

PARTICIPATION OF TRIBAL WOMEN IN AGRICULTURE AND ALLIED ACTIVITIES IN TRIPURA STATE

Thesis submitted in part fulfilment of the requirement for the Degree
of Master of Science (Agriculture) in AGRICULTURAL EXTENSION
to the Tamil Nadu Agricultural University, Coimbatore.

By

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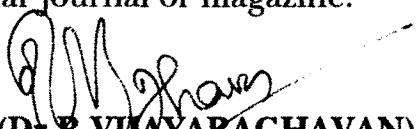
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CERTIFICATE

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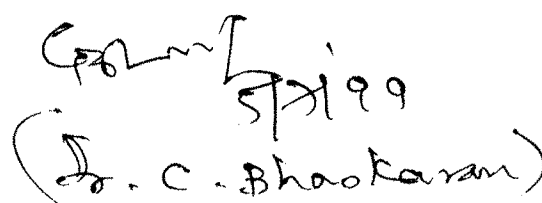

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PHANI BHUSAN JAMATIA

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LIST OF ABBREVIATIONS USED

ADP	-	Agricultural Development Programme
AHP	-	Animal Husbandry Programme
BLB	-	Bacterial Leaf Blight
BPH	-	Brown Plant Hopper
IRDP	-	Integrated Rural Development Programme
NP	-	Non-participation
SD	-	Self Doing
SV	-	Supervising
TWS	-	Tribal Welfare Scheme

ABSTRACT

ABSTRACT

PARTICIPATION OF TRIBAL WOMEN IN AGRICULTURE AND ALLIED ACTIVITIES IN TRIPURA STATE

BY

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This research study entitled "Participation of Tribal women in Agriculture and Allied Activities in Tripura State" was undertaken in 3 blocks viz., Matabari, Killa and Bagafa of South Tripura district of Tripura state. The study was conducted with the specific objectives of assessing the extent of participation of tribal women in agriculture and allied activities and also assessing the extent of participation of tribal women in decision making in agriculture and allied activities. The study attempted to study the socio-psychological and socio-cultural characteristics of tribal women, their relationship with the participation in agriculture and allied activities and also with their participation in decision making. It was attempted further to find out their preferences and non preferences in differential participation and their 'Hope of Success' and 'Fear of Failure' in agriculture and allied activities. It was also aimed to findout their sources of farm information and

their perceived credibility. Their training needs in agriculture and allied activities were assessed. The participation of tribal women in development programmes was also attempted.

It was found that the tribal women participated in almost all the agriculture and allied activities as selfdoers, assistants or supervisors. Their participation by self doing was high in the activities like, stubble collection, sowing, transplanting, weeding, harvesting, threshing, drying and storing. In activities like forming ridges and furrows, forming drainage channel, basal application of FYM, Earthing up irrigation and winnowing, majority of them participated by way of providing assistance or supervision. In the men oriented activities like ploughing, levelling field, basal application of fertilizer, seed treatment, top dressing of fertilizer, plant protection measures and marketing, majority of them reported non-participation. They participated by selfdoing in all the activities of dairy management, poultry keeping, piggery and goat rearing except taking care of sick animals and birds and marketing activities where they participated by way of providing assistance. In farm forestry, most of them reported non participation in all the activities.

Tribal women participated less in self decision making in agriculture and allied activities. Majority of tribal women were found to participate in joint decision making with spouse / elders in agriculture and allied activities.

Majority of the tribal women respondents were middle aged and illiterates. Majority of them owned marginal size land holding. The occupation of most of the tribal women was agriculture and allied activities and their annual income was medium. Majority of them had low level social participation and they were not members of organisation. Majority of tribal women had low level of mass media participation and poor contact with extension agency. They were neither localite or cosmopolite in nature and their sources of credit were friends and relatives followed by private money lenders. Tribal women's scientific orientation, economic motivation, innovativeness, self-reliance, achievement motivation, progressivism-traditionalism, intra-tribal communication, family norms and gregariousness were of low to medium level but their fatalism-scientism and religious belief were high in order.

The cultural characteristics of tribal farm women revealed that their main food was rice with dried fish and vegetables. Chewing betelvine, smoking bedi and drinking country liquor were common. Cent per cent of tribal women wore traditional dress but few younger generation girls wore sarees and blouses when they happened to go out of their hamlets. The percentage of school going girls had increased. The tribals have their traditional village head man or leader called 'Choudhury' and majority of them were in favour of traditional leader. Generally child marriage is not prevelant among the tribes. Tribals have two types of dowry system-Bride price and dowry.

The variables occupational status, gregariousness, fatalism-scientism and religious belief showed positive and significant association with participation of tribal women in agriculture and allied activities. The variable innovativeness alone showed significant and positive association with participation of tribal women in decision making in agriculture and allied activities.

Non-involvement of tools and machinery, non-requirement of technical knowledge and skills and physical suitability of the activities were the reasons attributed for preference of activities like, weeding, transplanting, harvesting, threshing and storing by tribal women. Non-preference of the activities like application of FYM/fertilizer, plant protection measures, irrigation, ploughing and marketing were expressed by tribal women because of complexity involved in the practice, requirement of more physical strength and more out door involvement.

Majority of the tribal women had 'Hope of Success' in agriculture and allied activities. Uneconomic holding of land, water scarcity for irrigation, limited opportunities for farm employment, degradation of soil fertility, pest disease incidence, low price and fluctuations of the prices of farm produces were the stated reasons for their 'Fear of Failure' in agriculture. High initial investment, high cost of maintenance and lack of marketing facilities were the reasons attributed for 'Fear of Failure' in dairy. Incidence of epidemic, endemic diseases and high initial investment were the reasons for 'Fear of Failure' in poultry and piggery.

The measures suggested by the tribal women for going ahead with better farming included land reform programme, better transport and marketing facilities, better irrigation facilities, technical guidance to tribal women, better price for agriculture products, soil and water conservation measures, supply of good quality seeds, better labour wages, better credit facilities, setting up of hiring centre for agricultural implements, more number of schemes on livestock and plantation crops.

None of the tribal women regularly used institutional sources. AAO can only be termed as institutional source of farm information and the most credible source. Most of tribal women reported non-institutional sources as rare sources of farm information and among non-institutional sources, family members were considered as the regular and the most credible source of farm information. Among mass media, radio was regular and the most credible source of farm information.

