



Factors Influencing Adoption of Mushroom Production in Gujarat

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ABSTRACT

Mushroom farming is increasingly becoming attractive to marginal and small farmers because it is simple, low cost, labor intensive and eco friendly profession and can provide employment in both rural and semi urban areas. The study was conducted in four districts of Gujarat in order to assess the knowledge gained and technology adopted by the trainees and analyzes the factors influencing adoption of mushroom production technologies. The data were collected from 244 farmers through structured questionnaires and was analyzed by using the suitable statistical methods. It was observed that pre training knowledge score was not much satisfactory. However, the knowledge score gained by participants after training was more satisfactory in all aspects. Except farming experience, all the variables *i.e.*, age, education, land holding, family income, farming experiences, achievement motivation, economic motivation and knowledge of mushroom production technology were positively and significantly correlated with adoption of mushroom production technology.

Key Words: Adoption, Independent Variables, Oyster Mushroom, Production, Technology.

INTRODUCTION

The oyster mushroom (*Pleurotus spp*) due to its tremendous stability of cap and stem, cooking qualities and longer shelf life plays a very significant role to eradicate malnutrition, alleviate poverty and create employment opportunity for rural unemployed folk specially the tribal farming community (Kumari *et al*, 2018). It is one of the high value crops that can be grown alongside other crops as a diversification option for both small holder and large scale farmers. Mushroom cultivation in Gujarat is negligible during last few years although there is a considerable increase in its demand. Nearly 50% per cent of Gujarat farmers belong to the small and marginal category. Their socio-economic level is quite low for a sustained livelihood. It is a well established fact that the rural unemployed individuals specially the tribal farmers can be developed, as entrepreneurs through organizing vocational training programmers on regular basis (Pradhan *et al*, 2016). Keeping in view the above fact, as many as 15 residential training programmes each of five days duration on oyster mushroom

cultivation were organized by the Gujarat Vidyapith KVK for the farmers of different districts of Gujarat state. In this context the study was conducted by KVK with the objectives to ascertain the level of knowledge and adoption level of recommended oyster mushroom cultivation technologies by the trainees and to find out the relationship between socioeconomic characteristics and adoption of oyster mushroom production technologies by the ex-trainee farmers.

MATERIALS AND METHODS

The study was conducted in four districts (Valsad, Bhavnagar, Gandhinagar and Surat) of Gujarat. In all 244 farmers trained by the KVK in mushroom production technology during last three years were selected at random. The study used both qualitative and quantitative data collected by survey. Data were also collected using semi-structured questionnaires which were administered to trainees before and after training as well as in subsequent year after completion of the training in order to assess the knowledge gained and technology

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Table 1. Distribution of respondents according to their overall extent of knowledge of oyster mushroom production technologies by the ex-trainee farmers. N=244

Categories	Frequency	Percentage
Low (Mean -0.5 S.D.) (Below 4)	34	13.93
Medium (Between low and High) (Between 5 to 9)	58	23.77
High (Mean + 0.5 S.D.) (Above 9)	152	62.30

Mean =23.80±16.64

adopted by the trainees. For measuring knowledge and adoption level of ex trainee farmers, knowledge test was constituted. Similarly for measuring adoption level, adoption quotient was calculated using formula developed by (Sengupta, 1967). The data were then analyzed using appropriate statistical tools like Mean (X), Standard Deviation (SD) etc. In order to ascertain the existence or non existence of the relationship between independent variables and adoption of mushroom production technology, correlation of coefficient (r value) was worked out.

RESULTS AND DISCUSSION

Socio-economic profile of mushroom farmers

It was evident from the data that the age of participants was between 20 to 56 yr. More than half of trainees were in age group of 26-40 whereas 38.3 per cent were above 40 yr of age. With respect to education indicated that 45 per cent studied up to primary level followed by middle level (35%) and matriculate level (20%). It was also inferred that 68.3% were small and marginal farmers remaining farmers were having more than 1 ha farming land. Majority of trainees belonged to farming background and depend on farming as their main source of income, and were possessed

more than 25-30 yr of farming experience. As many as 86 per cent of the respondent farmers possessed very good knowledge regarding different aspects of mushroom production technology. It was observed that pre training knowledge score was not satisfactory. However, the knowledge score gained by participants after training was more satisfactory in all aspects. About 66 per cent and 69 per cent of them belonged to medium category of achievement motivation and economic motivation, respectively.

