

## ADOPTION OF IMPROVED ANIMAL HUSBANDRY PRACTICES BY THE TRIBAL WOMEN PROMOTED UNDER NAIP

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### ABSTRACT

The study was conducted with an objective to study the Impact of National Agriculture Innovation Project (NAIP) on technological empowerment of tribal women with regard to improved animal husbandry practices. The study was conducted in eight villages of Kherwada panchayat samiti of Udaipur district in Rajasthan covering 120 tribal women. The results indicated that NAIP has made significant impact on technological empowerment of tribal women, as the adoption level of the beneficiaries was significantly higher than the non beneficiaries in all the components of improved cattle, goat and poultry rearing practices.

### INTRODUCTION

The credit of growth in the livestock sector goes to women. Tribal women besides performing household and agriculture work have been traditionally and predominantly engaged in animal husbandry. Animal husbandry is generally considered as a job of women where number of activities are performed by them viz. chopping of fodder, feeding, cleaning, milking of animals, goat rearing, backyard poultry etc. In spite of active involvement of women in different animal husbandry activities, lack of exposure and access to new technology has restricted women to show their full potential for the growth of livestock sector.

To assist the women, new strategies and innovative solutions are urgently required which in turn will require technological support. Hence, recently World Bank aided National Agricultural Innovation Project (NAIP) led by ICAR has been initiated on 26th July 2006 to enhance rural livelihood and nutritional security through integrated approach. The Maharana Pratap University of Agriculture and Technology, Udaipur implemented a sub project entitled "Livelihood and nutritional security of tribal dominated areas through integrated

farming system and technology models" under component IIIrd of NAIP on 20th October 2007 for the period of five years. In the present sub project, MPUAT is working on two Integrated farming system models i.e. (i) Horticulture based Integrated Farming System and (ii) Livestock based Integrated Farming System model.

The success of any development programme depends upon continuous feedback received by conducting con-current evaluation studies. The process of evaluation in terms of its impact would indicate to what extent the defined objectives of the project have been achieved. Therefore, the present study was undertaken with the objective to find adoption of improved animal husbandry practices by the Tribal Women promoted under NAIP.

### RESEARCH METHODOLOGY

The study was conducted in Udaipur district of Rajasthan State. In Udaipur District the NAIP project is implemented by KVK Badgoan in six villages of *Kherwara* panchayat samiti which were taken for the purpose of the study. For sample selection, a village wise list of tribal women who

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have been covered under animal husbandry activities of the project was obtained from KVK Badgoan. From the list, 15 women from each village were selected randomly to form a total sample of 90 tribal women. Two more villages i.e. *Bichiwada* and *Garnala* which were not covered under the project were also selected from the same panchayat samiti in order to select a sample of 30 tribal women for comparison of results. Personal interview technique was used for data collection..

For measuring extent of adoption of improved animal husbandry practices by the respondents, an adoption proforma each for cow, goat and poultry was developed. Four major components related to each animal i.e. breeding, feeding, management and health care were included in the Proforma. The total score obtained by the respondents in different components were converted into mean percent scores for ease of comparison. On the basis of MPS, the respondents were distributed in three adoption categories which were formulated by dividing total score of 100 into three equal class intervals i.e. poor (below 33.3), average (33.3-66.7) and good (above 66.7). Z- test was used for analysis of data.

## RESULTS AND DISCUSSION

### Adoption of improved cattle rearing practices by the respondents

Data presented in Table 1 elucidate that in cattle rearing, majority of the beneficiaries (87.36%) were in average level of adoption and 10.35 per cent beneficiaries were in good adoption category. Only 2.29 percent beneficiaries were found in poor adoption category. Contrary to this majority of the non beneficiaries (70%) were in the poor adoption category and only 26.67 per cent were observed in the category of average adoption. None of the non beneficiaries was found in good adoption category. Hence, it can be concluded that beneficiaries had higher adoption as compared to non beneficiaries which clearly indicates the impact of project activities.

The results are supported by that of Meena et al. (2004) concluded that majority of the respondents were in the category of average level of adoption of improved animal husbandry practices.

