



## Entrepreneurial Behaviour of Ginger Growers – An Analysis

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### ABSTRACT

India is one of the major producers of spices in the world. Ginger is one of the important spices of them and playing an important role in production and export of the country. Ginger is grown in almost all the states of the north east region of India but the leading states are Assam, Meghalaya, Sikkim and Nagaland. The present study aimed to analyze the entrepreneurial behaviour of ginger growers with respect to establishment of ginger based entrepreneurial ventures. The study was conducted in Dimapur district of Nagaland by conducting household survey of ginger growers in three villages comprising 120 randomly selected respondents following ex-post facto research design. Personal interview was conducted to obtain data from the selected respondents. Major findings revealed that most of the ginger growers had small size of land holding and low mass media exposure, high level of self-confidence and economic motivation, medium level of achievement motivation, planning orientation, production orientation, marketing orientation, risk orientation and farm decision making ability; whereas most of them exhibited low level of scientific orientation. The study concluded that variables namely – age, farm size, annual income and knowledge were found important in influencing the entrepreneurial behaviour of the ginger growers.

**Key words:** Entrepreneurial behaviour, Ginger Growers, Influencing Factors, Nagaland.

### INTRODUCTION

Ginger (*Zingiber officinale* Rosc.) is one of the most widely consumed dietary condiments in the world. It is an important commercial crop grown for its aromatic rhizomes which is used both as a spice and a medicine (Jakkawad *et al.*, 2017). It is a fragrant spice made from the rhizome, which may be chopped or powdered for cooking. In India, it is also one of the important vegetable/ cash crops grown. The history of Indian spices dates back to the beginning of human civilization (Sundresha *et al.*, 2020). India has a long history of producing and exporting spices. Ginger is cultivated in India, China, Japan, Indonesia, Nepal, Australia, Nigeria and West Indies islands. India is also one of the leading producer and consumer of ginger in the world. The largest ginger importers are the United Kingdom, the United States and Saudi Arabia. India is the largest producer of ginger in the world contributing 34.60% of the global production with an annual production of 702 thousand tonnes followed by China (24.97 %) with an annual production of 506.62 thousand tonnes (FAOSTAT, 2022). In India, the state of Madhya Pradesh is leading in ginger production followed by the states of Karnataka and Assam respectively (Statistica, 2022).

According to F.H Knight, “An entrepreneur is a person who performs dual function of risk taking and control” (Chopra, 1996). According to J.A. Schumpeter, “Entrepreneur is associated with innovations.” Innovations mean the practical application of new idea to reduce the cost of production or to improve the quality of production (Chopra, 1996). 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 (Nazar, 2005). Nagaland is one of the important ginger growing states in the north east region of India. The productivity of ginger in the state of Nagaland is 9.15 t/ha (Anonymous 2021), however there is lack of evident ginger based agro industries which may be instrumental in empowering the socio-economic status of farmers. Taking into account the high potential of quality ginger production, the present research study was conducted in the state of Nagaland.

### OBJECTIVES

1. To examine the profile characteristics of ginger growers.
2. To analyze the entrepreneurial behaviour of ginger growers.
3. To ascertain the relationship of socio-economic variables with the entrepreneurial behaviour of ginger growers.

## METHODOLOGY

The present study was conducted in Dimapur district of Nagaland. This district was selected as it has favourable agro-climatic conditions and one of the progressive districts in growing ginger in the state. The study was based on household survey of randomly selected 120 ginger growers from three villages of the selected district. Ex-post facto research design was followed for conducting the study during 2021-2022. Entrepreneurial behaviour of the respondents were studied in terms of the variables – Achievement motivation, Self confidence, Planning Orientation, Production Orientation, Marketing orientation, Risk orientation, Scientific orientation, Farm Decision Making Ability, Economic motivation. Profile characteristics of the ginger growers were also studied selecting important variables based on the review of the past studies. Primary data were collected with the help of a pre-tested structured schedule by conducting personal interview of the selected farmers. Data analysis was done using SYSTAT 12 software for obtaining relevant statistical inferences.

