



Constraints Faced by The Paddy Farmers in Adoption of Bio-Fertilizers In Vellore District

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ABSTRACT

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 the which 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. India stands second after china which has developed hybrid rice technology on a commercial scale. India is the home to paddy and the largest paddy growing and second larger paddy producing and consuming country. A sample of 120 respondents were considered adequate for the study. The number of respondents from each village was selected by following proportionate random sampling procedure. Based on the results of the study that majority of the respondents (85.00 per cent) reported lack of interest as their first and foremost constraint followed by lack of practical knowledge as their second constraint by (83.33 per cent) of the respondents. Lack of technical guidance from extension personnel was their third most important constraint experienced by (82.50 per cent) of respondents followed by inadequate supply through state department of agriculture as their fourth constraint experienced by (80.00 per cent) of the respondents. Lack of training programmes is the fifth constraint experienced by (79.16 per cent) of the respondents. Invisible results of biofertilizer, lack of awareness, lack of confidence, non-availability of labour were found to be sixth, seventh, eighth and ninth constraints expressed by 75.00, 74.16, 69.16, 41.66 per cent of the respondents respectively, while adopting the recommended biofertilizer practices in their paddy cultivation.

Key words: Paddy farmers, bio fertilizers and constraints

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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 the which 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.

India stands second after china which has developed hybrid rice technology on a commercial scale. India is the home to paddy and the largest paddy growing and second larger paddy producing and consuming country [1].

In the last 40 years, science-driven technological advances and growth oriented developmental initiatives enabled our country to achieve sustained self-sufficiency in its need of paddy and sizeable surplus to emerge as one of the major paddy exporting countries. The kind of transformation the country witnessed in food and paddy scenario is unparalleled in the contemporary history of global agriculture [6].

Paddy grows on a variety of soils like clay, clay loam, alluvial soil, black soil and red soil. It can also tolerate alkaline as well as acid soils. However, clay loam is well suited to raising this crop. Paddy raised in the well-watered lowland areas is known as lowland or wetland paddy, paddy grown in the hilly areas is known as dry or upland paddy. Interestingly, per hectare yield of upland paddy is comparatively less than that of the wet paddy [2].

Based on the field experience of the researcher, coupled with discussion with paddy growers and extension functionaries, constraints in the adoption of bio-fertilizer in paddy were enumerated. The respondents were asked to indicate the constraints experienced by them in the adoption of recommended bio-fertilizer practices in paddy cultivation. The frequency of respondents indicating each of the constraints was found out and expressed in percentage.

MATERIAL AND METHODS

A sample of 120 respondents were considered adequate for the study. The number of respondents from each village was selected by following proportionate random sampling procedure. A well-structured interview schedule was used for the collection of data. Interview schedule was prepared in English. Questions were asked in Tamil by the student researcher to the respondents. Before finalizing the interview schedule, it was pre-tested in a non-sample area to identify the inconsistencies and later necessary changes in the schedule were made. The data collected were processed, coded and tabulated for statistical analysis. Data were collected during the month of February–March 2021.

RESULTS AND DISCUSSION

CONSTRAINTS EXPERIENCED BY THE PADDY FARMERS IN ADOPTION OF RECOMMENDED BIOFERTILIZERS PRACTICES IN PADDY CULTIVATION

The findings on the constraints experienced by the paddy farmers in the adoption of recommended bio-fertilizers practices are presented in this section. The constraints were ranked according to the number of respondents reported and the salient findings are given in Table 1.

Table 1. Constraints experienced by the paddy farmers in adoption of recommended bio-fertilizers practices in paddy cultivation (n=120)

Sl. No.	Constraints	Number of respondents	Per cent	Rank
1.	Lack of interest	102	85.00	I
2.	Lack of practical knowledge	100	83.33	II
3.	Lack of technical guidance from extension personnel	99	82.50	III
4.	Inadequate supply through state department of agriculture	96	80.00	IV
5.	Lack of training programmes	95	79.16	V
6.	Invisible results of bio fertilizer	90	75.00	VI
7.	Lack of awareness	89	74.16	VII
8.	Lack of confidence	83	69.16	VIII
9.	Non-availability of labour	50	41.66	IX

Table.1, revealed that majority of the respondents (85.00 per cent) reported lack of interest as their first and foremost constraint followed by lack of practical knowledge as their second constraint by (83.33 per cent) of the respondents. Lack of technical guidance from extension personnel was their third most important constraint experienced by (82.50 per cent) of respondents followed by inadequate supply through state department of agriculture as their fourth constraint experienced by (80.00 per cent) of the respondents. Lack of training programmes is the fifth constraint experienced by (79.16 per cent) of the respondents. Invisible results of biofertilizer, lack of awareness, lack of confidence, non-availability of labour were found to be sixth, seventh, eighth and ninth constraints expressed by 75.00, 74.16, 69.16, 41.66 per cent of the respondents respectively, while adopting the recommended biofertilizer practices in their paddy cultivation.