Majority of the tribal women expressed training needs in pest, disease management and fertilizer application in agriculture. In allied activities also, majority of them wanted training in disease management.

Majority of the tribal women were aware and participated in the development programmes like Tribal Welfare Scheme, Integrated Rural Development Programme, Agricultural Development Programme, Animal husbandry and Fishery Development Programme which were implemented in their villages.

INTRODUCTION

**PARTICIPATION OF TRIBAL WOMEN IN AGRICULTURE AND
ALLIED ACTIVITIES IN TRIPURA STATE**

1

CHAPTER - I

INTRODUCTION

Tripura state has a large concentration of tribal population which constitutes 31 per cent of the total state population (27,44,827 - 1991 census) whereas, the Scheduled Tribe population in India is 51.63 million which accounts for 7.76 per cent of the total population (1991 census). Two-third of the state's geographical area are high hills, hillocks and upland with heavy soil which enjoys humid and sub-tropical climate with moderate rainfall, sets in March and continues upto October.

The tribals normally dwell in hills and dense forests which will be inaccessible to reach as they are far-flung. They are found to be mostly backward, poor, illiterate and uneconomic shifting cultivation and collection of minor forest produces characterised their backwardness and low productivity in yields, insufficient to meet even basic minimum needs. On the whole, the tribals are very simple minded with an equalitarian ethos, by and large. At the sametime, superstition and strong tradition have made them to be very much afraid of new ideas, practices piercing from outside their command premises.

They also lead an isolated life and distinct by their own cultural environment. This natural isolation has deprived them of the fruits of science and technologies of modern days. In Tripura, 72 per cent of the total tribal population depends on traditional type of cultivation including shifting cultivation (estimated area 1.1 lakh ha) either directly as land owner or indirectly as agricultural labourer. However, better off tribals have adopted settle plough cultivation on fertile soil on plains or valleys. The important crops grown are rice, maize, jowar, bajra, mesta, sesamum and hilly vegetables.

The tribal women (48% of the total tribal population) occupy an important place on the socio-economic structure of the people who live in far-flung areas. The tribal women are active and agile in different agricultural activities and extend a considerable economic support for the family. They are more industrious and hard working than men, work at home as well as in the field.

There is no sphere of life untouched by tribal women. Like a woman of other sector, a tribal woman starts working from childhood, then as a girl and more when they get a life partner and work on and on from motherhood to grand motherhood and beyond.

For the whole year, tribal women work equally hard as male counterparts in the agricultural operations right from the cutting and burning of fallen trees, bushes, dibbling in the ash covered soils,

intercultural operations, harvesting, threshing, winnowing, storage of seeds and food grains and carrying the produces to markets. Other activities of tribal women include collection of fire wood and wild vegetables from forests, rearing of birds, pigs, goats and cattles, weaving, handicrafts and brewing liquor. The participation of tribal women in all activities is by way of self doing or assisting their husband or others or supervising.

Though large mass of tribal women are engaged in agriculture and allied activities, very few of them have been provided with new knowledge and technologies to improve their performance and tribal women can be organised as a part of highly valuable human resource with appropriate training and education.

These aspects necessitated the researcher to conduct the study on the participation of tribal women in agriculture and allied activities with the following specific objectives.

Objectives :

1. To assess the extent of participation of tribal women in agriculture and allied activities.
2. To study the extent of participation of tribal women in decision making in agriculture and allied activities.
3. To study the socio-psychological and cultural characteristics of tribal women.

4. To study the relationship of socio-psychological characteristics with the participation of tribal women in agriculture and allied activities and their participation in decision making.
5. To study their preferences and non preference in differential participation in agriculture and allied activities and reasons accounted for the same.
6. To study their 'Hope of success' and 'Fear of Failure' in agriculture and allied activities.
7. To study their sources of farm information and perceived credibility of sources by tribal women.
8. To assess the training needs of tribal women in agriculture and allied activities.
9. To study the extent of participation of tribal women in development programmes.

Scope of the study :

Like any women's study, the study in tribal women is also essentially an exercise in comprehending and combating with the problem of inequality. The tribal women as a disadvantaged social group suffer from many crippling problems that retard their development, keeping them relatively backward and marginalised in a growing economy.

The tribal women participate with their men in all the activities from sowing to harvest. Without the participation of tribal women, agriculture and allied activities cannot be carried out successfully and economically in the farm.

The study proposes to bring into focus the extent of participation of tribal women in agriculture and allied activities and participation in decision making. It proposes to give an idea about the socio-psychological and socio-cultural characteristics of tribal women and their relationship with the extent of participation in agriculture and allied activities and their participation in decision making. This study will also help to know about the reasons accounted for their preferences and differential participation in agriculture and allied activities. This study will through some light on their "Hope of Success" and "Fear of Failure".

The study will also help to know their sources of farm information and their credibility building among the tribals. Understanding the areas of potential training needs of tribal women in different activities will help in synthesising and arranging the need based training. This study will also highlight the extent of participation of tribal women in development programmes. In toto, the study is expected to be a helpful guide in suggesting measures for effective participation by tribal women in agriculture and allied activities for promoting activities in which tribal women are involved.

Limitations of the study

The study suffered from the usual limitations of time, conveyance and physical facilities as any scientific investigation undertaken by a student researcher in social science would encounter.

Despite this, sincere efforts were made by the researcher to make the study as objective, definite, and as systematic as possible by conforming the norms of scientific study.

The tribals of Tripura - An overview

Until 14 October, 1949, Tripura was a princely state and thereafter it was integrated with the Indian Union as a Part 'C' State under direct administrative control of the Government of India. It was declared as a full-fledged state on 21 January, 1972.

The State of Tripura is the permanent abode of a number of scheduled tribes besides a large population of the non-tribals.

The following are the nineteen scheduled tribes residing in Tripura.

1. Bil, 2. Bhutia, 3. Chaimal, 4. Chamka, 5. Garo, 6. Halam, 7. Jamalia, 8. Khasi, 9. Kuki, 10. Lepcha, 11. Lusnai, 12. Mag, 13. Munda, 14. Naotia, 15. Oraon, 16. Riang, 17. Santal, 18. Tripura, 19. Uchai.

