
WOMEN EMPOWERMENT THROUGH SKILL DEVELOPMENT TRAINING: THE CASE OF MUSHROOM PRODUCTION UNITS IN THRISSUR DISTRICT, KERALA STATE

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Abstract : Nutritional security and food safety have become priorities in agricultural development in Kerala state during the recent past. Inadequate production of rice, milk, meat, egg, and vegetables affecting food and nutritional security, along with increased awareness about toxic residues in commercially grown vegetables obtained from markets tempt the people to raise safe to eat vegetables in their homesteads or terraces and look for other safe food options. In this context, mushroom has also emerged as a safe and nutritional diet in Kerala, getting popularity in a gradual way as it contains protein, fiber and several medicinal values. Mushroom growing is catching up as an agri-based micro enterprise in the state, particularly among unemployed women and youth, as it requires only minimum investment, less labor, minimum infrastructure and gives high returns. KVK-Thrissur has conducted several skill development trainings on mushroom production in on-campus and off-campus modes focusing on unemployed women, supplemented with trainings on spawn production as well as value addition and product diversification. A research study was conducted to analyze the drivers of mushroom growing as an agri-based micro enterprise, particularly among women in Thrissur district, along with identification of constraints and opportunities for expansion of the enterprise. The data were collected through a survey among 100 randomly selected mushroom growers of the district, Focused Group Discussions and Key Informant interviews, and analyzed using statistical tools like means, standard deviations, percentages and frequencies, rankings and binary logistic regression model. Results of the study indicated that women were the main beneficiaries of mushroom production enterprise, who could get a new livelihood and income generation option without much additional investments of money and time. The major significant driving factors were education, training received, unemployment status, and output market access through mushroom producers' society as revealed the results of quantitative and qualitative data. Inadequacy of spawn availability in terms of quantity and time, and output sales markets in the locality were found to be the main constraints in expansion of the business. KVK-Thrissur has taken steps to overcome these constraints by organizing a Mushroom Producers' Society with initiatives of procurement, processing, branding and marketing of value added, diversified products of mushroom.

Introduction : Food safety and nutritional security have become priority in agricultural development in the state since agriculture has become a less important sector in Kerala's economy. Inadequate production of rice, which is the staple food, in the state along with shortage in milk, meat, egg, vegetables and manual labour to produce such commodities worsen the situation of food and nutritional security. Considering the agro ecological conditions, homestead farming system and the increased awareness of the community about toxic residue in the vegetables obtained in the market tempt the people to raise safe to eat vegetables in their households and look for other safe food options. In this context, mushroom has emerged as a safe and nutritional diet in Kerala, getting popularity in a gradual way as it contains protein, fibre and medicinal elements. Mushroom growing is catching up as an agri-based micro enterprise in Kerala, particularly among unemployed women and youth, as it requires minimum investment, less labour, less infrastructure and gives high returns. Moreover, scientific reports on the medicinal properties of mushroom in cell rejuvenation of the individuals undergone chemo therapy after infected by cancer as well as for enhancing body immunity also tempt

many people to include it in their daily diet. Studies and experiences revealed that mushroom cultivation face several constraints in Kerala and hence the enterprise is not catching up as it should be in spite of the immense potential. KVK Thrissur has initiated formation of a Mushroom Producers' Society in Thrissur district in 2013, linking more than 300 mushroom growers. The Society involves in their production, processing and marketing channels. However, no empirical study has been conducted so far to analyze the driving forces for the individuals to start mushroom production units and on the prevailing constraints and opportunities of mushroom growing in Thrissur district. Hence this research was proposed to address these issues and tries to fill the knowledge gap.

Research methodology : The sampling frame was prepared with the names of the persons who received training initiated at KVK Thrissur on mushroom production, which is estimated to be more than 700. The sample size was 100, and was selected based on simple random sampling procedure from the sampling frame. Both primary and secondary data, of quantitative and qualitative in nature, were collected for the purpose of this study. Quantitative data were collected using a survey among the sample

respondents with the help of a pre tested, semi structured interview schedule while qualitative data collection was through Key Informants' Interviews (KIIs) and Focused Group Discussions (FGDs). The secondary data were gathered from records available at KVK Thrissur as well as with Thrissur Mushroom Producers' Society. Data were analyzed with simple descriptive statistics like means, frequencies, percentages, rankings, and binary logistic regression model. Qualitative data were analyzed using narration, interpretation and tabulations.

Results and Discussion : Based on the analysis of data collected through household survey using SPSS computer software, the results are presented as follows. The socio economic profile of the sample respondents indicated their overall picture in terms of means of parameters of age, total members in the family, number of females, number of unemployed members, number of relatively vacant rooms that can be converted for growing mushroom, access to credit, wealth status, membership in the mushroom society, and family food habit with mushroom.

