

V SUMMARY AND CONCLUSION

Women are the backbone of agricultural workforce, farming, the vital part of Indian economy. There is a gradual realization of the key role of women in agricultural development and their contribution in the field of agriculture, food security, horticulture, dairy, sericulture, fisheries and other allied sectors. Despite their importance to agricultural production, women face severe handicaps. Recognition of their crucial role in agriculture should not obscure the fact that farm women continue to be concerned with their primary functions as wives, mothers and homemakers. To get to know about the role of the tribal farm women in the mainstream, the present study entitled **“Gender Mainstreaming in Agriculture in the Selected Tribal Settings: A Comparative Analysis of Tamil Nadu and Manipur States”** was undertaken with the overall objective:

- To understand the prevailing status of gender concepts among the tribal farm women in the tribal settings of Tamil Nadu and Manipur States and initiate efforts to enhance and sustain gender mainstreaming efforts in their agriculture and allied activities.

Specific objectives, as to

- know the socio-economic profile of tribal farm women in the selected settings.
- study the participation of women in agricultural operations and analyse the gender differential performance.
- identify the training needs of tribal farm women.
- train the selected tribal farm women on agriculture and gender issues.
- assess the awareness created among the tribal farm women on agriculture and gender issues.

Methodology

The methodology of the study was designed in the following heads:

- A. Analysis of Gender Performance in Agriculture in the Selected Tribal Settings of Tamil Nadu and Manipur States.
- B. Organising an Awareness Programme for Selected Tribal Farm Women on Agriculture and Gender Issues.

A. Analysis of Gender Performance in Agriculture in the Selected Tribal Settings of Tamil Nadu and Manipur states

The study was conducted in Tamil Nadu and Manipur states. In Tamil Nadu, Karamadai Block in Coimbatore District and Ooty Block in Nilgiris District and in Manipur, Ukhrul Block in Ukhrul District and Saikul Block in Senapati District, were selected for the study. Stratified random sampling method was used to select the subjects for the study. Twenty tribal farm women were selected from each village, making the total subjects as 400 for the survey. Data were collected using an interview schedule and analyzed with the use of appropriate statistical tools.

B. Organising an Awareness Programme for Selected Tribal Farm Women on Agriculture and Gender Issues

An awareness programme was organized based on the needs expressed by the tribal farm women. From 100 farm women surveyed in each block, 25 women who expressed their willingness were included for the training programme. Locale for the training was decided according to the convenience of the tribal farm women. The IEC (Information, Education and Communication) materials were prepared for the training programme. The training was conducted with the help of appropriate resource persons from the Government Departments as well as Non-Government Organizations (NGOs) and educational institutions in both the states. The training programme was scheduled for ten days. Training was imparted to the tribal farm women on gender, legal rights, government schemes and programmes and affordable farming technologies. Check list was used to assess the awareness of the women on agriculture and gender issues.

Findings of the study:

A. Profile of tribal farm women

General background

- The tribal farm women of both the states, 35.5 per cent in Tamil Nadu and 31.5 per cent in Manipur state respectively, were in the age group of 31-40 years.

- About 45.5 per cent and 40 per cent of the tribal farm women, respectively of Tamil Nadu and Manipur states, were illiterate.
- In Tamil Nadu, 98 per cent were Hindus and in Manipur all the tribal farm women were Christians.
- A majority, 72 per cent and 80.5 per cent of the tribal farm women, respectively of Tamil Nadu and Manipur states, belonged to nuclear family.
- Among the tribal farm women, 55 per cent and 54.5 per cent of Tamil Nadu and Manipur states respectively belonged to medium size family, having 4-6 family members.

Sources of income

- Seventy per cent and 62.5 per cent of the families of tribal farm women of Tamil Nadu and Manipur states respectively, had monthly income of ₹2001- 4500.
- Through **dairy farming**, 56.38 per cent of the tribal farm women of Tamil Nadu earned ₹5001-10,000 per month, whereas in Manipur state, 85.71 per cent of the tribal farm women earned less than ₹5000 per month as their income
- Thirty seven per cent of the tribal farm women of Manipur state earned ₹15,000 and above per annum, from **piggery farming**.
- All the tribal farm women of Tamil Nadu and 68 per cent of the tribal farm women of Manipur respectively were earning less than ₹5000 per annum from **poultry farming**.
- Eighty per cent of the tribal farm women of Tamil Nadu and all the tribal farm women of Manipur were earning ₹5001-10,000 per annum from **goat rearing**.