Level of Knowledge and Adoption of mushroom production technology

The data regarding knowledge level of recommended technology of mushroom production revealed that 62.30 per cent of the respondents acquired very good knowledge belonged to higher scored category followed by 23.77 per cent belonged to medium category and 13.93 per cent of the respondents were fall in to low level of knowledge. So far adoption level regarding recommended technology of mushroom production is concerned 56.15 per cent of the respondents were belonged to higher scored category followed by 31.96 per cent belonged to medium category. Only 11.89 per cent and low level of adoption category,

Table 2. Distribution of respondents according to their overall extent of adoption of oyster mushroom production technologies by the ex trainee farmers N=244

Categories	Frequency	Percentage
Low (Mean -0.5 S.D.) (Below 5)	29	11.89
Medium (Between low and High) (Between 6 to 9)	78	31.96
High (Mean + 0.5 S.D.) (Above 9)	137	56.15

Mean =28.30±18.16

Factors Influencing Adoption of Mushroom Production

Table 3. Relationship between socioeconomic characteristics and adoption of oyster mushroom production technologies by the ex trainee farmers. N= 244

Variable	Independent variable	Correlation Coefficient ('r' value)
1.	Age (X1)	.5374*
2.	Education (X2)	.4005*
3.	Land holding (X3)	.4287*
4.	Family income (X4)	.7625*
5.	Farming experience (X5)	-.3388*
6.	Achievement motivation (X6)	.3746*
7.	Economic motivation (X7)	.3371*
8.	Knowledge of crop (X8)	.4702*

Significant at 0.05 level of probability

respectively. The findings were in line with the findings of (Tiwari *et al*, 2018).

The relationship between independent variables and dependant variables when tested it was observed that all the variables i.e. age, education, land holding, family income, farming experiences, achievement motivation, economic motivation and knowledge of mushroom production technology were positively and significantly correlated with adoption of mushroom production technology. Only Farming experiences found to have negative but significant relationship with adoption of mushroom production technologies.

Age and farm size

Age had a negative effect on adoption of mushroom production. This implies that the older the person was, having had more year of experience in the diversification of farm. This can be attributed to the fact that as people grew older they tend to be more risk bearer hence want to engage in new ventures to raise their income. The older people were more willing to start mushroom production majorly because it was not considered as an enterprise that requires a lot of energy and can even be practiced out with people with disabilities. It can be viewed as the more educated a person is more ready to learn therefore, they get information on new production technology. The farm families having education possess an aptitude both for adoption

of new enterprise/technology and improvement in livelihood. People with larger pieces of land under crop production are more risk averse and are mostly producing what has previously been grown. People with smaller pieces of land were willing to try out new crops that will enable them get the most from their small pieces of land. Thus, farm size plays significant role in adoption of mushroom production technology by the farmers. Negative but significant correlation of farming experience with the adoption of mushroom technology reflected that increase in the experiences lead to increase pragmatic decision-making ability of the respondents.

Income

Income is one of the most important factors in our farming system. Irrespective of categories, farmers strive hard to get more and more from the available resources they have. Large farm holders try to increase benefit by investing more in new enterprise like mushroom whereas small farmers desire to have more income by investing less with adoption of low cost –high return enterprise like mushroom. Pride of being early in doing something new in their locality is the important reason for significant relationship of achievement motivation. Economic motives inspired the farmers to get maximum returns through optimum utilization of available resources with them. Thus, both achievement motivation and economic motivation

had significant relationship with the adoption of mushroom production technology by the trainees.

The knowledge score gained by participants after training was more satisfactory about mushroom production. This has created interest amongst trainees to try out it. Thus, knowledge had significant relationship with the adoption of mushroom production technology by the trainees (Acharya *et al*, 2018).

CONCLUSION

Since it does not require access to land, mushroom cultivation is a viable and attractive activity for both rural farmers and peri-urban dwellers. Indirectly, mushroom cultivation also provides opportunities for improving the sustainability of small farming systems through additional income. Frontline extension system may come up with strategies that include mushroom production as an integral component in all extension programmes, training, demonstration etc. It will ensure the capacity building of farmers which lead to adopt this low external input and high return enterprise.

REFERENCES

- Acharya Sumita, Satpathy Bineeta and Mishra Ipsita (2018). Impact of training programme on the profitability of mushroom growers in Angul district of Odisha. *J Krishi Vigyan* 6 (2): 146-149
- Kumari Anuradha, Singh D P, Singh Archana and Kumari Maya (2018). Adoption level and constraints in scientific mushroom cultivation among rural women. *Int J Curr Microbiol App Sci* 7: 1280-87
- Pradhan L, Das P and Nayak M P (2016). Empowerment of farm women through income generating activities. *J Krishi Vigyan* 4 (2) : 40-43.
- Sengupta T (1967). A simple adoption scale for farmers for high yielding varieties of paddy. *Indian J Extn Edu* 3: 107-115.
- Sharma Anjali (2018). Market linked technology of mushroom production for subsidiary income and nutritional security of farm families of Uttar Dinajpur district of west bengal. *J Krishi Vigyan* 7 :97-100
- Tiwari N, Kumar Sanjay and Tiwari Atal (2018). Knowledge and adoption level of mushroom cultivation among Rural Women in Gumla district of Jharkhand. *J Krishi Vigyan* 6(2): 146-149.

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