

Innovativeness of cucumber growing farmers in Mokokchung, Nagaland

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ABSTRACT

Cucumber is one of the oldest vegetable crop grown widely throughout India as well as tropical and sub-tropical parts of the world. Nagaland, one of the eight states of the north east region is blessed with suitable agro climatic conditions and its soil is suitable for agriculture, where cucumber is grown in all the districts. Mokokchung district of Nagaland leads in area as well as production of cucumber. This district is unique not only for growing normal season cucumber but off- season cucumber also which is widely cultivated and having high demand in the market. Farmers cultivate cucumber without using chemical fertilizer or pesticides and utilize their enriched indigenous technical knowledge and innovative practices. Farmer's innovation plays a key role in augmenting the desired agricultural produce in the concerned region as well as providing a strong line of support to the participatory technology development process. The present study was conducted in Ongpangkong (South) rural development block under Mokokchung district of Nagaland with an objective to know about the selected socio-economic characteristics of the cucumber growing farmers and analyze their innovativeness with respect to off season cucumber cultivation. The findings revealed that majority of the respondents belonged to small farm category, were middle aged, had level income, had education up to high school level with medium length of farming experience and moderate level of innovativeness in relation to off season cucumber cultivation. The variables age, education and income influenced the innovative behaviour of the off- season cucumber growers.

Key Words: Socio economic characteristics, Innovativeness, Cucumber growers, Nagaland.

INTRODUCTION

Cucumber (*Cucumis sativus* L.) belonging to the family of Cucurbitaceae is one of the oldest vegetable crops grown widely throughout India as well as tropical and sub-tropical parts of the world. It is known for its versatile uses viz., medicinal, edible and industrial uses. Cucumber is grown throughout the world and China leads in area (11, 66,690 ha) as well as production (5,43,62,750 t). India ranked 28th in the world with total area and production of 26,500 ha and 1,68,000 t respectively during the year 2013. Important cucumber growing states include Bihar, Haryana, Orissa, Punjab, Rajasthan and Uttar Pradesh (Anonymous, 2014). Nagaland, one of the eight states of the north east region is blessed with suitable agro climatic conditions and soil suitable for cucumber cultivation.

Nagaland is also one of the states where cucumber is grown in all the districts. Mokokchung district of Nagaland leads in area as well as production of cucumber. This district is unique not only for growing normal season cucumber but off- season cucumber also which is widely cultivated and having high demand in the market. Farmers cultivate normal season cucumber as mixed crop in their jhum fields with other crops in summer season in which production is affected due to high incidence of rain whereas the off- season cucumber is cultivated in winter season starting in the month of January and providing additional income to the farmers.

Farmers utilize their enriched indigenous technical knowledge and innovative practices for cultivating cucumber without using chemicals. First of all the technique of off- season cucumber was conceived and lead by Purremba a progressive farmer of

Mokokchung district. Farmer's innovation plays a key role in augmenting the desired agricultural activity and provides a firm base to the participatory technology development process of the research organizations.

STATEMENT OF PROBLEM

There exists an immense potential of undertaking off-season cucumber cultivation as farmers can venture out economically and establish successful entrepreneurial ventures. Following the success of innovative approach of cucumber cultivation, farmers from different villages are now engaged in off-season cucumber cultivation in Mokokchung district. Taking these points into consideration a study was undertaken in the year 2014-2015 with the following research questions:

RESEARCH QUESTIONS

1. What is the socio-economic status of the cucumber growers in the study area?
2. What is the level of innovativeness of the selected farmers?
3. Which factors are influencing the innovativeness of the cucumber farmers?

METHODOLOGY

Research Design

Ex-post facto research design was followed for conducting the present research work.

Sample

The present study was conducted in Mokokchung district of Nagaland. It lies between $26^{\circ} 28' 56''$ and $94^{\circ} 30' 41''$ E. It is situated at an elevation of 1,325 m above the mean sea level. This district was purposively selected being the highest producer of quality cucumber in Nagaland. One rural development (RD) block viz; Ongpangkong (South) block was purposively selected for the present study. Under this RD block three leading villages in off-season cucumber cultivation were selected for the present study. The list of all the cucumber growers in the selected villages was prepared and respondents were selected based on

proportionate random sampling procedure making a sample size of one hundred farmers.

Instruments

A well structured pre-tested interview schedule was prepared for data collection. Before the actual interview was conducted in the selected villages, a sample of 25 respondents which did not constitute the respondent sample was selected for pre-testing the schedule. Rapport building was done and data were collected based on personal interview as well as focused group discussions.

Analysis

Data obtained from the respondents were tabulated, and classified. Statistical analysis was done using SYSTAT-12 software.