Details of agriculture

- 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 60 per cent and 55 per cent of the families of tribal farm women of Tamil Nadu and Manipur states respectively had owned less than 2 acres of land.

Crops cultivated

- The maize was the major crop cultivated by the tribal farm women of Tamil Nadu whereas in Manipur state, they cultivated maize as well as paddy.
- In Manipur, different varieties of beans were cultivated. In Tamil Nadu, horsegram and channa dominated the other crops. The vegetables and greens were produced by the tribal farm women of both the states, based on their consumption pattern.
- Due to the different climatic condition, the varieties of crops cultivated were also different in both the states.

Problems faced by tribal farm women

- The constraints faced by the women of Tamil Nadu and Manipur states seemed to be the same. The financial crisis was the major problem, which they managed by getting loans from SHGs and local moneylenders, for agricultural operations and household maintenance.
- In Tamil Nadu state, 85.5 per cent of the tribal farm women had reported that natural calamities such as flood, drought, cyclone and plague of animal and insect were affecting their livelihood. Eighty five per cent expressed that lack of adequate facilities for irrigation affected the implementation of agricultural operations.
- In Manipur state, 97 per cent had revealed that marketing the agriculture produce was the major problem. And also, 55 per cent expressed about the lack of irrigation facilities as a problem in operating agriculture.
- All the tribal farm women of Tamil Nadu state complained of back pain as the main health problem, which was followed by hand and leg pain (99.5 per cent). In Manipur state, eighty four per cent of the tribal farm women complained of joint pain as the major health problem followed by back pain (82.5 per cent).

Training needs of tribal farm women

- Information regarding the selection of seeds and sowing, transplanting, manuring and nurturing, weeding, plant protection, irrigation and post harvesting technologies, were the aspects identified as training needs. Steps were taken to cover the above aspects in the awareness training.
- The women also expressed the need to know about mushroom cultivation, goat rearing, apiculture, dairy farming, poultry farming, farm forestry and piggery farming. Due to time constraints, the training schedule could not include these allied aspects. But efforts were taken to approach the Development Departments, requesting them to take up the training and fulfill the requirements of women. Accordingly the trainees had been informed to approach the concerned departments for follow up.
- The welfare programmes implemented by government for the tribal people were Central Sector Scheme, Centrally Sponsored Scheme, Educational Schemes for Tribals, Employment Assurance Scheme, Jawahar Gram Samridhi Yojana, Tribal Cooperative Marketing Development Federation of India, Tribal Sub- Plan, Village Electrification and Vocational Training Centre.

B. Participation of tribal farm women in agricultural operations and gender performance analysis

Role of tribal women in agriculture:

Time schedule for agricultural and allied operations

The women spent 5-6 hours in carrying out agriculture operations, indicating that there was not much difference between the two states. The women of both the states spent about two hours for the care of cattle.

Pattern of wage distribution

- In both the states, ploughing was done exclusively by men; getting ₹200 and above per day as wage, during the peak seasons.
- In Tamil Nadu state, there was a difference in wage distribution between men and women for the same work. During harvesting, 45 per cent of

women earned ₹150-200 per day whereas, 55 per cent of men earned ₹200 and above per day. For threshing, 34 per cent of women earned ₹151 -200 per day whereas, 76 per cent of men earned ₹200 and above per day in Tamil Nadu.

- In Manipur state, there was no difference in wage distribution among men and women all the tribal farm women revealed that the labourers were getting equal pay for the equal work.

Use of implements

- All the tribal farm women of Tamil Nadu and Manipur states used traditional implements like spade and country plough. Spade was used by both men and women and country plough was exclusively operated by men alone in both the states.
- In Tamil Nadu state, only eight per cent of the tribal farm women operated electric or diesel motor to lift water. Sprayer and tractor were operated by men alone.
- In Manipur state, as expressed by tribal farm women, sprayer (66 per cent) and tractor (61 per cent) were operated by men alone.

Gender performance analysis in agricultural operations

- In field preparation, cleaning and preparing land were the agricultural operations solely carried out by the women (above 94 per cent) of both the states.
- Land ploughing and leveling (77 per cent), forming drainage channel (66 per cent) and forming of ridge and furrows (61 per cent) were jointly performed by both men and women in Tamil Nadu. In Manipur, men alone participated in land ploughing and leveling (68 per cent), forming drainage channel and forming of ridge and furrows (54 per cent).
- Above 76 per cent of the tribal farm women of both the states reported that sowing and seed treatment were solely carried out by the women themselves.