Table.1. Districtwise tribal population

District	Total population	Tribal population	% of tribal population to the total district population
West Tripura	1293861	325845	25.18
South Tripura	718732	329525	45.84
North Tripura*	7446112	197975	26.58

(Source : Census Report 1991.

* During 1991 census the population of break way district (Dhalai) was showed within the North Tripura district population

In 1931 the total tribal population of Tripura was 52 per cent of the total population of the state whereas in 1991 it fell down to 31 per cent according to 1991 census (Table 2).

Table 2. Tripura's demographic change of population (1931-1991)

Year	Total population	Tribal population	Percentage of Tribal to total population
1931	3,81,450	2,03,327	52.00
1941	5,13,010	2,56,991	50.09
1951	6,39,028	2,37,953	37.09
1961	11,42,005	3,60,070	31.50
1971	15,56,342	4,50,544	28.95
1981	20,53,058	5,83,920	28.44
1991	27,44,827	8,53,345	30.95

Source : A Brief analysis of primary Census Abstract, pp.88 - 100 Census of India 1991, Series-1, Paper-2 of 1992.

The tribals of Tripura are utmost rural people (98.35%) and 95.50 per cent are dependent on agriculture (Source : Census Reports). Agricultural sector is still the predominant sector of living for the tribal people of the state mainly because of low level of literacy among the tribals in general and tribal women in particular.

Table 3. Growth of literacy among the tribals

Year	Literacy among tribals (%)	General literacy in the state (%)
1961	10.01	20.27
1971	15.03	30.98
1981	23.07	42.12
1991	32.25	60.39

Note : In 1991 census all the children below age 7 years have been treated as illiterate. In 1961, 1971 and 1981 census, all the children below 5 years were treated as illiterates.

In the past, jhuming was universally practised in Tripura. Tribal people produced everything they consumed. They did not produce for exchange but for consumption only. But, as the immigrants were making inroads into the interior areas, total area available for jhuming was also deteriorating.

A comparison of occupational pattern obtained in 1961 with that of in 1991 of the tribals in Tripura yields a picture of occupational immobility or very insignificant mobility of the tribals.

Table.4. Occupation pattern of tribal men and tribal women of Tripura

Sl. No.	Occupation	Tribal men		Tribal women	
		1961	1991	1961	1991
1.	Cultivators	86.20	75.36	83.81	54.24
2.	Agricultural labourers	4.43	20.14	2.81	36.65
3.	Mining - allied activities	1.16	1.23	1.12	0.00
4.	Livestock - allied activities				
5.	Household industry	5.24	1.12	10.96	0.52
6.	Other than household industry	0.26	0.28	0.25	0.74
7.	Construction	0.05	0.03	0.01	0.07
8.	Trade and Commerce	0.23	0.18	0.00	0.23
9.	Transport and Communication	0.08	0.15	0.00	0.05
10.	Other services	2.35	2.50	0.94	5.28
	Total workers	100.00	100.00	100.00	100.00

Mining, quarrying - allied activities and livestock - allied activities clubbed together.

(Source : Census of India, 1961 and 1991.)

The available data on tribal participation rate in agriculture indicates a sharply rising proportion of agricultural labourers over the period. Probably a significant proportion of the cultivators and household industry workers would have joined the rank of agricultural labourers. The increasing proportion of agricultural labourers among the tribal women workers in Tripura may be linked to the large scale land alienation in tribal areas.

It is also a fact that the tribal household industry has been dying out under the impact of market forces and changing tastes and preferences of the people.

Definition of key concepts

Tribal woman: It was operationalised as an active adult female who participate in agriculture and allied activities.

Decision-making: It is referred to the product of great many small judgements organised and summarised.

Allied activities: It included the activities which were carried out by a tribal woman with regard to dairy management, poultry keeping, piggery, goat rearing and farm forestry management.

Participation: It is the involvement of an individual in a small face to face group who possesses a common identity atleast some feeling of unity and certain goals and shared norms.

Consultation: It means exchange of ideas between two or more individuals.

REVIEW OF LITERATURE

REVIEW OF LITERATURE

A good understanding of the problem requires an analysis of the existing body of knowledge in the area of research under question. Review of the related literature assists the student researcher to quapple the problem with deeper insight and provides more complete knowledge about the problem chosen for investigation. Review of literature also provides new ideas and approaches for evaluation the research efforts in comparison with similar efforts done by others.

It is clear that past studies pave way for future research endeavour. An acquaintance with earlier pertinent studies has been felt necessary to develop good understanding of the present study and to formulate appropraite research methodology.

An attempt has been made to review the literature in this Chapter, which had a meaningful relation to this study and are presented in the following sub-heads.

- 2.1. Extent of participation of tribal women in agriculture.**
- 2.2. Extent of participation of tribal women in allied activities.**
- 2.3. Extent of participation of tribal women in decision-making.**
- 2.4. Socio-psychological characteristics of tribal women.**

- 2.5. Relationship of socio-psychological characteristics with the participation of tribal women in agricultural and allied activities
 - 2.6. Relationship of socio-psychological characteristics with the participation of tribal women in decision making in agriculture and allied activities
 - 2.7. Sources of farm information and their perceived credibility by tribal women
 - 2.8. Training needs of tribal women
 - 2.9. Participation of tribal women in development programmes
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- 2.1. Extent of participation of tribal women in agriculture

Sharma and Prasad (1983) observed that the tribal women had to work harder than men. They cared the household and children, help the menfolk in agriculture etc. Besides, they had to collect firewood from the forest often and it became necessary for them to work for wages. They were less paid than menfolk.

Jagannathan (1985) found that in hilly and tribal areas, women were only doing the entire farming and livestock management.

Choudhury (1986) concluded that tribal women were not only participating in the economic field with their male partner but also looked after all type of household jobs and rearing children.

Bhuyan and Tripathy (1988) observed that in tribal areas, women worked with men in sowing, application of fertilisers and pesticides. The tribal women were taking the arduous work of cultivation in contrast to the

women in plain or coast. They shared with men in all operations except in land preparation and irrigation.

Deshpande et al. (1988) stated that tribal women shared 75.00 per cent of all the farm work. The daughters in law performed 4.9 per cent of it. In dairy, poultry and goat rearing, tribal women carried out 68 per cent of the work. Cleaning and feeding of cattle and the entire care of poultry was in their incharge.

