

Original Research Article

Adoption level and Constraints in Scientific Mushroom Cultivation among Rural Women

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ABSTRACT

The present study was conducted in Deoria district of Uttar Pradesh state. Out of sixteen block of Deoria district three blocks i.e. Bhatni, Salempur and Bhatparrani were selected purposively for this study, from each block three villages were selected purposively for the study. Among each village 10 farm women were selected randomly. Hence total sample size was 90 women. The data were collected through personal interview method. The interview schedule was prepared by keeping the objectives of the study in mind. The necessary care was taken to collect the un-biased and correct data. To study the assessing the acceptability of mushroom enterprise for empowerment of women and analyze the constraints related to mushroom entrepreneurs. In this study, extent of adoption of twelve selected scientific cultivation of oyster mushroom practices were measured. The study reveals that the majority of respondents were found to be high level of adoption (54.44%) followed by medium and low. Majority of respondents had high use of fresh spawn (52.22%), high recommended appropriate seed rate (58.88%), high use of wheat straw in bagging (60.00%), low use of paddy straw (54.44%), high knowledge of sanitation (58.80%), low purchase of spawn through private agency (44.44%), high use of chemical in congenial media (45.55%), low use of boiling of congenial media (wheat straw) (47.77%), Majority 46.66 percent of respondents had high control of diseases (fungal and bacterial infection). Study reveals that lack of proper marketing channels was the most important constraints responsible for low rate of adoption, 'Distantly located markets' and 'lack of government support' were the other major constraints in this process. 'Non availability of quality spawns and risk involve due to perishable nature' were also observed as constraints by the mushroom growers.

Keywords

Adoption level,
Constraints,
Scientific
Mushroom
cultivation, Rural
women

Introduction

Mushroom cultivation is a women friendly profession. Mushroom growing is one agricultural activity in which women can play a vital role without sacrificing their household responsibilities.

Mushroom cultivation is simple, low cost and suitable for rural areas, is labour intensive and can provide employment in both the semi-urban and rural areas. Mushroom cultivation will improve the

socio-economic condition of farmers, families and solve employment problems of both literate and illiterate, especially women. In view of above facts, mushroom farming in our country may flourish like mushroom growth in the coming years. The rural and urban masses are showing much interest in mushroom cultivation. The small enterprises in India have been proved to be engine of growth of the economy with 39 percent of India's gross industrial production. It is estimated that with over 11.8 million units in the country, the small sector provides employment intensive segment of the economy, the employment of women through organization of Self Help Groups was one of the nine primary objectives of the ninth five year plan. (Dasgupta 2005).

Mushroom growing has been appreciated as a technically feasible and profitable venture and widely accepted by the researchers as a good venture for his income, employment generation and rural development (Kapoor and Behl, Chauhan, 1983 and Sood, 1992). There is an urgent need to impart technical knowhow to women in order to adopt mushroom production as an income generating activity for enhancing additional income of their family. It is a boon for poverty alleviation as reported by Chiroro 2004.

Oyster mushrooms are low in sodium, starch and fat. It has folic acid and low sodium potassium ratio. It helps to cure anemia and suitable for people with hypertension, obesity and diabetes (*Shu-Ting and Miles, 2004 and Dubost, 2006*). Mushroom are a high liking food items on several occasions and celebrations in rural areas now-a- days. There have been regular systematic plan at present to promote domestic cultivation of mushrooms. In general, recommended oyster mushroom cultivation technologies

are not accepted by all the farmers at a time and also to full extent. In this context the study was conducted with the objective to ascertain adoption level of recommended oyster mushroom cultivation technologies by the farmers/farm women. Find out the relationship between institutional and socioeconomic constraints and adoption of oyster mushroom production technologies to mark out the constraints experienced by the rural women farmers. Keeping view in mind, the present study has been under taken with the following objectives:

- i. To identify the adoption level of oyster mushroom with improved cultivation practices.
- ii. To assess the various constraints faced by the rural women in improved oyster mushroom cultivation practices.

