EFFECTIVENESS OF NAIP IN ADOPTION OF LIVESTOCK BASED IFS INTERVENTIONS AMONG THE TRIBAL BENEFICIARIES

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ABSTRACT

Keeping in view the challenges of food and nutritional security, National Agricultural Innovation consortia project was initiated by the ICAR in MPUAT, Udaipur. The NAIP was implemented in four districts of southern Rajasthan state viz.,Banswara, Dungarpur, Sirohi and Udaipur. Two clusters of Dungarpur district were selected for the present study. These were (a) Faloj and (b) Bichhiwara. Total 10 villages out of 15 villages (under NAIP) were selected proportionately on random basis for inclusion in the study. Total size of sample was of 104 respondents. It was found the adoption level of livestock interventions introduced under NAIP reflected high among 79 (75.96 per cent) of beneficiaries, 22 (21.15 per cent) farmers belonged to moderate level of adoption. Furthermore, data clearly show that of total beneficiaries, 101 (97.11 per cent) expressed overwhelmingly satisfactory level of adoption. Artificial insemination, Nirbhik breed of poultry, he buffalo, fodder seeds and construction of mangers with their respective ranks 2,3,4,5,6 and MPS 75.00, 71.92, 64.61, 56.92 and 56.34 respectively.

INTRODUCTION

The prestigious and ambitious agricultural research project, "National Agricultural Innovation Project (NAIP)"is focused on innovations in agricultural technology. It was expected that it would facilitate an accelerated and sustainable transformation of the Indian Agriculture, so that it can support poverty alleviation and income generation.This would be achieved through collaborative development and application of agricultural innovations by the public organizations in partnership with farmers' groups, the private sector and other stakeholders.

Attaining livelihood and nutritional security, improved quality of life and sustainability of agriculture are the important goals for the government to have social equity and inclusive growth. Despite many efforts by the central and state governments, the productivity and profitability of the tribal regions in the country has not improved.

Four districts of Rajasthan viz. Udaipur, Banswara, Dungarpur and Sirohi figure prominently as the disadvantaged districts, identified by the planning commission, based on income, tribal population, their resources, state of agriculture, etc. Keeping in view the challenges of food and nutrition security, National Agricultural Innovation consortia projects have been initiated by the ICAR in many of the SAUs of India.

Maharana Paratap University of Agriculture and Technology, Udaipur was also sanctioned a consortia project entitled "Livelihood and Nutritional security of Tribal Dominated Areas through Integrated Farming system and Technology Models" under component 3. The budget outlay for this project was of Rupees 1838.34 lac for the duration of 5 years (2007-2012).

In the present project proposal, two models (I) Horticulture based Integrated Farming system (IFS) and (II) Livestock based Integrated Farming system (IFS) with judicious mix of proven need assessed technologies, appropriate for small and marginal farmers encompassing end to end approach were planned and implemented for development of appropriate replicable model. To the best of knowledge to the researcher, no study so far has been undertaken by any researcher regarding the effectiveness of livestock based Integrated

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Farming system (LBIFS) model run under NAIP. This was right time (June, 2012) to evaluate the programme.

RESEARCH METHODOLOGY

The NAIP was implemented in four districts of southern Rajasthan state viz-Banswara, Dungarpur, Sirohi and Udaipur. As far as number of beneficiaries covered under NAIP was concerned, District Dungarpur stood at the secondrank consisting of total 2361 beneficiaries. It was next to District Udaipur where beneficiaries under NAIP were 3794. Hence, district Dungarpur was selected for investigation.The NAIP was executed in two clusters of Dungarpur district, these were Faloj and Bichhiwara. As such, both these clusters were purposively included for the present investigation.There were 15 villages in Dungarpur district where NAIP was in execution, of which 7 were in Faloj cluster and remaining 8 villages were in Bichhiwara cluster. Total 10 villages out of 15 villages (under NAIP)were selected proportionately on random basis for inclusion in the study.Relevant data were collected from the targeted respondents with the help of tailormade interview schedule. Face-to-face interview technique was employed for collecting the data. The interview was conducted in Hindi as well as in local dialect as and when required. Frequency distribution and MPS were worked for arriving at findings.

RESULTS AND DISCUSSION

Groupism of tribals on the basis of their level of adoption about livestock based IFS interventions

Data in Table 1 and figure 1 revel that the adoption level of livestock interventions introduced under NAIP was reflected high among 79 (75.96 per cent) of beneficiaries, 22 (21.15 per cent) farmers belonged to moderate level of adoption. Furthermore, data clearly show that of total beneficiaries, 101 (97.11 per cent) expressed overwhelmingly satisfactory level of adoption about significant interventions advocated to them, because these farmers belonged to high to moderate level of adoption categories in combination.