Singh and Sharma (1988) stated that hill women were mostly involved in repetitive and monotonous operation like transplanting, harvesting and threshing. They also found that 58.38 per cent of the farms were managed by men. 16.59 per cent were managed by women and 24.88 per cent were jointly managed.

Tribal farm women participated in all the activities viz., forking, clod breaking, formation of ridges and furrows, formation of drainage channel and application of FYM, connected to main field preparation and also the weeding, harvesting except marketing as opined by Manjula (1991).

Patel and Sandagi (1995) stated that majority of the farm women participated in harvesting (97.17%), planting (91.51%), weeding (88.68%), feeding the animal and poultry birds (88.19%), post harvest operation (74.47%), nursery raising and planting of vegetables (74.47%), livestock care

(75.47%), preparation of FYM and compost (63.21%) and winnowing (54.72%).

Parvathi et al (1996) opined that majority of the women agricultural labourers were involved in transplanting (80%), transplanting and spreading of seedling (60%) in paddy, reaping the crop (98%) and bundling and transportation (94%).

Chakrabarty (1997) indicated that while ploughing was the monopoly of men in wet cultivation, the tribal women's work load nearby no means less than their men. In sowing, uprooting the seedlings, transplantation, weeding, harvesting and threshing both tribal men and women were participating. But uprooting the seedlings, transplantation and weeding were predominantly done by women.

The Onge women also participated in some agricultural activities on coconut plantation, weeding, collection of nuts. Onge women played a vital role in decision-making as revealed by Kumar (1998).

2.2. Extent of participation of tribal women in allied activities

Halim (1984) observed that women involved themselves in income generating activities within the households such as raising fruit plants, vegetables, rearing goats and poultry birds.

Bhill tribal women collected wood from the forests and allowed cattle grazing and they were highly industrious and hard working then menfolk as stated by Shashi (1986) .

Reddy and Prasad (1988) opined that in works relating to animal husbandry, women seemed to monopolize all operations such as feeding and watering of animals, cleaning of sheds, fodder collection and cooking grain for cattle. Their participation was less in health care.

James (1989) stated that farm women involved in most of the dairy management activities like preparation of feed, feeding animals, cleaning cattle shed, milching, processing and marketing of milk and milk products.

Joshi (1989) indicated that women involved themselves totally in fish trade, collection and selling of grass, cowdung cake, fire wood, selling of dairy product, ghee, milk etc.,

Velmayil (1997) observed that women had a vital role in keeping the poultry alive by keeping their involvement in activities like collection of eggs (80%), feeding of birds (75%), keeping water and cleaning of shed (83%), checking disease prevalence (67.80%), selling eggs (13.00%), using of litter as manure (17.00%) and medication of birds (65%), where men involved in outside contact like purchase of feed and vaccination of birds (48.00%) and contacting extension personnel (69.00%).

Tribal women had too much work in and around house taking care of pigs and poultry as concluded by Chakrabarty (1997).

2.3. Extent of participation of tribal women in decision-making

Hiranand and Kumar (1980) concluded that the most important areas in which women were found to influence the decisions were purchase and sale of land, borrowing and purchase and sale of animals.

Puri (1981) indicated that all the farming and animal related tasks were predominantly carried out by wives and they took decisions with regard to bringing fodder from the field, chaff cutting, preparing feed for cattle, bathing and cleaning the cattle, cleaning the cattle shed, making cowdung cakes, preparing a structure for starting cowdung cakes, compost making, milking and making curd, butter and ghee.

Women made lesser independent decisions on matters relating to farming when compared to collective decisions as observed by Savarimuthu (1981).

Achanta (1982) found that women were consulted with regard to the adoption of improved seeds, marketing of food grains and adoption of improved agricultural implements and fertilisers.

Rexlin (1984) reported that small farm women ranging from 72 to 88 per cent and 72 and 96 per cent of big farm women actually participated in making decisions on the use of farm practices.

Singh et al. (1988) concluded that women had a positive role in decision-making. However, men played a leading role in decision-making, for farming and other household activities, more than half of the total decisions with respect to the agricultural operations were taken solely by the men and only about 29 per cent of the decisions were taken by the women.

Guruswamy et al. (1990) indicated that women helped in decision-making with regard to farm operations, in addition to participation in farm activities and physical work. 72.80 per cent of small farm women and 72.96 per cent of big farm women actually participated in making decisions on the use of farm practices.

Though tribal women had little importance in the choice of plots and cutting and burning trees in shifting cultivation, they played a significant role in decision in the entire Jhum process, right from deciding about the crops to be planted, to harvesting and storing the same as found by Roybarman (1990).

Ponnusamy et al (1990) indicated that farm women were found to have taken majority of the decisions either independently or jointly in various activities of farming.

Satyawati et al. (1993) stated that male members played a dominant role in planning for the different aspects of credit viz., deciding for taking credit, amount of credit, source of credit and purpose of credit. Sizable number of women (61 per cent) were consulted only at the time of taking signature on the credit forms followed by 22 per cent who were consulted only after their husbands decision to take credit.

Decision making regarding main field preparation and fertilizer application were done by father, mother brother and others and not only by women as revealed by Sujatha (1996).

Premavathi (1997) found that the farm women ranging from 8 to 13 per cent had taken up their own decisions, while 37.3 per cent of the rural women had consulted their spouse/elders to take decisions regarding all the activities.

Khandekar and Kunru (1997) stated that in most of the management aspect of goat rearing, the tribal women and her spouse took joint decision as whether kid should be allowed to suckle before milking (13.33%), for how long (26.67%), where the decision were taken jointly or by wife alone. The tribal women took decision about poultry were only the quantum to be sold

(46.67%). Most of the other aspects like whether egg/birds was to be sold (52.89%), rate at which to be sold (46.67%), minimum price of purchase of birds (71.55), maximum price at which to be purchased (44.45%) the decision taken jointly.

2.4. Socio-psychological characteristics of tribal women

2.4.1. Age

Samata and Reddy (1982) found that majority i.e., 64 per cent of Kaya farmers belonged to 36-50 years age category and 36.0 per cent of them belonged to 35 years of age.

Bhoite and Barve (1984) concluded that most of the tribal respondents were in the middle age group i.e., below 50 years of age.

