	.031	.524**	.042	.026	.372**	-.062
X_7	.437**	.385**	.353**	.358**	.287**	.285**

** Significant at 1% level of probability

- Numerical values in the table represent coefficient of correlation (r)

Knowledge (Y_1): The correlation analysis revealed a negative and highly significant relationship (r = -0.325) with the variable age X_1. This indicates that younger is the respondent more is his capability of acquiring pertinent knowledge about improved package of practices of pineapple cultivation. The variables education, X_2 (r=0.561), farm experience, X_4 (r = 0.268) and information sources utilized, X_7 (r = 0.437) were also associated positively and found to be highly significant

Open Science Index, Agricultural and Biosystems Engineering Vol:2, No:10, 2008 publications.waset.org/8585/pdf

with the variable knowledge, suggesting that higher is the level of education, farm experience and information sources utilisation, higher is their knowledge level about improved package of practices of pineapple cultivation.

Risk orientation (Y_2): The variable risk orientation had negative and highly significant association with the variable age, X_1 (r = -0.504). This indicates that younger is the individual, higher is his risk taking ability. Risk orientation was also highly significant and positively associated with the variables education, X_2 (r=0.374), annual income X_6 (r = 0.524) and information sources utilized X_7 (r = 0.385). It may be inferred that respondents having higher level of education, annual income and high degree of utilisation of information sources possessed greater degree of risk taking ability.

Self-confidence (Y_3): Self-confidence had negative and highly significant relationship with the variable age, X_1 (r = -0.346). This implies that younger is the respondent; more is his level of self confidence to undertake a new venture for accomplishments. The variables education, X_2 (r = 0.547), farm experience, X_4 (r = 0.452) and information sources utilized, X_7 (r = 0.353) were also highly significant and positively associated with the variable self confidence, suggesting that with increase in the level of education, experience and degree of information sources utilisation, an individual tend to gain self-confidence which may be helpful for him to take initiative for an innovative venture and to become an entrepreneur.

Management orientation (Y_4): The variable management orientation had negative and highly significant association with the variables age, X_1 (r = -0.437), which indicates that if a person is young; he is more likely to adopt relevant management practices in his entrepreneurial activities. Variables education X_2 (r = 0.378) and information sources utilised, X_7 (r = 0.358) were also highly significant and positively associated with the variable management orientation. Higher level of education and greater utilisation of information sources might have increased awareness, knowledge and creativity of the entrepreneurs equipping them with higher degree of management orientation.

Farm decision making ability (Y_5): The variables annual income, X_6 (r = 0.372) and information sources utilized, X_7 (r = 0.287) had positive and highly significant association with the variable farm decision making ability. This implies that higher is the level of annual income and degree of utilisation of the information sources, higher is the farm decision making ability of an individual. This might be due to the assured financial status and greater degree of awareness about improved package of practices of pineapple cultivation thereby projecting a higher and strong farm decision making ability of an entrepreneur.

Leadership ability (Y_6): The correlation analysis revealed that the variable information sources utilized, X_7 (r = 0.285) had positive and highly significant association with the leadership ability of the selected pineapple growers. It may be inferred that higher is the level of utilisation of information sources greater is the leadership ability of an entrepreneur. This might be due to the fact that with greater access of information sources an individual might get enriched with latest market information and greater degree of confidence to undertake leadership roles.

D. Attitude of the Pineapple Growers towards Improved Package of Practices of Pineapple Cultivation

Distribution of respondents based on their attitude towards improved package of practices of pineapple cultivation has been presented in Table IV. It was evident from Table IV that majority (72.22%) of the pineapple growers had favourable attitude towards improved package of practices of pineapple cultivation followed by most favourable attitude in case of 21.11 percent of them. It was noteworthy to find that only 6.67 percent of the pineapple growers had less favourable attitude, as they possessed staunch traditional belief being hesitant to adopt improved package of pineapple cultivation practices. These findings are in line with the findings of Bhatnagar and Singhal (1984) [14].

TABLE IV
DISTRIBUTION OF RESPONDENTS BASED ON THEIR ATTITUDE TOWARDS PINEAPPLE CULTIVATION

N = 90

Degree of attitude	Frequency	Percentage
Less favourable	06	06.67
Favourable	65	72.22
Most favourable	19	21.11

Mean (μ) = 34.35; s.d = 2.72

TABLE V
ASSOCIATION OF SELECTED INDEPENDENT VARIABLES WITH THE DEPENDENT VARIABLE- *ATTITUDE* OF PINEAPPLE CULTIVATORS

Independent Variables	Correlation Coefficient 'r'
X_1	-0.219*
X_2	0.358**
X_5	0.413**
X_7	0.289**
Y_2	0.284**
Y_4	0.375**

* Significant at 5% level of probability
** Significant at 1% level of probability

- Numerical values in the table represent coefficient of correlation (r)

It was evident from Table V that the variable age (X_1) had negative and significant association (r = -0.219) whereas the variables education (X_2), farm size (X_5),sources of information utilised (X_7), risk orientation (Y_2) and management orientation (Y_4) had positive and highly significant association (r = 0.358, 0.413, 0.289, 0.284, 0.375 respectively) with the attitude of the respondents towards improved package of practices of pineapple cultivation. It may be inferred that younger person possessed higher degree of favourable attitude making them more open to innovations for adoption. Further respondents having higher level of

education, farm size, and more access to sources of information, risk orientation, and management orientation were found to exhibit more favourable attitude towards improved package of practices of pineapple cultivation.

