

## **IV RESULTS AND DISCUSSION**

The findings of the study on “**Gender Mainstreaming in Agriculture in the Selected Tribal Settings: A Comparative Analysis of Tamil Nadu and Manipur States**” are presented under the following headings:

- A. Profile of Tribal Farm Women
- B. Participation of Tribal Farm Women in Agricultural Operations and Gender Performance Analysis
- C. Decision Making Pattern of Tribal Farm Women
- D. Assessment of the Awareness Programme

### **A. Profile of Tribal Farm Women**

The profile of tribal farm women is discussed on the following format:

#### **A.1. General information**

##### **A.1.1. Income from agriculture**

#### **A.2. Details of agriculture**

##### **A.2.1. Problems faced in agriculture**

##### **A.2.2. Health hazards faced by tribal farm women**

##### **A.2.3. Training needs of the tribal farm women**

#### **A.1. General information**

The general information of the tribal farm women are presented in Table V.

**TABLE V**  
**GENERAL INFORMATION OF TRIBAL FARM WOMEN**

<b>Aspects</b>	<b>Percentage of respondents stating</b>	
	<b>Tamil Nadu (n=200)</b>	<b>Manipur (n=200)</b>
<b>Age (in years)</b>		
20-30	31	13.5s
31-40	38.5	31.5
41-50	22	26.5
51 and above	8.5	28.5
<b>Educational status</b>		
Illiterate	45.5	40
Primary	26	26.5
High school	23.5	26
Higher secondary	4	5.5
Graduate	1	2
<b>Religion</b>		
Hindu	97.5	-
Christian	2.5	100
<b>Type of family</b>		
Nuclear	72	80.5
Joint	28	19.5
<b>Family size</b>		
1-3 members	34.5	13.5
4-6 members	55	54.5
> 6 members	10.5	32

The above data of women indicates that there was not much difference in the age wise distribution of the tribal farm women between Tamil Nadu and Manipur states; however a vast difference could be identified among 51 and above years. A higher percentage of women in the age group of 31-40 years were involved in the farm operations.

The findings are partially in line with those of Chaudhry, (2004) which showed that 55 per cent of the respondents were in the age group of 30-44 years, followed by 26.7 per cent and 18.3 per cent of them were in the age group of 45-59 years and 15-29 years respectively from a sample of 120 respondents of Fateh Jung, Attock District of Punjab.

Educational status of the tribal farm women shows that 45.5 per cent and 40 per cent of the tribal farm women of Tamil Nadu and Manipur states respectively, were illiterate, indicating the similarity between the tribal farm women of both the states.

An interesting feature to mention is that in Tamil Nadu, 98 per cent were Hindus and in Manipur all the tribal farm women were Christians. For having, 100 per cent belonging to Christianity in Manipur, the researcher tried to analyse the reasons. Reviewing the literature available and contacting elderly in different parts of the study area in the state. In Manipur State, it was found that, during the British rule, many missionaries had been to their hill stations. They organized welfare and developmental programmes and motivated people to follow Christianity.

Majority, 72 per cent of the respondents of Tamil Nadu state, belonged to nuclear family. A similar trend was noticed in Manipur state, where 80.5 per cent of the respondents belonged to nuclear family. Fifty five per cent of the tribal farm women of Tamil Nadu and Manipur states were belonged to medium size of the family (4-6 family members).

#### **A.1.1. Income from agriculture**

The details of income from agriculture of the families of the tribal farm women are presented in Table VI.

**TABLE VI**  
**INCOME FROM AGRICULTURE**

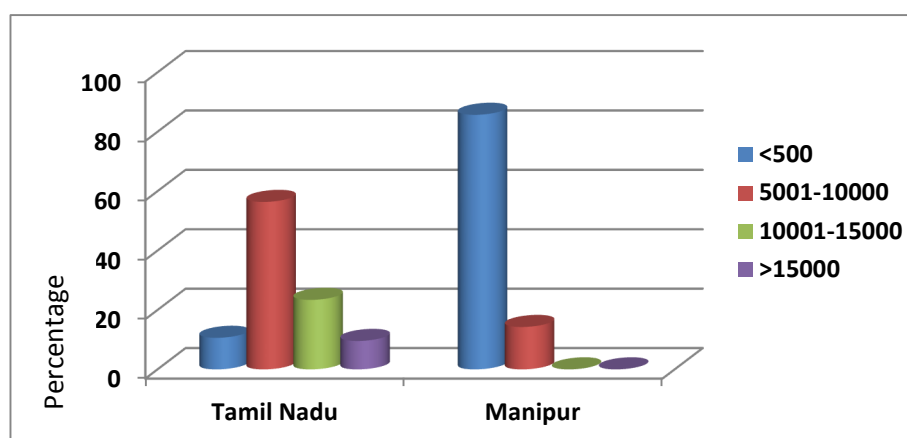
Aspects	Percentage of respondents stating*	
	Tamil Nadu (n=200)	Manipur (n=200)
<b>Monthly family income (in Rupees)</b>		
2001- 4500	70	62.5
4501-7500	17.5	18.5
7501 and above	12.5	19

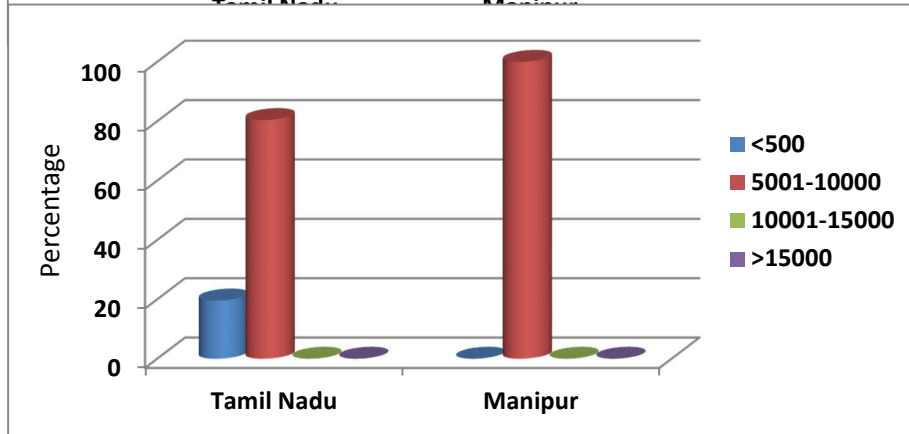
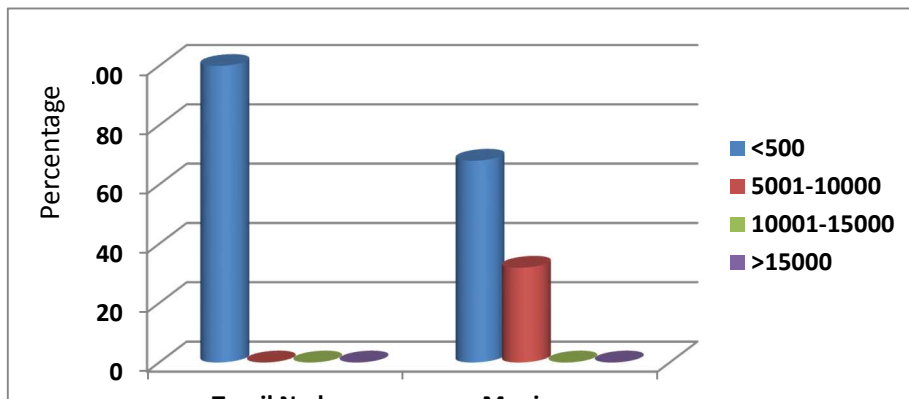
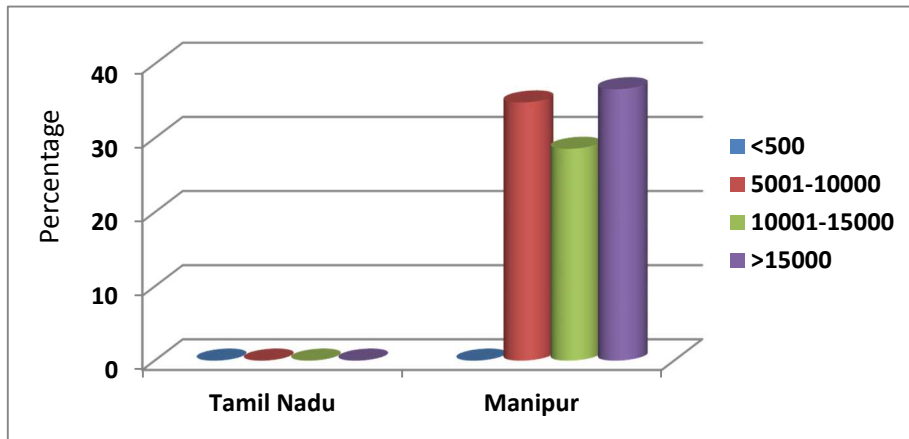
\*Multiple Responses

The distribution of families income shows that 70 per cent and 62.5 per cent of the families of tribal farm women of Tamil Nadu and Manipur states respectively earn monthly income of ₹2001- 4500 from agriculture. It is interesting to note that 12.5 per cent and 19 per cent of the families of tribal farm women of both the states respectively had their monthly income of ₹7501 and above from agriculture.

The families of tribal farm women had annual income from other sources like piggery farming, poultry farming and goat rearing and monthly income from dairy farming.

In Tamil Nadu state, dairy farming was an important source of income. In Manipur state, other than agriculture, piggery farming was the main source of additional income. Poultry keeping in Manipur state and goat rearing in Tamil Nadu were other sources to be maintained. Illustration of income from allied activities is shown in Figure 5.





**FIGURE 5 : INCOME FROM ALLIED ACTIVITIES**

**A.2. Details of agriculture**

The details of agriculture as given by the tribal farm women are presented in Table VII.

**TABLE VII**  
**DETAILS OF AGRICULTURE**

<b>Aspects</b>	<b>Percentage of the respondents stating*</b>	
	<b>Tamil Nadu (n=200)</b>	<b>Manipur (n=200)</b>
<b>Years of experience in agricultural operations</b>		
Below 5	30	11
6-10	39.5	30
11-15	25	39
>15	5.5	20
<b>Size of land holding (acre)</b>		
<b>Owned</b>	60	55
<2	15.5	13
3-5	13	10.5
>5		
<b>Leased in</b>		
<2	11.5	18
3-5	-	3.5
<b>Type of land (acre)</b>		
<b>Dry</b>		
<2	68.5	48
3-5	11.5	10.5
>5	13	7.5
<b>Wet</b>		
<2	-	25.5
3-5	-	8.5
>5	-	3
<b>Garden</b>		
<2	3	-
3-5	4.5	-

\*Multiple responses

All the tribal farm women of both the states revealed that agriculture was their traditional occupation. Thirty nine per cent of the tribal farm women

of Tamil Nadu and thirty per cent of Manipur states respectively had 6-10 years and 11-15 years of experience in agricultural operations.

The families of tribal farm women were the owners of their ancestral land, majority of 60 per cent and 55 per cent of the families of tribal farm women respectively of Tamil Nadu and Manipur states had owned less than 2 acres of land. Surprisingly, 11.5 per cent and 18 per cent of the families of tribal farm women of Tamil Nadu and Manipur states respectively were leased in less than 2 acres of land for cultivation.

In Tamil Nadu state, 68.5 per cent and in Manipur state 48 per cent of the families of tribal farm women owned less than 2 acres of dry land for cultivation. Among the tribal farm women of Manipur state, 25.5 per cent of the families had owned less than 2 acres of wet land. None of the families of tribal farm women

of Tamil Nadu owned wet land. For the purpose of cultivation, only few families of tribal farm women of Tamil Nadu state owned less than 2 acres and 3-4 acres of garden land. Ownership of garden land by the families of tribal farm women of Manipur state could not be observed.

### **Crops cultivated**

The crops cultivated, as expressed by the tribal farm women are presented in Table VIII.

## **TABLE VIII**

## CROPS CULTIVATED

Crop cultivated	Percentage of respondents stating *	
	Tamil Nadu (n=200)	Manipur (n=200)
<b>Cereal</b>		
Paddy	-	100
Maize	39.5	88
<b>Pulse</b>		
Pea	-	81
Kidney beans	-	87
Double beans	-	85
Soyabean	-	51.5
Channa	11.5	-
Horse gram	18.5	-
<b>Vegetables</b>		
Avarakai	40.5	-
Cabbage	37	42
French beans	-	78
Cucumber	-	63
Bottle Gourd	-	15.5
Ladies finger	27.5	-
Brinjal	21.5	-
Pumpkin	18.5	61.5
Chillies	-	61
<b>Green leafy vegetables</b>		
Spinach	-	78
Coriander	-	49
<b>Roots and Tuber</b>		
Potato	30.5	65
Yam	-	98
Radish	26	-
Ginger	-	83.5
Turmeric	-	47.5
<b>Fruit</b>		
Banana	1	17
Pineapple	-	13

\*Multiple responses

We could infer that while the tribal farm women of Manipur showed great interest in cultivating variety of beans, the tribal farm women of Tamil Nadu confined only to channa and horse gram. The vegetables and greens were produced by the tribal farm women of both the states, based on their consumption pattern. The maize was the major crop cultivated by the tribal farm women of Tamil Nadu whereas in Manipur, they cultivated maize as well as paddy. Due to the different climatic condition, the varieties of crops cultivated were also different in both the states.

