

Perceived Utility of Trainees on Instructional Manual on Oyster Mushroom Cultivation

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Abstract

Utility perception of instructional manual on oyster mushroom cultivation was assessed by 120 women and youth trainees. The manual comprises a specially designed file and set of three leaflets, was assessed on 5 point continuum for quality coverage satisfaction and utility perception. The utility perception index was calculated for content of each leaflet. The maximum trainees found the most useful information on material required followed by preparation of straw in leaflet number one. The leaflet on nutritional importance of oyster mushroom was found most useful for nutritional importance, followed by therapeutic value. High rank was obtained for the information on preventive measures in the leaflet on pest & diseases and their control measures. The score for the overall perceived utility of the instructional material on various dimensions was high. The specially designed file was reported very useful to maintain record harvest and provide adequate follow up activities during the process of oyster mushroom cultivation. The overall utility of the instructional manual was high on various dimensions. Hence, recommended that the written instructional material should be prepared and used wisely for better outcomes of the training.

Keywords –Utility perception, instructional manual, training, oyster mushroom cultivation

Introduction

Instructional manual is learning material to enhance knowledge, skill and used to deliver experience and expertise of learner. Instructional material can use for further reference and reinforced (). Inadequacy of literature on oyster mushroom cultivation in local language was the motive to prepare the instructional manual for the series of training programme. Utility-based decisions use information as one of the inputs. It is recognized that this is not instantaneous information, but rather information that is modified over time, leading to the concept of perceived information. (Saeed P. Langarudi and Isa Bar-On 2018)

Information is regarded as most valuable resource in agriculture and rural development programmes, and empowers decision making. (Morrow et al.2002).

Extension and training have been widely accepted as a development strategy with high returns on investment. The system approach to training is a logical model consists of five main interdependent phases and number of sub phases. Training needs are assessed before planning training programme and

assess progress and diagnose performance of trainees (Mishra 1990).

Oyster mushroom are the easiest and least expensive commercial mushrooms to grow because they are well known for conversion of crop residues to food protein and are considered as potential source of income, alternative food production, provision of employment, and for recycling of agricultural wastes (Banik and Nandi 2004).

Oyster mushroom has abilities to grow at a wide range of temperatures utilizing various lignocelluloses (Sánchez 2010). Oyster mushrooms produce extensive enzymes and utilize complex organic compounds which occur as agricultural wastes and industrial by-products (Baysal et al.2003).

Methodology

The instructional manuals used in the utility study were designed to educate and aid trainers during oyster mushroom cultivation training. The assessment of instructional manual was conducted by descriptive research design approach method. The instructional manual comprised of a set of three-leaflet explaining process and different stages of oyster mushroom cultivation, nutritional plus medicinal importance of oyster mushroom and control measures necessary to prevent and cure potential pest and diseases. In addition, a file was

specially designed to track the growth of mushroom beds at different stages, room conditions for temperature and humidity, total harvest, as well as document user experiences during oyster mushroom cultivation process. The training curriculum was prepared by referring to the concentric circle approach (Mishra 1990) and the instructions in the manual were written in easy-to-understand local Marathi language. A panel of 30 subject matter experts of botany department, extension education, experienced trainers in oyster mushroom cultivation and representatives of targeted trainee population reviewed and provided feedback on the designed instruction manual. The manual contents were finalized on basis of the weighted mean allotted to each section by the panel of experts. The assessment study was conducted, and perception data were collected during the follow-up sessions of the 15th day oyster mushroom cultivation program. A total of 120 candidates took the survey. The utility of instructional material was evaluated on the 5-point continuum Likert Scale with stated ratings; (5) Very Useful (4) Useful (3) Neutral (2) Not Much Useful (1) Not Useful at all. The collected raw score data was categorized by equal interval method and converted into the utility index. Utility perception was operationalized as interpretation of trainers about the information effectiveness of an instructional manual to promote perceptions of utility value and interest of the trainees for successful cultivation of oyster mushroom.

Results and Discussion

The demographic profile of the trainees depicts that more than fifty per cent trainees were in the middle age group i. e. 30 to 40 yrs. 89 per cent trainees were female. 75 per cent trainees were educated up to some diploma or degree. All the trainees were using more than two popular channels of communication. The maximum trainees were in contact with at least two extension personnel.

Perceived Utility of Designed File

The printed file was designed as worksheet to maintain the record of every developmental stage of the mushroom bed. It contains a table to keep date wise record of temperature, humidity, the stages of mushroom cultivation like spawning, after 3 days, after six days, after 9 days, opening of the bag, pinheads, first flush, second flush with their weight,

etc. the space for recording the observation and reaction was provided, do and don'ts were communicated. All the trainees reported that, file was most useful to track the progress or problems faced by the trainees during oyster mushroom cultivation. These records were useful to assess performance of training in oyster mushroom cultivation.

Leaflet on Oyster Mushroom Cultivation

This leaflet disseminates knowledge about material required, selection of substrate, preparation of straw, spawning, incubation and harvesting post harvesting of the mushroom beds. The leaflet was assessed for quality, coverage, comprehensibility and utility of the leaflet the observed scores are presented in the following table.