## RESULTS

Table 1 revealed that India is leading in area, production, as well as productivity of ginger in comparison to China for the period of 2011-2021. The average area under ginger production in India in 2011 was 149100 ha which increased to 205000 ha in the year 2021 with a gain of 37.49 %. The gain in productivity for the same period was recorded as 216.95 %. The average area under ginger production in China in 2011 was 46256 ha which increased to 61722 ha in the year 2021 with a gain of 33.43 %. The gain in productivity of ginger in China for the same period was recorded as 30.44 %. Thus India is the top producer of ginger globally with an average productivity 10.85 t/ha.

**Table1.** Comparative account of ginger production, India Vs China.

Sr. No	Country	Area under ginger 2011 (ha)	Area under ginger 2021 (ha)	Percent change in area (2011-2021)	Production of ginger 2011 (t)	Production of ginger 2021 (t)	Yield of ginger 2011 (t/ha)	Yield of ginger 2021 (t/ha)	Percentage change in yield (2011-2021)
1.	India	149100	205000	37.49 %	702000	2225000	4.70	10.85	+ 216.95%
2.	China	46256	61722	33.43 %	506617	660834.2	10.9	10.70	+ 30.44%

Source: [www.fao.org/faostat/en/#data/QCL](http://www.fao.org/faostat/en/#data/QCL) (2022)

Table 2 revealed that highest percentage of ginger growers (51.67 %) belonged to the middle age group, majority (42.50 %) of them were illiterate, most of them (56.67 %) had family size of 5 to 8 members and most of them (65.00 %) had an experience of 10 to 12 years in ginger cultivation. Majority (70.00 %) of them possessed 1 to 2 ha of land for farming; most (65.00 %) of them had an average annual income ranging \$ 1207 to \$ 2414 with a mean annual income of \$ 1475. Most (78.33%) of the respondents had low level of mass media exposure and majority (56.67%) of them had medium knowledge level of the improved ginger production technology. The findings related to age, family size, annual income and knowledge was in line with the findings of Lotha and Jha (2022), Sundresha (2020) and utilization of mass media sources was in line with the findings of Das and Jha (2022) however, Sundresha (2020) found that the ginger growers had high mass media participation.

**Table 2.** Profile characteristics of ginger growers

Sl. No	Variables	Category	Mean	Frequency	Percentage
1.	Age	Below 35 years	41 Yr	48	40.00
		35-55 years		62	51.67
		More than 55 years		10	08.33
2.	Education	Illiterate	-	51	42.50
		Primary school		43	35.83
		Middle school		23	19.17
		High school and above		03	02.50
3.	Size of family	< 5 members	6	41	34.17
		5-8 members		68	56.67
		> 8 members		11	09.16
4.	Experience in ginger cultivation	< 10 years	15 Yr	18	15.00
		10-20 years		78	65.00
		> 20 years		24	20.00

5.	Farm Size	< 1 ha	1.22	26	21.67
		1-2 ha		84	70.00
		> 2 ha		10	08.33
6.	Annual income	< \$ 1207	\$ 1475	26	21.67
		\$ 1207 to \$ 2414		78	65.00
		> \$ 2414		16	13.33
7.	Exposure of Mass Media Sources	Low	-	92	78.33
		Medium		26	21.67
		High		00	00.00
8.	Knowledge of improved practices	Low	-	32	26.67
		Medium		68	56.67
		High		20	16.66

Table 3 revealed that most (78.33 %) of the ginger growers had moderate level of innovativeness. Majority (76.67 %), of the ginger growers had medium level of achievement motivation. Majority (73.33 %), of them had medium level of risk orientation. Thus most of the entrepreneurs had potential to undertake a moderate degree of risk in respect of starting new ventures and initiatives in form of start ups. Most of them had moderate level of planning, production as well as marketing orientation. Most (65.00 %), of the farmers had medium level farm decision making ability and majority (56.67 %), of them had low level of scientific orientation. High level of self-confidence was evident in case of 56.67 per cent of the respondents and most (48.33%) of the respondents had high level of economic motivation. Thus there exist a good potential of promoting entrepreneurial ventures based on ginger based value added products. The findings related to risk orientation was in line with the findings of Lotha and Jha (2022), whereas the findings in relation to self confidence was in line with the findings of Vashisth *et al.* (2007).