Materials and Methods

The present study was conducted in Deoria district of Uttar Pradesh state. Out of sixteen block of Deoria district three blocks i.e. Bhatni, Salempur and Bhatparrani were selected purposively for this study, from each block three villages ie. Noonkhar, Uska and Mathdanaur from Bhatni block Malhana, Bankatamishra, Laxmanchak from Salempur block and Khampar, Malhani and Dharamkhorkaran from Bhatparrani block were selected purposively for the study. Among each village 10 farm women were selected randomly. Hence total sample size was 90 women. The data were collected through personal interview method. The interview schedule was prepared by keeping the objectives of the study in mind. The necessary care was taken to collect the unbiased and correct data. To study the assessing the acceptability of mushroom enterprise for empowerment of women and analyze the constraints related to mushroom

entrepreneurs, a list of all possible problems under socio psychological, economical, technological and marketing areas was prepared after consulting the extension workers, research workers, farmers and farm women. The seriousness of every constraint was measured on 5 points by using the words i.e. very much, much, don't know, not so much and not at all, which were allotted with scores 4, 3, 2, 1 and 0 respectively. A sum of scores was calculated for each constraint and rank orders were placed accordingly. The data were collected, tabulated and analyzed to find out the findings and drawing the conclusion. The statistical tools like frequency, percentage and rank were employed to analyze the data.

Results and Discussion

It is found from Table 1 that majority (52.22%) of the respondents had high use of fresh spawn followed by 31.11 percent had medium and only 16.66 per cent had low use of fresh spawn. In case of recommended seed rate that majority (58.88 %) of respondents were using recommended appropriate seed rate, while 28.88 per cent had medium and 12.22 per cent had low use of recommended seed rate. The adoption of wheat straw in bagging was concerned, majority (60.00%) of the respondents had high use of wheat straw in bagging, while 26.66 per cent had medium use of wheat straw in mushroom bag and 13.33 per cent had low use of wheat straw. Maximum (54.44%) of the respondents had low use of paddy straw followed by 31.11 percent had medium and only 14.44 percent had high use of paddy straw. 58.80% of respondents had high knowledge of sanitation while 15.55 percent had low knowledge of sanitation.

Majority (44.44%) of the respondents had low purchase of spawn through private

agency followed by 33.33 percent had medium and 22.22 percent had high purchase of spawn through private agency. In case of purchase of spawn through government agency, majority (47.77%) of the respondents had high purchase of spawn through government agency while 47.77% of respondents had low purchase of spawn from other sources followed by 33.33 percent had medium purchase of spawn from other sources and only 18.88 percent had high purchase of spawn from other sources. Thus it can be concluded that the respondents have low adoption of purchase the spawn from other sources or agency.

It is evident from Table 1 majority (45.55%) of the respondents had high use of chemical in congenial media (wheat straw), while 32.22 per cent showed the medium use of chemical in congenial media and 22.22 per cent shown low use of chemical in congenial media. Thus, it can be concluded that the respondents from the trained category showed higher extent of adoption towards use of chemicals in congenial media in commercial oyster mushroom production as compared to the respondents of untrained category. The similar observation recorded by *Siddhant et al. (2013)*.

Majority (47.77%) of respondents had low use of boiling of congenial media (wheat straw), while 21.11 per cent had high use of boiling of congenial media and 31.11 per cent had medium use of boiling of congenial media (Wheat straw). Majority (46.66%) of the respondents had high control of disease (fungal and bacterial infection) while 37.77 per cent had medium and only 15.55 percent had low control of disease (fungal and bacterial infection). Majority (40.00%) respondents had shown low work through SHG's, Cluster or Federation; while 33.33 per cent had shown medium work through SHG's, clusters or federation and 26.66 per

cent had high work through SHG's, cluster or federation.

