Int.J.Curr.Microbiol.App.Sci (2021) *10*(11): 322-327

International Journal of Current Microbiology and Applied Sciences
***ISSN: 2319-7706* Volume 10 Number 11 (2021)**
Journal homepage: http://www.ijcmas.com

Original Research Article https://doi.org/10.20546/ijcmas.2021.1011.036

Level of Knowledge of Farm Women in Production of Vermicompost

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Keywords

Vermicompost, Knowledge, Farm women, Organic manure and Agriculture

Article Info

Received:
14 October 2021
Accepted:
04 November 2021
Available Online:
10 November 2021

A B S T R A C T

With the global concerns of safe foods, the concept of organic manure was introduced to the farmers. Organic manure provides a solution to the alarming environmental damage caused by chemical fertilizers. The residues of chemical fertilizer are not only percolating into the soil but have moved into the reservoirs of water, rivers and streams. Among various sources of organic manure, vermicompost have been recognized as having considerable potential as soil amendments and also source of generating additional income along with the already known environmental benefits. Farm women play an important role in farm enterprises. Since immemorial women support to the family by earning and undertaking various type of work. Farm women are considered as invisible works force in various agricultural operations. And by looking to the benefit of organic manure, most of the farm women of Jorhat District started producing vermicompost in their homes. Thus the study was undertaken to see the Level of knowledge of farm women in production of vermicompost. The present study was conducted in Jorhat District of Assam. A total of 100 farm women were selected who were engaged in production of vermicompost. Data collection was done by using interview cum questionnaire. The study revealed that majority 67 per cent had medium level of knowledge in production of vermicompost. The findings also revealed that education and organisational membership had close association with knowledge of vermicompost.

Introduction

Agriculture is the backbone of the Indian economy and contributes nearly 50 percent of the total national income. Therefore, the development of the country depends on agricultural development. The advent of green revolution made India reach self-sufficiency in food production. This was mainly due to the cultivation of high yielding varieties which were responsive to chemical fertilizers and pesticides. The use of fertilizers and pesticides have led to enormous levels of chemical build up in our environment-soil, water, air, animals and even in our bodies. Fertilizers and plant protection chemicals have a short –term effect

on productivity but a long term negative effect on the environment where they remain for years after leaching and running off, contaminating ground water and water bodies. Krieger *et al.,* (1992) showed that the human exposure to pesticides occur as a consequence of their use or persistence in a variety of media including air, water, soil, plants, and animals especially as foods. This continuous exposure may lead to fatal diseases like cancer and heart related disease.

But with the global concerns of safe foods, had introduced the concept of organic farming. Organic agriculture is an eco-friendly production system that promotes and enhances biodiversity, biological cycles and biological activities. The principle is based on minimal use of off-farm inputs and management practices that help to maintain and enhance ecological balance. Organic agriculture is chemical free. Producing organically, is a commitment to a system which ensures that healthy, nutritious food can be produced year after year. The primary goal of organic farming is health and productivity of interdependent communities of soil life, animals and for millions of human beings. "Organic farming is a production system that avoids or largely excludes the use of synthetically compounded fertilizer, pesticides, growth regulators and livestock feed additives. Organic farming systems rely to the maximum extent on crop rotations, crop residues, animal manures, legumes, green manures, off-farm organic wastes, and aspects of biological pest control to maintain soil productivity and tilt, to support plant nutrients and control insects, weeds and other pests".

Compost contains variable amounts of N, P and K, and is a valuable source of plant nutrients. Among various sources of organic matter, vermicompost have been recognized as having considerable potential as soil amendments. Recently, there is an increasing interest in the potential of vermicomposts, which is a process of biodegradation of organic materials through interactions between earthworms and microorganisms. Cost of inorganic fertilizers is very high and sometimes it is not available in the market for which the farmers fail to apply the inorganic fertilizers to the crop field in optimum time.

On the other hand, the organic manure is easily available to the farmers and its cost is low compared to that of inorganic fertilizers vermicomposting as one of the methods of generating additional source of income, economic empowerment and assuring sustainable livelihood approach along with the already known environmental benefits. And by looking to the benefit of organic manure, most of the farm women of Jorhat District started producing vermicompost in their homes. Thus the study was undertaken to see the Level of knowledge of farm women in production of vermicompost with the following objectives i) to study the socio-personal characteristics of farm women ii) to assess the level of knowledge of farm women in production of vermicompost and iii) to find out the association between level of the knowledge and selected independent variables.

Materials and Methods

The present study was carried out in Jorhat District of Assam. Two blocks namely Jorhat Development Block and Sipahikhola Block was purposively selected. From each block two villages altogether four villages were selected randomly. From each village twenty five farm women who were engaged in production of vermicompost were selected purposively, thus altogether 100 respondents were selected for the present study. A well – structured interview schedule has been prepared to collect the data from the rural women. To measure the knowledge level of

farmers in this study by using standardized scale developed by LatikaVyas *et al.,* (2014) with slight modification. The scale was consists of 43 knowledge statements these statements are based on concept of vermiculture technology, bed preparation, raw material, earthworms, water, filling of bed, maintenance of vermin-bed, harvesting of ready compost, care during transportation and its uses. The 3 points continuum were know thoroughly, know somewhat and not known with respective weight age 3, 2, 1. The scores so obtained under various questions were summed up. On the basis of the total score obtained, respondents were categorized into three classes i.e. low, medium and high level of knowledge.

