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## Knowledge and adoption regarding agriculture implements and tools distribution service of tribal area development programme on Tribals of Udaipur district

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### Abstract

The word “tribal” or Adivasi brings to our mind a picture of half-naked men and women, with arrows and spears in their hands, feathers in their heads, and speaking an unintelligible language, their lives often combined with myths of savagery and cannibalism. A tribe is defined as “a social group with a definite area, dialects, cultural homogeneity, and unifying social organization. Knowledge of the beneficiaries about Agriculture Implements and Tools Distribution had good knowledge about the service Agriculture Implements and Tools Distribution while non - beneficiaries were having poor knowledge. Adoption of Agriculture Implements and Tools Distribution service reveals that beneficiaries had high adoption in four components viz tools and implements, subsidy, participation in trainings and demonstration, with MPS ranging 71.66 - 100.

**Keywords:** Knowledge, adoption, Agriculture, TADP, Tribals etc.

### Introduction

The word “tribal” or Adivasi brings to our mind a picture of half-naked men and women, with arrows and spears in their hands, feathers in their heads, and speaking an unintelligible language, their lives often combined with myths of savagery and cannibalism. However, any person having visited a tribal village will be surprised and thrilled to see a community living close to nature, peace-loving, equitable and with advanced cultural/social forms. Our knowledge about the tribals is very limited, leading us to believe many myths at the cost of their dignity. Even when majority of the communities in the world kept changing their lifestyles, competed with each other and developed materialistic instincts to keep pace with the “progress” of the world, there were communities still living in line with their traditional values, customs and beliefs. The exploitative mindset of the mainstream society made these communities recede often into forests and high-altitude Mountains, where they could continue to live in peace with Nature and their unpolluted surroundings. As the so-called civilized communities of the mainstream society neither could comprehend the values and ideals of these communities nor had the patience to understand their lifestyles, the mainstream world branded them variously as natives, uncivilized people, Aborigines, Adivasis, Tribals, Indigenous people etc. In India, we mostly refer them as Adivasis/Girijans. In spite of the merciless treatment by the “civilized” men and the socio-economic perils faced by these communities all over the world, the tribals continue to live in the continents of Africa, Asia, North and South America and Australia.

A tribe is defined as “a social group with a definite area, dialects, cultural homogeneity, and unifying social organization. Tribals have specific characteristics which make them a society based upon kinship, where social stratification is absent (Beteille, 1977). In spite of favourable resource conditions, tribal regions perform poorly in terms of infrastructure, returns from agriculture and almost all human development indicators. As compared to other sections of the Indian society, the tribal population has the lowest Human Development Index (HDI). Among the social groups, scheduled tribes (STs) have the highest proportion of the poor (54 percent), followed by scheduled castes (SCs, 50 percent). While the tribal population accounts for only about 8 percent of the total population, it constitutes 40 percent of the displaced population.

Rajasthan, one of the most picturesque states of India, is widely known for its lakes, palaces, deserts and princely heritage and valor of men. Its wide range of climate and topography makes it a challenging area to live in, with the layout of tourist fascination, for culture and beauty of Rajasthan lies in the valuable tribal groups whose joys and hopes add brighter shades in places to otherwise gloomy but revealing portrait of tears and toils, suffering and sorrow of the people, who stand the shock of life, struggle in their vovulus way. The tribes of Rajasthan, as elsewhere in the country are passing through a process of socio-cultural and demographic transformation.

### Status of Tribal Agriculture

Historically, tribal communities were characterized by a lifestyle distinct from agrarian communities. They subsisted on different combinations of shifting cultivation, hunting and gathering of forest products: all activities closely linked with forests. Their cultures celebrated and fostered this close bond with nature while also emphasizing communal ownership and consumption, closely-knit kinship structures, and minimal hierarchies. Today, the tribal majority areas, which overlap with the country's major forest areas, are also areas with the highest concentrations of poverty. Agriculture is predominantly rainfed and monocropped. Horticulture is marginally developed in the tribal areas with the present area under fruits, vegetables, and spices accounting for only about 2.5 percent of the cultivated area<sup>15</sup>. Vegetable cultivation is picking up very fast. These are preferably grown on Bari land (homestead). Women participate in all agricultural operations excepting ploughing and sowing of rice seed, contributing between 70 to 80 percent of the total labour. In spite of favorable resource conditions, tribal regions perform poorly in terms of infrastructure, returns from agriculture and almost all human development indicators.

