ASSOCIATION OF ACQUAINTANCE AND ACCEPTANCE OF BIOFERTILIZERS WITH THEIR PERSONAL PROFILES OF BIOFERTILIZER USERS IN SOUTH GUJARAT

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A B S T R A C T

Although large hectares of area are under cultivation in this country, the yield per hectare for many crops is lower than expected level. This is because of lack of adoption of new, improved practices, advanced techniques, use of non-productive soils, decreasing soil conditions etc. It is possible to increase yield per unit area by adopting new production technologies *viz.,* use of biofertilizers, vermicompost, organic farming, bio-control remedies, genetically modified crops etc in golden era of organic farming. Hence, there is increasing demand for organic foods. Therefore, there is a need of certain supplements to the chemical fertilizers with organic manures. In this case, bio-fertilizers can play a significant role in improving soil condition and agricultural production. Now a days Biofertilizers are available in ample with all SAUs in Gujarat. Especially, NAU is producing huge mass of Biofertilizers. With this background, the study entitled "**Extent of knowledge and adoption of biofertilizers use by the biofertilizer users of Navsari district**" was undertaken with the following objectives: To study the profile of the biofertilizer users, to ascertain the knowledge level of biofertilizer users towards the use of biofertilizers, to study the adoption pattern of bio fertilizers by biofertilizer users and to measure the relationship between profiles with level of Knowledge and adoption towards the use of biofertilizer.

The results says that majority of the farmers was in the middle age group ,most of the farmers had education up to high school level, majority of farmers had 2 to 5 acres of land holding, majority of farmers belonged to more than Rs. 1,00,000 annual income, majority of farmers had low level of social participation, majority of farmers had medium extension contact, majority of the farmers had low level of scientific orientation, majority of farmers belonged to medium mass media exposure, majority of farmers belonged to medium level of knowledge about use of biofertilizer, majority of farmers belonged to medium level of adoption of biofertilizer Damor ,(2013).The variable age is negative but significant relationship with the level of knowledge about the use of biofertilizer, education is positive and highly significant and other variables *viz.,* land holding, annual income, social participation, extension contact, scientific orientation and mass media exposure are positive and significant. The variable age is negative but significant relationship with the level of adoption of biofertilizer, education and extension contact are the positive and highly significant and other variables *viz.* land holding, annual income, social participation and mass media exposure is positive and significant relationship with the level of overall adoption of the biofertilizer. Scientific orientation is negative and non-significant.

INTRODUCTION:

The constant and sustained efforts of the microbiologists and biotechnologists for isolating and standardizing the activities of microorganisms have helped to increase the production of bio fertilizers. The bio fertilizers are carrier based preparations containing effective strains of microorganisms like bacteria, algae, fungi alone or in combination with sufficient number which can provide plant nutrients through microbial activity. When these microorganisms are incorporated with seeds/seedlings and in soil they ensure enhanced crop production by way of biological nitrogen fixation, solubilization of fixed phosphate, uptake of phosphorous and other mineral nutrients and synthesis of growth promoting substances. This concept has helped in the development of bio fertilizer industries, as they do not depend on high cost and depleting raw materials. Bio fertilizers are environment friendly, less costly and non-bulky. Total production of bio-fertilizers during 2012-13 was 46836 metric tones. Biofertilizers have been recommended in almost all of the crops. With this background, the study entitled "**Extent of knowledge and adoption of biofertilizers use by the biofertilizer users of Navsari district**" was undertaken with the above objectives:

METHODOLOGY

An ex-post-facto research design was used in the present investigation. The study was conducted during April-June 2016 in Navsari district of Gujarat state. The main focus of the investigation is on **extent of knowledge and adoption of biofertilizers use by the biofertilizer users of Navsari district.**

The research was carried out in Navsari district of South Gujarat during 2016. The District comprises of six Talukas, among which Gandevi, Chikhali and Khergam Talukas were randomly selected for the study. Three talukas were selected for the study and from each taluka two village were selected. In each of the selected villages farmers were selected according to random sampling to form 60 respondents as a sample size for the study. Eight variables were measured, viz: size of land holding, annual income ,social participation, education,scientific orientation and mass media . In order to measure knowledge and extent of adoption of biofertilizer use a structured schedule was developed by reviewing related literature and seeking expert's suggestions. The data were collected by personal interview method. Statistical tools viz. frequency, percentage, ranking and correlation, were used to analyze the data.