**Table 1. Distribution of respondents in different adoption categories of improved cattle rearing practices**

Categories	n= 117			
	Beneficiaries (n=87)		Non Beneficiaries (n=30)	
	f	%	f	%
Poor (below 33.3)	2	2.29	21	70
Average (33.3-66.7)	76	87.36	8	26.67
Good (above 66.7)	9	10.35	0	0

**Table 2. Comparison of adoption level of the beneficiaries and non beneficiaries regarding improved cattle rearing practices**

S. No.	Component	MPS		Zvalue
		B	NB	
1	Breeding	58.18	20.8	11.13**
2	Feeding	53.02	26.22	11.81**
3	Management	70	43.33	8.78**
4	Health care	38.21	11.66	6.2**
	<b>Overall</b>	<b>59.02</b>	<b>26.50</b>	<b>14.72**</b>

\*\*Significant at 1 percent level of significance, MPS- Mean Percent Score, B- Beneficiaries, NB- Non Beneficiaries

Data presented in Table 2 show that the beneficiaries had overall mean per cent score 59.02 as compared to 26.50 in case of non beneficiaries. A comparative look to the adoption score in different components highlights that in "Breeding" the beneficiaries scored 58.18 MPS whereas, the score of non beneficiaries in this component was only 20.8 MPS. Data related to "feeding" aspect reveal that the beneficiaries were average adopters of the recommended feeding practices in cow as the observed MPS was 53.02. In case of non beneficiaries, they were poor adopters of improved feeding practices as their mean per cent score was only 26.22.

With respect to "management practices" it was observed that the adoption level of both the categories of respondents was satisfactory, however, the adoption level of beneficiaries (70 MPS) was comparatively better than the non beneficiaries (43.33 MPS). It was recorded that in 'health care' the MPS of beneficiaries was found to be 38.21 whereas,

in case of non beneficiaries it was only 11.66 MPS. Similar findings have been reported by Vashishtha (2007) found that adoption index of respondents was highest in cattle management, while it was lowest in case of healthcare practices.

In order to know the significance of difference in adoption level between beneficiaries and non beneficiaries 'Z' test was applied. Critical examination of the data presented in Table 2 reveal that there was significant difference with respect to all the four components of cattle rearing practices as 'Z' computed was greater than the tabulated value at 1 per cent level of significance. It indicates that there was significant difference between beneficiaries and non beneficiaries women as far as the level of adoption about improved practices of cattle rearing was concerned. In other words, beneficiaries had higher adoption level than the non beneficiaries.

#### Adoption of improved goat rearing practices by the respondents

Out of the total 120 respondents, only 87 beneficiaries and 27 non beneficiaries women possess goat and rest of them did not have goat in their animal yard. Hence, the adoption level of only goat keepers (87 beneficiaries, 27 non beneficiaries) was judged. In an attempt to know extent of adoption of improved goat rearing practices the respondents were grouped into three adoption categories viz: poor, average and good adoption. The results are presented as under:

**Table 3. Distribution of respondents in different adoption categories of improved goat rearing practices**

Categories	n= 114			
	Beneficiaries (n=87)		Non Beneficiaries (n=27)	
	f	%	f	%
Poor (below 33.3)	0	0	23	85.19
Average (33.3-66.7)	66	75.87	4	14.81
Good (above 66.7)	21	24.13	0	0

Table 3 depicts that majority of the beneficiaries (75.87%) were in the category of average adoption whereas, in case of non

beneficiaries, majority (85.19%) were found in poor adoption category. Nearly one fourth of the beneficiaries were found in good adoption category whereas, none of the non beneficiaries was found in this category. Hence, it can be concluded that beneficiaries were good adopters of improved goat rearing practices as compared to the non beneficiaries, which clearly indicate impact of the project activities.

**Table 4. Comparison of adoption level of the beneficiaries and non beneficiaries regarding improved goat rearing practices**

S. No.	Component	MPS		Z value
		(B)	(NB)	
1	Breeding	58.04	20.37	12.66**
2	Feeding	60.27	22.5	14**
3	Management	72.41	30.97	11.25**
4	Health care	41.66	9.25	8.2**
	<b>Overall</b>	<b>61.14</b>	<b>23.84</b>	<b>16.04**</b>

\*\*Significant at 1 percent level of significance, MPS - Mean per cent score

Data presented in Table 4 show that the beneficiaries had overall mean per cent score of 61.14 as compared to only 23.84 MPS in case of non beneficiaries. A comparative look to the adoption score in different components highlights that in "breeding" the beneficiaries scored 58.04 MPS whereas, the score of non beneficiaries in this component was only 20.37 MPS. Data related to "feeding" aspect reveal that the beneficiaries were average adopters of the recommended feeding practices in goat as the observed MPS was 60.27. In case of non beneficiaries, they were poor adopters of improved feeding practices as their mean per cent score was only 22.5. Similarly, in 'management' aspect the MPS of beneficiaries (72.41 MPS) was higher than the non beneficiaries (30.97 MPS). It was recorded that in 'health care' the MPS of beneficiaries was found to be 41.66 whereas, in case of non beneficiaries it was only 9.25 .