The mixed cropping system has followed in Manipur state. In Manipur the crops were cultivated for consumption purpose while in Tamil Nadu state the crops were cultivated for sale also.

### **A.2.1. Problems faced in agriculture**

The problems faced in agriculture as expressed by the tribal farm women in implementing the agricultural operations are presented in Table IX

**TABLE IX**  
**PROBLEMS FACED IN AGRICULTURE**

<b>Problems</b>	<b>Percentage of respondents stating *</b>	
	<b>Tamil Nadu (n= 200)</b>	<b>Manipur (n= 200)</b>
Money to invest on agriculture	100	99
Natural calamities	85.5	44
Lack of irrigation facilities	85	55
Non availability of good seeds	34.5	46
High cost of fertilizer	27	27.5
Lack of agricultural labourer	8	36
Lack of sources for marketing the produce	6	97

\*Multiple responses

The constraints faced related to agriculture from the views of the tribal farm women of Tamil Nadu and Manipur states were the same. The financial crisis was the major problem, which they managed by getting loans from SHGs and local moneylenders, for agricultural operations as well as household maintenance.

In Tamil Nadu, the tribal farm women (85.5 per cent) had reported that natural calamities such as flood, drought, cyclone and plague of animal and insect were affecting their livelihood. Eighty five per cent of the tribal farm women expressed that lack of adequate irrigation facilities were affected the implementation of agricultural operations. In Manipur, 97 per cent had revealed that marketing the agriculture produce was the major problem. And also, 55 per cent expressed that the lack of adequate irrigation facilities was

the main problem. It was observed by the researcher that there was no proper market to sale their agriculture produce especially in the tribal area.

In Manipur state, 78 per cent of the tribal farm women borrowed money from the local moneylenders at high rate of interest whereas, in Tamil Nadu, 48 per cent of the tribal farm women borrowed money from local moneylenders. As compared to Tamil Nadu tribal farm women (52 per cent), only 22 per cent in Manipur state borrowed money from Self Help Group.

### **A.2.2. Health hazards faced by tribal farm women**

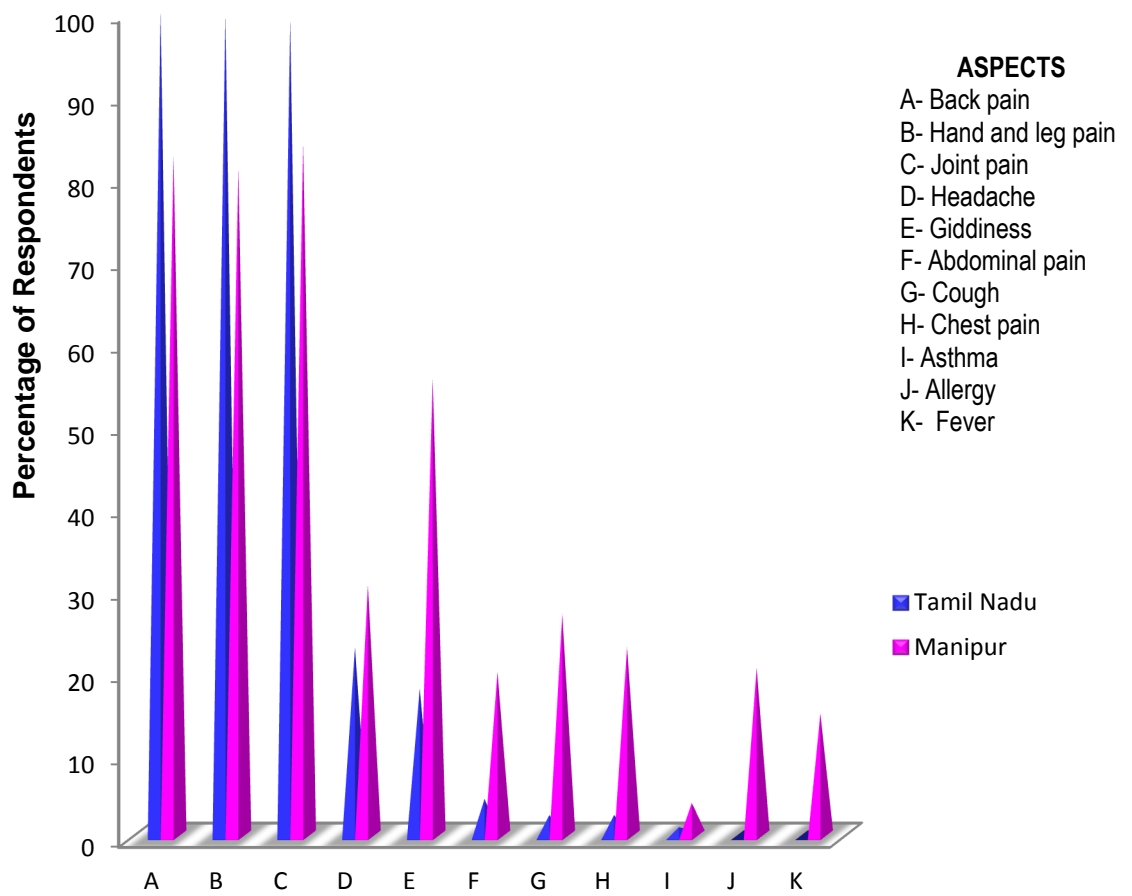
The health hazards faced by tribal farm women in carrying out agricultural operations are presented in Table X and Figure 6.

**TABLE X**  
**HEALTH HAZARDS FACED BY TRIBAL FARM WOMEN**

Illness	Percentage of respondents stating *	
	Tamil Nadu (n=200)	Manipur (n= 200)
Back pain	100	82.5
Hand and leg pain	99.5	81
Joint pain	99	84
Headache	23	30.5
Giddiness	18	55.5
Abdominal pain	4.5	20
Cough	2.5	27
Chest pain	2.5	23
Asthma	1	4
Allergy	-	20.5
Fever	-	15

\*Multiple responses

All the tribal farm women of Tamil Nadu state complained of back pain as the main health problem because agricultural activities involve bending for a longer duration of time followed by hand and leg pain (99.5 per cent). Eighty four per cent of the tribal farm women of Manipur state complained of joint pain as the major health problem followed by back pain (82.5 per cent). It might be due to the reason that they were to walk up and down in the hilly fields.



**HEALTH HAZARDS FACED BY TRIBAL FARM WOMEN**

**FIGURE 6**

The findings coincided with the research study of Suthar and Kaushik (2011) with a sample of 30 tribal women at Udaipur District, revealed that 80 per cent of the tribal women had pain in elbow, 76.66 per cent had neck pain and back pain, 56.66 per cent had pain in thighs, 46.66 per cent had pain in shoulder and upper arm and 36.66 per cent had knee pain.

### A.2.3. Training needs of tribal farm women

Training needs as expressed by the tribal farm women related to agricultural and allied operations, are presented in Table XI and Figure 7.

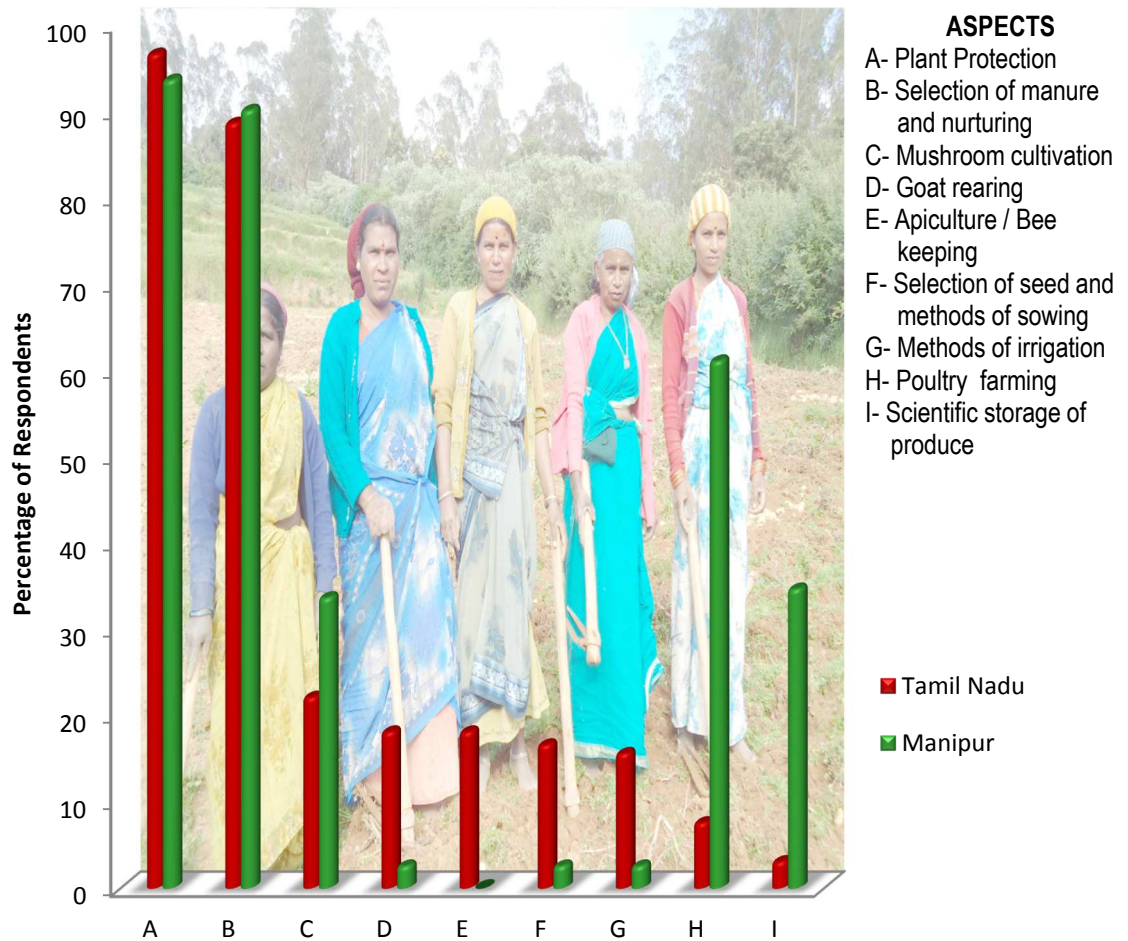
**TABLE XI**  
**TRAINING NEEDS OF TRIBAL FARM WOMEN**

Aspects	Percentage of respondents stating *	
	Tamil Nadu (n=200)	Manipur (n=200)
Plant protection	96.5	93.5
Selection of manure and nurturing	88.5	90
Mushroom cultivation	22	33.5
Goat rearing	18	2.5
Apiculture / Bee keeping	18	-
Selection of seed and methods of sowing	16.5	2.5
Methods of irrigation	15.5	2.5
Poultry keeping	7.5	61
Scientific storage of agricultural produce	3	34.5

\*Multiple responses

The training needs as expressed by the tribal farm women, related to skill development in agricultural and allied operations. They were in need of longer period of intensive training.

To support the finding of training needs, Ajayi *et al.*, (2006) who conducted at Osun State (Nigeria) with a sample of 150 respondents had reported that women farmers had low knowledge and skills in performing the farm operations: chemical weeding and pest control, preparation and utilization of organic fertilizer, livestock and poultry breed selection, and construction of livestock houses. Other areas of training needs are identification and treatment of sick animals; slaughtering and dressing of animals and marketing of livestock.



**TRAINING NEEDS OF TRIBAL FARM WOMEN**

**FIGURE 7**

**B. Participation of Tribal Farm Women in Agricultural Operations and Gender Performance Analysis.**

**B.1. Role of women in agriculture:**

**B.1.1. Time schedule of tribal farm women**

**B.1.2. Pattern of wage distribution**

**B.1.3. Use of implements**

**B.2. Gender performance analysis in agricultural operations**

**B.3. Gender performance analysis in allied operations**

**B.1. Role of women in agriculture**

**B.1.1. Time schedule of tribal farm women**

Time use pattern of tribal farm women for performing various operations at home and on farm are presented in Table XII.