- According to 97 per cent and 48 per cent of tribal farm women of Tamil Nadu and Manipur states respectively did the weeding process by themselves.
- Above 43 per cent of the tribal farm women of both the states were taking main role in plant protection measures. In Tamil Nadu, 68 per cent of both men and women jointly participated in irrigation.
- In Tamil Nadu, bundling (30 per cent) and reaping crops (95 per cent) were carried out by women alone and the process of transporting of harvest to threshing yard was done by men alone (91 per cent). Identifying the sources of market price was done by women alone in Tamil Nadu (31 per cent) and in Manipur (88 per cent).
- In Manipur, above 58 per cent of the tribal farm women participated in bundling and transporting of harvest to threshing yard. Forty per cent of both men and women together participated in reaping the crops.
- Drying and storing were done by women alone (above 58 per cent) and only ten per cent of men and women jointly participated in these operations in both the states.
- 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, but post harvesting, there is a 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 proved that the educational status has no influence with respect to participation in agricultural operations among the tribal farm women of Manipur state.
- Paired 't' test was applied to compare the participation of tribal farm women in agricultural operations between the two states has significant

difference, but in cultivation where there is no significant difference between the two states.

- There is no difference in the agricultural operations of tribal farm women of Tamil Nadu and Manipur states.

Gender performance analysis in allied operations

- In **dairy farming**, the operations carried out by the women alone were, cleaning of shed (90 per cent) and feeding the cattle (89 per cent) in Tamil Nadu, whereas in Manipur, cleaning of shed (62 per cent) was carried out by women alone.
- Grazing the cattle (59 per cent) was carried out through joined efforts by both men and women in Tamil Nadu whereas in Manipur, men alone (97 per cent) carried out grazing of cattle.
- In both the states, 57-60 per cent of both men and women jointly participated in collection of cattle feed, feeding the cattle and taking care of sick cattle.
- In Tamil Nadu, men alone took the main role in operations such as milking (83 per cent) and marketing of milk and milk products (89 per cent).
- Above 91 per cent of the tribal farm women expressed that women alone carried out the operations related to **poultry farming**, in both the states.
- 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 venture i.e., both men and women together.
- In **goat rearing**, above 52 per cent of the tribal farm women solely carried out the activities such as cleaning of goat shed, feeding and collecting feeds in both the states.
- In Tamil Nadu, men joined the women in the operations such as grazing the goat (51per cent), collecting feeds (44 per cent) and care and maintenance of goat (35per cent) and in Manipur also men too joined the women in the operations such as grazing the goat (60 per cent), care and maintenance of the goat and marketing of goat (100 per cent).

- 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.
- Paired 't' test was applied to compare the participation in allied operations among the tribal farm women of Tamil Nadu and Manipur states and found it has a significant difference.
- There is no significant difference of participation in allied operations of tribal farm women of Tamil Nadu and Manipur states.

C. Decision making pattern of tribal farm women in agricultural operations

Gender performance in decision making pattern related to agricultural operations

- In both the states, above 50 per cent of tribal farm women expressed that women alone were taking decisions regarding selection of seeds, transplanting, weeding, harvesting and storage of the produce.
- Regarding the preparation of 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.
- In Tamil Nadu and Manipur states, above 70 per cent of women alone was found taking decisions on the mode of saving for the family income.
- In Manipur, fixing the rate for selling the agricultural produce, mode of getting payment for the produce sold and quantity to be sold were decided solely by tribal farm women (above 69 per cent) whereas, in Tamil Nadu,

both men and women (above 82 per cent) took part in taking decisions for the same operations.

- In the management of land, men and women (65-75 per cent) of both the states jointly made decisions regarding sale of land, leasing in land and leasing out land.
- Eighty two per cent and 73 per cent of both men and women of Tamil Nadu and Manipur states respectively took joint decisions in arranging for loans for agricultural operations.
- Decisions on deciding wage rate for agricultural labours were taken jointly by men and women in both the states i.e., Tamil Nadu (78 per cent) and Manipur (34 per cent).
- 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 in investment regarding agriculture and agricultural inputs, has a 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 in agricultural operations, investment regarding agriculture and arranging for loans has a 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, but in agricultural operations, investment regarding agriculture, mode of saving and amount to be saved has a 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

in agricultural operations it has a significant difference among the educational status.

