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Research Article

Motivational factors responsible for the adoption of improved mushroom production technology

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SUMMARY : Mushroom refers to the fruit body of a fungus. It is neither a plant nor animal. On a dry weight basis, it contains 55 per cent carbohydrates, 32 per cent proteins, 2 per cent fats and the rest minerals and vitamins. The greatest advantage of this venture is the fact that mushrooms have capacity to convert nutritionally valueless substances like wheat or rice straw into nutritional delicacies. These are also an excellent source of Vitamin $B_{1,}$ B_2 and minerals such as potassium, phosphorus, iron and copper. They are recommended as alternative source of proteins by FAO. Mushroom cultivation is very remunerative and plays an important role in increasing incomes, self employment and job opportunities in rural areas. The present study is an endaveour to study the various occupational, social and economic motivational factors responsible for adoption of improved mushroom production technology. The result of the study reveals that major occupational motivation factor was that there was no need to go outside home for work as sufficient employment opportunity is available at home. Being influenced by the village Sarpanch was the main social motivational factor for adoption of mushroom cultivation. The major constraints faced by the respondents were lack of pre cooling and storage facilities (89.75%) and inadequate knowledge about growing mushroom (82.76%).

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BACKGROUND AND OBJECTIVES

Mushrooms have been consumed by human races in one form or the other prehistorically. Edible mushrooms are among the most popular and nutritious food accepted by the world and increased consumer demand over past few years has made its production escalate in large proportions. These are one of the most important and effective bio-convergent of agricultural wastes into proteinaceous mass used as food. It is recognized as a distinct source of essential amino acids (Nair *et al.*, 1991). Out of 2000 edible mushrooms known about 283 species are known to be found in India (Singh, 1999). Mainly three types of edible mushrooms are cultivated in India on commercial basis. These are paddy straw mushrooms (*Volvarcella volvacea*), Oyster of dhingri mushroom (*Pleurotus sajor-kanju*) and white button mushrooms (*Agaricus biosporus*) (Chakraborti, 2001). Button mushroom is the most widely accepted mushroom in India both by rural and urban consumers. The second important mushroom is Oyster mushroom and there are several species of this genus.. It also enables recycling of agro wastes like dung and chicken manure which otherwise pose problems (Kumar and Rekhi, 1990).

The world's largest button growing unit is located in Punjab. The present production of all types of mushrooms in India is about 1, 00,000 tons per annum (2008) and the bulk of it is the white button mushroom (Sharma and Dhar, 2009). J & K is one of the major mushroom growing states of the country. The climatic conditions are quite favourable for growing mushroom throughout the year. Systematic work on mushroom cultivation in Jammu region was started with 500 trays of button mushroom in the year 1972 with a production level of about 5 quintals. But at present it produces about 6500 quintals of fresh mushroom, out of which about 50 per cent is contributed by the

Jammu district alone. The productivity in Jammu region is less as compared to other states in the country. One of the reasons for low productivity can be due to non adoption of recommended practices. Looking at the popularity of mushroom cultivation as a major income generating enterprise among farmers in Jammu district, the present study was under taken with the following specific objective : to study motivational factors responsible for taking mushroom production and to study the constraints faced by farmers in cultivation of mushroom.

RESOURCES AND METHODS

The present study was conducted in purposively selected Ranbir Singh Pura and Bishnah Panchayat samities of District Jammu of Jammu and Kashmir. The reason for selecting the said Panchayat samities was that these have maximum number of mushroom growers trained by Department of Agriculture, Government of Jammu and Kashmir in mushroom cultivation. Eight villages having maximum number of respondents were finally selected from these two samities and from them a sample of 120 farmers was taken by the method of stratified random sampling using proportional allocation.

OBSERVATIONS AND ANALYSIS

The extent of motivation which encourages the cultivators to take mushroom production technology as a subsidiary agricultural occupation was analyzed separately under occupational, social and economic motivational factors. The constraints faced by the respondents were tabulated under six major headings. The analysis was done using mean percentage scores and ranking was done accordingly.

The data incorporated in the Table 1 reveal that fairly a large number of respondents get motivated to adopt mushroom production so as to get employment at home as there was no need to go outside in search of work (MPS 84.17) and it was ranked first. To get employment was the next important aspect (MPS 78.06) and was ranked second. Besides this, majority of them had undertaken mushroom cultivation as it can be cultivated along with household chores (MPS 61.74). They were also motivated because their family labour could easily be utilized (MPS 54.44) and few of them took it to utilize their leisure time (MPS 37.78) and this was ranked fifth. Mishra and Sinha (1983) also revealed similar motivational dispositions.

This might have happened due to limited employment opportunities available in the area for the respondents. Their inner will to seek employment locally might have led them to initiate a venture at their home so that their family labour could best be utilized with less investment.