### Objectives of the Study

1. To study the structure and functioning of Tribal Area Development Programme (TADP) in Udaipur District.
2. To find out the knowledge and adoption of agriculture implements and tools distribution service under agricultural services of TADP among the beneficiaries.

**Knowledge:** Knowledge in the present study referred as to the amount of information possessed by the beneficiaries of the service and non-beneficiaries respondents.

**Adoption:** The term adoption in this study implied the acceptance and use of improved practices promoted under Baren Land Development of TADP by the beneficiaries of the service and non-beneficiaries respondents.

### Material and Methods

The study was conducted in tribal area of Udaipur district where Tribal Area Development Programme is in operation under Tribal Area Development Department. The department implements the programme services through line departments or related organization in the area. The Agricultural services are intensively implemented in three tribal blocks namely

Jadol, Sarada and Lasadiya as informed by the department personnel hence these three blocks were purposively selected for the study. There were six Agricultural services and for each service, two villages were selected for beneficiaries. Thus 12 villages were selected for beneficiaries for each service, thirty beneficiaries (15 from each village) were selected randomly, making a total sample of 180 beneficiaries for the six Agricultural services. The interview schedule was developed by the researcher after extensive review of literature and in consultation with the subject matter specialists from the concerned department/organization. The personal interview method was used by the researcher for the purpose of data collection. Informal observations were also made to check the information regarding adoption of practices. For statistical analysis frequency, percentage, Mean Percent Scores (MPS), Mean Weighted Scores (MWS) and Student 't' test were used.

**Knowledge test:** This included questions related to information about each service such as starting year of the service, beneficiary selection criteria's, objectives of the service and activities of the service and specific question related to package of practices in each Agriculture service as follows :

**Agricultural Tools and Implements Distribution:** Questions related to equipments, provision, subsidy rates, Training, demonstrations/exhibition, technical literature, subsidy and place of service.

**Adoption tool:** This included the extent of adoption of the improved practices in various aspects of each Agriculture service as:

**Agriculture Tools and Implement Distribution:** Extent of adoption of improved practices related to tools and implements, subsidy, registration of problem.

**Knowledge test:** Each correct answer was assigned one score. However in few questions, scores were assigned in view of the relative importance of the information covered like in the advantages of growing crop and artificial insemination, symptoms of animal in heat, necessity of green fodder, common diseases and vaccination of cattle's and sanitary precautions while milking.

**Adoption tool:** Assessment was done on three point continuum as always, sometimes and never with scores of 2, 1 and 0 respectively.

### Results

#### Knowledge regarding agriculture implements and tools distribution service

Agriculture Implements and Tools Distribution is a service in which beneficiaries were provided improved tools and implements on subsidized rate. Beneficiaries were also facilitated to know the use of various agriculture tools and implements through trainings, demonstrations and exhibitions organized by Agriculture Department from time to time.

**Table 1:** Distribution of the respondents by the knowledge regarding Agriculture Implements and Tools Distribution n=60

S. No	Components	Knowledge							
		Beneficiaries n <sub>1</sub> =30				Non-Beneficiaries n <sub>2</sub> =30			
		f(%)				f(%)			
Good	Average	Poor	MPS	Good	Average	Poor	MPS		
1	Provisions under the service	15 (50)	10 (33.33)	5 (16.66)	77.77	2 (6.66)	0	28 (93.33)	12.22
2	Equipment	18 (60)	10 (33.33)	2 (6.66)	67.29	3 (10)	4 (13.33)	23 (76.66)	18.75
3	Trainings	22 (73.33)	0	8 (26.66)	73.33	6 (20)	0	24 (80)	20
4	Demonstrations/Exhibition	24 (80)	0	6 (20)	80	7 (23.33)	0	23 (76.66)	23.33
5	Technical Literature	16 (53.33)	0	14 (46.66)	53.33	7 (23.33)	0	23 (76.66)	23.33
6	Subsidy	20 (66.66)	8 (26.66)	2 (6.66)	68.89	3 (10)	8 (26.66)	19 (63.33)	18.89
7	Place of service	14 (46.66)	0	16 (53.33)	46.66	4 (13.33)	0	26 (86.66)	13.33
	Over all	16 (53.33)	12 (40)	2 (6.66)	76.66	1 (3.33)	4 (13.33)	25 (83.33)	15.89