Based on the findings, it is concluded that the NAIP, with special reference to livestock based IFS

technologies in Dungarpur district of Rajasthan had been proved to be most effective in terms of persuasion of the tribals for adopting the introduced interventions thereof. It is so because most of the farmers observed to be under high level of adoption of IFS technologies followed by moderate level of adoption.

Table 1. Groupism of Tribals on the basis of their level of adoption about livestock based IFS interventions

n = 104

S. No.	Level of adoption	f	%
1	Low (< 30 per cent score)	3	2.89
2	Moderate (30-50 per cent score)	22	21.15
3	High (> 50 per cent score)	79	75.96
	Total	**104**	**100**

f = Frequency, % = percentage of respondents

The current results are well supported by Kumar et al. (2001), Rakshe et al. (1998), Pareek (1999), Verranna (2000), Maity and Sidhu (2001) and Jitarwal (2003). At the sametimes, the present results are in contradiction with the findings of Solanki (2001) and Intodia (2001).

Aspects wise prioritization of livestock based IFS technologies among the farmers for adoption

After categorization of respondents as per their level of adoption regarding livestock based interventions, detailed view of status of adoption among the tribals was also had through calculating the MPS acquired about each of the 11 interventions defined therein and ranking them.

Analysis of data given in Table 2 reveal that first priority among the farmers goes to adoption of Sirohi buck for breed improvement (ranked first with MPS 77.88) followed by Artificial insemination, Nirbhik breed of poultry, He buffalo, Fodder seeds and construction of mangers with their respective ranks 2,3,4,5,6 and MPS 75.00, 71.92, 64.61, 56.92 and 56.34 respectively (Fig. 2).

Least adoption level was recorded for the interventions of "solar tunnel dryers", "biogas plants" and "mineral mixture", which were ranked 11, 10 and 9 with their respective MPS 23.84, 26.92 and 45.19. In view of data (Table 2), it is concluded

that the level of adoption about livestock based IFS interventions (LBIFSI), particularly of Sirohi buck for breed improvement, Artificial insemination (A.I.), Nirbhik breed of poultry, Fodder seeds and Contraction of mangers were adopted on higher priorities in the hierarchy of 11 LBIFSIs. These 6 interventions are directly related to the fastest improvements in the livestock. Therefore, the farmers expressed substantial and satisfactory adoption about these first 6 interventions.

Table 2. Aspects wise prioritization of livestock based IFS technologies among the farmers for adoption

n = 104

S. No.	Intervention	MPS	Rank
1	Artificial Insemination	75.00	2
2	He buffalo	64.61	4
3	Sirohi buck for breed improvement	77.88	1
4	Nirbhik breed of poultry	71.92	3
5	Construction of mangers	56.34	6
6	Fodder seeds	56.92	5
7	Chaff cutters	49.03	7
8	Mineral bricks	48.07	8
9	Mineral mixture	45.19	9
10	Biogas plants	26.92	10
11	Solar tunnel dryers	23.84	11

MPS= Mean per cent score

Past studies of those of Intodia (2001), Rao (2002) and Gujar et al. (2008) are also by and large at par with the findings of present investigation. In accordance with the findings, it is inferred that most of the NAIP beneficiaries belonged to high and moderate level of adoption categories. Sirohi buck, Nirbhik breed and He buffalo were the most orderly preferred interventions of livestock to be adopted by the beneficiaries for higher returns of livestock. Solar tunnel dryers and biogas plants, both were found being adopted at the lowest level among the Tribals of Dungarpur district, reason being, these may be perceived to be complicated and costlier by the Tribal farmers covered under NAIP.

It could be recommended on the basis of the findings that the follow up action by the NAIP consortia project personnel must be taken, so as to insure the continued adoption of livestock interventions by the tribals of the study area. Looking to the perceived effectiveness, it is also recommended and suggested that the present module (Livestock based IFS interventions) must be replicated elsewhere in the country, where similar climatic and demography conditions prevail.

The findings further compel to recommend that the NAIP, with special reference to livestock based IFS technologies in Dungarpur district of Rajasthan must be extended for further period, that could bring about spectacular results in the white revolution in the study area in particular and in the country as a whole.

Recommendations, based on the findings are also made to further strengthen and enhance the adoption level of the tribals in relation to mineral mixture, mineral bricks and chaff cutters.

CONCLUSION

It can also be concluded that the adoption level of the tribals with regards to very important aspects of livestock production ranged between 56.92 to 77.00 per cent, hence the NAIP in the area had been proved to be very effectively in terms of making people adopted latest LBIFSIs.

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