

ADOPTION OF FARMER FIRST PROGRAMME BENEFICIARIES ABOUT DEMONSTRATED TECHNOLOGIES

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ABSTRACT

Directorate of Extension Education has implemented Farmer FIRST Programme in the year 2017. The research was carried out to reveal the extent of adoption about the demonstrated technologies of various modules by FFP beneficiaries and its association with their profile. The research was carried out in 2021. Two talukas, namely Jalalpore and Gandevi of Navsari district was purposively selected as the project was implemented in these two talukas only. The sample size consisted of 120 small and marginal beneficiary farmers. The beneficiaries selected by random proportionate method from Crop, Horticulture, IFS, NRM, Livestock and Entrepreneurship, modules were 26, 34, 10, 25, 19 and 6, respectively. Ex-post facto research design was used. Twelve independent and one dependent variable was chosen for the research. Research results shown that majority (68.00 %) of the beneficiary farmers had medium level of adoption regarding NRM based module, followed by crop based module (61.54 %), horticulture based module (58.82 %) and livestock based module (52.63 %). Half (50.00 %) of the beneficiary farmers had medium level of adoption regarding entrepreneurship based module and IFS based module (50.00 %). Majority (63.33 %) of the beneficiary farmers had medium level of overall adoption regarding the demonstrated technologies. It was found that social participation, innovativeness, scientific orientation and risk orientation were found positive and highly significant. Whereas, education, occupation, land holding, annual income, extension contact and economic motivation were found positive and significant.

Keywords: FFP, horticulture, integrated farming system, livestock, natural resource management, small and marginal farmers, vermicompost

INTRODUCTION

In October 2016, ICAR launched the Farmer FIRST (Farm, Innovations, Resources, Science and Technology) Programme. The program was implemented in the XI Agricultural Technology Application Research Institutes zones, falling under the category of externally funded projects. Navsari Agricultural University, situated in ICAR ATARI Zone-VIII, Pune, implemented FFP project in 2017 titled “Ensuring livelihood security for small and marginal farmers of South Gujarat,” led by the Directorate of Extension Education, Navsari. The project covered three villages in Navsari District and consisted of thirteen technologies organized into six modules: crop-based, horticulture-based, IFS-based, NRM-based, livestock-based, and entrepreneurship-based.

During the study, no previous research on the Farmer FIRST Programme in Gujarat state was found. Therefore, an effort was made to assess the “Adoption level of Farmer FIRST Programme Beneficiaries regarding Demonstrated Technologies.” The aim was to provide useful insights to extension personnel at ICAR, ATARI zone, directorates, and

grassroots levels, enabling them to refine and adapt their approaches and methods for the project. The adoption of demonstrated technologies under FFP was expected to be influenced by the personal profiles of the beneficiary farmers. Therefore, the study aimed to benefit the relevant officials by providing appropriate information and encouraging non-beneficiaries to take advantage of FFP.

To investigate the research objectives, a null hypothesis was formulated, assuming no relationship between the profile of beneficiary farmers and their adoption of demonstrated technologies.

OBJECTIVE

To examine the personal profiles of FFP beneficiary farmers and assess their adoption of demonstrated technologies under FFP

METHODOLOGY

The study was carried out in the year 2021. Ex post facto research design was employed for the study. The study was carried out in Gujarat state. Navsari district was

purposively selected as the project was implemented in Navsari district only. Out of six Talukas, only two talukas viz., Jalalpure and Gandevi were purposively selected as the project was implemented in these two talukas only. Out of these two talukas, three villages viz., Hansapore, Chijgam and Pathri were selected purposively as the project was implemented in these three villages only. The reason for purposive selection was implementation of FFP in these areas only. The list of number of the beneficiary farmers of all six modules was obtained. The beneficiaries selected by random proportionate method from Crop, Horticulture, IFS, NRM, Livestock and Entrepreneurship, modules were 26, 34, 10, 25, 19 and 6, respectively. A total of 120 respondents were selected for the study. A total number of twelve independent variables and one dependent variable was selected for the study.