Thiagarajan (1989) found that majority (43.50%) of the head of the tribal family belonged to old age category followed by 32 per cent of the younger age group. About one-fourth (24.50%) of the head of tribal household belonged to middle age group.

Chakrabarty (1997) found that working age for tribal women generally ranged between 15 and 65. Women worker of age even below 15 and above 65 were not rare. The modal age group by tribal women workers was found to be 25-44.

2.4.2. Educational status

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Varadarajan (1980) stated that while nearly half (42.60%) of the tribal population was illiterate, 29.98 per cent of them had primary school education, about one fourth (25.4%) of them had secondary school education and a meagre per cent (1.54%) with collegiate education.

Parwar et al (1987) inferred that the percentage of literacy among Scheduled Tribes to that of the total population of India was 16.35. The percentage of male literacy among the tribal was 17.74, while among female it was 3.60.

Bodade et al. (1988) observed that only 4.85 per cent of tribal women were literates.

Gunasekaran and Ramaswamy (1988) concluded tht the level of literacy among tribals was too low to compare with the state (Tamil Nadu) as the survey conducted revealed that only 12 per cent of the tribals were literates.

A little more than half of the tribal farm women were illiterates (59.20%), 28.57 per cent of them with primary level education and only 12.24 per cent of the farm women had middle school education. None of them had secondary level and collegiate education as observed by Manjula (1991).

Rao (1996) revealed that 76.16 per cent of the Chenchu tribal were illiterate followed by 18.34 per cent primary school and 2.5 per cent were functionally literate.

Chakrabarty (1997) found that in respect of literacy and education, women in general and tribal women in particular, hold an inferior position in Tripura. The wide gap between the male and female literacy rates indicates a gender-bias in a household's attention to the education of the children.

Kumar (1998) reported that cent per cent of Onge respondents belonged to no schooling (illiterate) category. For the centuries the Onges were living as semi nomadic in the forest of little Andaman without any script of their language.

2.4.3. Occupational status

Bhatnagar and Saxena (1987) revealed that the lean period/slack time spent by Tribal women in farming increased with the size of holding.

Bodade et al (1988) found that over 54.4 per cent of tribal women were cultivators, 36.6 per cent were agricultural labourers and 12.9 per cent were labourers engaged in non-agricultural pursuits.

Sahay (1988) reported that agricultural labour was the most popular and common occupation among tribal women.

Chakrabarty (1997) indicated that the tribal economy of Tripura had been undergoing some changes. Traditional Jhum cultivation was no longer the mainstay of living although many tribals retain jhuming as a subsidiary occupation. She also reported that ethnic background did not become a bar to tribal women's participation in economic activities. In tribal villages agriculture was the main source of employment for women and they did not feel shy to take part in agricultural activities in the fields.

Kumar (1998) revealed that 100 per cent Onge respondents were belonged to the occupation of collection of minor forests produce, hunting and fishing. There was a clear division of labour on the basis of sex, with activities like hunting, fishing, construction of huts, collection of honey, preparation of dug out canoes, implement etc., the activities which requires courage, skill and strength were entrusted to the men, and the other activities like collection of edible roots, tuber, fruits and fire wood from forest were allotted to women. They also caught the smaller fish with nets, in creeks and coral reefs during low tide. For fishing as well as for collecting the forest produce, the women always went out in groups.

2.4.4. Farm size

Shah (1981) observed that 97.0 per cent of the holdings in Northern Himalayan tribes were less than a hectare. Only 8.0 per cent was irrigated and the holdings were located in a five separate locations.

Manjula (1991) indicated that more than 60 per cent of tribal farm families owned small sized land holdings followed by marginal and big farmers categories.

Rao (1996) reported that 57.5 per cent of the Chenchu respondents were belonged to landless, 37.50 per cent belonged to marginal and followed by 5 per cent small category farmers.

All the Onge respondents belonged to landless category. Numerically Onges did not possess land on their names, but an area of 252 sq.m. of little Andaman was reserved for them in which others were not allowed to settle as per aboriginal tribe regulation act. as stated by Kumar (1998).

2.4.5. Income

Lal et al (1983) reported a low income and family expenditure among the tribals. About 90.0 per cent of the total family expenditure was on necessities while about 5.0 per cent was on recreation and cash saving accounts for hardly 2.36 per cent while borrowing accounts for 8.6 per cent and investment accounts for less than 30.00 per cent of the total income.

Thiagarajan (1989) revealed that 75.5 per cent of the tribal household had low income and 24.5 per cent of the tribal household had high income.

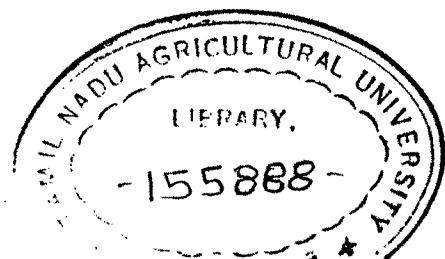
Madivanane (1990) indicated that about half (48.00%) of farm women belonged to the low income group followed by about one-third (37.00%) under the high income group and a small number (15.00 per cent) under the medium income group.

Manjula (1991) concluded that the annual income of the tribal farm family was medium for 54.00 per cent of the respondents, high for 32.00 per cent and low for 14.00 per cent. In general, the income of the tribal farm families was low.

2.4.6. Farming experience

Balaji (1990) stated that 42.00, 31.00 and 27.00 per cent of farm women had low, high and medium level of experience respectively in agriculture.

Madivanane (1990) stated that nearly half (47.00%) of the farm women had low farming experience followed by nearly on equal percentage of the respondents with high (27.00%) and medium (26.00%) level of farming experience.



Manjula (1991) indicated that in the case of tribal farm women (44.94%) had medium level farming experience (11-25 years).

~~Sujatha~~ (1996) found that 46.66 per cent and 41.67 per cent of farm women had medium and high level farm experience respectively. 11.67 per cent of them had low level experience.

2.4.7. Social participation

Sadamate (1978) found that the social participation of tribal was low.

Most of the Toda tribals (97%) had medium level of social participation as observed by Surendran (1981).

~~Premavathi~~ (1997) stated that 53 per cent of farm women possessed a medium level of social participation, followed by 33 and 14 per cent with low and high level of social participation respectively.

