

Adoption of vermicompost practices among the tribal beneficiaries of NAIP-III

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ABSTRACT

Vermicomposting is the term given to the process of conversion of biodegradable matter by earthworms into vermicast. Vermicompost supplies a suitable mineral balance, improve nutrient availability could act as complex fertilizer granules. Vermicompost may also bring about a greater decrease in bio available heavy metals than in the composting process and there is evidence that the final product may contain hormone like compounds which accelerate plant growth. This study was undertaken in one district viz., Bansakantha, of North Gujarat state. The district was purposively selected for the study being the more number of vermicompost making framers under NAIP-III. For selection of taluka, villages and respondents, three stage random sampling technique with purposive selection was employed. All beneficiaries' farmers of vermicompost farmers were selected from each village. A total of 120 vermicompost farmers were selected from 6 villages of 2 talukas. Thus final sample constituted of 120 farmers. Majority (57.5 per cent) of the respondents were having medium level of adoption. 21.67 per cent of the respondents fall under the category of low level of adoption and 20.83 per cent respondents were found having high level of adoption.

Key words : Vermicompost, tribal, beneficiaries

Increased usage of chemical fertilizers without adequate organic recycling has not only aggravated multi-nutrient deficiencies in soil plant system but also deteriorated soil health and created environment pollution. Moreover, chemical fertilizers are becoming costlier input in agriculture because of increasing oil prices as well as raw materials prices. Therefore, it is right time to evaluate the feasibility and efficiency of organic manures but also increasing the efficiency of chemical fertilizers. Organic Farming is giving back to the nature what is taken from it. It is not mere non-chemicalism in agriculture, it is a system of farming based on integral relationship. Therefore, one should know the relationship among soil, water, plant and microflora and overall relationship between plant and animal kingdom. It is the totality of these relationships, which is the backbone of the organic Farming (Funtilana 1990).

The NAIP-III is aimed at achieving sustainable livelihood security of the farmers of disadvantaged districts of the Gujarat state namely Banaskantha, Dahod and Dangs. At the initial stage of project implementation, the Participatory Rural Appraisal and individual family survey was conducted. The major observation of participatory rural appraisal and survey were; (1). More than half of the farmers in all the villages were marginal and small. (2). The live stock population is high i.e., 2-3 animals per family but the breed is low milk yielding. (3). The crop productivity was found to be low, no micro irrigation system was observed. The cultivation of high value crops viz., vegetables, soybean, horticulture etc. were not cultivated. Irrigation facility was very limited.

Therefore, it is necessary to conduct impact study of adoption of vermicompost practices among the tribal beneficiaries of NAIP-III. With this ideology in view, an attempt has been made to study the adoption of vermicompost practices among the tribal beneficiaries of NAIP-III in the adopted villages with the following objectives :

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- [1] To assess the extent of adoption of vermicompost practices among the tribal beneficiaries of NAIP-III.
- [2] To assess the association between the personal, social economic, communication and situational attributes of the tribal beneficiaries and their level of the knowledge about the vermicompost practices.

METHODOLOGY

The present study was conducted in two talukas viz., Danta & Amirgadh of Banaskantha district, Gujarat because this district was under jurisdiction of the project NAIP-III. These two talukas were selected purposively. Three villages were selected purposively from each taluka. Total 120 beneficiaries were selected purposively because they have been given vermicompost units by the NAIP-III project. Ex-post- facto reserch design (Funtilana 1990) was used for this study. The data were collected through personal intview with the help of pre-tested structured schedule. The data collected were tabulated and statistical tools like frequency, percentage and correlation coefficient were used for logical conclusion.

RESULTS AND DISCUSSION

Extent of adoption of vermicompost practices among the tribal beneficiaries of NAIP -III

The finding on extent of adoption of recommended vermicompost technologies are presented and discussed in Table1. Majority of the respondents (57.50 per cent) were having medium level of adoption of vermicompost technology followed by 21.67 per cent and 20.83 percent low & high adoption of vermicompost technology, respectively. The probable reason might

Table 1 : Distribution of the respondents according to their extent of adoption of recommended vermicompost technology.

(n=120)

Level of adoption	Farmers	
	Frequency	Per cent
Low (Up to33.00 per cent)	26	21.67
Medium (34.00 to 53.00 per cent)	69	57.50
High (above 54 per cent)	25	20.83
Total	120	100.00

Mean=43.67

S.D.=10.61

be due to medium level of knowledge about the recommended vermicompost technology among the beneficiaries. The present finding are supported by the finding of Patel (2012), Upadhyay and Kaur (2012) and Jaganathan *et al.*, (2009).

Relationship between the personal, social, economic, communication and situational attribute of farmer and their extent of adoption of vermicompost practices

The data presented in Table 2 clearly indicated that education(0.3656**), herd size(0.2801**), source of water(0.3024**), extension contact(0.3342**) had positive and significant relationship with the extent of adoption of recommended vermicompost production technologies. Variables viz., family type(-0.0739^{NS}), family size(-0.0621^{NS}), social participation(0.0352^{NS}), land holding(-0.0085^{NS}) were failed to establish any significant relationship with extent of adoption whereas, age (-0.2554**) and annual income(-0.5443**) was negative and significantly related with extent of adoption of recommended vermicompost production technologies. This findings is similar to the finding reported by Pandya

Table 2 Relationship between the personal socio-economic attribute of farmers and their extent of adoption of vermicompost practices.

(n=120)

Independent Variables	Correlation coefficient (<i>r</i> value)
Personal characteristic	
1 Age	-0.2554**
2 Education	0.3656**
Socio economic characteristic	
1 Family type	-0.0739 ^{NS}
2 Family size	-0.0621 ^{NS}
3 Social participation	0.0352 ^{NS}
Economic characteristic	
1 Land holding	-0.0085 ^{NS}
2 Annual income	-0.5443**
3 Herd size	0.2801**
Communication characteristic	
1 Extension contact	0.3342**
Situational characteristic	
1 Source of water	0.3024**

NS = Non significant

** Significant at 1% level

(2011) and Patel (2006). The probable reasons for this might be the aged farmers had less risk taking capacity and enthusiastic than the younger ones. It can be concluded that education brings the changes in adoption behavior leading to higher education. Education helps in grasping ideas, forming favorable attitude and also in explaining the ideas to other. This may be reasons of higher adoption by educated farmer. This might be due to that in large size family might be the not awareness of family planning among the beneficiary farmers. In large size family, decision for vermicompost practices was taken jointly and took some time. This may be the probable reason for having non- significant relationship between family size and adoption. Social participation of the vermicompost was also limited to one organization. The probable reason for this might be farmers who have already higher income have higher capacity to invest and therefore most likely adopt the new agricultural technologies. The probable reason for positive and highly significant association between extension contact and knowledge level about vermicompost practices may be due to interaction between extension personnel with tribe beneficiaries pertaining to improved vermicompost technologies which can have cleared their doubts improved technology. The probable reason for positive and highly significant association between source of water and extent of adoption about vermicompost practices may be due to more utilization of vermicompost due to intensive farming.

CONCLUSION

Majority (57.5 per cent) of the respondents were having medium level of adoption. 21.67 per cent of the respondents fall under the category of low level of adoption and 20.83 per cent respondents were found having high level of adoption. It was found that education, herd size, source of water, extension contact had positive and significant relationship with the extent of adoption of recommended vermicompost production technologies. Variables viz., family type, family size,

social participation, land holding were failed to establish any significant relationship with extent of adoption whereas, age and annual income was negative and significantly related with extent of adoption of recommended vermicompost production technologies.

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