

A Study on Practice - Wise Knowledge Level of the Paddy Farmers about the Recommended Biofertilizers Practices in Paddy Cultivation in Vellore District

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Abstract

The present investigation was designed to determine the practice wise knowledge level of paddy farmers about the recommended biofertilizers practices in paddy cultivation. The study was undertaken in selected villages from Gudiyattam taluk of Vellore District in Tamil Nadu. A sample size of 120 was fixed for the study considering the limitations of time and other resources. Based on the proportionate random sampling method, one hundred and twenty respondents were identified for the study from selected six villages. Data collection was done with the help of well – structured interview schedule. The data were collected by the researcher by personally interviewing the respondents and the collected data were interpreted and tabulated for appropriate statistical analysis. The results of the study showed that majority of them had low level of knowledge (45.83 per cent) on recommended biofertilizers practices in paddy cultivation.

Key words: Practice – wise knowledge level, Paddy farmers, Knowledge, Paddy Cultivation, Biofertilizers practices.

INTRODUCTION

Paddy is one of the most important cereals that holds the key towards food security. It feeds more than half of the world's population. Paddy is now grown in 200 million rice farms, most of them are smaller than one hectare in 112 countries. It has been cultivated in Asia for several thousand years. About fifty per cent of the crop is grown and consumed in Asia and net exporter of rice to the rest of the world.

Bio-fertilizers play an important role in achieving this goal in an Eco-friendly manner by fixing nitrogen, improving the crop growth by production of growth promoting chemicals and improving the nutrient uptake of the crops. Among several beneficial bacterial genera reported in paddy, *Cyanobacteria*, *Azolla*, *Phosphobacteria*, *Azospirillum*, *Pseudomonas fluorescens* have been widely used as biofertilizers for paddy crop. Association of phosphate mobilizing fungus viz., *Vesicular arbuscular mycorrhiza* is also used as a bio-fertilizer.

REVIEWS OF LITERATURE

Knowledge level of farmers

Prithiviraj (2005) reported that majority of the respondents (45.00 per cent) were found to have medium level of knowledge about biofertilizers followed by low (33.33 per cent) and high (21.67 percent) level of knowledge.

Madhu (2010) reported that (38.00 per cent) of the respondents belonged to medium level of

knowledge about recommended cultivation practices followed by (36.30 per cent) and (25.70 per cent) belonged to low and high levels of knowledge categories respectively.

Chethan (2011) stated that (44.00 per cent) of the respondents possessed medium knowledge about recommended cultural practices of cardamom.

Sivajiganesan (2011) observed that more than half of the respondents (54.16 per cent) had high level of knowledge followed by medium (34.17 per cent) and low (11.67 per cent) levels of knowledge.

Kesakar *et al.* (2012) revealed that (71.50 per cent) of the respondents had medium knowledge, while (16.50 per cent) and (12.00 per cent) of the respondents had high and low knowledge levels respectively about organic practices on cashew nut cultivation.

Muthukumar (2012) stated that more than fifty per cent of the medicinal plant growers (52.00 per cent) had medium level of knowledge about cultivation practices followed by high (36.00 per cent) and low (12.00 per cent) levels.

Vasanthakumar (2012) concluded that nearly half of the respondents (49.00 per cent) had high level of knowledge followed by medium (35.00 per cent) and low (16.00 per cent) levels of knowledge.

Kathiresan (2013) revealed that more than half of the respondents (56.70 per cent) had medium level of knowledge, followed by low (33.00 per cent) and high (10.00 per cent) levels.

Kumar and Rathod (2013) reported that majority of the respondents (62.67 per cent) possessed medium level of knowledge followed by high (20.66 per cent) and low (16.67 per cent) levels of knowledge.

Sivaperumal (2013) observed that more than half of the respondents (57.00 per cent) had high level of knowledge followed by medium (32.00 per cent) and low (11.00 per cent) levels of knowledge on precision farming.

Shindhu (2015) revealed that exactly half of the respondents (50.00 Per cent) had high level of knowledge on recommended cultivation practices followed by (27.30 per cent) of the respondents had medium level of knowledge on recommended cultivation practices. The remaining (22.70 per cent) of the respondents had low level of knowledge on recommended cultivation practices.

Silambarasan (2015) observed that more than half of the respondents (52.50 per cent) had high level of knowledge followed by (30.83 per cent) of the respondents who had medium level of knowledge. Only (26.67 per cent) of the respondents had low knowledge level.

Prakash (2016) indicated that more than half (55.83 per cent) of the respondents were found to possess medium level of knowledge followed by one-fourth (25.00 per cent) of the respondents with high level of knowledge. Only (19.16 per cent) of the respondents had low level of knowledge.

Ganapathy Ramu (2017) stated that more than half of the respondents (55.00 percent) had medium level of knowledge on recommended cultivation practices followed by (25.83 per cent) of the respondents with high level of knowledge on recommended cultivation practices. The remaining (19.17 per cent) of the respondents had low level of knowledge on recommended cultivation

practices.