**TABLE XII**

**TIME USE PATTERN OF TRIBAL FARM WOMEN**

Operations	Mean time spent per day			
	Tamil Nadu Hours- minutes	Total	Manipur Hours- minutes	Total
<b>Household work</b>		5:00		5:30
Cooking	1:00		1:30	
Washing	0:30		0:30	
Cleaning utensil	0:30		0:30	
Household cleaning and maintenance	0:30		1:00	
Care of family member	0:30		0:30	
Marketing	2:00		1:30	
<b>Personal work</b>		11:00		10:30
Personal care	0:30		0:30	
Entertainment	2:00		1:00	
Taking nap	0:30		0:30	
Hobbies	1:30		1:30	
Sleeping	6:30		7:00	
<b>Agriculture and allied operations</b>		8:00		8:00
Agricultural field work	5:30		6:00	
Kitchen garden	0:30		1:00	
Care of farm animals	2:00		1:00	

The mean time spent at home and on farm by the tribal farm women shows that there was not much difference between the tribal farm women of Tamil Nadu and Manipur states. A maximum of five hours and thirty minutes was spent for agricultural field work during the hectic seasons by the tribal farm women of Tamil Nadu and six hours was spent on agricultural field work by the tribal farm women of Manipur state. There is a difference in the time spent on care of farm animals among the tribal farm women of both the states; maximum of 2 hours was spent by the tribal farm women of Tamil Nadu whereas in Manipur state only one hour was spent.

### B.1.2. Pattern of wage distribution

The details of distribution of wage for men and women labourers, as stated by the tribal farm women are given in Table XIII.

**TABLE XIII**  
**PATTERN OF WAGE DISTRIBUTION**

Operations	Wages per/day (Rs)	Percentage of respondents stating *			
		Tamil Nadu (n=200)		Manipur (n=200)	
		Men	Women	Men	Women
Ploughing	>200	100	-	100	-
Transplanting	101-150	-	80	-	-
	151-200	20	-	100	100
Weeding	50-100	-	76	-	-
	101-150	24	-	100	100
Harvesting	150-200	-	45	-	68
	>200	55	-	32	-
Threshing	151-200	-	34	100	-
	>200	76	-	-	-
Winnowing	101-150	-	75	100	100
	151-200	35	-	-	-

\*Multiple responses

In Tamil Nadu state there was a difference in wage distribution between men and women for the same work. In both the states ploughing was done exclusively by men; all the tribal farm women expressed that men were getting Rs 200 and above per day for ploughing during the peak seasons. In Manipur state there was no difference in wage distribution among men and women; all the tribal farm women expressed that the labourers were getting

equal pay for the equal work. In harvesting and threshing, wage was higher for men since the men alone did most of the heavy work.

### **B.1.3. Use of implements**



All the tribal farm women of Tamil Nadu and Manipur states used traditional implements like spade and country plough. Both men and women used spade and men alone in both the states exclusively operated country plough.

The tribal farm women of both the states used advanced technologies like motor (electric or diesel) to lift water, sprayer and tractor. In Tamil Nadu state, only 8 per cent of the tribal farm women operate motor (electric or



diesel) to lift water. Sprayer and tractor were operated by men. In Manipur, as expressed by tribal farm women, sprayer (66 per cent) and tractor (61 per cent) were operated by men alone.

This finding is in conformity with the findings of Karthikeyan et al. (2009), which revealed that country plough (kalappai) is an indigenous tool used by the dry land farmers of Tamil Nadu.

### **B.2. Gender performance analysis in agricultural operations**

The details of gender performance in agricultural operations are presented in Table XIV.

TABLE XIV

## GENDER PERFORMANCE IN AGRICULTURAL OPERATIONS

Operations	Percentage of respondents stating*					
	Women (alone)		Men (alone)		Both (men and women together)	
	T N n= 200	MPR n=200	TN n=200	MPR n=200	T N** n=200	MPR ** n=200
<b>Field preparation</b>						
Cleaning and preparing the land	94	95	2.5	-	3.5	5
Basal application of Farm Yard Manure (FYM)	49	20	17	24	34	56
Land ploughing and leveling	-	-	23	68	77	32
Forming ridges and furrows	-	14	39	54	61	32
Forming drainage channel	-	12	34	54	66	44
Basal application of chemical fertilizers	-	1	99	49	1	-
<b>Sowing</b>						
Sowing/ transplanting	97	87	-	8	3	5
Seed treatment	76	87	-	3	24	10
<b>Cultivation</b>						
Weeding	97	48	-	29	3	23
Digging to loosen the soil	3	8	40	52	57	40
Irrigation	3	10	39	52	58	38
Plant protection measures	43	51	6	24	51	25
Top dressing of fertilizer	-	5	93	27	7	18
<b>Harvesting</b>						
Reaping the crops	95	24	-	40	5	36
Bundling	30	76	48	6	22	18
Transporting of harvest to threshing yard	-	58	91	12	9	30
<b>Post harvesting</b>						
Threshing	42	33	34	20	24	47
Winnowing	33	45	34	11	33	44
Drying	97	90	-	-	3	10
Storing	58	88	26	-	16	12
<b>Marketing</b>						
Identification of sources	31	88	30	-	39	12
Actual marketing						

\*Multiple Responses \*\* TN- Tamil Nadu, MPR- Manipur

In field preparation, cleaning and preparation land were solely carried out by the tribal farm women (above 95 per cent) in both the states, which involved more strain for women due to bending for longer period hours.

Application of manure, threshing and winnowing were done either by women or jointly by men and women in both the states. In Tamil Nadu, 77 per cent and 66 per cent of the tribal farm women expressed that both men and women together were participating in land ploughing and leveling and forming drainage channel. In Manipur, above 54 per cent of the tribal farm women also reported that both men and women were participating in land ploughing and leveling, forming drainage channel and forming ridges and furrows.

In both the states, women alone carried out harvesting process. In Manipur, the transporting of harvest to threshing yard was done by 58 per cent of the women alone, while both men women in Tamil Nadu (30 per cent) shared it (Plate VI and VII).

The above research findings are supported with those of Chauhan (2011). His study reveals that the highest participation of tribal farm women was observed in sowing / transplanting followed by stubble collection, clod crushing, manuring and seedbed preparation /nursery, in nipping / picking and threshing followed by harvesting, winnowing, storage, making threshing yard, bagging / packing and marketing of agricultural produce. The roles of tribal farm women in all the operations were observed upto the importance level from a sample of 120 tribal farm women of Navsari District of Gujarat.

Plate 6

Plate 7

**Participation of tribal farm women in agricultural operations in Tamil Nadu and Manipur states**

Table XV illustrates the age and education wise one way ANOVA, applied for the participation of tribal farm women in agricultural operations in Tamil Nadu and Manipur states.

**TABLE XV**

**AGE AND EDUCATION VERSUS PARTICIPATION OF TRIBAL FARM WOMEN IN AGRICULTURAL OPERATIONS**

Agricultural operations	Age				Education			
	Tamil Nadu		Manipur		Tamil Nadu		Manipur	
	F-Value	Significant	F-Value	Significant	F-Value	Significant	F-Value	Significant
Field preparation	0.178	NS	0.407	NS	7.817	**	0.471	NS
Sowing	0.037	NS	0.759	NS	3.952	**	0.356	NS
Cultivation	0.052	NS	2.533	NS	8.728	**	0.823	NS
Harvesting	0.656	NS	1.438	NS	16.297	**	0.915	NS
Post harvesting	0.298	NS	2.778	*	17.382	**	1.826	NS
Marketing	0.147	NS	1.851	NS	13.377	**	1.882	NS

\*Significant at 5% level \*\* Significant at 1% level NS- Not Significant

The statistical analysis using F-test indicated that there is no significant difference among the age groups with respect to participation in agricultural operations among the tribal farm women of both the states. The post harvesting has significant difference among the age groups with respect to agricultural operations among the tribal farm women of Manipur state.

Statistical interpretation showed that there is a significant difference among the educational status with respect to participation in agricultural operations among the tribal farm women of Tamil Nadu state.

The statistical data proves that the educational status has no influence with respect to participation in agricultural operations among the tribal farm women of Manipur state.

Table XVI illustrates the paired 't' test, applied to compare the participation of tribal farm women in agricultural operations with Tamil Nadu and Manipur states.

**TABLE XVI**

**COMPARISON OF THE PARTICIPATION OF TRIBAL FARM WOMEN IN AGRICULTURAL OPERATIONS  
BETWEEN TAMIL NADU AND MANIPUR STATES**

Agricultural Operations	Tamil Nadu			Manipur			Total			t-test		
	Mean	Standard Deviation	Number	Mean	Standard Deviation	Number	Mean	Standard Deviation	Number	t	df	Sig
Field preparation	14.44	2.96	200	11.80	2.28	200	13.12	2.95	400	10.000	398	**
Sowing	7.73	0.51	200	7.31	1.44	200	7.52	1.10	400	3.928	398	**
Cultivation	12.22	2.37	200	11.99	2.68	200	12.10	2.53	400	0.890	398	NS
Harvesting	7.40	1.72	200	10.49	2.12	200	8.94	2.47	400	16.062	398	**
Post harvesting	11.92	3.57	200	13.90	1.66	200	12.91	2.95	400	7.117	398	**
Marketing	2.71	1.22	200	3.89	0.32	200	3.30	1.07	400	13.196	398	**

NS- Not Significant \*\* Significant at 1% level

Table XVI reveals the comparison of participation of the tribal farm women in agricultural operations with Tamil Nadu and Manipur states and it has significant difference, except cultivation where there is no significant difference between the two states.

According to the hypothesis “there is no difference in the agricultural operations of tribal farm women of Tamil Nadu and Manipur states” was rejected, except cultivation.

### **B.3. Gender performance analysis in allied operations**

The extent of gender performance in dairy farming, poultry farming, piggery farming and goat rearing are presented in Table XVII.

**TABLE XVII**  
**GENDER PERFORMANCE IN ALLIED OPERATIONS**

Allied Operations	Percentage of respondents stating *					
	Women (alone)		Men (alone)		Both (men and women together)	
	Tamil Nadu (n=94)	MPR (n= 35)	Tamil Nadu (n=94)	MPR (n= 35)	Tamil Nadu (n=94)	MPR ** (n= 35)
<b>Dairy farming</b>						
Cleaning the shed	90	62	4	18	6	20
Feeding the cattle	89	20	4	20	7	60
Collection of cattle feed	38	8	5	32	57	60
Bathing the cattle	37	6	36	40	27	54
Grazing the cattle	26	-	15	97	59	3
Taking care of sick cattle	8	3	55	40	37	57
Milking	3	-	83	-	14	-
Marketing of milk and milk products	3	-	89	-	8	-
<b>Poultry keeping</b>	<b>(n= 41)</b>	<b>(n=169)</b>	<b>(n= 41)</b>	<b>(n=169)</b>	<b>(n= 41)</b>	<b>(n=169)</b>
Feeding the birds	100	98	-	-	-	2
Cleaning the shed	100	92	-	-	-	8
Taking care of sick birds	100	91	-	-	-	9
Marketing the eggs/birds	100	98	-	-	-	2
<b>Piggery farming</b>	<b>(n=0)</b>	<b>(n=112)</b>	<b>(n=0)</b>	<b>(n=112)</b>	<b>(n=0)</b>	<b>(n=112)</b>
Feeding the pigs	-	90	-	-	-	10
Marketing of pork	-	90	-	-	-	10
Bathing	-	81	-	-	-	19
Taking care of sick animal	-	79	-	-	-	21
<b>Goat rearing</b>	<b>(n=51)</b>	<b>(n=10)</b>	<b>(n=51)</b>	<b>(n=10)</b>	<b>(n=51)</b>	<b>(n=10)</b>
Cleaning of animal shed	100	100	-	-	-	-
Feeding the goats	100	100	-	-	-	-
Collecting feeds	52	100	4	-	44	-
Grazing the goats	40	40	10	-	51	60
Care and maintenance	47	-	18	-	35	100
Marketing of goat	10	-	73	-	17	100

\*Multiple Responses \*\* MPR- Manipur n: No of respondents

Table XVII shows that in dairy farming, the women themselves carried out the operations such as cleaning shed, feeding the cattle and bathing the cattle. The operations such as grazing the cattle, collection of cattle feed and

taking care of sick cattle were taken care of, by both men and women in Tamil Nadu. In Manipur, collection of cattle feed, feeding cattle, taking care of sick cattle and bathing of cattle were joint ventures by both men and women together.

In poultry farming, all the operations were solely carried out by the tribal farm women in Tamil Nadu and above 91 per cent of the tribal farm women had taken main role in carrying out the operations in Manipur state. A meagre percentage of men participate in rearing the poultry, because of the reason that it was giving lesser income when compared to other allied activities.

In piggery farming, above 79 per cent of the tribal farm women in Manipur state took the leading role and 10-21 per cent had joint ventures i.e., both men and women together.

The tribal farm women of Tamil Nadu were much involved in goat rearing, where 12 to 37 per cent of them told it was solely carried by women. Like dairy management, in goat rearing also men joined the women in grazing the goats, collecting feeds and care and maintenance of the animals in both the states (Plate VIII).

The research findings are partially in line with that of Vijay et al. (2010) who conducted the study in Nilgiris District of Tamil Nadu with a sample of 306 tribal household Which revealed that feeding and watering to animals (56.86 per cent regular and 37.26 per cent sometime), cutting of grass (56.86 per cent regular and 17.65 per cent sometime), chopping of straw (45.10 per cent regular and 31.37 per cent sometime), grazing of animals (50.98 per cent regular and 19.61 per cent sometime), care of sick animals (47.06 per cent regular and 37.25 per cent sometime) and care of newborn calf (62.74 per cent regular and 15.69 per cent sometime) were performed by the female respondents.