The first and foremost constraint expressed by majority (85.00 per cent) of the respondents was lack of interest. During the survey, majority of the respondents reported that they were not ready to change their cultural operations followed traditionally, they gave more importance to plant protection measures aspects and they depended on chemical fertilizers for higher yields. Moreover, most of the respondents were middle to old aged with low mass media exposure that leads to lesser interest towards application of recommended biofertilizer practices. This may be the possible reason for the above said constraint. This finding is in line with findings of M. Prithviraj [3].

The second constraint expressed by majority (83.33 per cent) of the respondents was lack of practical knowledge towards various biofertilizers practices. This constraint is due to lack of extension agency contact, lack of awareness, poor social participation and lack of technical guidance from various extension personnel. This finding is in line with the findings of Janusia (2017).

The third constraint reported by the majority (82.50 per cent) of the respondents was lack of technical guidance from extension personnel, though the extension officials of State Department of Agriculture, Government of Tamil Nadu and officers of the agriculture department were not taking any intensive effort to disseminate the recommended biofertilizer practices, they did not provide complete technical guidance on paddy biofertilizers such as the advantages of applying specific biofertilizers, place of availability, its

complementary nature etc., further they were not trained properly towards application of biofertilizers in time. This findings is in line with the findings of M. Prithviraj [3].

The fourth constraint experienced by (80.00 per cent) of the respondents was inadequate supply through state department of agriculture, though the extension officials of State Department of Agriculture, were not taking any specific activities to supply the biofertilizers at grassroots level. Hence it creates difficulty to search and buy the biofertilizers by the paddy farmers. This finding is in line with findings of Siddharthan [1] and Mullaivendan [5].

Lack of training programme was experienced as the fifth constraint by (79.16 per cent) of the respondents. Even though the State Government of Agriculture conducts various training programmes for the farmers, the number of trainings conducted on paddy biofertilizers were meager as reported by the majority of respondents. Hence majority of the farmers were not trained properly on the application of biofertilizer. This may be the probable reason for this constraint in adoption of biofertilizers. This finding is in line with findings of VasanthaKumar [4].

The sixth constraint expressed by a majority (75.00 per cent) of the respondents was invisible results of biofertilizer. The farmers were reluctant to adopt it because of the biofertilizer did not have any visual impact at critical stages and hence it would not serve the extension principle of seeing by believing. This finding is in line with M. Prithviraj [3].

Lack of awareness was experienced by the majority of the respondents (74.16 per cent). While doing the survey, most of the paddy farmers didn't even know what biofertilizer was and its applications. It is due to lack of awareness created by the State Department of Agriculture, Government of Tamil Nadu at village, block and district level. This result is in line with findings of M. Prithviraj [3].

The eighth constraint experienced by the majority (69.16 per cent) of the respondents was lack of confidence towards various recommended biofertilizer practices. The farmers had no faith in the invisible result, lack of technical guidance at the time of application, lack of training programmes, incomplete information made them suspicious, which in turn led to lack of confidence in the minds of the farmers. This finding gain support from the findings of M. Prithviraj [3]

Non availability of labour was reported by (41.66 per cent) of the respondents. During the peak period of every season, all the farmers would start their work at the same time, hence there has been a heavy demand for skilled labourers. Further, the availability of agricultural labour is drastically reduced in the study area due to industrialization. Even though the labourers are available, they not skilled, properly trained and this has led to wastage of time, money, and inputs. This may be reason in the above reported concern [4, 5].

CONCLUSION

On the basis of the major findings of this study, certain broad implication that may be useful for the improvement of the farmers in adoption of bio fertilizers. This might be due to intensive transfer of technologies by way of giving more training would help them to do them for adopting in more scientifically. They may also be given intensive training especially on bio-fertilizers practices. Further they can develop technologies to enable the farming communities. To mould appropriate extension strategies so as to generate awareness knowledge among farming about the need for adoption of suitable bio fertilizers technologies.

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