IV. Conclusion

Based on the present research study it was evident that the selected pineapple growers under present investigation had favourable attitude towards improved package of practices of pineapple cultivation. The variables age, education, farm size, risk orientation, management orientation and sources of information utilised were found important to influence the attitude of the respondents towards improved package of practices of pineapple cultivation. The findings of the present study have several practical implications, mostly in the nature of suggestions to the policy makers, trainers, planners and all concerned officials involved in increasing the productivity and promoting needed infrastructure facilities to motivate the pineapple cultivators for large scale pineapple cultivation. Since majority of the pineapple cultivators had medium level of entrepreneurship characteristics and favourable attitude towards improved method of pineapple cultivation, potential farmers may be meticulously selected for intensive need based training with respect to improved package of practices of pineapple cultivation, giving due cognisance to the variables identified for influencing the attitude. Since majority of the respondents selected under present study belonged to small (1-2 ha land) and marginal category (less than 1 ha of land) of farmers, it is imperative that findings of the present study may help such target groups in developing acumen for entrepreneurial development resulting in increased productivity, prosperity as well as setting up of small scale industries including fruit processing units for increased capital formation and employment opportunities in the region.

References

[1] "Annual report," Anonymous, North East Council, Shillong, Meghalaya, India, 2004.
[2] "Annual report," Anonymous, Directorate of Horticulture, Govt of Nagaland, India, 2007.
[3] Batra.G.S, Development of Entrepreneurship, Deep and Deep Publications Pvt Ltd, New Delhi, India, pp. 23-25, 2002.
[4] M. Nazar, "Women entrepreneurship and small scale industries," Himalaya Publishing House, New Delhi, India, pp.6-9, 2005.
[5] S.V. Supe, "Factors related to different degree of rationality in decision making among farmers," Unpublished PhD Thesis, IARI, New Delhi, India, 1969.
[6] M. Basavanna, "A study of self confidence as an attitude of self concept," Unpublished PhD Thesis, APAU, Hyderabad, India, 1971.
[7] R. K. Samantha, "A study of some agro- economic socio-psychological and communication variables associated with repayment behaviour of agricultural credit user of national bank," Unpublished PhD Thesis, Department of Agricultural Extension, BCKV, Nadia, West Bengal, 1977.
[8] G. G. Nanda Purkar, "Small farmers: A Study on their entrepreneurial behaviour," Metropolitan Book Co. Pvt.Ltd, New Delhi, India, 1980.
[9] Rongsentemjen, and K. K. Jha, " Farm level constraints faced by the farmers and their attitude in respect of pineapple cultivation in Dimapur district of Nagaland, M.Sc (Ag) Thesis, Unpublished, SASRD, Medziphema, Nagaland University, India, 2001.
[10] D.S. Landes, "French entrepreneurship and industrial growth in 19th century," Journal of Economic History, vol.9, pp. 12, 1949.
[11] L.A. Devi, "Time utilization pattern of rural farm women, "Indian Journal of Adult Education, vol.38, no.1, pp. 13,1986.
[12] K. Murali, and A. Jhamtani, "Entrepreneurial characteristics of floriculture farmers," Indian Journal of Extension Education, vol. 39, no. 1&2, pp.19-25, 2003.
[13] K. Loyi, and K. K. Jha, "Entrepreneurship characteristics of orange growers: An analysis," Nagaland University Research Journal, vol.5, pp.55-62, 2008.
[14] S. Bhatnagar, and A. Singhal, "Attitude of women participants towards integrated child development services (ICDS)," Indian Journal of Extension Education, vol.20, no. (3&4), pp.67-68, 1984.

Kaushal Kumar Jha has a degree of PhD in Agricultural Extension from Institute of Agricultural Sciences (IAS), Banaras Hindu University, Varanasi, India, 1999. He is having specialization in the fields of Extension Education and Rural Development and involved in teaching, research and extension in the Department of Rural Development and Planning, (SASRD), Nagaland University, as senior Assistant Professor. He is also associated with NAIP project sponsored by ICAR, New Delhi, and Monitoring and Evaluation of ATMA (Agricultural Technology Management Agency), Government of Nagaland. His research interest lies in the fields of Entrepreneurship Development, Training for Development, Impact Assessment and Development Policy (e - mail: kkjhanurd@rediffmail.com).

Open Science Index, Agricultural and Biosystems Engineering Vol:2, No:10, 2008 publications.waset.org/8585/pdf