Results and Discussion

Background characteristics

Majority of the rural women were between the age group 30 – 40 years (55.00 per cent), married (80 per cent), farming as their main occupation (65.00 per cent), nuclear family (70 per cent) and small family size (55.00 per cent).

Forty percentages of rural women had education up to high school level. Majority of the respondents (60.00 per cent) had 5 to 10 bighas of land, Possess katcha house (65.00 per cent), rear cow (70.00 per cent). Table 1 again shows that majority 78.00 percent had no contact with extension personnel, had no mass media exposure 73.00 per cent and attained training from Agriculture University 84.00 per cent.

Level of knowledge of rural women in production of vermicompost

The rural women were classified into three categories on the basis of their level of knowledge. The findings are presented in Table-2.

Table-2 shows that majority of the rural women (67.00 %) had medium level of knowledge followed by twenty four percent have high level of knowledge on production of vermicompost. Saini (2005) (Arora *et al.,* 2012). Very negligible percent of rural women had low level of knowledge on production of vermicompost.

The finding in the Table 2 shows that rural women had knowledge on production of vermicompost. This might be due to the fact that rural women had taken training on production of vermicompost. Aski *et al.,* (2014), Pagaria (2014) and Singh *et al.,* (2016).

Association between level of the knowledge and selected independent variables

Table 3 reveals that there was a significant association with education qualification and knowledge. It means knowledge increased with increase in education. This might be due to the fact that educated women easily understand the importance and benefit of vermicompost than the uneducated women. Further analysis of the table also shows that organisational membership was significantly associated with knowledge of rural women in production of vermicompost.

Table.1 Distribution of respondents according to their background characteristics

N = 100

Sl. No.	Characteristics	Category	Percentage
1	Age	Younger (20 – 30) Middle (30 – 40) Older (40 – 50)	**25.00** **55.00** **20.00**
2	Marital status	Unmarried Married Widow	**15.00** **80.00** **5.00**
3	Occupation of head of the family	Service Business in agro based Farming Business beyond Agriculture Daily wage earner	**5.00** **20.00** **65.00** **4.00** **6.00**
4	Family structure a) Family type	Nuclear Joint Extended	**70.00** **25.00** **5.00**
	b)Family size	Small (up to 4 members) Medium (5 – 8 members) Large (9 and above)	**55.00** **25.00** **20.00**
5	Education qualification	Illiterate Can read & write Primary level Middle school level High school level Higher school level	**2.00** **10.00** **15.00** **20.00** **40.00** **13.00**
6	Organizational membership	No membership Member of one organization Office bearer of an organization	**40.00** **58.00** **2.00**
7	Land holding	Small (< 5 bigha) Medium (5 to 10 bighas) Large (> 10 bighas)	**15.00** **60.00** **25.00**
8	Type of house	Katcha house Mixed house Pucca house	**65.00** **25.00** **10.00**
9	Livestock possession	Cow Poultry Goat Duck	**70.00** **35.00** **30.00** **25.00**
10	Closeness with extension contact	Never Sometime/occasionally Regular	**78.00** **20.00** **2.00**
11	Mass media exposure	Never Sometime/occasionally Regular	**73.00** **24.00** **3.00**
12	**Attained training on vermicompost from**	**District agricultural office** **Block office** **NGO** **Agriculture university**	**1.00** **1.00** **14.00** **84.00**

Table.2 Distribution of rural women according to the level of knowledge on production of vermicompost

N = 100

Sl No	Category	Frequency	Percentage (%)
1.	Low (< 11.00)	9	9.00
2.	Medium(11.00 – 21.80)	67	67.00
3.	High (> 21.80)	24	24.00

Table.3 Association between involvement and selected independent variables

Independent variable	X^2
Age	2.085^{NS}
Educational qualification	13.260*
Marital status	1.840^{NS}
Family type	1.931^{NS}
Family size	1.920^{NS}
Organizational membership	11.840*

NS: Non- Significant
*: Significant at 5 per cent level of probability
X^2: Chi-square

It is due to the fact that organizational membership might helped the farm women to took training on production of vermicompost and also to interact with different people regarding advantages of using vermicompost in their fields. From the research study it can be concluded that majority (67.00%) of the respondents were having medium level of knowledge followed by 24.00 per cent of them had high level of knowledge. The independent variables like, educational qualification and organizational membership had significant correlation with level of knowledge on vermicompost production. Hence, suitable extension programmes should be planned for the farm women to increase their knowledge on production of vermicompost.

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How to cite this article:

Poree Saikia. 2021. Level of Knowledge of Farm Women in Production of Vermicompost. *Int.J.Curr.Microbiol.App.Sci.* 10(11): 322-327. doi: https://doi.org/10.20546/ijcmas.2021.1011.036