Perusal of Table 1 reveals that the knowledge of the beneficiaries about Agriculture Implements and Tools Distribution was good with MPS 76.66 while non-beneficiaries possessed poor knowledge with MPS 15.89 only. The over all distribution of the respondents in the service also reveal that 53.33 per cent and 40 per cent beneficiaries were in good and average knowledge category, respectively whereas 83.33 per cent non-beneficiaries were in poor knowledge category.

In component wise knowledge, the table shows that in five components i.e. provisions under the service, equipments, trainings, demonstration/exhibition and subsidy, beneficiaries had good knowledge as depicted by MPS 77.77, 67.29, 73.33, 80 and 68.89, respectively. This is also reflected in distribution of the beneficiaries in knowledge categories as 50-80 per cent beneficiaries were found in good knowledge category and 26.66 - 33.33 per cent of the beneficiaries had average knowledge.

In rest of the two components, beneficiaries were found in average knowledge category i.e. technical literature and place of service with MPS 53.33 and 46.66 respectively. The distribution of the beneficiaries knowledge category, reveal that 46.66 - 53.33 per cent of the beneficiaries were in good and poor knowledge category.

The table further shows that non-beneficiaries possessed poor knowledge in all the components of Agriculture Implements and Tools Distribution as depicted by MPS which ranges between 12.22 - 23.33 and the category wise distribution of the non-beneficiaries also reveals that 63.33 - 93.33 per cent of the non-beneficiaries were falling in poor knowledge category in all the components of the service. These findings reveal that beneficiaries had good knowledge about the service Agriculture Implements and Tools Distribution while non - beneficiaries were having poor knowledge.

The difference in knowledge of the beneficiaries and non-beneficiaries in various components of Agriculture Implements and Tools Distribution can be attributed to the reasons that beneficiaries had knowledge due to the receipt of subsidy on the equipments, trainings, demonstrations and exhibition organized from time to time along with literature distribution and being the part of process of availing benefits from the programme personnel, which was not available to non-beneficiaries.

### Adoption of Agriculture Implements and Tools Distribution service

Data pertaining to adoption of improved practices related to Agriculture Implements and Tools Distribution by the respondents are presented in Table 2.

**Table 2:** Distribution of the respondents by the adoption of Agriculture Implements and Tools Distribution service n=60

S. No.	Components	Extent of adoption							
		Beneficiaries n <sub>1</sub> =30				Non - Beneficiaries n <sub>2</sub> =30			
		f(%)				f(%)			
High	Medium	Low	MPS	High	Medium	Low	MPS		
1	Tools and implements	30 (100)	0	0	100	0	4 (13.33)	26 (86.66)	6.66
2	Subsidy	18 (60)	12 (40)	0	80	0	3 (10)	27 (90)	5
3	Trainings	24 (80)	6 (20)	0	90	0	0	30 (100)	0
4	Demonstration	17 (56.66)	9 (30)	4 (13.33)	71.66	0	6 (20)	24 (80)	10
5	Exhibition	15 (50)	10 (33.33)	5 (16.66)	66.65	0	10 (33.33)	20 (66.66)	16.66
6	Literature	14 (46.66)	9 (30)	7 (26.66)	61.66	0	5 (16.66)	25 (83.33)	8
7	Trainings information use in buying equipments	10 (33.33)	14 (46.66)	6 (20)	56.66	0	9 (30)	21 (70)	15

8	Demonstration helped in deciding the equipments	13 (43.33)	8 (26.66)	9 (30)	56.66	0	2 (6.66)	28 (93.33)	3.33
9	Registration of problem	6 (20)	15 (50)	9 (30)	45	0	2 (6.66)	28 (93.33)	3.33
10	Solution for problem	0	13 (43.33)	17 (56.66)	21.66	0	0	30 (100)	0
Over all		11 (36.66)	19 (63.33)	0	63.03	0	0	30 (100)	6.21

The table depicts that in over all adoption of the service, beneficiaries had medium extent of adoption with MPS 63.03 while non-beneficiaries had low extent of adoption with MPS 6.21. Distribution of the respondents in adoption categories also reveals that 63.33 per cent and 36.66 per cent beneficiaries (100%) were in medium and high adoption categories, respectively where as all the non-beneficiaries were in low adoption category.