- Paired 't' test was applied to compare the decision making pattern in allied operations among the tribal farm women of Tamil Nadu and Manipur states, there is a significant difference between the two states, except in arranging for loans.
- There is no difference in decision making pattern in agricultural operations among the selected tribal farm women of the two states.

Gender performance in decision making pattern related to allied operations

- In **dairy farming**, 81 per cent of the tribal farm women of Tamil Nadu state took decisions by themselves regarding type and feed ratio for cows, type and feed ratio for calves and disease management and in Manipur, 57 per cent and 66 per cent of the women took decisions independently regarding type and feed ratio for cows and type and feed ratio for calves respectively.
- In both the states, operations such as type and feed ratio for broiler/hen, typed and feed ratio for layer, disease management and marketing of eggs/broiler/hen where decision was made solely by women alone as stated by the tribal farm women (above 70 per cent) in **poultry keeping**.
- 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**.
- There was not much difference in taking decision by the tribal farm women related to **goat rearing** in both the states.
- A majority of tribal farm women of Tamil Nadu were taking decision by themselves in feeding (90 per cent), cleaning of animal shed (80 per cent), care and maintenance (72 per cent) and grazing the goats (50 per cent) respectively in goat rearing.
- In Manipur state, feeding (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 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 there is no significant difference among the educational status.
- Statistical analysis using F-test showed 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.
- Paired 't' test was applied to compare the decision making pattern of the two states in allied operations and found that there is a significant difference between the two states.
- There is no difference in decision making pattern in allied operations among the selected tribal farm women of the two states.

D. Assessment of the awareness training

Agriculture operations

- Awareness of the tribal farm women of Tamil Nadu state had become aware of control of pest and seed processing (100 per cent), selection of seeds (96 per cent), storage of farm product (94 per cent) and seed treatment (92 per cent) after the training.
- 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 above 60 per cent of the tribal farm women of both the states gained awareness on fertilizer and pesticide application.

Schemes and programme implemented by the government

- Tribal farm women of Tamil Nadu and Manipur states were not aware of government schemes, before the training. Only 22 per cent of the women of Manipur state were aware of the System of Rice Intensification (SRI) scheme.
- After the training programme above 70 per cent and 80 per cent of the tribal farm women of Tamil Nadu and Manipur states respectively had become aware of Accelerated Maize Development and Crop Competition (sponsored by State Agriculture Department) followed by National Pulse Development Programme (NPDP) and Integrated Cereal Development Programme (ICDP), Oil seed Production Programme (OPP), Sustainable Development of Sugarcane base Cropping System Area, Agriculture Technology Management Agency (ATMA) and System of Rice Intensification (SRI).
- Before the training none of the tribal farm women in both the states were aware of the formation of Farm Women SHGs.
- The training had helped to all the tribal farm women of both the states in learning the importance of forming Farm Women SHGs after the training.
- The impact of the training was visible as it resulted in the formation of two Farm Women SHGs in the selected villages in Ukhrul block of Manipur state and in addition the groups had received funds from Department of Agriculture, Manipur state.

Decision making in agricultural and allied operations

- The training had helped about 90 per cent of tribal farm women of Tamil Nadu and Manipur states to become aware of the correct procedures in making decision about agricultural operations.
- Above 80 per cent of the tribal farm women of both the states had gained awareness on the decision making pattern in allied operations.
- Thirty eight per cent of the tribal farm women of both the states were already aware of the benefits of investment. After the training, 92 per cent and 96 per cent of the tribal women in Tamil Nadu and Manipur

respectively had become aware about the benefits of investment of their saving.

Health hazards and drudgery reduction technologies

- The training had helped 94 per cent and 90 per cent of the tribal farm women of Tamil Nadu and Manipur states respectively to become aware of the meaning of drudgery in agricultural operations.
- The concept of health and health hazards got deep rooted in the minds of 80-95 per cent of the tribal farm women of both the states as an effect of the training programme.
- Due to the training, all the tribal farm women of both the states had become aware of the drudgery reduction technologies such as groundnut decorticator, rice transplanter, double screen cleaner and winnower.
- The training had helped about 96 per cent of the women of both Tamil Nadu and Manipur states to gain awareness on food hygiene and balanced diet.
- Ninety four per cent and 80 per cent of the tribal farm women of Tamil Nadu and Manipur states had become aware of personal hygiene after the training.
- Due to the training, all the tribal farm women of Tamil Nadu and 84 per cent of the women in Manipur state had become aware of sanitation. Ninety four 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 also.