RESULTS AND DISCUSSION:

FINDINGS

1: Personal profile of the respondents

Personal profile of the respondents indicated that majority of the farmers were in the middle age group (36-50 years).Most of the farmers had education up to high school level. Majority of farmers had 2 to 5 acre of land holding. Majority of farmers belonged to more than Rs. 1,00,000 annual income. Majority of farmers had low level of social participation. Majority of farmers had medium extension contact. Majority of the farmers had low level of scientific orientation. Majority of farmers belonged to medium mass media exposure. The same was also reported by Pandya (2010) and Patel *et al* (2014).

2: Knowledge level of the respondents

Knowledge level of farmers about the use of biofertilizers.

Table No.1: Distribution of the respondents according to their level of overall knowledge of farmers about biofertilizers n=60

Sr.No	Category	Frequency	Percentage
1	Low knowledge	6	10.00
2	Medium knowledge	41	68.33
3	High knowledge	13	21.67
	Total	**60**	**100**

Mean =8.20 SD=1.60

From the above table No.1 it is evident that majority of farmers (68.33 per cent) belonged to medium level of knowledge, followed by low (21.67 per cent) and high (10.00 per cent).The above findings are in line with the findings of Mokhale *et al.* (2010) with respect to majority of farmers having medium level of knowledge. Majority of farmers belonged to medium level of knowledge about use of biofertilizer. Reddy *et al* (2012) also reported the same.

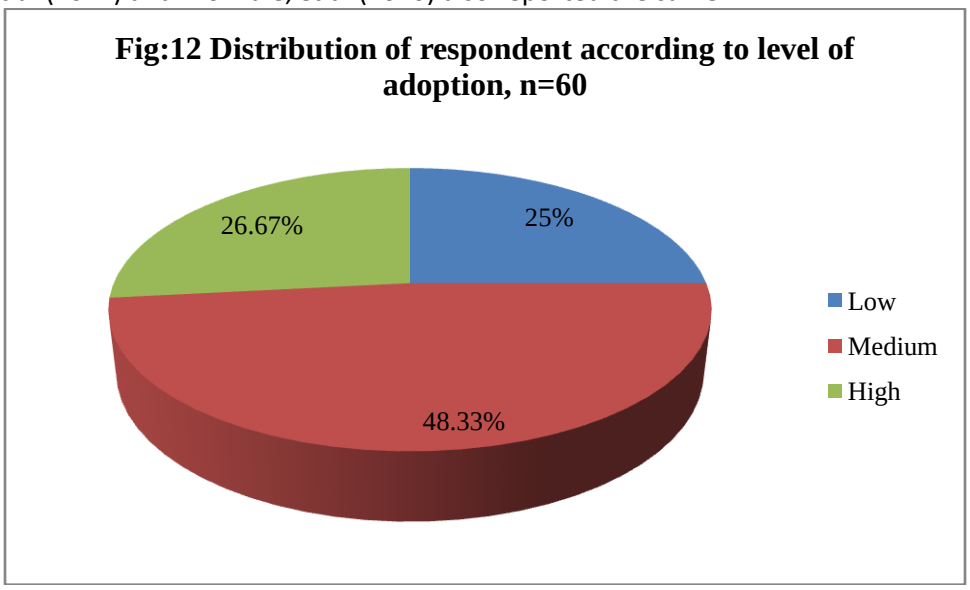
3: Adoption level of biofertilizer by the farmers