As for as over all adoption was concerned it is evident from Table 2 that majority (54.44%) of the respondents were having high level of adoption of scientific cultivation of oyster mushroom followed by 27.77 percent and 17.77 percent were found in medium and low adoption level in respect of technology. From the above discussion, it can be concluded that the farmers of the trained category showed higher extent of adoption of oyster mushroom cultivation practices technology is pertaining to all twelve mushroom cultivation practices than those of the untrained category. Thus, the trained farmers showed an increasing trend in the scientific cultivation of oyster mushroom.

It is evident from the Table 3 that adoption of improved cultivation practices were mean score i.e. Use of fresh spawn (85.55) , Recommended Seed rate (68.88), Use of wheat straw (65.55), Use of Paddy straw (20.00), Knowledge of sanitation (72.22), Private agency (12.22), Private agency (12.22), Through government agency (55.55), Source of spawn from other sources (21.11), Use of chemicals in

congenial media, wheat straw (61.11), Boiling of congenial media wheat straw (23.33), Market linkage (28.88) and Work through SHG,s Cluster or Federation (18.88).

The data presented in table 4 showed that the list of various Socio-psychological constraints faced by the respondents. It was observed that the 'Lack of interest in mushroom production' was the major constraints with the mean score value (MSV) of 0.66. 'Lack of persuasion and motivation' was another major constraints and work ranked second with the mean score value (MSV) of 0.57. Among the other constraints 'Lack of place of mushroom production' (MSV 0.52), 'Lack of support from other family members' (MSV 0.44). The mushroom has not been considered as vegetable to consume by the rural people (MSV 0.40) were ranked third, fourth and fifth respectively. Most of the farmers think of mushroom production enterprise as the side business and benefits of mushroom production are not more cost effective, therefore most of the respondents were not getting the effective motivation for continuing the venture.

Table.2 Distribution of respondents according to their overall extent of adoption of mushroom cultivation practices among the rural women

(N=90)

Categories	Frequency	Percentage
Low	16	17.77
Medium	25	27.77
High	49	54.44
Total	90	10.00

Table.1 Distribution of respondents according to their adoption of oyster mushroom cultivation practices

Mushroom cultivation practices	Categories of adoption	Frequency	Percentage
Use of fresh spawn	L	15	16.66
	M	28	31.11
	H	47	52.22
Recommended Seed rate	L	11	12.22
	M	26	28.88
	H	53	58.88
Use of wheat straw	L	12	13.33
	M	24	26.66
	H	54	60.00
Use of Paddy straw	L	49	54.44
	M	28	31.11
	H	13	14.44
Knowledge of sanitation	L	14	15.55
	M	23	25.55
	H	53	58.88
Private agency	L	40	44.44
	M	30	33.33
	H	20	22.22
Through government agency	L	15	16.66
	M	32	35.55
	H	43	47.77
Source of spawn from other sources	L	43	47.77
	M	30	33.33
	H	17	18.88
Use of chemicals in congenial media (Wheat straw)	L	20	22.22
	M	29	32.22
	H	41	45.55
Boiling of congenial media (wheat straw)	L	43	47.77
	M	28	31.22
	H	19	21.11
Control of disease infection	L	14	15.55
	M	34	37.77
	H	42	46.66
Work through SHG,s Cluster or Federation	L	36	40.00
	M	30	33.33
	H	24	26.66

L-Low,

M-Medium,

H-High

Table.3 Adoption level of improved mushroom cultivation practice

Mushroom cultivation practices	Mean Score
Use of fresh spawn	85.55
Recommended Seed rate	68.88
Use of wheat straw	65.55
Use of Paddy straw	20.00
Knowledge of sanitation	72.22
Private agency	12.22
Through government agency	55.55
Source of spawn from other sources	21.11
Use of chemicals in congenial media (Wheat straw)	61.11
Boiling of congenial media (wheat straw)	23.33
Market linkage	28.88
Work through SHG,s Cluster or Federation	18.88

Table.4 Degree of seriousness of socio-psychological constraints

(N=90)