In order to know the significance of difference in adoption level between beneficiaries and non beneficiaries 'Z' test was applied. Critical examination of the data presented in Table 4 reveal that there was significant difference with respect to all the four components of goat rearing practices as 'Z' computed were greater than the tabulated values at

1 per cent level of significance. It indicates that there was significant difference between beneficiaries and non beneficiaries women as far as the adoption level about improved practices of goat rearing was concerned. In other words, beneficiaries had higher adoption level then the non beneficiaries.

#### Adoption of improved poultry rearing practices by the respondents

Out of the total 120 respondents, only 71 beneficiaries and 23 non beneficiaries possess poultry and rest of them did not have poultry in their animal yard. Hence, the adoption level of only poultry owners (71 beneficiaries, 23 non beneficiaries) was judged. The results are presented as under:

**Table 5. Distribution of respondents in different adoption categories of improved poultry rearing practices**

Categories	Beneficiaries (n=71)		Non Beneficiaries (n=23)	
	f	%	f	%
Poor (below 33.3)	0	0	21	91.31
Average (33.3- 66.7)	41	57.75	2	8.69
Good (above 66.7)	30	42.25	0	0

As apparent from Table 5 that majority of the beneficiaries (57.75%) were in the category of average adoption as compared to only 8.69 per cent non beneficiaries in this category. Majority of the non beneficiaries (91.31 %) were found in poor adoption category and none of the beneficiaries was found in this category. More than 40 per cent beneficiaries were observed in the category of good adoption whereas, none of the non beneficiaries was found in this category. Hence, it can be concluded that beneficiaries had more adoption as compared to non beneficiaries which clearly indicates the impact of project activities.

Data presented in Table 6 show that the beneficiaries had overall mean per cent score of 62.01 as compared to only 20.88 in case of non beneficiaries. A comparative look to the adoption score in different components highlights that in

"breeding" the beneficiaries scored 74.84 MPS whereas, the score of non beneficiaries in this component was only 22.98 MPS. Data related to "feeding" aspect reveal that the beneficiaries were good adopters of recommended feeding practices as the observed MPS was 82.67. In case of non beneficiaries, they were average adopters with MPS of 35.33. Similarly in 'management' aspect the MPS of beneficiaries (53.34 MPS) was higher then the non beneficiaries (14.78 MPS). It was recorded that in 'health care' the MPS of beneficiaries was found to be 26.23 whereas, in case of non beneficiaries it was only 6.24 .

**Table 6. Comparison of adoption level of the beneficiaries and non beneficiaries regarding poultry rearing practices**

S. No.	Component	MPS (B)	MPS (NB)	Z value
1	Breeding	74.44	22.98	27**
2	Feeding	82.67	35.33	16**
3	Management	53.34	14.78	12.3**
4	Health care	26.23	6.24	6.2**
<b>Overall</b>		<b>62.01</b>	<b>20.88</b>	<b>20**</b>

\*\*Significant at 1 percent level of significance, MPS-Mean Percent Score

In order to know the significance of difference in adoption level between beneficiaries and non beneficiaries 'Z' test was applied. Critical examination of the data presented in the table reveal that there was significant difference with respect to all the four components of poultry rearing practices as 'Z' computed was greater than the tabulated value at 1 per cent level of significance. It indicates that there was significant difference between beneficiaries and non beneficiaries as far as the level of adoption about improved practices of poultry rearing was concerned. In other words, beneficiaries had higher adoption level then the non beneficiaries.

## CONCLUSION

Based on the findings it could be concluded that NAIP has made significant impact on tribal women as the adoption level of the beneficiaries was found to be higher than non beneficiaries in all the components of cattle, goat and poultry rearing practices.

**REFERENCES**

- Solanki, D. 2001. Impact of Central Sector Scheme 'women in Agriculture' on empowerment of farm women of Udaipur district, Rajasthan. An Unpublished Ph.D. thesis, MPUAT, Udaipur (Raj.).
- India 2011. A Reference Annual, Compiled by Research, Reference and Training Division, Ministry of information and broadcasting, Government of India.  
<http://www.naip.icar.org.in> National Agricultural Innovation Project.
- Vashishtha, M. 2007. Adoption of improved dairy cattle management practices by rural women in Udaipur district, Rajasthan. An Unpublished M.Sc. thesis, MPUAT Udaipur (Raj.).
- Satyanarayan K. and Jagadeeswary V. 2010. A study on knowledge and adoption Behaviour of livestock farmers. *Indian Journal of Animal Research* **44**: 100-106.
- Meena, L.R., Dangi, K.L. and Bansal, V. 2004. Extent of adoption of improved practices of animal husbandary among the tribal and non tribal farm women, Rural India 67:20-30.