Table No.2: Distribution of the respondents according to their level of overall adoption of biofertilizers by farmers n=60

Sr.No	Category	Frequency	Percentage
1	Low knowledge	15	25.00
2	Medium knowledge	29	48.33
3	High knowledge	16	26.67
	Total	**60**	**100**

Mean =5.05 SD=0.79

From the above table No.2 it is evident that majority of farmers (48.33 per cent) belonged to medium level of adoption, followed by high (26.67 per cent) and low (28.00 per cent).The above findings are in line with the findings of Shashidhara. K. K (2012) with respect to majority of farmers belongs to medium level of adoption. Majority of farmers belonged to medium level of adoption of biofertilizer. Reddy *et al* (2012) and Mokhale, *et al* (2010) also reported the same.



4: Relationship between knowledge and profile of farmers

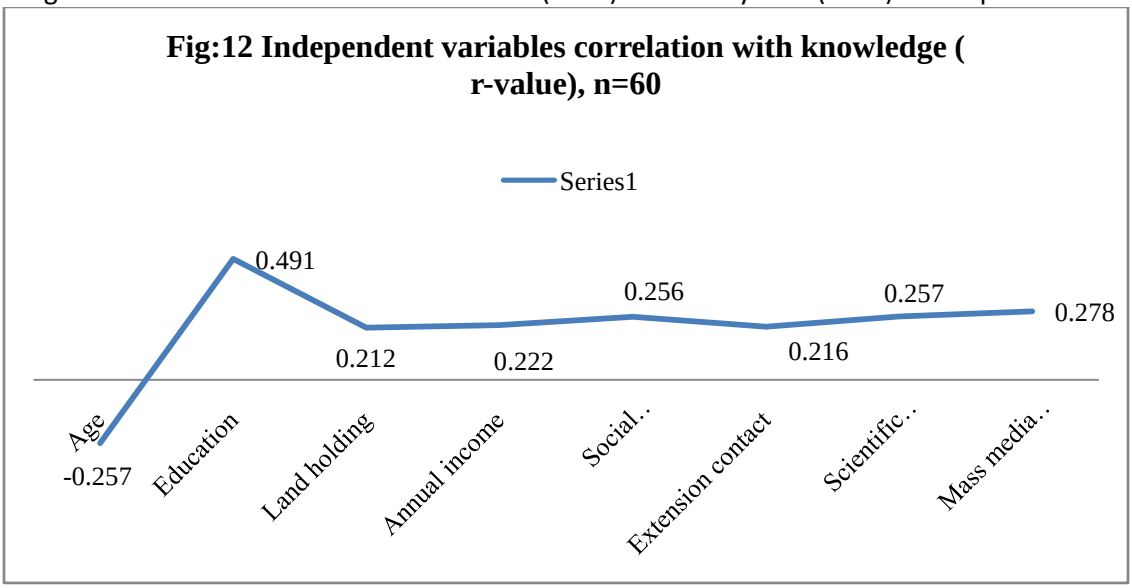
Table No. 3 .Relationship between knowledge and profile of farmers

Sr. No.	Characteristics	Correlation coefficient (r)
1	Age	-0.2576*
2	Education	0.4910**
3	Land holding	0.2116*
4	Annual income	0.2224*
5	Social participation	0.2566*
6	Extension contact	0.2162*
7	Scientific orientation	0.2570*
8	Mass media exposure	0.2784*

NS= non-significant, * = significant at 0.05 level, **=significant at 0.01 level

The result presented in Table no. 3 and figure no. 11 revealed that the variable age is negative but significant relationship with the level of knowledge about the use of biofertilizer, education is positive and highly significant at 0.01 per cent level of probability with knowledge about use of biofertilizer. Other variables *viz.,* land holding, annual income, social participation, extension contact, scientific orientation and mass media exposure are significant at 0.05 per cent level of probability with knowledge about use of biofertilizer. Slathia et *al*. (2013) and Reddy *et al* (2012) also reported the same.