Kumar (1998) reported that majority of the Onge respondents (83.88%) belonged to low category of involvement in socio-political organisation followed by medium category (16.22%).

2.4.8. Contact with extension agency

Sripal (1983) found that two-third (66%) of the tribal population maintained poor contacts with extension agency. This was attributed to the

fact that no transport facility was available to those villages which were located in deep forests.

Manjula (1991) opined that among the tribal farm women 57.16 per cent were not members in any of the organisations, while 28.57 per cent had low level social participation, 12.24 per cent had medium level participation and 2.00 per cent of them had high level social participation.

* Premavathi (1997) found that 68 per cent of farm women had medium level of contact with extension agencies while 27 per cent had low and 5 per cent had high level contact with extension agencies respectively.

> Senthamarai et al. (1997) stated that about two-fifth (40.83%) of the respondents had medium level of extension agency contact, followed by low (31.67%) and high (27.50%) levels.

The Onge tribes were belonged to low category of extension contact. Group discussion, method demonstration and sometimes visit to exhibition by selected Onges were the main extension activities of the Onges as reported by Kumar (1998).

2.4.9. Mass media participation

Kulkarni (1981) reported that inadequacy of mass media like farm magazine or Radio and inability to decide the technical terms were reported as factor, by 74 per cent of tribal respondent in non-use of farm techniques.

X, Senthamarai et al. (1997) stated that less than three-fourth (70.83%) of the farm women had low level of mass media exposure followed by medium (30.00%) and high (25.83%) level.

It was evident by Kumar (1998) that 100 per cent of Onge tribe belonged to low mass media exposure category. Every Onge family possessed a radio and most of the respondents listened to radio broadcast for music only. They viewed T.V. mostly music in a community T.V. presented by AAJUS.

2.4.10. Value orientation (Localiteness - Cosmopoliteness)

Nallamuthu (1976) reported that Panias, a bid of tribe of Tamil Nadu had felt suspicious of outsiders especially those who volunteered to help them. They did not know what was happening outside their hamlet, because the tribals had no continuous contact with outsiders.

Surendran (1981) opined that majority of the Todas were cosmopolite in nature while a less percentage (9%) was found to be localite.

Sripal (1983) expressed that 75 per cent of the respondents were neither fully localites nor fully cosmopolites.

Rao (1996) found that 66.66 per cent of Chenchu tribals were having medium level urban contact followed by 25.84 per cent low and 7.5 per cent high urban contact.

Kumar (1998) indicated that cent per cent of the respondents had low urban contact. Prior to rehabilitation and settlement the Onges were rarely ventured out and were busy and happy with their semi nomadic life.

2.4.11. Progressivism - Traditionalism

Senthamarai et al. (1997) observed that majority of the farm women (44.17%) had medium level of progressiveness, followed by low (33.33%) and high (22.50%) level of progressiveness.

2.4.12. Conservatism - liberalism

Barakataky and Gohain (1970) reported that due to the presence of certain institutional behaviour like religious beliefs, customs and practices, the pace of the expected development was not upto the mark among the tribals.

Yadav (1970) concluded that the tribal leaders laid more emphasise on sticking to the traditional ways of life.

Driegberg (1977) observed that in the tribal institution cultures and taboos played a fundamental role and were inamicable to change. He further added that local religious priests played a key role in orderidng tribal life which was observed to be major problem to the change agents about their beliefs he further added that tribes organised mass hunt to propitiate their dietics sensure good crop.

Vyas and Mann (1980) reported that the tribal society continued to be superstition ridden. The predominance of superstition had not been shaken even under changing condition in certain fields.

Chakrabarty et al. (1989) stated that the absence of attitudinal change and attachment of the tribal towards traditional heritage, culture and scenic environment in which they live was an important aspects of social life that failed to influence the farmers in generating increased level of employment and increased through full exploitation of irrigation potential and diversified occupation.

Nath (1988) reported that under the inexorable pressure of diverse and myriad factors, the ancient tribal norms, customs or mores were changing at a fast speed. Educated girls and boys were occupying the vanguard of powers in domestic and community and political affairs at the expense of the elders as expressed by Nath (1988).

2.4.13. Fatalism - Scientism

Kumar (1998) found out that majority (74.20%) of the respondents belonged to medium category of fatalism followed by high category (25.80%) of fatalism. Onges were animist. They had few rites and rituals associated with birth, adolescence, marriage and death. The rituals on the Onges did not involve any religious worship or sacrifice but some beliefs and fear emanating from them.

2.4.14. Scientific orientation

Sujatha (1996) expressed that majority (43%) of farm women had low level scientific orientation, followed by 31.67 and 25 per cent of farm women of a medium and high level scientific orientation respectively.

Premavathi (1997) opined that 70 per cent of farm women had medium level of scientific orientation. This followed by low level (21%) and high level (9%) of scientific orientation.

Senthamarai et al (1997) reported that farm women who had low level of scientific orientation were 39.17 per cent. They were followed by high (30.83%) and medium (30.00%) level.

2.4.15. Innovativeness

Parvathi (1995) reported that majority (73.8%) of the farm women were under medium level innovativeness followed by low level innovativeness (18.1%). Only 8.1 per cent of the farm women were under high level innovativeness.

2.4.16. Economic motivation

Senthamarai et al (1997) stated that 42.50 per cent of the respondents with low level of economic motivation, followed by medium (32.50%) and high (25.00%) level.

Sujatha (1997) noted that 40 per cent of women had low economic motivation. But, 25 per cent of farmer had high economic motivation.

2.4.17. Credit orientation

Sripal (1983) found that majority of the tribals (58.00%) were dependent on credit but the source differs. The private money lenders were the main source of credit to majority of tribals (63.00%).

Senthamarai et al (1997) stated that there were 43.33 per cent of the respondents with medium level of credit orientation, followed by low (40.84%) and high (15.83%) levels.

2.4.18. Achievement motivation

Gupta (1981) found significant impact of economic and socio-cultural disadvantages upon the motivational structure, achievement motivation and personality pattern of tribals of Tripura.

2.4.19. Family norms

Surendran (1981) found that majority of Toda tribal respondents possessed medium to low level of norms about their family.

Sripal (1983) found that tribals family norms were of medium order as reported by 57.00 per cent of tribals.

