

ADOPTION LEVEL OF PRIVATE BIO-FERTILIZERS BY FARMERS**Rakesh Karravula¹, R. M. Naik² and Neeta Kalasariya³**

1 M.Sc. Scholar, Dept. of Extn. Edu., NMCA, NAU, Navsari-396450

2 Associate professor, Dept. of Extn. Edu., NMCA, NAU, Navsari-396450

3 M.Sc. Scholar, Dept. of Extn. Edu., NMCA, NAU, Navsari-396450

Email: rakesh333devan@gmail.com

ABSTRACT

The study was conducted in Navsari district of South Gujarat using Ex-post facto research design. It has 6 talukas viz., Navsari, Gandevi, Chikhli, Khergam, Vansda and Jalalpore. All the talukas were covered under study, a simple random sampling method was followed for selection of the respondents. 120 respondents were selected as a sample size. Private bio-fertilizers in this study are referred as the bio-fertilizers that are manufactured by private manufacturers. This study concluded that majority of respondents had low adoption level of private bio-fertilizers. Education, occupation, mass media exposure, extension contact, economic motivation, management orientation, land holding, social participation, scientific orientation are significantly associated with adoption level of private bio-fertilizers.

Keywords: knowledge, bio-fertilizers, respondents, adoption

INTRODUCTION

After the Green revolution, India became world's largest user of chemical fertilizers, consuming each year around 16 per cent of the world's nitrogen consumption, 19 per cent of phosphatic and 15 per cent of potassic nutrients of the global total. Total fertilizer consumption in the country was 28.30 million tons up to 2010-11. The emphasis on chemical fertilizers, which sometimes led to injudicious application, has meant that the soil be regarded as an inert substrate for plant roots, instead of a living biosphere, the rhizosphere containing a myriad of organisms. It is now realized that in agricultural lands productivity slowly declines and environmental quality starts to deteriorate (Patel, 2019). Environmental stresses are becoming a major problem and productivity is declining at an unprecedented rate (Saran *et al.*, 2015). Our dependence on chemical fertilisers and pesticides has encouraged the thriving of industries that are producing life-threatening chemicals and which are not only hazardous for human consumption but can also disturb the ecological balance (Vanpariya *et al.*, 2020a & 2020b). Current soil management strategies are mainly dependent on inorganic chemical-based fertilizers, which caused a serious threat to human health and environment. Bio-fertilizers can help solve the problem of feeding an increasing global population at a time when agriculture is facing various environmental stresses. It is important to realise the useful aspects of bio-fertilizers and implement its application to modern agricultural practices. The exploitation of beneficial microbes as a bio-fertilizer has become paramount importance in agriculture sector for their potential role in food safety and sustainable crop production.

(Bhardwaj, 2014).

Usage of Eco-friendly bio-fertilizers is need of the hour. Based on the results obtained extension strategies can be developed to increase farmers adoption of private bio-fertilizers, Private bio-fertilizers in this study is referred as the bio-fertilizers manufactured by private manufacturers. Keeping these things in view the present study was conducted to assess the Adoption level of private bio-fertilizers by farmers.

OBJECTIVES

- (1) To study the Adoption level of private bio-fertilizers by the respondents
- (2) To analyze the relationship between profile of the respondents with their adoption level of private bio-fertilizers.

METHODOLOGY

The study was conducted in Navsari district of South Gujarat during the year 2019-20. It has 6 talukas viz., Navsari, Gandevi, Chikhli, Khergam, Vansda and Jalalpore. All the talukas were covered under study. Bifurcated list was used to identify the respondents and a simple random sampling method was followed for selection of the respondents. Considering the vast geographical area under present study the Student Advisory Committee had suggested to restrict the respondent size up to 120. So, total 10 respondents were selected randomly from each village. Thus, total 120 respondents were studied and analyzed with the help of

frequency, percentage, rank, mean, standard deviation and correlation coefficient etc.

RESULTS AND DISCUSSION

Adoption level of private bio-fertilizers by the respondents

Adoption is the decision to make full use of a new idea as the best course of action available. The data regarding extent of adoption of respondents about use of private bio-fertilizers were analyzed, tabulated and presented in the following sequence according to the adoption level.

The findings were presented in table 1

Table 1: Distribution of respondents according to adoption level (n=120)

Sr. No.	Adoption level	Respondents	
		Frequency	Percentage
1	Low	65	54.20
2	Medium	42	35.00
3	High	13	10.80

The data of the table 1 revealed that majority of the respondents (54.20 %) belonged to low adoption category, followed by 35.00 per cent and 10.80 per cent of them belonged to medium and high adoption categories respectively. In general majority of the respondents (89.20 %) belong to low to medium extent of adoption category. The finding is partly in line with the findings of Srinivas and Bhalekar, (2013)

Relationship between profile of the respondents and their adoption level of private bio-fertilizers.

The relationship between profile of the respondents and their adoption level of private bio-fertilizers were calculated with the help of correlation co-efficient (r). The findings are presented in table 2.

The data presented in table 2 revealed that education (0.316**), occupation (0.292**), mass media exposure (0.263**), extension contact (0.249**), economic motivation (0.267**), management orientation (0.357**) were found positively and highly significantly associated with extent of adoption about use of private bio-fertilizers at 1 per cent level of probability whereas, landholding (0.216*), social participation (0.219*), scientific orientation (0.225*) are positively and significantly associated at 5 per cent level of probability, while age (0.070 NS), family size (0.064 NS), farming experience (0.017NS), annual income (0.122 NS), risk orientation (0.125 NS), gender (-0.110 NS) and family type (-0.059 NS) had non-significant association with adoption level of private bio-fertilizers by the respondents.

This finding is partly in conformity with the finding of Chaudhary and Chauhan, (2016)

Table 2: Relationship between profile of the respondents with their adoption level of private bio-fertilizers. (n=120)

Sr. No.	Independent variables	Correlation coefficient (r)
X ₁	Age	0.070 NS
X ₂	Education	0.316**
X ₃	Gender	-0.110 NS
X ₄	Family type	-0.059 NS
X ₅	Family size	0.064 NS
X ₆	Occupation	0.292**
X ₇	Landholding	0.216*
X ₈	Farming experience	0.017 NS
X ₉	Annual income	0.122 NS
X ₁₀	Mass media exposure	0.263**
X ₁₁	Extension contact	0.249**
X ₁₂	Social participation	0.219*
X ₁₃	Scientific orientation	0.225*
X ₁₄	Risk orientation	0.125 NS
X ₁₅	Economic motivation	0.267**
X ₁₆	Management orientation	0.357**

NS non-significant * Significant at 0.05 level ** Significant at 0.01 level

CONCLUSION

It can be concluded that majority of the respondents (54.20%) had low adoption level of private bio-fertilizers. In the correlation analysis it was found that Education, occupation, mass media exposure, extension contact, economic motivation, management orientation are positively and highly significantly associated at 1 per cent level of probability whereas, land holding, social participation, scientific orientation are positively and significantly associated at 5 per cent level of probability, while age, family size, farming experience, annual income, risk orientation, gender, family type were non-significantly associated with adoption level of private bio-fertilizers.

RECOMMENDATION/POLICY IMPLICATION

There is need to establish awareness and conduct training programs to transfer bio-fertilizer technology. This may bring increasing the adoption of private bio-fertilizers. Such investigations ought to be repeated after the regular intervals in other geographical areas of Gujarat in order to

fortify the results.

CONFLICT OF INTEREST

No Conflict of Interest

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