Plate 8

### Participation of tribal farm women in allied operations in Tamil Nadu and Manipur states

Table XVIII illustrates the age and education wise one way ANOVA, applied for the participation of tribal farm women in allied operations in Tamil Nadu and Manipur states.

**TABLE XVIII**

#### **AGE AND EDUCATION VERSUS PARTICIPATION OF THE TRIBAL FARM WOMEN IN ALLIED OPERATIONS**

Allied operations	Age				Education			
	Tamil Nadu		Manipur		Tamil Nadu		Manipur	
	F-Value	Significant	F-Value	Significant	F-Value	Significant	F-Value	Significant
Dairy farming	1.132	NS	0.630	NS	1.445	NS	0.148	NS
Poultry keeping	0.337	NS	1.514	NS	8.446	**	1.013	NS
Piggery farming	-	-	0.980	NS	-	-	1.120	NS
Goat rearing	0.401	NS	1.315	NS	12.130	**	0.900	NS

\*\*Significant at 1% level NS- Not Significant

Statistical interpretation shows that there is no significant difference among the age groups with respect to participation in allied operations, in both the states.

The statistical analysis using F-test showed that there is a significant difference among the educational status with respect to participation in allied operations among the tribal farm women of Tamil Nadu but in dairy farming there is no significant difference among the educational status.

The statistical data proves that the educational status has no influence with respect to participation in allied operations among the tribal farm women of Manipur state.

Table XIX illustrates the paired 't' test, applied to compare the participation of the tribal farm women in allied operations with Tamil Nadu and Manipur states.

**TABLE XIX**

**COMPARISON OF THE PARTICIPATION OF TRIBAL FARM WOMEN IN ALLIED OPERATIONS BETWEEN TAMIL NADU AND MANIPUR STATES**

Allied Operations	Tamil Nadu			Manipur			Total			t- test		
	Mean	Standard Deviation	Number	Mean	Standard Deviation	Number	Mean	Standard Deviation	Number	t	df	Sig
Dairy farming	9.85	10.79	200	2.53	5.65	200	6.19	9.35	400	8.498	398	**
Poultry keeping	3.28	6.48	200	13.32	5.77	200	8.30	7.92	400	16.358	398	**
Goat rearing	5.11	8.64	200	1.07	4.68	200	3.09	7.23	400	5.809	398	**

\*\*Significant at 1% level

Comparison of participation of tribal farm women in allied operations with Tamil Nadu and Manipur states shows that it has a significant difference.

The hypothesis “there is no difference in the allied operations of tribal farm women of Tamil Nadu and Manipur states” was accepted.

### **C. Decision Making Pattern of Tribal Farm Women**

The gender performance in decision making pattern related to agricultural operations is discussed under the following heads:

**C.1. Gender performance in decision making pattern related to agricultural operations**

**C.2. Gender performance in decision making pattern related to allied operations**

**C.1. Gender performance in decision making pattern related to agricultural operations**

Decision making pattern of tribal farm women in agricultural operations is presented in Table XX.

**TABLE XX**  
**DECISION MAKING PATTERN OF TRIBAL FARM WOMEN IN**  
**AGRICULTURAL OPERATIONS**

Aspects	Percentage of respondents stating *					
	Women (alone)		Men (alone)		Both (men and women together)	
	Tamil Nadu (n=200)	MPR (n=200)	Tamil Nadu (n=200)	MPR (n=200)	Tamil Nadu (n=200)	MPR** (n=200)
<b>Agriculture operations</b>						
Weeding	97	85	-	9	3	6
Transplanting	92	85	1	9	7	6
Storage	72	87	11	7	17	6
Harvesting	67	59	16	27	17	14
Selection of seeds	50	66	3	15	47	19
Field preparation	23	14	15	18	62	68
Application of fertilizer	10	7	52	11	38	20
Nursery preparation	-	35	-	23	-	41
<b>Marketing agricultural produce</b>						
Fixing the price for selling the agricultural produce	11	81	7	10	82	9
Mode of getting payment for the produce sold	11	82	6	5	83	13
Quantity to be sold	10	69	7	16	83	15
<b>Investment regarding agriculture</b>						
Sale of land	7	3	28	22	65	75
Leasing in land	7	5	34	20	69	75
Leasing out land	7	9	21	21	72	70
<b>Agricultural inputs</b>						
Engaging labourers	19	50	16	14	75	36
Hiring equipment	39	31	38	20	22	49
Purchase of agriculture input	24	11	54	16	22	73
Arranging for loan	10	8	8	19	82	73
Mode of saving	78	70	5	14	17	16
Amount to be saved	51	53	5	14	44	33
Deciding wage rate for agricultural labourers	16	53	6	13	78	34

\*Multiple responses \*\*MPR- Manipur

Agriculture is a major occupation which contributes a major portion of family income. Hence in majority of the agricultural operations women, who are the custodians of the family, take the decisions in several agricultural operations. In both the states there was not much difference in taking decisions related to agricultural operations by the tribal farm women themselves. A majority of the tribal farm women of Tamil Nadu state were taking decisions by themselves regarding weeding (97 per cent) and transplanting (92 per cent) in Manipur state, transplanting and weeding (87 per cent) and storage of the produce (85 per cent) were decided by the women themselves.

In preparing the field for cultivation, 62 per cent and 68 per cent of the tribal farm women of Tamil Nadu and Manipur states respectively decided jointly by both men and women.

It is revealed that there was a difference in taking decisions among the tribal farm women of both the states in marketing agricultural produce and investment regarding agriculture. The tribal farm women of Manipur were taking number of decisions independently when compared to the tribal farm women of Tamil Nadu.

Regarding the arrangement for loans for agriculture purpose majority 82 per cent and 73 per cent of the tribal farm women of Tamil Nadu and Manipur states were taking decisions jointly with men. As far as savings was concerned, the tribal farm women of Tamil Nadu (78 per cent) and Manipur (70 per cent) took decisions by themselves. There was not much difference in taking decisions by the tribal farm women regarding the amount to be saved in both the states. To decide about the wage rate for the agricultural labourers, there was a difference between the two states. The tribal farm women of Tamil Nadu (78 per cent) and Manipur (34 per cent) were taking decisions jointly with men in deciding the wage rate for agricultural labourers.

The research findings are partially in tune with that of Chauhan (2011), who conducted at Navsari District of Gujarat with a sample 120 tribal farm women, revealed that the decisions regarding farm management such as when to irrigate the fields (87.50 per cent), quantity and type of fertilizers to be

used in the farm (85.10 per cent), introduction of new crop variety (82.50 per cent), buying farm machinery / equipment (80.00 per cent), using plant protection measures (76.67 per cent), borrowing money for farm operation (70.00 per cent), installing oil engine, electric motor and pumps (66.67 per cent), selection of seed (65.00 per cent) deciding area to be sown under each crop (62.50 per cent) husband dominated scene. The joint decision made by tribal farm women and other members of family were hiring farm labourers (66.67 per cent), buying and selling of land (71.67 per cent) and selling of surplus farm produce (58.33 per cent).

Table XXI illustrates the age and education wise one way ANOVA, applied in decision making pattern of tribal farm women in agricultural operations of Tamil Nadu and Manipur states.

**TABLE XXI**

**AGE AND EDUCATION VERSUS DECISION MAKING PATTERN OF THE TRIBAL FARM WOMEN IN AGRICULTURAL OPERATIONS**

Aspects	Age				Education			
	Tamil Nadu		Manipur		Tamil Nadu		Manipur	
	F-Value	Significant	F-Value	Significant	F-Value	Significant	F-Value	Significant
Agricultural operations	0.279	NS	6.831	**	7.167	**	3.472	*
Marketing agricultural produce	2.252	NS	0.444	NS	1.728	NS	2.525	NS
Investment regarding agriculture	3.189	*	4.698	**	5.761	**	0.761	NS
Arranging for loan	0.662	NS	3.816	*	0.034	NS	1.032	NS
Agricultural inputs	6.034	**	1.960	NS	0.278	NS	0.367	NS
Mode of saving	0.490	NS	0.113	NS	4.874	**	0.530	NS
Amount to be saved	1.749	NS	0.956	NS	3.136	*	0.561	NS
Deciding wage for agricultural labourer	1.267	NS	0.905	NS	2.441	NS	2.290	NS

\*Significant at 5% level \*\* Significant at 1% level NS- Not Significant

The statistical data showed that there is no significant difference among the age groups with respect to decision making in agricultural operations among the tribal farm women of Tamil Nadu state, but investment regarding agriculture and agricultural inputs, has significant difference among the age groups.

Statistical analysis using F-test indicated that there is no significant difference among the age groups with respect to decision making in agricultural operations among the tribal farm women of Manipur state but agricultural operations, investment regarding agriculture and arranging for loans has significant difference among the age groups.

The statistical analysis showed that there is no significant difference among the educational status with respect to decision making in agricultural operations among the tribal farm women of Tamil Nadu state. In agricultural operations, investment regarding agriculture and mode of saving and amount to be saved has significant difference among the educational status.

The statistical analysis using F-test showed that there is no significant difference among the educational status with respect to decision making in agricultural operations among the tribal farm women of Manipur state, but agricultural operations has significant difference among the educational status.

Table XXII illustrates the paired 't' test, applied to compare the decision making pattern of tribal farm women in agricultural operations with Tamil Nadu and Manipur states.

**TABLE XXII**  
**COMPARISON OF DECISION MAKING PATTERN OF THE TRIBAL FARM WOMEN IN AGRICULTURE OPERATIONS**  
**BETWEEN TAMIL NADU AND MANIPUR STATES**

Aspects	Tamil Nadu			Manipur			Total			t-test		
	Mean	Standard Deviation	Number	Mean	Standard Deviation	Number	Mean	Standard Deviation	Number	t	df	Sig
Agricultural operations	29.21	1.69	200	32.17	2.83	200	30.96	2.91	400	15.009	398	**
Marketing agricultural produce	12.12	1.26	200	13.93	1.83	200	13.02	1.81	400	11.547	398	**
Investment regarding agriculture	19.11	4.63	200	23.97	2.69	200	21.54	4.49	400	12.808	398	**
Arranging for loans	3.91	0.64	200	3.89	0.51	200	3.90	0.58	400	0.260	398	NS
Agricultural input	2.00	1.40	200	3.96	0.51	200	2.98	1.44	400	18.539	398	**
Mode of saving	4.75	0.52	200	4.57	0.72	200	4.66	0.63	400	2.786	398	**
Amount to be saved	4.70	0.51	200	4.39	0.72	200	4.55	0.64	400	4.958	398	**
Deciding wage for the labourer	4.07	0.61	200	4.40	0.71	200	4.23	0.68	400	5.064	398	**

\*\* Significant at 1% level NS- Not Significant

The decision making pattern in agricultural operations among the tribal farm women of both the states was compared, there is a significant difference, except arranging for loans there is no significant difference between the two states.

According to the hypothesis, "There is no difference in decision making pattern in agricultural operations among the selected tribal farm women of the two states" was rejected, except arranging for loans.

### C.2. Gender performance in decision making pattern related to allied operations

The gender performance in decision making pattern related to allied operation is presented in Table XXIII.

**TABLE XXIII**  
**DECISION MAKING PATTERN OF TRIBAL FARM WOMEN IN ALLIED OPERATIONS**

Allied Operations	Percentage of respondents stating *					
	Women (alone)		Men (alone)		Both (men and women together)	
	Tamil Nadu (n= 94)	MPR (n= 35)	Tamil Nadu (n= 94)	MPR (n= 35)	Tamil Nadu (n= 94)	MPR** (n= 35)
<b>Dairy farming</b>						
Type and feed ratio for cows	84	57	2	-	14	43
Type and feed ratio for calves	84	66	3	-	13	34
Disease management	81	29	3	29	16	42
Marketing of milk	6	-	49	-	45	-
<b>Poultry keeping</b>	<b>(n= 41)</b>	<b>(n= 169)</b>	<b>(n= 41)</b>	<b>(n= 169)</b>	<b>(n= 41)</b>	<b>(n= 169)</b>
Type and feed ratio for broilers/hen	100	100	-	-	-	-
Typed and feed ratio for layer	100	70	-	11	-	19
Disease management	100	94	-	3	-	3
Marketing of eggs /broiler/hen	87	100	-	-	13	-
<b>Piggery farming</b>	<b>(n=0)</b>	<b>(n=112)</b>	<b>(n=0)</b>	<b>(n=112)</b>	<b>(n=0)</b>	<b>(n=112)</b>
Feeding the pigs	-	75	-	10	-	6
Marketing of pork	-	10	-	82	-	10
Bathing	-	90	-	-	-	10
Taking care of sick animal	-	28	-	19	-	54
<b>Goat rearing</b>	<b>(n=51)</b>	<b>(n=10)</b>	<b>(n=51)</b>	<b>(n=10)</b>	<b>(n=51)</b>	<b>(n=10)</b>
Cleaning of animal shed	80	71	7	11	13	18
Feeding the goats	90	84	-	-	10	18
Collecting feeds	36	60	26	12	38	28
Grazing the goats	50	60	20	12	30	28
Care and maintenance	72	64	18	20	10	20
Marketing of goat	23	12	69	76	8	12

\*Multiple responses \*\* MPR- Manipur n: No of respondents

The above table shows that more than 81 per cent the tribal farm women of Tamil Nadu state were taking decisions independently when compared to the tribal farm women of Manipur as far as dairy farming was concerned.