The data incorporated in Table 2 reveal that fairly a large number of respondents were influenced by village Sarpanch to undertake mushroom cultivation as a vocation (MPS 78.06) and was ranked first. Besides this, next important social factor was to boost personal and family prestige (MPS 73.33). Motivation by VEW's and other farm functionaries (MPS 66.94) was ranked third and encouragement by friends and neighbors (MPS 65.56) was ranked fourth. Motivation by success of vocation in nearby villages (MPS 43.33) was ranked fifth. Very few respondents were also motivated by mass media (MPS 21.11) and by relatives having mushroom units (MPS 13.61).

The data incorporated in Table 3 show that fairly a large number of respondents had undertaken mushroom cultivation because of quick monetary gains derived from it (MPS 81.39)

Table 1 : Occupational motivational factors responsible for under taking mushroom cultivation as a subsidiary occupation by the respondents

Sr. No.	Motivational factors	MPS	Rank
1.	To get employment.	78.06	II
2.	Children and other family members can also contribute	54.44	IV
3.	Along with household chores, mushroom can be cultivated.	61.74	III
4.	To utilize leisure time.	37.78	V
5.	No need to go outside for work as sufficient employment opportunity is available at home.	84.17	I

MPS = Mean per cent score

Table 2 : Social motivational factors responsible for undertaking mushroom cultivation as subsidiary occupation by the respondent

Sr. No.	Motivational factors	MPS	Rank
1.	To boost personal and family prestige.	73.33	II
2.	Encouraged by friends and neighbors.	65.56	IV
3.	Motivated by VEW's and other farm functionaries.	66.94	III
4.	Motivated by relatives having mushroom units.	13.61	VII
5.	Motivated by mass media.	21.11	VI
6.	Influenced by village Sarpanch.	78.06	I
7.	Motivated by success of vocation in nearby villages	43.33	V

(MPS = Mean per cent score)

Table 3 : Economic motivational factors responsible for undertaking mushroom cultivation as subsidiary occupation by the respondents

Sr. No.	Motivational factors	MPS	Rank
1.	More returns as compared to other vocations.	78.61	II
2.	To get additional income.	72.50	III
3.	Mushroom unit can be established with little monetary investment.	33.61	IV
4.	Free and easily availability of raw material.	31.67	V
5.	Quick monetary gains.	81.39	I

Table 4 : Constraints faced by respondents in mushroom cultivation

Sr. No.	Constraints	MPS	Rank
1.	Inadequate knowledge about mushroom growing	82.76	V
2.	Non availability of spawn	94.76	I
3.	Fluctuating prices of mushrooms	87.65	III
4.	Lack of marketing facilities	83.85	IV
5.	Lack of pre cooling and storage facilities	89.75	II
6.	Electricity tariff	78.92	VI

and it was ranked first. Besides this, comparatively more return from mushroom cultivation MPS (78.61) was also a chief motivational factor. Respondents were also found lured towards this vocation because getting additional income MPS (72.50). Along with this, little monetary investment for establishing mushroom unit MPS (33.61) and ranked fourth, followed by free and easy availability of raw material MPS (31.67).

The reason for quick monetary gain as a chief economic motivational factor might be that mushroom starts giving production after 18-22 days of spawning, one can sell it and earn within a short duration.

Constraints reported by the respondents in mushroom cultivation:

Although the study indicated that nature of constraints varies with the extent and type of mushroom growing, yet the general constraints faced by mushroom growers can be illustrated as in Table 4

A cursory look at Table 4 reveals that non availability of spawn was the major constraint reported by the farmers and was ranked first (MPS 94.76). Next in rank was lack of pre cooling and storage structures (MPS 89.75). Fluctuation in the prices of mushrooms was ranked third (MPS 87.65). Lack of marketing facilities, inadequate knowledge about mushroom cultivation and prevailing electricity tariff were the other constraints reported by the respondents and were ranked, respectively

Conclusion:

The major occupational motivational factor responsible for undertaking mushroom production technology was to get employment at home as there is no need to go outside for work. Among social motivational factors respondents were largely influenced by village Sarpanch to take on this occupation and from the economic motivational factors quick monetary gains was major factor motivating respondents to go for mushroom cultivation. The major constraints reported by the respondents were non availability of spawn, lack of pre cooling and storage structures. Mushroom being a highly perishable commodity has to be stored in a cool room for 2-3 days at 5 degrees centigrade. Lack of marketing facilities was another constraint reported by the respondents. When mushroom are harvested in large quantities then marketing becomes a major problem. The farmers cannot dispose of large quantities of mushroom more than daily demand. Prevailing electricity tariff was another constraint reported by the farmers. To motivate peoples to go for mushroom cultivation, government needs to establish post harvest structures, ensure timely availability of good quality spawn, provide marketing support to the mushroom growers in the form of minimum support price and do away with the electricity tariff of units engaged in mushroom cultivation.

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