Simrajit Kaur and Guruvinder Singh (2019) observed that more than half of the respondents (61.66 per cent) had medium level of knowledge followed by low (22.50 per cent) and high (15.84 per cent) level of knowledge on recommended cultivation practices.

Jayashankar *et al.* (2020) reported that majority of the respondents (65.83 per cent) had high level of knowledge followed by medium (19.17 per cent) and low (15.00 per cent) level of knowledge on recommended cultivation practices.

MATERIALS AND METHODS

The present investigation was designed to determine the occupational status and annual income of paddy farmers about the recommended biofertilizers practices in paddy cultivation. The study was undertaken in selected villages from Gudiyattam taluk of Vellore District in Tamil Nadu. A sample size of 120 was fixed for the study considering the limitations of time and other resources. Based on the proportionate random sampling method. One hundred and twenty respondents were identified for the study from selected six villages. Data collection was done with the help of well – structured interview schedule. The data were collected by the researcher by personally interviewing the respondents and the collected data were interpreted and tabulated for appropriate statistical analysis. The results of the study showed that majority of them were agriculture as primary occupation and medium level of annual income in paddy cultivation.

FINDINGS AND DISCUSSION

Overall knowledge level on recommended biofertilizers practices in paddy cultivation

The results on distribution of respondents to their knowledge level on recommended biofertilizers practices is presented in Table 1 and Fig. 1

Table 1. Overall knowledge level on recommended biofertilizer practices.

(n=120)

Sl. No.	Category	No. of respondents	Per cent
1.	Low	55	45.83
2.	Medium	47	39.16
3.	High	18	15.00
Total		120	100.00

From the Table 1, it could be understood that little less than half of the respondents (45.83 per cent) had low level of knowledge followed by medium level (39.16 per cent) and high level (15.00 per cent) of knowledge on the recommended biofertilizers practices on paddy cultivation. Hence the reported low-level knowledge of respondents may be due to poor social participation, low mass media exposure, less information source utilization.

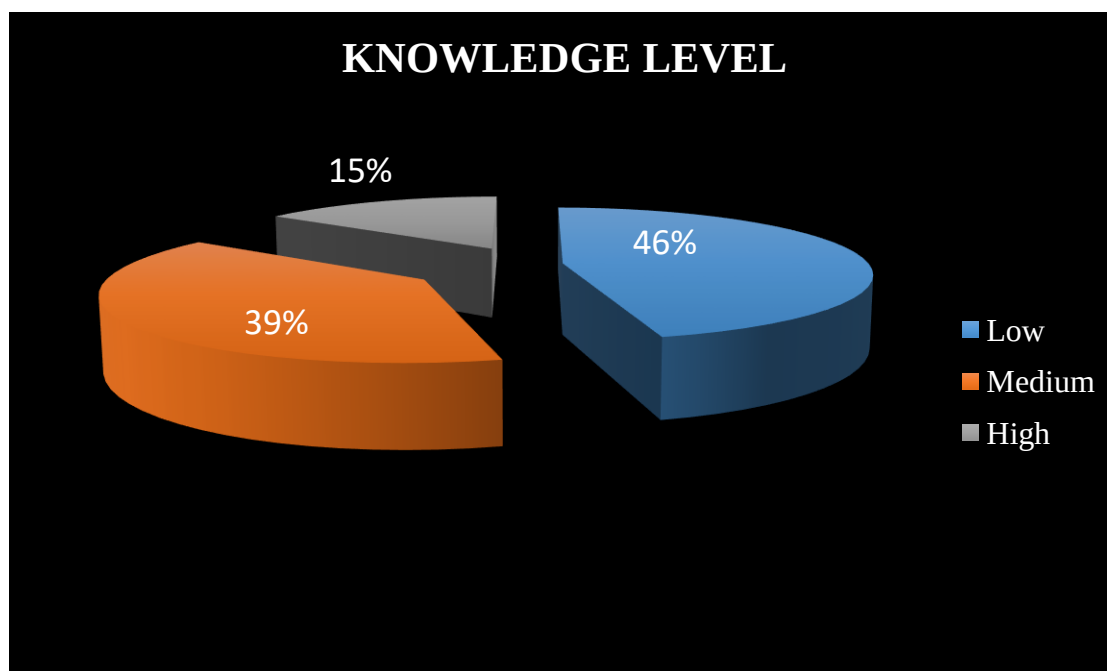


FIG. 1. DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR OVERALL KNOWLEDGE LEVEL ON RECOMMENDED BIOFERTILIZERS PRACTICES IN PADDY CULTIVATION

Practice - wise knowledge level of the paddy farmers about the recommended biofertilizers practices in paddy cultivation.