In poultry keeping, operations such as type and feed ratio for broilers/hen, type and feed ratio for layer, disease management and marketing of eggs /broiler/hen more than 70 per cent of the tribal farm women of both the states were taking decision independently.

In Manipur, about 75 percent of the tribal farm women were taking decision independently regarding the operation such as feeding the pigs and bathing of animals in piggery farming. Regarding taking care of sick animal, 54 per cent of tribal farm women take decision jointly with men.

In both the states there was not much difference in taking decision by the tribal farm women regarding to goat rearing. In Tamil Nadu, a majority of tribal farm women were taking decision by themselves in feeding the goats (90 per cent), cleaning of animal shed (80 per cent), care and maintenance (72 per cent) and grazing the goats (50 per cent). In Manipur state, feeding the goats (84 per cent), cleaning of animal shed (71 per cent), care and maintenance (64 per cent), collecting feeds and grazing the goats (60 per cent) of the tribal farm women respectively were taking decision by themselves.

The findings are supported with that of Chauhan 2011 who conducted the study at Navsari District of Gujarat with a sample of 120 tribal farm women, reported that the selection of fodder and feed was dominantly decided by farm women (81.67 per cent) followed by sale of milk and its product (52.50 per cent), sale and purchase of animal (65.00 per cent), selection of animal breed (60.00 per cent) and keeping size of herd (40.00 per cent) were jointly decided by family members.

Table XXIV illustrates the age and education wise one way ANOVA, applied in decision making pattern of tribal farm women related to allied operations of Tamil Nadu and Manipur states.

**TABLE XXIV**

**AGE AND EDUCATION VERSUS DECISION MAKING PATTERN OF THE  
TRIBAL FARM WOMEN RELATED TO ALLIED OPERATIONS**

Allied operations	Age				Education			
	Tamil Nadu		Manipur		Tamil Nadu		Manipur	
	F-Value	Significant	F-Value	Significant	F-Value	Significant	F-Value	Significant
Dairy farming	0.985	NS	0.475	NS	1.680	NS	0.228	NS
Poultry keeping	0.358	NS	1.624	NS	8.507	**	1.097	NS
Piggery farming	0.00	-	1.385	NS	0.00	-	0.754	NS
Goat rearing	0.626	NS	1.507	NS	13.179	**	0.493	NS

\*\* Significant at 1% level NS- Not Significant

The statistical analysis showed that there is no significant difference among the age groups with respect to the decision making pattern in allied operations in both the states.

The statistical data proves that there is no significant difference among the educational status with respect to the decision making pattern among the tribal farm women of Tamil Nadu, but poultry keeping has significant difference among the educational status.

Statistical analysis shows that there is no significant difference among the educational status with respect to decision making in allied operations among the tribal farm women of Manipur state.

Table XXV illustrates the paired 't' test, applied to compare the decision making pattern of tribal farm women in allied operations with Tamil Nadu and Manipur states.

**TABLE XXV**

**COMPARISON OF DECISION MAKING PATTERN OF THE TRIBAL FARM WOMEN IN ALLIED OPERATIONS  
BETWEEN TAMIL NADU AND MANIPUR STATES**

Aspects	Tamil Nadu			Manipur			Total			t-test		
	Mean	Standard Deviation	Number	Mean	Standard Deviation	Number	Mean	Standard Deviation	Number	t	df	Sig
Dairy farming	8.40	9.05	200	2.32	5.06	200	5.36	7.93	400	8.304	398	**
Poultry keeping	4.08	8.05	200	16.49	7.13	200	10.28	9.81	400	16.328	398	**
Goat rearing	6.75	11.52	200	1.27	5.61	200	4.01	9.46	400	6.036	398	**

\*\* Significant at 1% level NS- Not Significant

The decision making pattern in allied operations among the tribal farm women of both the states was compared and found there is a significant difference between the two states.

The hypothesis “there is no difference in decision making pattern in agricultural and allied operations among the selected tribal farm women of the two states” was rejected.

#### **D. Assessment of Awareness Programme**

The awareness gained by the selected tribal farm women regarding agriculture operations, schemes and programme, Farm Women SHGs, decision making pattern in agricultural and allied operations, health hazards and drudgery reduction technologies, health and sanitation, gender mainstreaming and legal rights are presented in the following pages.

##### **D.1. Agricultural operations**

###### **D.1.1 Schemes and programmes implemented by the government**

###### **D.1.2. Formation of Farm Women Self Help Groups (SHGs)**

##### **D.2. Decision making pattern regarding agricultural and allied operations**

##### **D.3. Health hazards and drudgery reduction technologies**

###### **D.3.1. Health and sanitation**

##### **D.4. Gender performance and legal rights**

##### **D.1. Agricultural operations**

Table XXVI depicts the awareness gained by the tribal farm women on agricultural operations.

**TABLE XXVI**  
**AWARENESS ABOUT AGRICULTURAL OPERATIONS**

Statement	Percentage of respondents stating *			
	Tamil Nadu (n=50)		Manipur (n=50)	
	Before	After	Before	After
Selection of seeds	34	96	28	96
Control of pest	28	100	38	94
Seed treatment	26	92	24	100
Seed processing	26	100	14	100
Identification of pests and diseases	10	90	-	100
Storage of farm produce	-	94	46	100
Methods of fertilizer application- Broadcasting	-	80	-	80
Placement	-	84	-	76
Foliar	-	84	-	72
Time of fertilizer application	-	100	-	100
Preparation of pesticides	-	90	-	94
Name and dosage of pesticides	-	80	-	90

\*Multiple responses

More than 90 percent of the tribal farm women of Tamil Nadu state had gained knowledge on seed processing and control of pests, selection of seeds, storage of farm produce and seed treatment.

In Manipur state, above 94 per cent of the tribal farm women had become aware of seed treatment, storage of farm product, seed processing, selection of seeds and control of pest after the training.

Methods of fertilizer application, time of application, identification of pest and diseases, name and dosage of pesticides and preparation of pesticides were included in the training. The results showed that more than 60 per cent of the tribal farm women of both the states gained awareness on fertilizer and pesticide application.

### D.1.1 Schemes and programmes implemented by the government

The awareness gained by tribal farm women on schemes and programmes implemented by the government are presented in Table XXVII.

**TABLE XXVII**

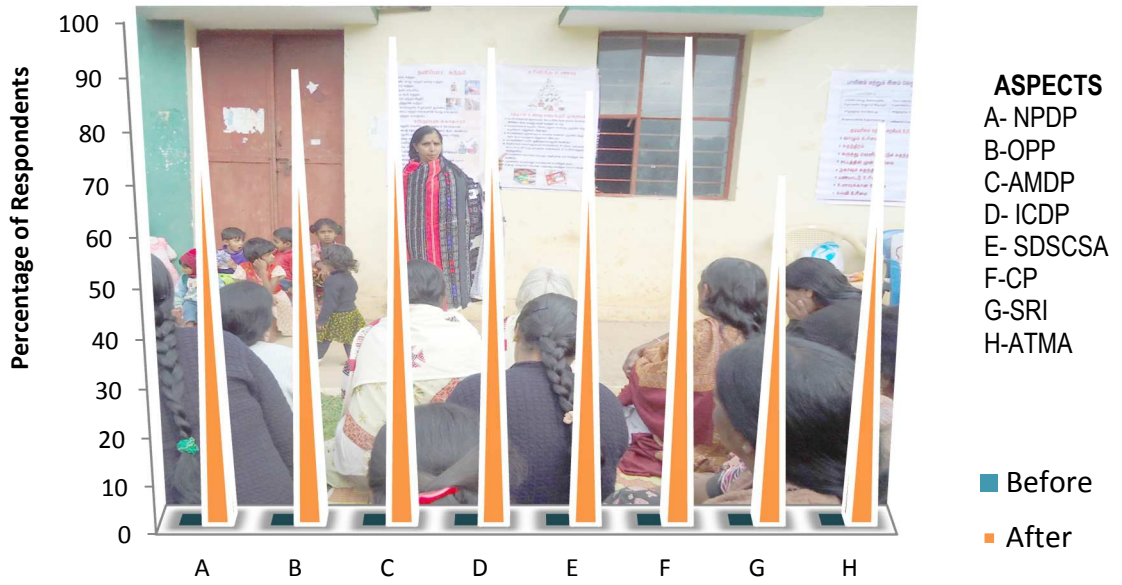
#### **SCHEMES AND PROGRAMMES IMPLEMENTED BY THE GOVERNMENT**

Schemes and Programmes	Percentage of respondents stating after the training	
	Tamil Nadu (n=50)	Manipur (n=50)
	After	After
National Pulse Development Programme (NPDP)	94	96
Oil seed Production Programme (OPP)	90	86
Accelerated Maize Development Programme (AMDP)	96	100
Integrated Cereal Development Programme (ICDP)	94	94
Sustainable Development of Sugarcane Based Cropping System (SUBACS)	86	80
Crop Competition (sponsored by State Agriculture Department)	96	90
System of Rice Intensification (SRI)	70	100
Agriculture Technology Management Agency (ATMA)	80	100

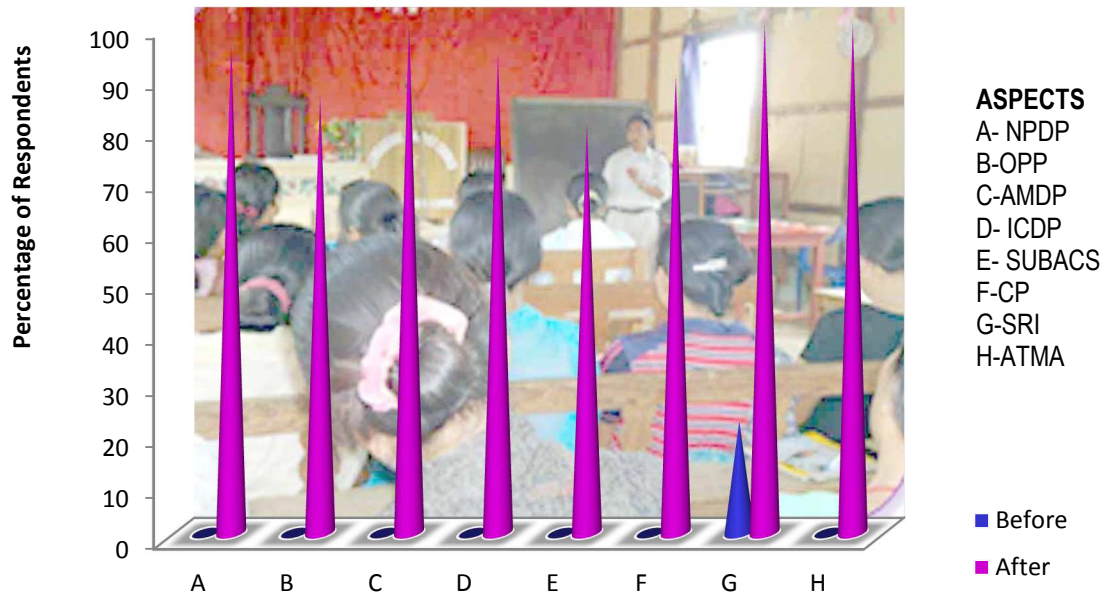
\*Multiple responses

Table XXVII depicts the schemes and programmes implemented by the government. According to the above data, the tribal farm women were not aware of the schemes and programmes, except 22 per cent of the selected tribal farm women of Manipur state who were aware of the System of Rice Intensification (SRI). After the training programme, above 70 per cent of the tribal farm women of Tamil Nadu and Manipur states respectively had become aware of all the information taught to them about the government schemes and programmes (Figure 8).

**Tamil Nadu**



**Manipur**



**SCHEMES AND PROGRAMMES IMPLEMENTED BY THE GOVERNMENT IN TAMIL NADU AND MANIPUR STATES**

**FIGURE 8**

### D.1.2. Formation of Farm Women Self Help Groups (SHGs)

The awareness of tribal farm women about Farm Women Self Help Groups are presented in Table XXVIII.

**TABLE XXVIII**  
**FORMATION OF FARM WOMEN SELF HELP GROUPS**

Aspects	Percentage of respondents stating after the training *	
	Tamil Nadu (n=50)	Manipur (n=50)
<b>Awareness</b>		
Formation of SHGs	100	100
Income generation	100	100
Importance of saving	100	100
Getting loans from bank and developmental departments	100	100
<b>Benefits</b>		
Ability to start new enterprises	100	100
Raise the standard of living	100	100
Social participation	100	100
Mass media exposure	96	92
Risk orientation	94	94
Innovativeness	92	96

\*Multiple responses

Table XXVIII, reveals that none of the tribal farm women was aware of the formation of Farm Women SHGs in both the states. Farm women SHGs was very new to them in both the states (Plate IX). The awareness training programme had enlightened them on the same. All were enthusiastic on its procedures and benefits of forming Farm Women SHGs. The impact of the training was visible resulting in the formation of two Farm Women SHGs in the

Plate 9

selected village in Ukhrul block of Manipur state and in addition, the groups had received funds from Department of Agriculture, Manipur state.