Fig:12 Independent variables correlation with knowledge (r-value), n=60



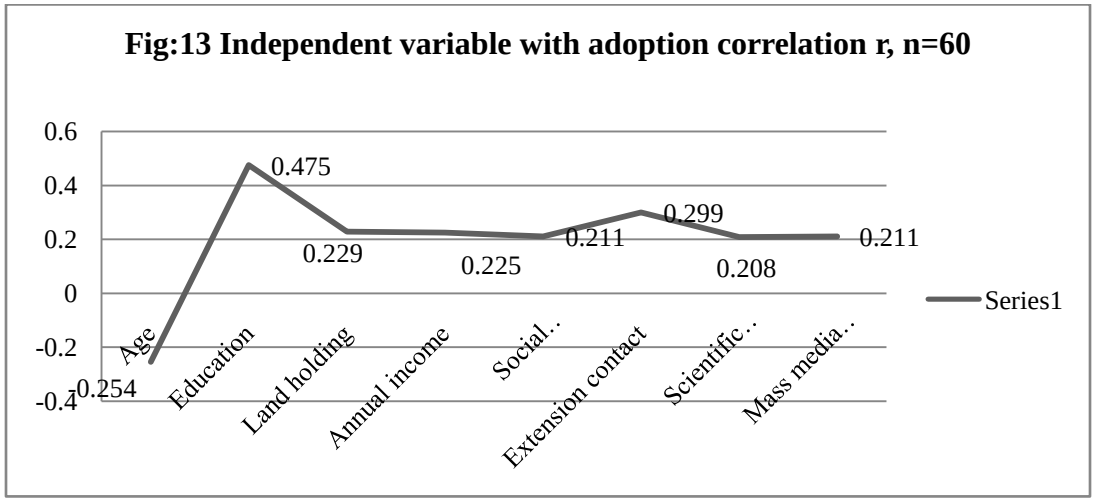
6: Relationship between adoption and profile of farmers

Table No. 5 .Relationship between adoption and profile of farmers

Sr. No.	Characteristics	Correlation coefficient (r)
1	Age	-0.254*
2	Education	0.475 **
3	Land holding	0.268*
4	Annual income	0.2257*
5	Social participation	0.211*
6	Extension contact	0.299**
7	Scientific orientation	-0.208NS
8	Mass media exposure	0.211*

NS= non-significant, * = significant at 0.05 level, **=significant at 0.01 level

The result presented in Table no. 5 and figure no. 13 revealed that the variable age is negative but significant relationship with the level of adoption of biofertilizer, education and extension contact are the positive and highly significant at the 0.01 per cent probability level of adoption of biofertilizer. Other variables *viz.* land holding, annual income, social participation and mass media exposure is positive and significant relationship with the level of overall adoption of the biofertilizer. Scientific orientation is negative and non-significant relationship with the 0.05 per cent probability level of adoption of biofertilizer. Srinivas and Bhalekar, (2013 also reported the same results.



SUMMARY AND CONLUSIONS:

From the above study it can be concluded that majority of biofertilizer users belong to 36 to 50 years, having education primary to graduate, medium land holding, high annual income, low level of membership, medium extension contact, low scientific orientation, medium mass media exposure. Majority of farmers had medium knowledge level. Majority of farmers had medium adoption level. The

variable age is negative but significant relationship with the level of knowledge about the use of biofertilizer, education is positive and highly significant and other variables *viz.,* land holding, annual income, social participation, extension contact, scientific orientation and mass media exposure are positive and significant. The variable age is negative but significant relationship with the level of adoption of biofertilizer, education and extension contact are the positive and highly significant and other variables *viz.* land holding, annual income, social participation and mass media exposure is positive and significant relationship with the level of overall adoption of the biofertilizer. Scientific orientation is negative and non-significant.

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