Regarding component wise adoption of Agriculture Implements and Tools Distribution service (Table 2) reveals that beneficiaries had high adoption in four components viz tools and implements, subsidy, participation in trainings and demonstration, with MPS ranging 71.66 - 100. The distribution of the beneficiaries in adoption categories also indicate that in these four components, 56.66 - 100 per cent beneficiaries were in high adoption category and 20 - 40 per cent beneficiaries were in medium adoption category. In other six components beneficiaries had medium extent of adoption i.e. exhibition (66.65 MPS), literature (61.66 MPS), trainings information use in buying equipments (56.66 MPS), demonstration helped the beneficiaries in deciding the purchase of equipments (56.66 MPS), problem for solution (45 MPS), and Visited Kisan Seva Kendra (40 MPS) as indicated by MPS. Category wise distribution of beneficiaries in these components also depicts the medium adoption as 30 - 50 per cent beneficiaries were in medium adoption categories.

Further Table 2 depicts that in the components receiving the solution for problem registered, beneficiaries had poor adoption with 21.66 MPS and 56.66 and 43.33 beneficiaries were in low and medium adoption categories, respectively.

The variation in extent of adoption of various components may be due to the reason that the adoption was high in the components where the things were received by them like tools, subsidy, trainings and demonstration, where as in other components the adoption was dependent on the use of information by the beneficiaries like seeing the exhibition, using the literature and trainings information or demonstrations to purchase the equipments or making registration of the problem.

Data in the table reveals that, non-beneficiaries had low level of adoption in all the components as depicted by very low MPS (up to 16.66 only). The categories wise distribution also reveals that majority of the non-beneficiaries (66.66 - 100%) were in low adoption category in all the components of Agriculture Implements and Tools Distribution service.

The comparison of beneficiaries and non-beneficiaries in extent of adoption of Agriculture Implements and Tools Distribution service reveals that beneficiaries had higher adoption than the non - beneficiaries may be due to the reason that they were availing benefits from the service and were in regular contact with personnel of implementing agency.

**Table 3:** Further shows that the major economic constraints reported by the beneficiaries of the service were lack of rebate on loan

i.	Lack of rebate on loan	84.44	IV
ii.	More price of tools after subsidized rates	77.78	
iii.	Low-credibility of source of purchasing	74.44	
Over all		78.89	
4	General constraints		
i.	Long procedure to avail tools	95.56	
ii.	Unavailability of tools	72.22	
iii.	Negative attitude towards technology	60	
iv.	Non-availability of literature	60	
v.	Lack of motivation from external agencies	50	
Over all		67.55	

Table 3 further shows that the major economic constraints reported by the beneficiaries of the service were lack of rebate on loan (84.44 MPS) followed by more price of tools even after subsidy (77.78 MPS) and low-credibility of source of purchasing (74.44 MPS). The reason for such findings could be that tribals belong to low SES and cannot purchase the new tools at their own.

With regard to general constraints, the long procedure to avail tools (95.56 MPS) was the most important constraint faced by the beneficiaries of the service (Table 3), as according to them the procedure is complicated, lengthy and require identity proof. Further they are illiterate and unknown about the work of bank and few of them had no identity proof. Other general constraints perceived by the beneficiaries of the service were unavailability of tools (72.22 MPS), negative attitude towards technology (60 MPS), non-availability of literature (60 MPS) and lack of motivation from external agencies (50 MPS).

Over all it can be said that the beneficiaries of the Agriculture Implements and Tools Distribution service have varied constraints reflecting that the adoption will be of only those agricultural tools and implements which are either distributed free of cost or comparatively low cost.

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