Forming of Farm Women SHGs would be beneficial and essential not only for the farmers to avail the opportunities and benefits but also for the concerned department. A win-win situation for both the borrower and banker would realize, and it would increase the credit flow and diversification of lending.

## D.2. Decision making pattern regarding agricultural and allied operations

The awareness gained by the tribal farm women on decision making pattern regarding agricultural and allied operations are presented in Table XXIX.

**TABLE XXIX**  
**DECISION MAKING PATTERN REGARDING AGRICULTURAL AND ALLIED OPERATIONS**

Aspects	Percentage of respondents stating *			
	Tamil Nadu (n=50)		Manipur (n=50)	
	Before	After	Before	After
Mode of saving	58	92	46	100
Agricultural operations	40	94	44	90
Allied operations	36	86	46	80
Marketing of agricultural produce	24	100	58	100
Investment regarding agriculture	18	92	38	96
Preparation of monthly budget	-	100	16	100

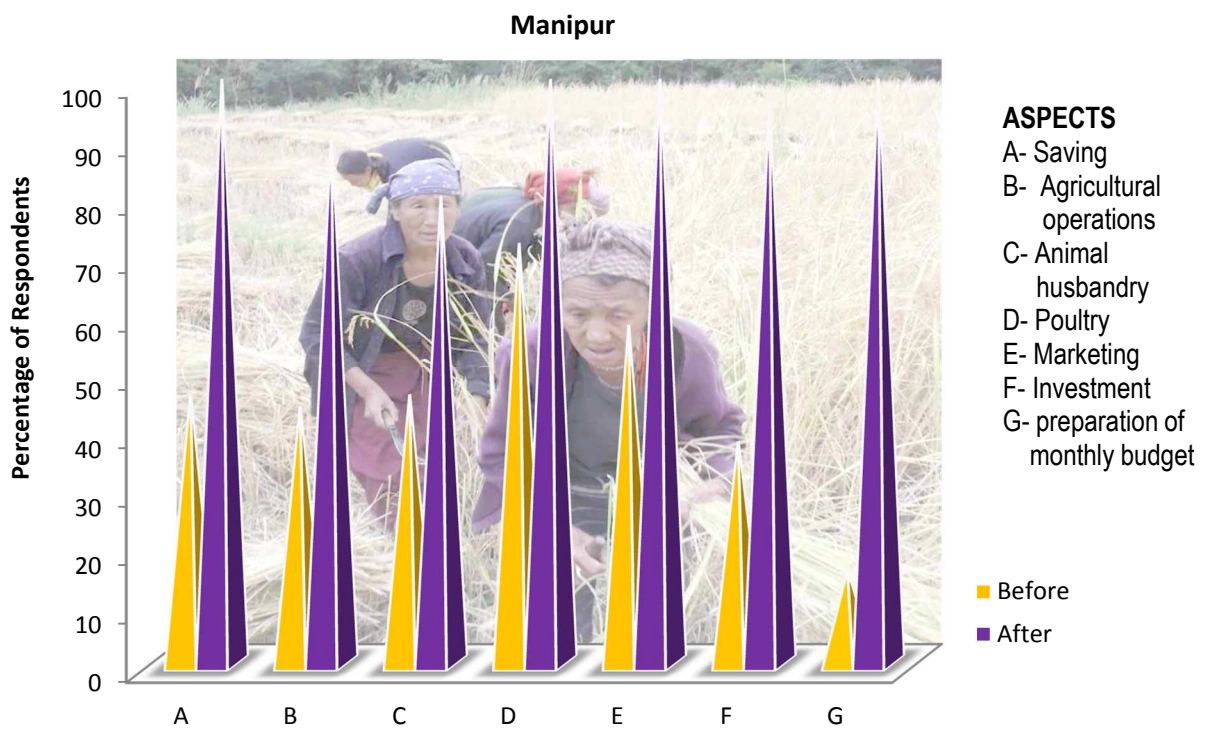
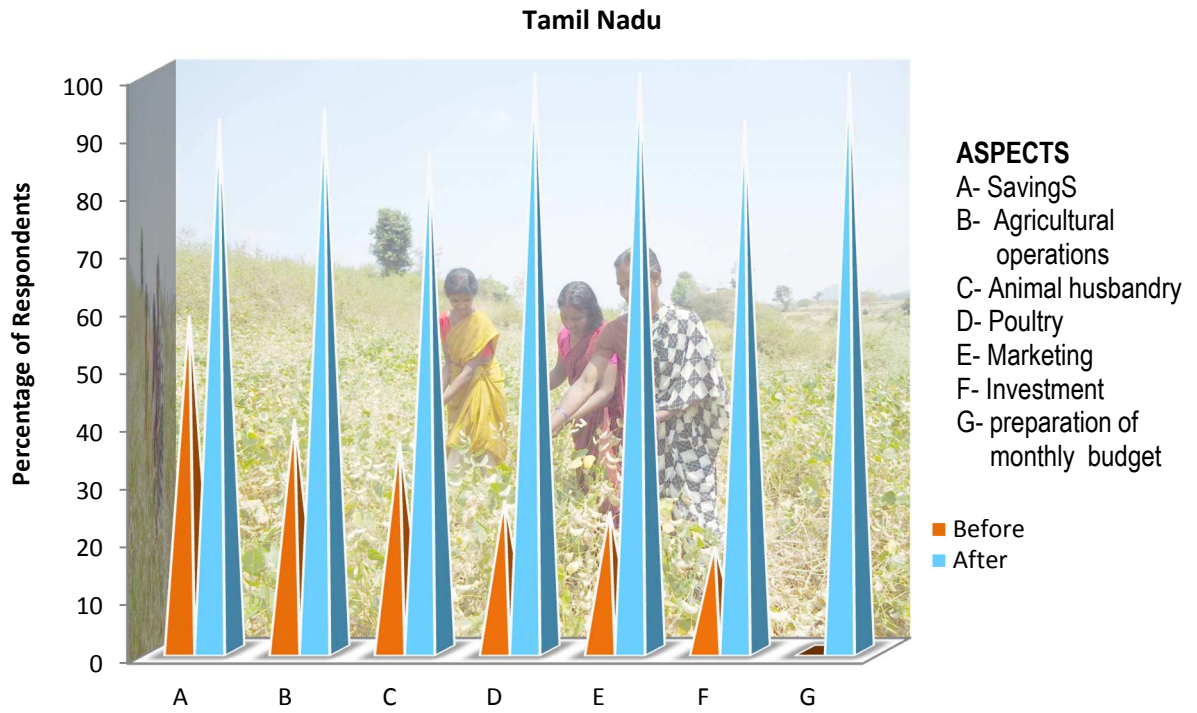
\*Multiple responses

Table XXIX, reveals that the awareness gained by the tribal farm women on decision making in agricultural and allied operations. Forty percent and 44 percent of the tribal farm women of Tamil Nadu and Manipur states respectively were already taking decision in agricultural operations. After the training, 94 per cent and 90 per cent of the tribal farm women of Tamil Nadu

and Manipur states respectively had become aware on the correct procedures in making decision about agricultural operations.

All the tribal farm women of both the states had become aware of the decision making pattern on marketing the agricultural produce. With regard to the allied operations, awareness scores are more than 50 per cent among the tribal farm women of both the states.

After the training, 92 per cent and 96 per cent of the tribal farm women of both the states respectively had become aware of the benefits of investment of their saving. Decision makers must weigh the positive and negative consequences of the decision. Effective decision-making requires good information, sound judgment, and flexibility; decision-making is not a guessing game. Decision-making helps resolve problems (Figure 9).



**DECISION MAKING ON AGRICULTURAL AND ALLIED OPERATIONS IN  
TAMIL NADU AND MANIPUR STATES**

**FIGURE 9**

### D.3. Health hazards and drudgery reduction technologies

The awareness gained by the tribal farm women on health hazards and drudgery reduction technologies are presented in Table XXX.

**TABLE XXX**

#### **HEALTH HAZARDS AND DRUDGERY REDUCTION TECHNOLOGIES**

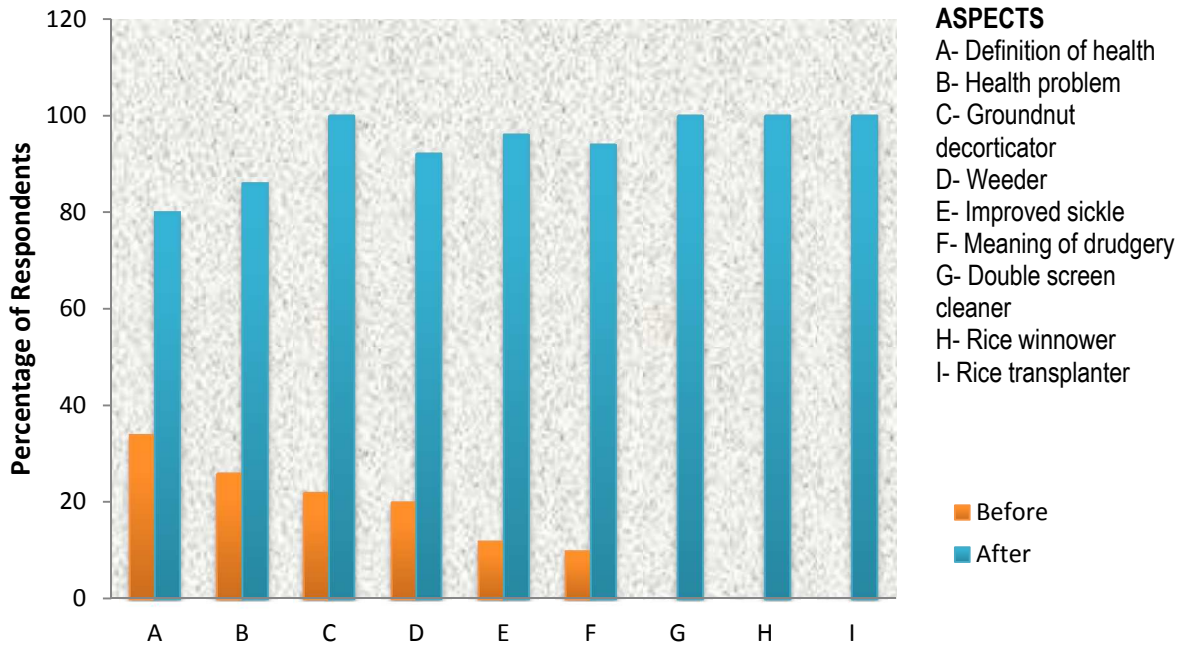
Aspects	Percentage of respondents stating *			
	Tamil Nadu (n=50)		Manipur (n=50)	
	Before	After	Before	After
<b>Health Hazards</b>				
Definition of Health	34	80	42	84
Health problems	26	86	20	92
Groundnut decorticator	22	100	-	100
Weeder	20	92	22	100
Improved sickle	12	96	26	100
Meaning of Drudgery	10	94	14	90
Double screen cleaner	-	100	-	100
Winnower	-	100	-	100
Paddy transplanter	-	100	10	100

\*Multiple responses

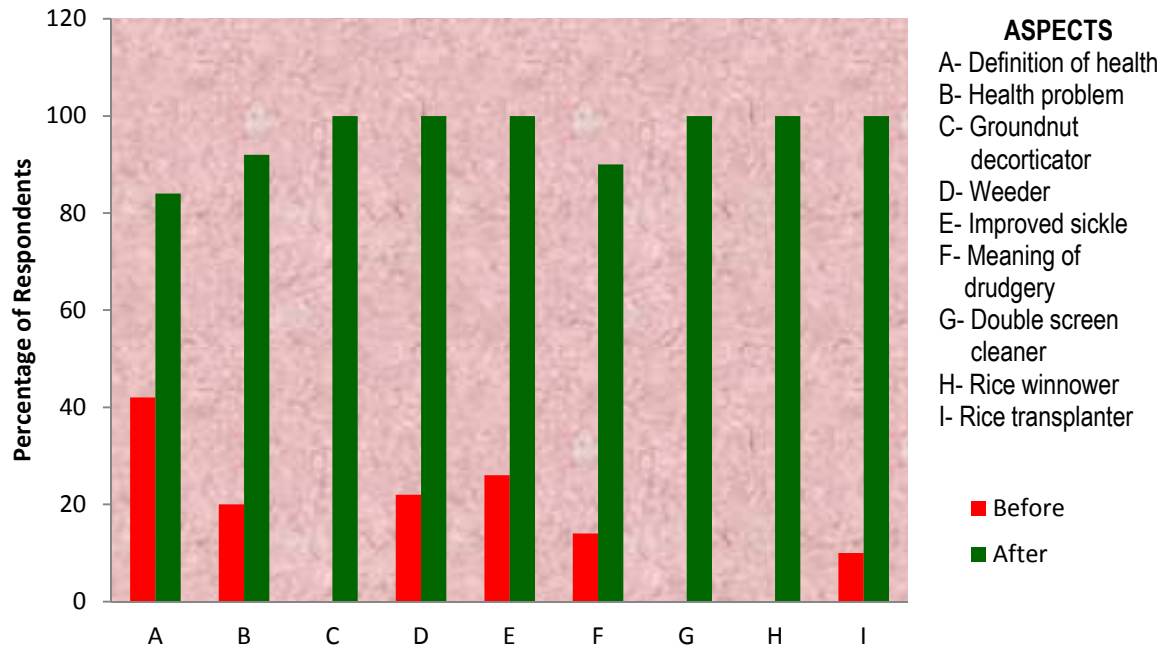
According to the above table, 94 per cent and 90 per cent of the tribal farm women of Tamil Nadu and Manipur states respectively had become aware of the meaning of drudgery due to the training. The concept of health and health hazards was deep rooted in the minds of 80-95 per cent of the tribal farm women as an effect of training programme.