Adoption refers to the extent to which the beneficiary farmer makes full use of demonstrated technology as a best course of action available. All the six modules were selected for the study. Under these modules all the technologies were selected. One farmer was selected for only one technology and was not selected for the other. A total of 10 statements related to practice of each technology were framed, to obtain the response from the beneficiary farmers. The statements of adoption test were carefully designed in consultation with CO-PI's of project, KVK staff, experts of agriculture and other KVK staff. A set of statements related to the practice of particular technology was given to the farmer and their level of adoption was measured. Each practice was sorted into three point continuum representing 'Fully adopted', 'partially adopted' and 'not adopted' with score of three, two and one, respectively. The total score obtained by a beneficiary farmer for all the statements was calculated. Then with the help of mean and standard deviation the respondents were categorized as low (Below $\bar{X}\bar{X} - SD$), medium ($\bar{X}\bar{X} \pm SD$) and high (Above $\bar{X}\bar{X} + SD$) with respect to their adoption level for various practices. The correlation coefficient was calculated to examine the relationship between the independent and dependent variable. Further, and t-test for testing of significance of the correlation coefficient was calculated to check its significance at 1% and 5% level of significance.

An interview schedule was prepared for data collection in line with the objectives of the study. The interview schedule was pre tested with th non sampling beneficiary farmers, in the sampling area. The required changes were made and schedule was modified. Data was collected by the researcher with the help of personal interview method. The collected data was coded and tabulated for statistical analysis. Statistical tests viz., frequency, percentage, arithmetic mean,

standard deviation, correlation coefficient and t-test for testing of significance of the correlation coefficient were employed for data analysis.

RESULTS AND DISCUSSION

Adoption level of farmers about demonstrated technology

From the table 1, it is evident that, in case of crop based module, majority (61.54 %) of the beneficiary farmers had medium level of adoption, followed by 23.08 % and 15.38 % had high level of adoption and low level of adoption, respectively. These results are in line with the findings of Agnihotri *et al.* (2018), Emran *et al.* (2020) and Desai *et al.* (2022).

In case of horticulture based module, more than half (58.82 %) of the beneficiary farmers had medium level of adoption, followed by 23.53 % and 17.65 % had high level of adoption and low level of adoption, respectively. These results are in line with the findings of Choudhary *et al.* (2018) and Waghmod *et al.* (2020).

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

Sr. No.	Categories of adoption	Frequency	Percentage
I	Crop based module		
1	Low	04	15.38
2	Medium	16	61.54
3	High	06	23.08
		26	100.00
II	Horticulture based module		
1	Low	06	17.65
2	Medium	20	58.82
3	High	08	23.53
		34	100.00
III	IFS based module		
1	Low	02	20.00
2	Medium	05	50.00
3	High	03	30.00
		10	100.00
IV	NRM based module		
1	Low	03	12.00
2	Medium	17	68.00
3	High	05	20.00
		25	100.00
V	Livestock based module		
1	Low	03	15.79
2	Medium	10	52.63
3	High	06	31.58
		19	100.00

Sr. No.	Categories of adoption	Frequency	Percentage
VI	Entrepreneurship based module		
1	Low	01	16.67
2	Medium	03	50.00
3	High	02	33.33
		06	100.00
VII	Overall adoption		
1	Low	17	14.17
2	Medium	76	63.33
3	High	27	22.50
	Total	120	100.00

(Mean=21.48) (SD=4.28)

In case of IFS based module, half (50.00 %) of the beneficiary farmers had medium level of adoption, followed by 30.00 % and 20.00 % had high level of adoption and low level of adoption, respectively. These results are in line with the findings of Bansal and Rathore (2022) and Boora *et al.* (2023).