**Table 3.** Entrepreneurial attributes of the ginger growers

Sl. No	Entrepreneurial attributes studied	Level	Frequency	Percentage
1.	Innovativeness	Low	18	15.00
		Medium	94	78.33
		High	08	06.67
2.	Achievement motivation	Low	11	09.17
		Medium	92	76.67
		High	17	14.16
3.	Self confidence	Low	10	08.33
		Medium	42	35.00
		High	68	56.67
4.	Planning orientation	Low	14	11.67
		Medium	97	80.83
		High	09	07.50
5.	Production orientation	Low	08	06.67
		Medium	90	75.00
		High	22	18.33
6.	Marketing orientation	Low	14	11.67
		Medium	72	60.00
		High	34	28.33
7.	Risk orientation	Low	12	10.00
		Medium	88	73.33
		High	20	16.67
8.	Scientific orientation	Low	36	30.00
		Medium	68	56.67
		High	16	13.33
9.	Farm Decision Making Ability	Low	15	12.50
		Medium	78	65.00
		High	27	22.50
10.	Economic motivation	Low	17	14.17
		Medium	58	48.33
		High	45	37.50

Table 4 revealed that the variables Farm Size and Annual Income had positive and significant association at 0.05  $\alpha$ , having  $r=+0.247$  and  $r=+0.189$  respectively with the entrepreneurial behaviour of the respondents. Thus it may be inferred that respondents having higher level of Farm Size as well as higher Annual income exhibited greater degree of entrepreneurial behaviour with respect to ginger production.

**Table 4.** Relationship of socio - economic variables with the entrepreneurial behaviour

of ginger growers.

Sr No	Independent Variables	Coefficient of correlation ( r )
1.	Age	-0.625**
2.	Education	+0.001 <sup>NS</sup>
3.	Farm Size	+0.247*
4.	Size of Family	+0.003 <sup>NS</sup>
5.	Experience in ginger cultivation	+0.106 <sup>NS</sup>
6.	Annual Income	+0.189*
7.	Mass Media Exposure	-0.108 <sup>NS</sup>
8.	Knowledge	+ 0.412**

\*\* Significant at 0.01  $\alpha$ .

\*Significant at 0.05  $\alpha$ .

NS – Non significant.

The variable Knowledge ( $r=+0.412$ ) had positive and highly significant association with the entrepreneurial behaviour of the respondents at 0.01  $\alpha$  inferring that respondents having high knowledge exhibited greater degree of entrepreneurial behaviour. The variable Age had negative and highly significant relationship with the entrepreneurial behaviour of farmers. This inferred that young ginger growers exhibited higher level of entrepreneurial behaviour. The variables viz., Education, Size of family, Experience in ginger cultivation, and Mass media exposure had non-significant association with the Entrepreneurial behaviour of the ginger growers. The findings related to Annual income and Knowledge was in line with the findings of Kharlukhi and Jha (2021).

## CONCLUSION

The study revealed that majority of the ginger growers belonged to middle aged category, had primary level of education, with moderate knowledge of improved ginger production. Most of them had small size of land holdings and low mass media exposure, high level of self-confidence and economic motivation, medium level of achievement motivation, planning orientation, production orientation, marketing orientation, risk orientation and farm decision making ability; whereas most of them exhibited low level of scientific orientation. The study revealed a characteristic feature with respect to the entrepreneurial behaviour of the ginger growers that majority of them had high level of self-confidence and economic motivation which is very instrumental in providing motivational energy for starting a new venture or a start up.

## RECOMMENDATIONS

Scientific orientation towards adoption of improved practices of the ginger production needs to be stepped up. Conducting result demonstrations and need based training programmes may be quite helpful towards inculcating scientific orientation and modifying the behaviour of ginger growers in order to transform them into a successful entrepreneur. The variables age, farm size, annual income and knowledge were found important in influencing the entrepreneurial behaviour of the ginger growers. Therefore, these factors may be given due cognizance in planning an entrepreneurial development programme for selection of young target groups of ginger growers. Farmers' producer organisation may be organised for increasing the volume of production and marketing orientation and market infrastructure may be further strengthened.

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