Drudgery is a term used to represent the dissatisfactory experiences that constrain work performance in any activity. Suitable technology for farm women will reduce drudgery. Drudgery reduction technologies will facilitate women in relieving them from postural stress, feeling of exhaustion and difficulty in household and farm operations. Due to the training, all the tribal farm women of both the states had become aware of the drudgery reduction technologies like groundnut decorticator, paddy transplanter, double screen cleaner and winnower (Figure 10).

**Tamil Nadu**



**Manipur**



**AWARENESS ON HEALTH AND DRUDGERY REDUCTION TECHNOLOGIES IN TAMIL NADU AND MANIPUR STATES**

**FIGURE 10**

### D.3.1. Health and sanitation

The awareness gained by tribal farm women on health and sanitation are presented in Table XXXI.

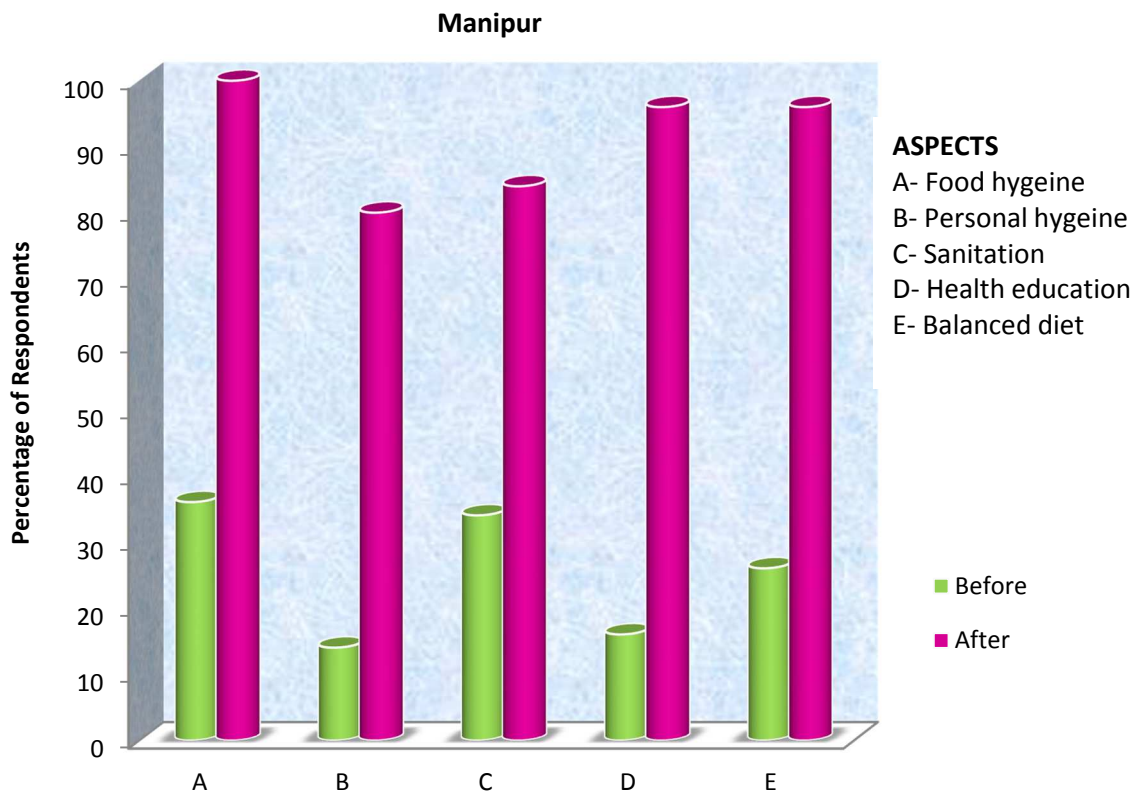
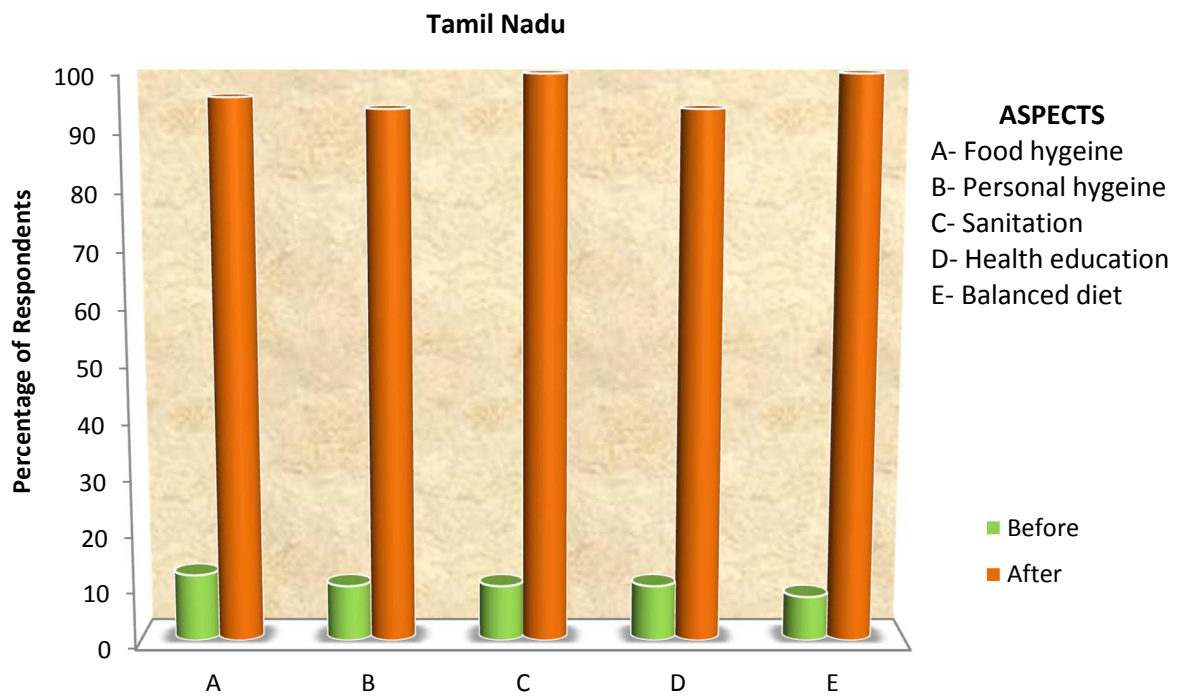
**TABLE XXXI**  
**AWARENESS OF TRIBAL FARM WOMEN ON HEALTH AND**  
**SANITATION**

Aspects	Percentage of respondents stating*			
	Tamil Nadu (n=50)		Manipur (n=50)	
	Before	After	Before	After
Food hygiene	12	96	36	100
Personal hygiene	10	94	14	80
Sanitation	10	100	34	84
Health education	10	94	16	96
Balanced diet	8	100	26	96

\*Multiple responses

The above table reveals that the training had helped about 96 per cent of the women of Tamil Nadu and Manipur states to gain awareness on food hygiene and balanced diet. The tribal farm women of Tamil Nadu (94 per cent) and Manipur states (80 per cent) had become aware of personal hygiene.

Health education is the development of individual, group, institutional, community and systemic strategies to improve health knowledge, attitudes, skills and behaviour. After the training, 94 per cent and 96 per cent of the tribal farm women of Tamil Nadu and Manipur states respectively had become aware of the need for health education. Due to the training, all the women of Tamil Nadu and 84 per cent of the women in Manipur state had become aware of sanitation (Figure 11).



**AWARENESS OF WOMEN ABOUT HEALTH AND SANITATION IN TAMIL NADU AND MANIPUR STATES**

**FIGURE 11**

#### D.4. Gender performance and legal rights

The awareness gained by tribal farm women on gender performance and legal rights is presented in Table XXXII.

**TABLE XXXII**  
**GENDER PERFORMANCE AND LEGAL RIGHTS**

Aspects	Percentage of respondents stating *			
	Tamil Nadu (n=50)		Manipur (n=50)	
	Before	After	Before	After
<b>Gender performance</b>				
Reproductive Role	54	100	50	100
Social Participation	48	80	40	86
Sharing of Responsibilities	32	100	34	100
Meaning of Gender	28	82	40	90
Gender Mainstreaming	-	90	-	96
<b>Human Right</b>				
Human Rights is the right to all humans	28	92	34	96
Article 1 (Right to equality)	28	100	24	100
Article 23 (Right to desirable work and to join trade unions)	26	100	24	100
Article 29 (Responsibilities to the community)	24	100	22	100
Origin of Universal Declaration of Human Rights	20	94	30	100
Article 3 (Right to life, liberty and personal security)	20	100	26	100
<b>National Commission for Women</b>				
Existence of National Commission for Women	20	90	18	92
<b>Function of National Commission for Women</b>				
• Investigate and examine all the matters relating to the safeguards provided for women under the constitution and other laws	30	80	26	86
• Call for special studies or investigations into specific problems or situations arising out of discrimination and atrocities against women and identify the constraints so as to recommend strategies for their removal	-	84	32	94

• Participate and advise on the planning process of socio-economic development of women	-	82	20	90
• Evaluate the progress of the development of women under the Union	-	88	8	86
<b>Inception of CEDAW</b> (Convention on Elimination of All Forms of Discrimination Against Women)	20	92	30	94
<b>Article 2</b> (States Parties condemn discrimination against women in all forms, agree to pursue by all appropriate means and without delay a policy of eliminating discrimination against women)	20	86	30	90
<b>Article 3</b> (States Parties should take in all fields, particularly in political, social, economic and cultural fields, all appropriate measures, including legislation, to ensure the full development and advancement of women)	10	88	-	80
<b>Article 14</b> (States Parties should take into account the particular problems faced by rural women and the significant roles which rural women play in the economic survival of their families, including their work in the non-monetized sectors of the economy)	-	84	-	86

\*Multiple responses

Gender is the socially constructed roles, behaviours, operations, and attributes that a given society considers appropriate for men and women. Gender mainstreaming is a globally accepted strategy for promoting gender equality. Mainstreaming is not an end in itself but a strategy, an approach, a means to achieve the goal of gender equality. Gender mainstreaming was a new concept for all the tribal farm women of both the states. After the training, more than 80 per cent and 86 per cent of the tribal farm women of both the states respectively had become aware of gender, reproductive role, social participation, sharing of responsibilities and gender mainstreaming. Due to training, 92 per cent and 96 per cent of the tribal farm women of Tamil Nadu and Manipur states respectively had become aware of Human Rights.