Table 1. Utility perception of trainees for content in leaflet on oyster mushroom cultivation (n= 120)

S. N.	Items	Most useful	Useful	Neutral	Poor	Very poor	UPI (Rank)
1	Material required	76	24	7	8	5	89 (1)
2	Preparation of straw	71	28	8	9	4	84 (2)
3	Harvesting	69	34	6	8	3	81 (3)
4	Post harvesting	65	36	9	6	4	80 (4)
5	Sterilisation	67	44	4	3	2	78 (5)
6	Selection of substrate	68	30	9	10	3	75 (6)
7	Incubation	60	41	9	6	4	73 (7)
8	Spawning	62	36	10	7	5	70 (8)
9	Disposal of Mushroom beds	56	38	11	9	6	69 (9)

UPI – utility perception index

Utility perception index and their ranks are indicated that information about material required for oyster mushroom cultivation was most useful and ranked highest, followed by preparation of straw. And the least score was obtained to information

about disposal of used mushroom beds. Similar study was conducted Kenny et al. (1995) Garner et al. (2011), Sunilkumar et al. (2017), used leaflet for providing information to target group .

Leaflet on Nutritional Importance of Oyster Mushroom

The second number leaflet was focused on the nutritional importance of oyster mushroom. The purpose of providing the information was creating interest and motivation for cultivation of oyster mushroom.

Table 2. Utility perception of the trainees for content in leaflet on nutritional importance of oyster mushroom (n=120)

S.N .	Items	Most usefu l	Usefu l	Neutra l	Poor	Ver y poor	Ran k (UPI)
1	Nutritional importanc e	61	39	6	10	4	90 (1)
2	Therapeuti c value of the oyster mushroom	54	42	5	11	8	87 (2)
3	Protein quality	51	53	9	-	7	86(3)
4	Vitamin and mineral contents	48	56	7	-	9	84 (4)
5	Cooking instructions	45	54	10	-	11	81 (5)
6	Recipes	40	53	12	-	15	70 (6)

The perceived utility of for the information regarding nutritional importance was highest index, followed by the therapeutic value of oyster mushroom. This leaflet does not included the specific recipes only provided the guideline to cook oyster mushroom this may be the reason the only 40 (48 %) opined it as most useful.

Leaflet on Pest and Diseases and Control

Table 3. Utility perception of the trainees for the content in leaflet on pest and diseases and control (n=120)

S. N.	Items	Most usefu l	Usefu l	Neutra l	Poor	Ver y poor	Ran k (UPI)
1	Preventi ve measure s	70	36	6	8	0	78 (1)
2	Attack	68	28	7	9	8	74

	of other fungi						(2)
3	Attack of Bacteria	65	36	5	8	6	69 (3)
4	Insects	67	35	5	6	7	65 (4)
5	Attack of rodents	68	32	6	5	9	64 (5)
6	Control measure s on other fungi	63	45	0	7	5	59 (6)
7	Control	62	33	8	10	7	57 (7)

The perceived utility for the content regarding the preventive measures in the cultivation of oyster mushroom was highest followed by attack of other fungi. The least utility perception index was for the control measures.

Overall Perceived Utility Index

Over all utility index of the instructional manual was assess on various dimensions as readability, comprehension, applicability clarity, coverage of the instructional manual used during training

Table 4. Overall perceived utility index of instructional manual on oyster mushroom cultivation

S. N .	Dimensions	File	Leafle t 1	Leafle t 2	Leafle t 3
1	Readability	92.63	91.75	93.85	96.5
2	Comprehensio n	97.10	89.52	90.65	91.82
3	Applicability	95.25	90.70	82.72	93.6
4	Clarity	90.51	88.7	85.3	81.78
5	Coverage of subject matter	80.25	92.48	83.63	86.23
6	Specific to Location	81.35	86.80	85.32	90.26
7	Overall satisfaction	91.52	90.62	89.91	90.52

The perceived utility of the file for comprehension and satisfaction was highest, and

lowest for coverage of subject matter. The designed file was reported as very useful for keeping record of temperature, humidity, dates of growth and harvest of mushroom beds and weight of the crop. Maximum participant appreciate the part of expression of the feeling after observation the oyster mushroom cultivation process. The overall perceived utility of the instructional material was high as the information can be used further and refer as short ready reckoner for the oyster mushroom cultivation

Table 5. Mean score for overall utility of the instructional manual

S.N.	Utility statements	Leaflet 1	Leaflet 2	Leaflet 3	File
1	Course content was relevant with course objective	4.31	4.41	4.40	4.00
2	Appropriate organisation of the content	4.30	4.11	4.21	4.62
3	Practically useful	4.53	4.59	4.15	4.70
4	Concepts are Clarity introduced	4.54	4.0	4.33	4.26
5	Explanation of Technical information	4.45	4.20	4.59	3.90
6	Scope and depth of the topic was appropriate	4.47	4.18	4.00	3.60
7	Useful to know information about weather	4.33	2.80	3.2	3.00
8	Adequate follow up activities are given	4.45	4.32	4.56	4.80
9	Ease in use	4.63	4.63	4.63	4.50
10	Overall quality	4.46	4.55	4.39	4.22

Table 5 indicates perception of trainees about instructional manual. Weighted mean score was highest (4.58) for the practical usefulness followed by concept clarity (4.54) and least score obtained to no ease in use of information disseminated through leaflet on oyster mushroom cultivation. The perception of trainees on nutritive and medicinal value of oyster mushroom was observed highest

(4.59) score practical usefulness, followed by relevance with course objectives and adequate follow up activities. The weighted mean for leaflet three was highest for explanation of technical information (4.59) followed by (4.56) for adequate follow up activities and concept clarity (4.53).

Utility perception of content of instructional manual was reported high by the trainees. The maximum trainees were agreed that overall utility perception of provided manual was most useful. Hence, recommended that the written instructional manual should be prepared and used wisely for better outcomes of the training.

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