Table1. Socio economic profile of respondents (n = 100)

Variables	Minimum	Maximum		Std. Deviation
Age	28.00	70.00	44.660	9.46041
Sex	1.00	2.00	1.7700	42295
Total members in the family	2.00	8.00	4.4400	1.46556
Number of females	1.00	5.00	2.1900	86100
Total number of dependent members	.00	4.00	.9400	1.09008
Number of unemployed members	.00	5.00	2.2300	1.23791
Number of rooms	2.00	9.00	4.9400	1.30128
Number of relatively vacant rooms that can be converted for growing mushroom	.00	4.00	.9600	.73745
Access to credit	1.00	2.00	1.9700	.17145
Wealth status	1.00	2.00	1.8900	.31447
Membership in the mushroom society	1.00	2.00	1.7900	.40936
Family food habit	1.00	3.00	2.7900	.51825

Source of data: Own survey, 2014

The qualitative data gathered revealed that women were the major stakeholders in attending trainings, growing mushrooms and involving in value addition process. This is probably due to the greater opportunities for women to start the enterprise without much investment, manage it along with household chores, and carry out the activities without going out. The educational level of women in Kerala is relatively better compared to other states, but formal employment sector cannot accommodate them as per demand, and thus self employment seeking is higher in the state in general, and in study area in particular.

The data were analyzed to identify the drivers to opt for mushroom growing as an enterprise by the respondents of the study. The purpose was to locate the main motivational factors among the mushroom growers who were selected as the respondents of the

study. The below Table shows that the statistically significant variables were need for home consumption of mushroom (.003), as a self employment option (.041), and number of unemployed persons at home (.071). The other factors also were influencing, but not at significant levels. It indicates that mushroom cultivation was conceived as a good option for those households, who need self employment options for income generation and conscious about the nutritional importance of mushrooms. The qualitative data obtained from FGDs and KIIs also indicated that several women and youth are attracted to this enterprise and attend the trainings offered by KVK and other agencies, particularly in the pretext of functioning of the Mushroom Producers' Society, which facilitates marketing of raw mushroom, processing and value addition

Table 2. Regression output on drivers for mushroom growing as an enterprise (n = 100)

Particulars		Coefficient	df	P value
	Number of females	2.669	1	.102
	Dependent	1.949	1	.163
	Unemployed persons in a family	3.264	1	.071
	Vacant rooms	.016	1	.900
	Area	.361	1	.548
	Credit	.163	1	.687
	Status	.435	1	.509
	Market	.622	1	.430
	Food habit	.873	1	.350
	Consumption	8.700	1	.003
	Self employed	4.175	1	.041

Source of data: Own survey, 2014

.Data were further analyzed to identify the constraints of mushroom growing in the study area and the results are presented in Table 3 below.

Table 3. Constraints in mushroom growing in Thrissur district (n = 100)

Sl no.	Constraint	Frequency	Percentage	Ranking
i)	Less market demand	75	75	1
ii)	Less timely availability	72	72	2
iii)	Inadequate availability of spawn.	57	57	3
iv)	Lack of possibility of processing.	35	35	4

Source of data: Own survey, 2014

This analysis showed that lack of market demand was the most important constraint felt by the respondents of survey as well as in FGDs and KIIs. Establishment of the Mushroom Producers Society under the initiative of KVK Thrissur has considerably addressed the issue, but the production in the district is not increasing considerably due to this apprehension. Moreover, perishable nature of mushroom demands market to match the production. Now, some vegetable shops, super markets and other outlets are involved in sale of fresh mushrooms, and food habits of the community creating high market demand is only gradually changing.

Availability of spawn as per requirement in time and quantity were the next major constraints, as reported

by the results of the study. Only very few agencies like KVK, University outlets, and some trained individuals are engaged in mushroom spawn production and sales, though it is a very profitable enterprise. More care in hygiene, special skills, more investments in spawn production with air conditioned room, inoculation chamber and facilities constrain spawn production by ordinary individuals. KVK is giving skill trainings in mushroom spawn production to the needy clients, but capital investments are limiting their number to increase. Attempt was made to identify the main opportunities for mushroom production as a micro enterprise in the district and the results are presented below in Table 4.

Table 4. Opportunities mushroom growing in the study area. (n = 100)
Source of Data: Own survey, 2014

S.L No	Opportunities	Frequency	percentage	Ranking
i)	Public awareness about medicinal value	94	94.0	1
ii)	Changing food habit	92	92.0	2
iii)	Possibility of product diversifications	90	90.0	3
iv)	Increasing market demand	87	87.0	4
v)	Awareness about the community about toxic residue in vegetables	82	82.0	5
vi)	Awareness about the importance of mushroom	69	69.0	6

The above Table gives the details of possibilities that prompt the farmers to start the mushroom business. There are mainly three factors that give the way to start the growing of the mushroom. They are the increased public awareness about the medicinal value of mushrooms in the context of rising rates of cancer patients in the society, the changing food habits in the community to include mushroom in the diet, and possibilities of product diversification and value addition enabling preservation and marketing. These opportunities are expected to increase in the days to come and thereby mushroom cultivation is assumed to have a bright future attracting more unemployed women and youth to the enterprise.

Conclusions : The study clearly showed the possibilities of promoting mushroom growing as an important vocation for women and youth, as it demands less space, less investment, less skill, and less time and efforts with more profits. Moreover, it ensures food safety and nutritional security in the community, especially in the context of speedy life styles and use of toxic chemicals in food crops. This enterprise offers good opportunities for self employment and income generation without affecting household chores and responsibilities of women. More training to impart the skills in mushroom production, spawn production, value addition, and enhancing public awareness on importance of mushroom as a safe and nutritional diet, along with strengthening market linkages are suggested based on the study.

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