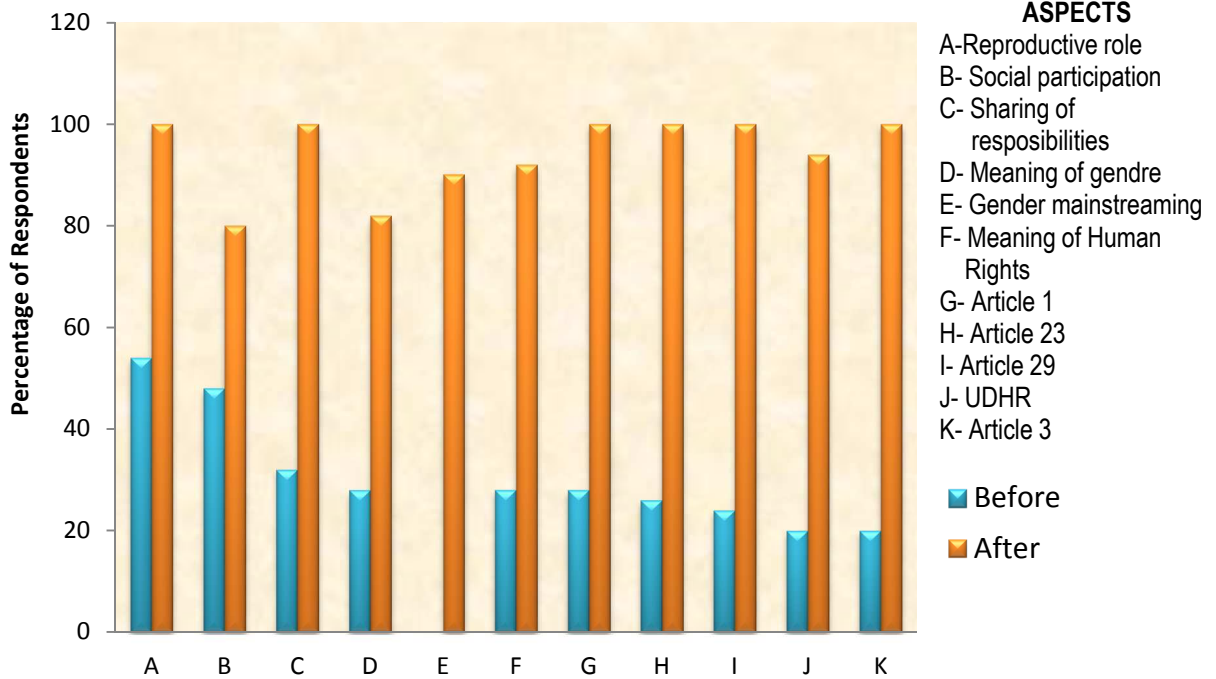
After the training programme, 94 per cent of the tribal farm women of Tamil Nadu state and all the tribal farm women of Manipur state had seen

changes on the awareness of origin of Universal Declaration of Human Rights. Human Rights is the basic right to all humans. They are necessary for freedom and maintenance of a reasonable quality of life. The training had enabled the women to get awareness on different aspects of Human Rights (Figure 12).

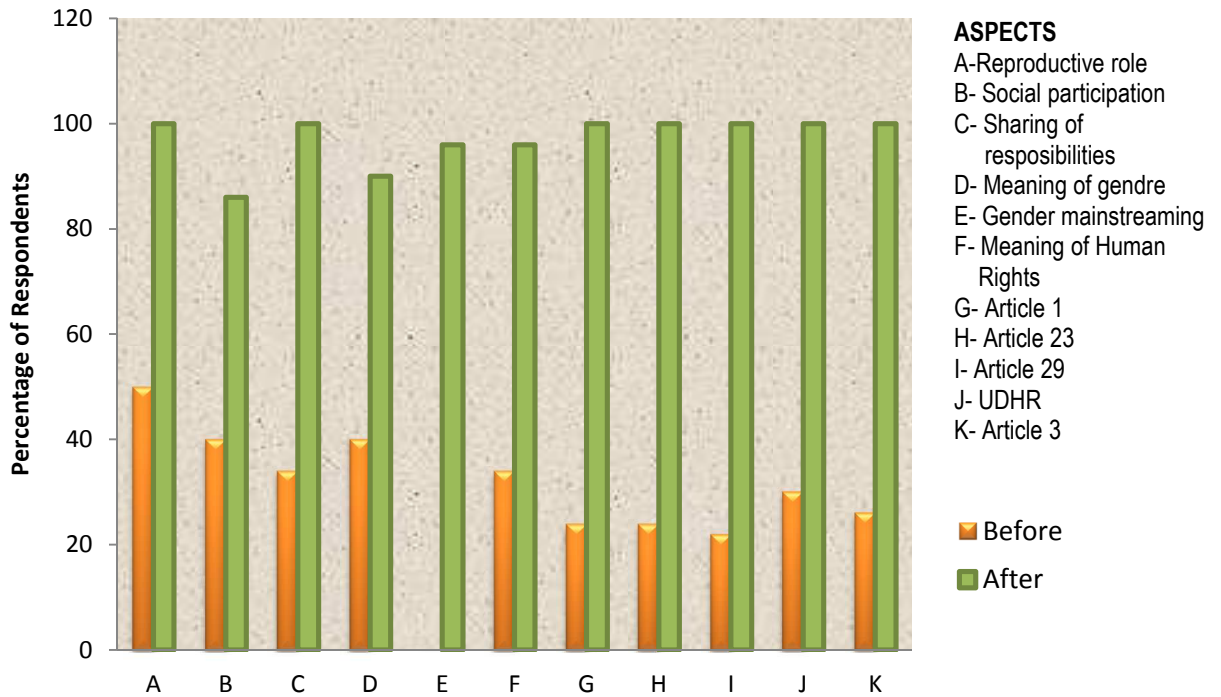
After the training, 90 per cent and 92 per cent of the tribal farm women of Tamil Nadu and Manipur states respectively had become aware about the National Commission for Women which is exclusively for the women. In Tamil Nadu state, above 80 per cent of the tribal farm women and above 86 per cent of the tribal farm women of Manipur had become aware of the various functions enumerated by the National Commission for Women. More evidence with regard to the subordinate status and position started coming in and women's issues were vociferously raised by women's movements all over the world, it was also emphasized that the state has to take the responsibility and lead in achieving the objective of gender equality by incorporating women's perspectives and concerns in its policies and structures.

When compared between the states, there was not much difference in gain in awareness scene after the training, 92 per cent and 94 per cent of the tribal farm women of Tamil Nadu and Manipur states respectively had become aware on the origin of CEDAW. The training had helped about 84 per cent of the tribal farm women of Tamil Nadu to learn the Article 2, 3 and 14 of CEDAW. In Manipur, the tribal farm women had become aware on Article 2 (90 per cent), Article 3 (80 per cent), and Article 14 (86 per cent) of CEDAW after the training (Figure 13).

### Tamil Nadu



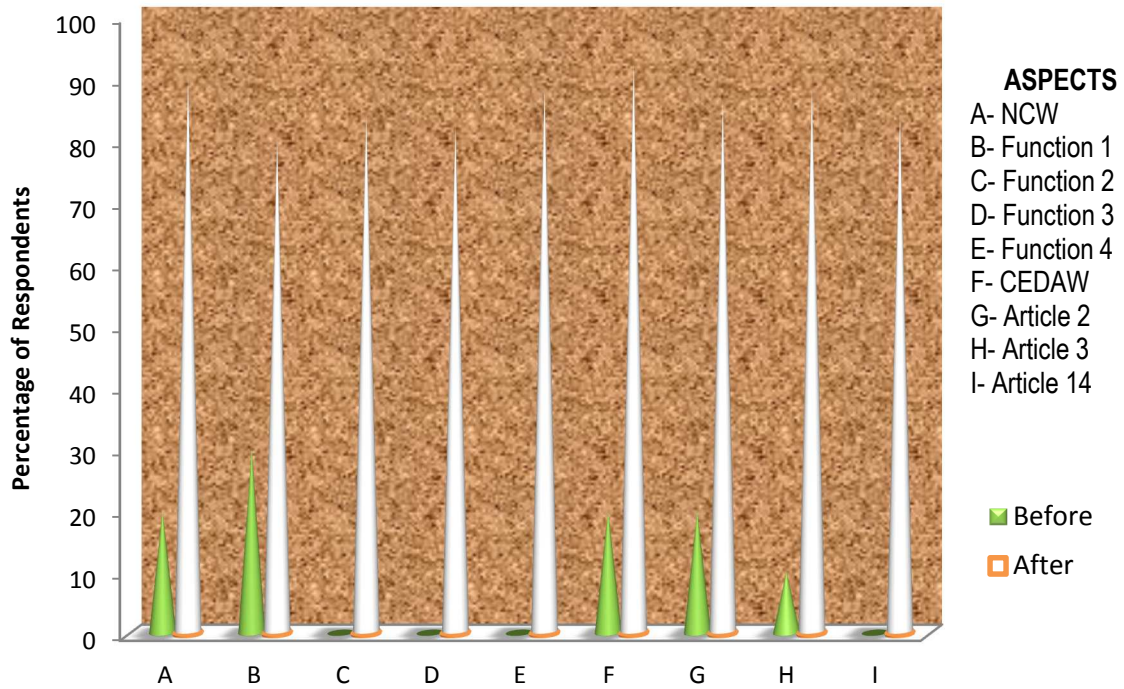
### Manipur



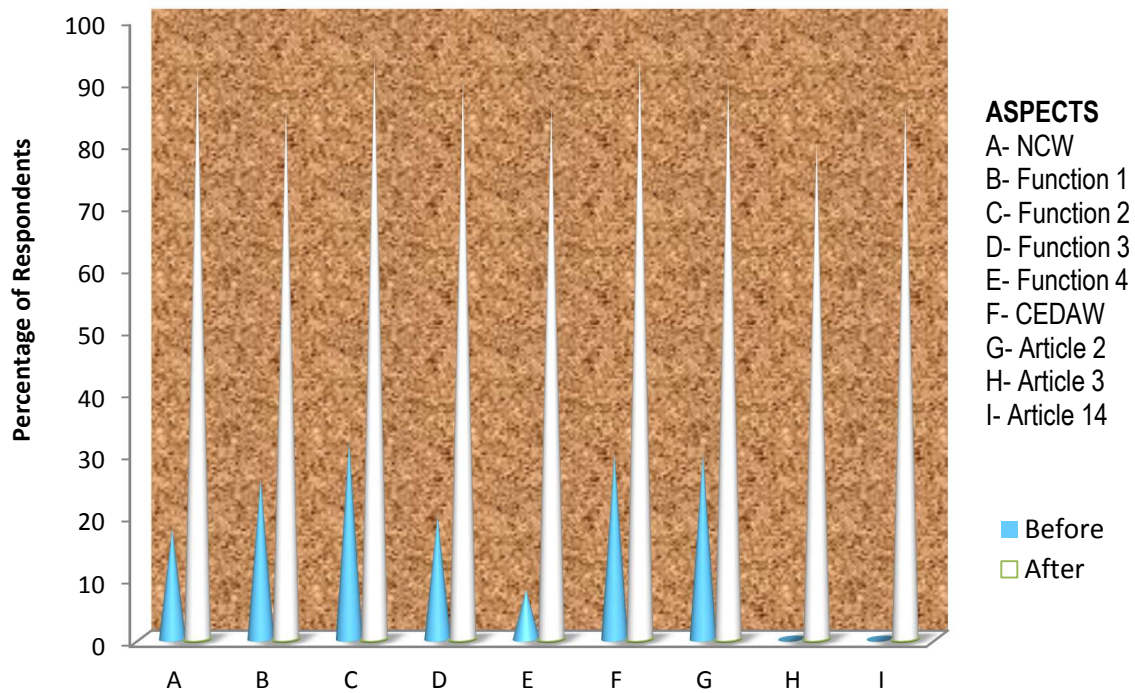
## AWARENESS OF WOMEN ABOUT GENDER PERFORMANCE AND HUMAN RIGHTS IN TAMIL NADU AND MANIPUR STATES

FIGURE 12

### Tamil Nadu



### Manipur



**AWARENESS OF WOMEN ABOUT NATIONAL COMMISSION FOR WOMEN AND CEDAW IN TAMIL NADU AND MANIPUR STATES**

**FIGURE 13**

## Analyzing of the awareness programme

Comparison of the awareness programme of the tribal farm women between the two states is presented in table XXXIII.

**TABLE XXXIII**  
**COMPARISON OF THE AWARENESS PROGRAMME BEFORE AND AFTER THE TRAINING PROGRAMME**

Aspects	Tamil Nadu			Manipur			Tamil Nadu			Manipur		
	Mean	Number	Standard Deviation	Mean	Number	Standard Deviation	t'	Degrees of Freedom	Significance	t'	Degrees of Freedom	Significance
<b>Training needs of tribal farm women and farm women SHGs</b>												
Before	1.24	50	1.2545	1.78	50	1.9825	37.384	49	**	36.943	49	**
After	8.48	50	0.8389	18.86	50	2.2679						
<b>Health Education and Decision Making Pattern</b>												
Before	2.92	50	2.1931	5.44	50	3.1439	23.136	49	**	50.412	49	**
After	58.568	50	1.9021	31.36	50	1.2898						
<b>Health hazards and Drudgery Reduction Technology</b>												
Before	1.24	50	1.2545	1.54	50	0.9521	28.059	49	**	36.522	49	**
After	8.48	50	0.8389	8.54	50	0.5789						
<b>Gender Education</b>												
Before	2.6	50	1.6537	2.86	50	1.8953	17.733	49	**	17.36	49	**
After	7.46	50	0.7343	7.72	50	0.536						
<b>Legal Right</b>												
Before	2.46	50	2.1496	3.28	50	2.7482	23.136	49	**	26.866	49	**
After	13.6	50	1.906	14	50	1.1249						

\*\* Significant at 1% level

The paired 't'-test was applied to find out whether there is a significance difference in the awareness of the tribal farm women due to the training programme with regard to the aspects on training needs regarding agriculture and allied operations, Farm Women SHGs, health problems and drudgery reduction technologies, health education and decision making pattern, gender education and legal rights. It shows that there is significance improvement before and after the awareness training programme, in both the states.

According to the hypothesis i.e., "there is no difference in awareness on agriculture and gender issues before and after the awareness training programme" was rejected.