Socio-psychological constraints	Mean Score value (MSV)	Rank order
Lack of persuasion and motivation	0.57	II
Lack of support from other family members	0.44	IV
Lack of interest in mushroom production	0.66	I
Lack of place of mushroom production	0.52	III
The mushroom has not been considered as vegetable to consume by the rural people	0.40	V

Table.5 Degree of seriousness of economic constraints

(N=90)

Economic constraints	Mean Score value (MSV)	Rank order
Lack of money	0.43	V
Non availability of government subsidy	0.62	III
Lack of government scheme for mushroom production	0.81	I
Low risk bearing capacity	0.53	IV
Lack of support for mushroom enterprises for government side	0.71	II

Table.6 Degree of seriousness of technological constraints

(N=90)

Technological constraints	Mean Score value (MSV)	Rank order
Lack of technical knowledge about mushroom production	0.35	V
Benefits are not cost effective	0.53	III
Risk involvement due to perishable nature	0.43	IV
Untimely availability of spawn	0.60	II
Non availability of quality spawn	0.68	I

Table.7 Degree of seriousness of marketing constraints

(N=90)

Marketing constraints	Mean Score value (MSV)	Rank order
Lack of remunerative mushroom prices	0.72	IV
Lack of proper marketing channels	0.91	I
Proper markets being distantly located	0.78	III
No marketing of mushroom in local market	0.85	II

Table 5 showed that the economic constraints faced by the respondents arranged in descending rank order. The majority of respondents reported the ‘Lack of government scheme for mushroom production’ as the most serious constraints with MSV of 0.81. ‘Lack of support for mushroom enterprises for government side’ ranked second (MSV 0.71) followed by ‘Non availability of government subsidy’ ranked third (MSV 0.62), ‘Low risk bearing capacity’ ranked fourth (MSV 0.53) and ‘Lack of money’ ranked fifth (MSV 0.43). Since, there is no proper government schemes in mushroom production enterprise, entrepreneurs need financial support from government in terms of subsidy, input supply, credit facility etc. Mushroom cultivation demands heavy investment in the initial stages. The small and marginal seasonal mushroom growers want to expand their temporary mushroom farms and those farm women who want to start a fresh are usually unable to invest the required amount of money from their own pocket. Therefore, they approach the financial organization are so complex that the seasonal mushroom growers and farmers cannot get the finance easily (Kavitha, 2006) so majority of respondents reported lack of government scheme for mushroom production as major constraints.

Table 7 showed that the marketing constraints faced by the farm women arranged in descending rank order. ‘Lack of proper marketing channels’ was ranked first (MSV 0.91) followed by ‘No marketing of

mushroom in local market’ ranked second (MSV 0.85), ‘Proper markets being distantly located’ ranked third (MSV 0.78) and ‘Lack of remunerative mushroom prices’ ranked fourth (MSV 0.72). Since In India there are no proper market places in rural areas if market is available in their places then it will be for short duration like weekly or quarterly market. Markets are properly available only in urban areas which are far from their places, so lack of proper marketing channels and no marketing of mushroom in local market were reported major constraints by the farm women respondents.

In conclusion, majority of the farm women/farmers showed high level of adoption of recommended technology. Use of fresh spawn and recommended seed rate were adopted by the majority of the farmers. There was no adoption due to some major constraints ‘Lack of proper marketing channel’, ‘proper markets being distantly located’ and ‘Lack of support for mushroom enterprise from government side’ found most crucial among all constraints which were responsible for low and non adoption of mushroom production enterprise. Based on inferences and experiences, it may be suggested that the government must provide marketing facilities at village level for selling mushroom. Availability of good quality of spawn and proper storage facility must be ensured to encourage the mushroom production enterprises in rural areas. It was necessary to intensify the extension efforts to increase the knowledge level and

adoption of recommended mushroom cultivation technologies, which would help in increasing the adoption of scientific cultivation of oyster mushroom at village level among rural, poor women farmers.

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