Awareness on gender performance and legal rights

- The training had created awareness among tribal farm women of both the states on the aspects such as meaning of gender (above 82 per cent), social participation (above 80 per cent), reproductive role (100 per cent) and sharing of responsibilities with the spouse (100 per cent).
- Gender mainstreaming was a new concept for all the tribal farm women of both the states. Ninety per cent of the tribal farm women in Tamil Nadu

and 96 per cent in Manipur state expressed that they had learnt the meaning of gender mainstreaming due to the training.

- Due to the training, 92 per cent and 96 per cent of the tribal farm women of Tamil Nadu and Manipur states respectively became aware of Human Rights.
- The training helped 94 per cent of the tribal farm women of Tamil Nadu state and all the tribal farm women of Manipur state to become aware of the origin of Universal Declaration of Human Rights.
- The training was the source for 90 per cent and 92 per cent of the tribal farm women of Tamil Nadu and Manipur states respectively to learn about the National Commission for Women which is exclusively established for the protection of women; due to the training, 92 per cent and 94 per cent of tribal farm women of Tamil Nadu and Manipur states respectively had become aware of the origin of CEDAW.
- Awareness on the various functions enumerated by the National Commission for Women were imparted successfully on 80 per cent of the women in Tamil Nadu and 86 per cent of the women in Manipur.
- The paired 't'-test was applied to find out whether there is a significant difference in the awareness of the tribal farm women regarding gender education, legal rights, health problem and drudgery reduction technologies, health education and decisions making pattern, training needs and formation Farm Women SHGs before and after the training. A significant improvement had seen in both the states before and after the training.
- There is no difference in the awareness about agriculture and gender issues before and after the awareness training programme.

Limitation of the study:

- The present study was confined only to the tribal farm women of Tamil Nadu and Manipur states and other states could not be covered.
- It was difficult to get the cooperation and responses from the tribal farm women, taking a long time to develop rapport.

- Lack of road facilities and inadequate communication sources made it difficult for the investigator to reach the tribal areas and meet the women.

Future scope for the study:

The experience in the present study “Gender Mainstreaming in Agriculture in the Selected Tribal Settings: A Comparative Analysis of Tamil Nadu and Manipur States” had given scope for future research on the following lines:

- Gender mainstreaming and Food Security: A social transformer among the tribal farm women in the selected states.
- An analysis of gender mainstreaming in poverty reduction policy in the selected tribal settings.

Recommendations

The recommendations emerged out of the research work are presented below:

Training

- Training on appropriate, affordable technologies for tribal farm women, especially marginal and small farming communities should be conducted based on their needs.
- Rational and practical orientation is needed for tribal farm women to take part actively in decision making process in the agriculture related operations, to bring about gender mainstreaming.
- Awareness should be created among the tribal farm women regarding the existing rights and provide legal aid, assistance and counseling.

Support Services

- Provision needs to be made with market support policy for tribal farm women to bring them in the mainstream arena of development.
- Periodic training should conduct on livestock management, provision of soft loan for animal sector including backyard poultry, piggery, goatery and fish farming for the tribal farm women.

- Farm Women SHGs should be formed among the tribal farm women.
- Adequate Extension Services for agriculture and livestock management should be provided to tribal farm women.
- Provision of agricultural processing facilities can be provided in tribal areas in Public Private Partnership mode for value addition of agriculture produce and help the women get higher return for their produce.
- Tribal farm women should be involved in decision making bodies to bring structural changes, which will bring changes in the gender relations in the society.

Conclusion

Tribal farm women play a vital role in agricultural development including crop production and livestock management, but they remain backward due to traditional values, illiteracy, superstition and many other social and cultural factors. The participatory role of tribal farm women in improving their living conditions by fully exploring natural endowments and alternative uses must find an appropriate place in the strategic approach. Through gender mainstreaming, tribal farm women can be brought in the arena of development in agriculture field. Mainstreaming of women in agriculture will help in solving the basic issues revolving around appropriate income generating operations for the technological options, extension and institutional support. This will in turn enable to decide on a strategy which will enable the women to become equal partners in the process of national development. Utilization of appropriate technologies by tribal farm women depends upon the effective sources of information and channels to which they are generally exposed directly or indirectly. To increase the production and self reliance of the tribal farm women, dissemination of information related to agriculture and allied operations is the need of the hour and it will pave way in bringing gender equality.