RESULTS

Socio- economic characteristics of the cucumber growers

Table 1 revealed that majority (64%) of the respondents were in the age group of 36 to 60 years, had education up to high school (42%). Most (93%) of the farmers were utilizing their land ranging 0.04 acres to 0.34 acres for off season cucumber cultivation and majority (87%) had medium level of experience (5-15 years) with an average annual income of Rs 20690 from the off season cucumber cultivation.

Innovativeness of the cucumber growers

It was evident from Table 1 that majority (71%) of the respondents had medium level of innovativeness followed by high (20%) and low (9%) level of innovativeness respectively. It is characteristic to note that 20 percent of the farmers possessed high level of innovativeness. These group of farmers may be potentially identified for providing need based trainings on 'Agri-preneurship' development so that cucumber based agricultural enterprises may be possibly set up to meet the emerging demands of the consumer. The ability and interest of the respondents to experiment and develop ideas into skills may be the plausible reason for these pattern of innovativeness among the respondents.

This finding was in line with the findings of Thorat *et al.* (2007) ; Sidaram *et al.* (2010) and Bennur (2011).

Table1: Socio-economic characteristics & innovativeness of Cucumber growers

N=100

| Sr. No. | Characteristics | Category | Frequency | Percentage |
|---------|---|--------------------------|-----------|--------------|
| 1. | Age (in Yrs) Mean =47.96 | More than 60 Years | 15 | 15.00 |
| | | 36-60 Years | 64 | 64.00 |
| | | Less than 36 Years | 21 | 21.00 |
| 2. | Education | Illiterate | 02 | 02.00 |
| | | Primary | 05 | 05.00 |
| | | Middle | 35 | 35.00 |
| | | High School | 42 | 42.00 |
| | | PU | 07 | 07.00 |
| | | Graduate | 09 | 09.00 |
| 3. | Land holding under off-season cucumber cultivation (acre) Mean =0.15 | Less than 0.04 acres | 00 | 00.00 |
| | | 0.04 – 0.34 acres | 93 | 93.00 |
| | | More than 0.34 acres | 07 | 07.00 |
| 4. | Level of experience (Years) Mean =7.71 | Low (Less than 5 years) | 05 | 05.00 |
| | | Medium (5-15 years) | 87 | 87.00 |
| | | High (More than 15years) | 08 | 08.00 |
| 5. | Annual Income from off-season cucumber cultivation (Rs) Mean =Rs. 20690.00 | Less than Rs. 9823 | 13 | 13.00 |
| | | Rs. 9823- Rs. 31507 | 73 | 73.00 |
| | | More than Rs. 31507 | 14 | 14.00 |
| 6. | Innovativeness Mean =11.04 | Low | 09 | 09.00 |
| | | Medium | 71 | 71.00 |
| | | High | 20 | 20.00 |

Table2: Association of innovativeness with 'Socio- economic characteristics' of the Cucumber farmers

| Sr. No | Independent Variables | Correlation coefficient 'r' |
|--------|--|-----------------------------|
| 1. | Age | -0.7049** |
| 2. | Education | +0.6368** |
| 3. | Land Holding under off season cucumber cultivation | 0.0027 ^{NS} |
| 4. | Experience in off season cucumber cultivation | 0.0315 ^{NS} |
| 5. | Annual Income from off-season cucumber cultivation | 0.342* |

**- Significant at 1 % α

*- Significant at 5 % α

NS- Non Significant

Factors influencing innovativeness of the off - season cucumber growers

Table 2 revealed that the variables 'Age' had negative and highly significant association with the innovative behavior of the farmers; The variable 'Education' had positive and highly significant association with the innovative behavior of the farmers and the variable 'Annual Income' from the off-season cucumber cultivation had positive and significant association with the variable "Innovativeness" of the cucumber farmers. This implies that cucumber growing farmers who were young in age possessed higher degree of innovativeness in relation with off-season cucumber cultivation practices. Further higher annual income and education level also resulted in higher degree of innovativeness among the off-season cucumber growers. It was observed that farmers had specific innovativeness in relation to the pest management and intercropping practices giving them strength and high degree of confidence in their endeavour. These findings are in line with the findings of Archana (2013) & Patel *et al.* (2014)

CONCLUSION

It may be concluded from the present study that majority of the respondents belonged to small farm category, were middle aged, had education up to high school level with medium length of farming experience and medium level of annual income from cucumber cultivation. Majority of the farmers had moderate level of innovativeness in relation to off season cucumber cultivation. It was also revealed that of innovativeness of the off season cucumber farmers were influenced by the variables age, education and annual income obtained from the cucumber cultivation.

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