In case of NRM based module, majority (68.00 %) of the beneficiary farmers had medium level of adoption, followed by 20.00 % and 12.00 % had high level of adoption and low level of adoption, respectively. These results are in line with the findings of Girawale and Naik (2016) and Modi *et al.* (2021).

In case of livestock based module, slightly more than half (52.63 %) of the beneficiary farmers had medium level of adoption, followed by 31.58 % and 15.79 % had high level of adoption and low level of adoption, respectively. These results are in line with the findings of Godara (2018) and Mandi and Subhash (2022).

In case of entrepreneurship based module, half (50.00 %) of the beneficiary farmers had medium level of adoption, followed by 33.33 % and 16.67 % had high level of adoption and low level of adoption, respectively. These results are in line with the findings of Patel *et al.* (2015) and Swetha *et al.* (2020).

In case of overall adoption, majority (63.33 %) of the beneficiary farmers had medium level of adoption, followed by 22.50 % and 14.17 % had high level of adoption and low level of adoption, respectively. Majority of the respondents were having medium level of extension contact, social participation, scientific orientation and innovativeness which might be the reason why majority of the beneficiary farmers had medium level adoption about demonstrated technology under various modules. This finding is in line with the finding of Singhal and Vatta (2017).

Association between personal profile of respondents and their extent of adoption

The correlation coefficient of twelve variables of the beneficiary farmers with their extent of adoption of demonstrated technology are furnished in table 2.

Table 2 : Association between personal profile of respondents and their extent of adoption
(n=120)

Sr. No.	Variables	'r' value
X ₁	Age	-0.0924 ^{NS}
X ₂	Education	0.1812 *
X ₃	Occupation	0.2003 *
X ₄	Type of family	0.0919 ^{NS}
X ₅	Land holding	0.2152 *
X ₆	Annual income	0.1806 *
X ₇	Social participation	0.2401 **
X ₈	Extension contact	0.2183 *
X ₉	Innovativeness	0.2937 **
X ₁₀	Economic motivation	0.2211 *
X ₁₁	Scientific orientation	0.3442 **
X ₁₂	Risk orientation	0.3038 **

NS Non significant * Significant at 0.05 level ** Significant at 0.01 level

The data presented in table 2 indicated that social participation (0.2401**), innovativeness (0.2937**), scientific orientation (0.3442**) and risk orientation (0.3038**) were found positive and highly significant. Education (0.1812*), occupation (0.2003*), land holding (0.2152*), annual income (0.1806*), extension contact (0.2183*) and economic motivation (0.2211*) were found positive and significant. Whereas, type of family (0.0919^{NS}) had positive and non significant association. While, age (-0.0924^{NS}) was found negative and non significant with extent of adoption. The reasons for the above results might be due to the fact that social participation, innovativeness scientific orientation and risk orientation were the factors that led to increased access to the knowledge further led to adoption by the farmers. further, their innovativeness, economic motivation and scientific orientation driven their enthusiasm to continuous adoption.

These findings are in line with the findings reported by Manjeet (2019), Singh and Jahanara (2019).

CONCLUSION

Research results shown that majority (68.00 %) of the

beneficiary farmers had medium level of adoption regarding NRM based module, followed by crop based module (61.54 %), horticulture based module (58.82 %), livestock based module (52.63%), entrepreneurship based module (50.00 %) and IFS based module (50.00 %). In case of overall adoption, majority (63.33 %) of the beneficiary farmers had medium level of adoption regarding the demonstrated technologies. It was found that social participation, innovativeness, scientific orientation and risk orientation were found positive and highly significant. Education, occupation, land holding, annual income, extension contact and economic motivation were found positive and significant. Whereas, type of family had positive and non significant association. While, age was found negative and non significant with extent of adoption.

CONFLICT OF INTEREST

This is to declare that there is “No conflict of interest” among researcher.

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Received : March 2023 : Accepted : May 2023