2.4.20. Intra tribal communication

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Sripal (1983) opined that intra-tribal communication of the tribal seemed to be of high level as was expressed by more than half (53.00%) of tribals. This intra-tribal communication was mostly woven around their community affairs, agriculture matter are seldom discussed.

2.4.21. Religious belief

Nandwani (1982) stated that social attitude, scientific prejudices, myths and beliefs limited women's participation in agriculture.

Kokate et al (1988) found that traditional belief held by tribals was the bottleneck in the adoption of improved practices in agriculture and cattle feeding.

Kota tribal women were not participating in all dairy activities. It was due to the reason that the Kota tribe had a strange belief that women doing the dairy activities was against God's will and it was a taboo as indicated by Manjula (1991).

Rao (1996) expressed that majority (56.67%) of the Chenchu tribals had medium level religious belief followed by 27.5 per cent high and 15.87 per cent low level religious belief.

2.5. Relationship of Socio-psychological characteristics with the participation of tribal women in agriculture and allied activities

✓ Dantwala (1975) observed that from a field study in 12 villages of Bihar, Gujarat and Uttar Pradesh that work participation ratio of females were not uniform in all the villages. Work participation ratio of females which was studied in relation to monthly per capita income (MPCI) of the household declined with the increase MPCI groups.

Division of labour between men and women varied from region to region according to social custom and community. Women's participation in agriculture was found to highest among the tribes followed by the Scheduled Castes. (The degree of participation declined with higher position in the social hierarchy as opined by Majumdar (1975)).

✓ Achanta (1982) revealed that patterns of division of labour between men and women varied from region to region according to social customs. Cultural norms affected women's participation in agriculture.

Govind (1984) found that the characteristics namely extent of land, social participation and annual income had shown significant but negative association with the extent of participation in farm activities, while the rest of the characteristics namely age, caste, education, occupation, farm experience, knowledge level, type of family, size of family, mass media exposure and extension agency contact showed non-significant relationship.

Manjula (1991) observed that significant correlations between extent of participation of tribals in agriculture and allied activities with age, educational status, family size, farm size and livestock possession existed and the intensity of the relationship had been maximum with family size, educational status, age, livestock possession and farm size. This clearly indicated that the above variables had direct relationship with the extent of participation bringing out that influence on the extent of participation had been remarkable.

Seema and Prasad (1991) stated that four variables viz., age, educational status, contact with extension agency and family educational status were found to have significant predictive function to explain the variation in role performance of farm women.

Sudha et al. (1991) indicated that farm size increased the proportion of male participation in farm activities increased, while that by females decreased.

Sujatha (1996) found that farming experience or mass media participation showed positive and significant association with role performance of farm women in agriculture and allied activities. Social participation, job preference and knowledge level showed negative and significant association with role performance of farm women in agriculture and allied activities.

✓ Premavathi (1997) stated that eighteen characteristics like age, farming experience, experience in home activities, family status, social participation, farm power status, material status, mass media exposure, cosmopolitaness, marketing behaviour, scientific orientation and socio-economic status had positively non-significant association with their involvement of rural women in farm activities but other variables namely educational status, occupational status, farm status, credit orientation, innovativeness and change agency contact had negatively non-significant association with their involvement of rural women in farm activities.

There was positive correlatin between size of land ownership and economic participation of tribal women but found negative correlatin between educational status and economic participation of tribal women as concluded by Chakrabarty (1997).

2.6. Relationship of socio-psychological characteristics with the participation of tribal women in decision making in agriculture and allied activities

✓ Dubey et al. (1982) concluded that participation of rural women in decision-making regarding animal husbandry practices, remained almost the same irrespective of their educational level and land size.

✓ Awasthi (1983) indicated that women made a significant contribution on small and medium sized farms. In large size farms the task performed by women and their share in decision-making regarding them varied from place to place and country to country.

✓ Singh and Chander (1983) reported that education and occupation were found to exercise non-significant effect on women's participation in decision-making.

✓ Rexlin (1984) found that the six variables namely age, caste, education, occupation, family type and farming experience showed positive and significant relationship with their participation in decision-making, whereas in other four variables namely family size, annual income, information seeking behaviour and extension agency contact failed to show any association with their participation in decision-making.

✓ Singh et al. (1988) revealed that adoption of technological innovation would be achieved through raising the educational level of the females, so that they might taken moral rational approach in decision-making for the betterment of farming.

✓ Seema and Prasad (1991) stated that four variables viz., age, educational status, contact with extension agency and family educational status were found to have significant predictive function to explain the variation in role performance of farm women. The knowledge in farming and contact with extension agency contributed positively and significantly to the prediction of role perception of farm women in decision-making.

✓ Harode et al. (1992) reported that the percentage of women were high in low level participation and low in high level participation, such that

the percentage of women in the decision-making process decreased with increased level of participation. Results also showed that with advancing age and educational level, participation increased.

✓ Satyawati et al. (1993) indicated that earlier women were considered neither knowledgeable nor competent enough to participate in the decision-making process. But the role and status of women have been undergoing a continuous change in recent years. Women now played a vital role in decision-making regarding household resources which were specifically used by them. (The results also showed that age, education, caste, type of family and urban contact did not affect extent of participation in decision-making, social participation and size of holding significantly affect the extent of participation in decision-making.)

✓ Rangnekar et al. (1992) stated that literacy was the main limiting factor to affect the decision-making of the farm women.

Sujatha (1996) expressed that out of 22 variables taken family size, land holding and knowledge level showed positive and significant association with training need by farm women. Farm women with more family members, land holding and knowledge level might have acquired training need.

✓ Premavathi (1997) found that out of 18 characteristics studied scientific orientation alone was found to be positively and significantly

associated with decision-making pattern of rural women. The other variables namely age, social participation, farm power status, material status, mass media exposure, cosmopolitaness, change agency contact and socio-economic status had positively non-significant relationship with decision-making behaviour of rural women. Educational status, farming experience, experience in home activities, family status, occupational status, credit orientation, innovativeness, marketing behaviour and farm status had negatively non-significant association with their decision-making behaviour of rural women.

2.7. Sources of farm information and their perceived credibility by tribal women

Sadamate (1978) reported that radio and television presented suitable programme for creating awareness about various legislations, programmes on the role of women in development. The media and press also helped in promoting social attitudes towards women and people to fight evils like child marriage etc.