Results of distribution of paddy farmers according to their practice – wise knowledge level about recommended biofertilizers practices in paddy cultivation are presented in Table 2 and Fig. 2

Table 2. Distribution of respondents according to their practice – wise knowledge level about the recommended biofertilizers practices in paddy cultivation

(n = 120)

SI .No.	Recommended biofertilizers practices	Number of respondents	Percent
1.	Seed treatment with <i>Azospirillum</i>	75	62.50
2.	Soil application with <i>Azospirillum</i>	30	25.00

3.	Seedling root dip with <i>Azospirillum</i>	25	20.83
4.	Seed treatment with <i>Phosphobacteria</i>	20	16.66
5.	Soil application with <i>Phosphobacteria</i>	17	14.16
6.	Seedling root dip with <i>Cynobacteria</i>	57	47.50
7.	Soil application with <i>Cynobacteria</i>	45	37.50
8.	Soil application with <i>Azolla</i>	39	32.50
9.	Seedling root dip with <i>Azolla</i>	20	16.66
10.	Seed treatment with <i>Pseudomonasfluorescens</i>	13	10.83
11.	Soil application with <i>Pseudomonasfluorescens</i>	9	7.50

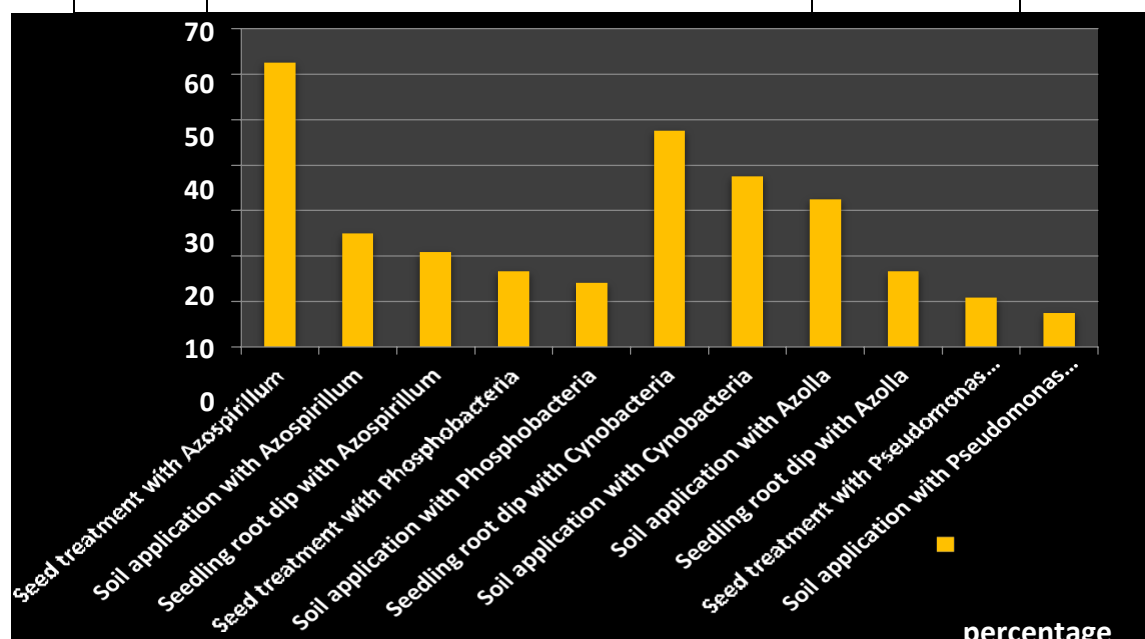


FIG. 2. DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR PRACTICE – WISE KNOWLEDGE LEVEL ABOUT THE RECOMMENDED BIOFERTILIZERS PRACTICES IN PADDY CULTIVATION

Further it could be found that more than sixty percent of the respondents had knowledge on seed treatment with *Azospirillum* (62.50 per cent), nearly half of the respondents had knowledge on seedling root dip with *Cynobacteria* (47.50 percent).

The mean percentage score of respondents were found to be (37.50 per cent) for soil application with *Cynobacteria* followed by 32.50 per cent for soil application with *Azolla*. The percentage score for soil application, seedling root dip with *Azospirillum* were 25.00 per cent and 20.83 per cent respectively.

The mean percentage score of respondents were found to be low for seedling root dip with *Azolla* (16.66 per cent), seed treatment with *Pseudomonas fluroscens* (10.83 per cent) followed by soil application with *Pseudomonas fluroscens* (7.50 per cent)

The reports for high knowledge on seed treatment with *Azospirillum* and seed treatment, seedling root dip, soil application with *Cynobacterium* maybe due to their high awareness, optimum educational status, experience on paddy cultivation and information sharing behaviour on such practices. The poor knowledge of the respondents on seed treatment, soil application with *Phosphobactertia*, *Pseudomonas fluroscens* and seedling root dip with *Azolla* may due to their lack of awareness, lack of mass media exposure, lack of social participation on such practices.

Conclusion

On the basis of the major findings of this study, certain broad implication that may be useful for the improvement of the paddy farmers knowledge level about the recommended biofertilizers practices in paddy cultivation. Low level of knowledge was observed among the paddy producing farmers about the biofertilizers and its practices. This might be due to lack of awareness, medium to low level of mass media participation, social participation and less information source utilization. So the awareness and knowledge level can be raised by mould them with appropriate extension strategies so as to generate awareness and knowledge. They may also give with intensive training especially on biofertilizers practices in paddy cultivation. Further they can develop technologies to enable the farming communities. Hence the training needs of paddy farmers on biofertilizers may be studied.

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