Rexlin (1984) stated that farm women consulted peer group, elder sons and daughters deciding the crop husbandry and dairy management.

Bhagat and Mathur (1985) indicated that radio was the most popular medium among rural women and television was the source of entertainment and information for farm women, but most of them had not possessed because of financial limitation.

Agarwal (1985) found that women learned more than men and gained knowledge as a result of T.V. viewing.

Yadav (1986) observed that women from different localities viewed news differently. Women in the relatively affluent areas watched more of T.V news compared to those from the resettled colonies and then it declined even more sharply in the case of women from small farms and rural areas.

Bhuyan and Tripathy (1988) opined that in the T & V system the VEW was only the person in disseminating of farm technology to the farm families. The source of information to the farm women were husband, VEW, neighbours and friends.

Devi (1989) found that 61 per cent of the farm women had regular contact with AAO and only 14 per cent of them had regular contact with AO.

2.9. Training needs of tribal women in agriculture and allied activities

Tribal women attend to various operations in cultivating crops such as sowing seeds, applying manures, weeding and harvesting. As the literacy rate among the tribal women remains low they cannot be expected to gain knowledge through channels of communication. A well structured and systematic training can provide the needed knowledge and skill to tribal women. Hence, it is essential to assess the training needs of the tribal women. The available literature on the training needs are presented below :

Nair and Swaminathan (1985) stated that 55.00 per cent of the respondents requested for training in areas like 'vathal-making' from chilli, cluster beans, bitter gourd, cowpea, 'chundakki' and bhendi, 'papad making', toffee preparation with locally available cereals and pulses and pickle-making with mangoes, gooseberry, garlic and onion.

Verma and Verma (1985) indicated that rural women of progressive and non-progressive villages had differential choice preferences for receiving training on improved farm and home practices.

Devi (1986) stated that short duration training could be given to rural women to improve their role performance at home and other production oriented activities.

Bhatti (1988) urged the need to train village women in poultry farming as an important income generating activity and to provide extra high protein food for their families.

Bhuyan and Tripathy (1988) observed that intensive training was required by the farm women since they were involved in the farming activities and often joined their husbands in performing different agricultural operations. They required training on methods of sowing, transplanting, harvesting and knowledge on developed storing techniques to avoid loss.

Pandey (1988) stated that there had been an increase in the number of women in natural resource management training, but their training and employment in this sector was still at the initial stage and current efforts needed to be extended.

Devi (1989) concluded that farm women needed training in seed selection, seed treatment, use of herbicides, identification and control of pests and diseases and storage with regard to rice crop.

James (1989) stated that about 68.00 per cent of farm women needed more training in processing of agricultural products and only 44.00 per cent of them needed more training in case of control of stored product pests.

Balaji (1990) epitomized that a majority of farm women required training in poultry followed by goat rearing and dairy.

Madivanane (1990) stated that farm women needed training in kitchen gardening, livestock and poultry keeping, income generating, subsidiary activities and food processing.

Prasad and Mrutyunjayam (1997) found that training was critical input for tribal farmers for the rapid transfer of agriculture technology and away for modernise their agriculture and improved their economic condition. Training needs by tribal farmers were in the area of land preparation, seeds and sowing and post harvest technology.

Parvathi (1995) reported that the subject matter areas in which majority of the farm women needed training on post harvest technologies were, use of improved bins (81.87%), method of storage (73.75%), storage grain pest management (60.62%), preparation of impregnated gunny bags (55%) and use of threshing machines (51.25%).

2.10. Participation of tribal women in development programmes

Ravichandran (1981) reported that after the production of lab to land programmes more than four fifths of the tribal farmers used high yielding varieties, majority applied fertilizers and adopted recommended cropping sequence.

Surendran (1981) epitomized that 61.00 per cent of Todas belonged to medium category of awareness about the Toda Welfare Programme. He also reported that Todas participated in the programmes to the extent of 75 to 100 per cent.

Bezbaruah (1982) found that Hill Development Corporation established in Assam provided social benefits to tribals by way of giving reasonable price for their agricultural produces and gave the inputs for extensive cultivation of fruits and cash crops.

Under IRDP schemes, seedlings of coconut, arecanut, jackfruit, mango and cashew had been supplied to the tribals. Milch animals had been

supplied. Electricity and drinking water supply was generally provided as expressed by Jaganathan (1985).

Renuka (1987) reported that according to 80.00 per cent of the respondents, panchayats had been active in solving village problems. Development works had been executed and various social services had been ensured for tribal areas by the panchayats.

Pant and Baghel (1989) stated that tribal area development was a rural development activity with a difference. The difference lies in the speciality of attention and the attunement of the activity to the cultural ethos of the area. The objective was to raise the purchasing power through various programmes of agriculture, animal husbandry, NREP, IRDP and Integrating service in the grass root level.

Thiagarajan (1989) found that there was an increased growth rate in livestock possession. The buffaloes showed the highest growth rate of 19.20 per cent, followed by sheep rearing (12.13%) and there was an increase in maintenance of cows by 8.90 per cent.

The percentage of scheduled tribe and scheduled caste assisted families of Tripura under the IRDP programme was 27 per cent and 22 per cent respectively constituting total of 49 per cent against the target of 30 per cent set by Government of India during the sixth plan for scheduled caste and scheduled tribe as concluded by Banik (1991).

RESEARCH METHODOLOGY

CHAPTER - III

RESEARCH METHODOLOGY

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This chapter deals with the research procedure followed for the conduct of this study. The variables used and the different statistical methods followed to analyse the data are discussed under the following sub-headings.

3.1. Locale of research

3.2. Sample and sampling procedure

3.3. Selection, operationalisation and measurement of variables

3.4. Collection of data

3.5. Statistical tools used

3.1. Locale of research

Tripura is a small state (10, 486 sq.m.) of the North-Eastern hilly region of India and the state possesses six hill ranges interspersed with nine river systems. The state is surrounded by Bangladesh almost on all sides except an outlet by the north eastern side through Assam. It is situated between 22°56' N and 24°32'N Latitudes and 91°21' Longitudes. Its altitude is ranging from 40 meters in the valley to 600 meters in the high hill.

FIG.1 MAP SHOWING THE LOCATION OF TRIPURA STATE AND SOUTH TRIPURA DISTRICT

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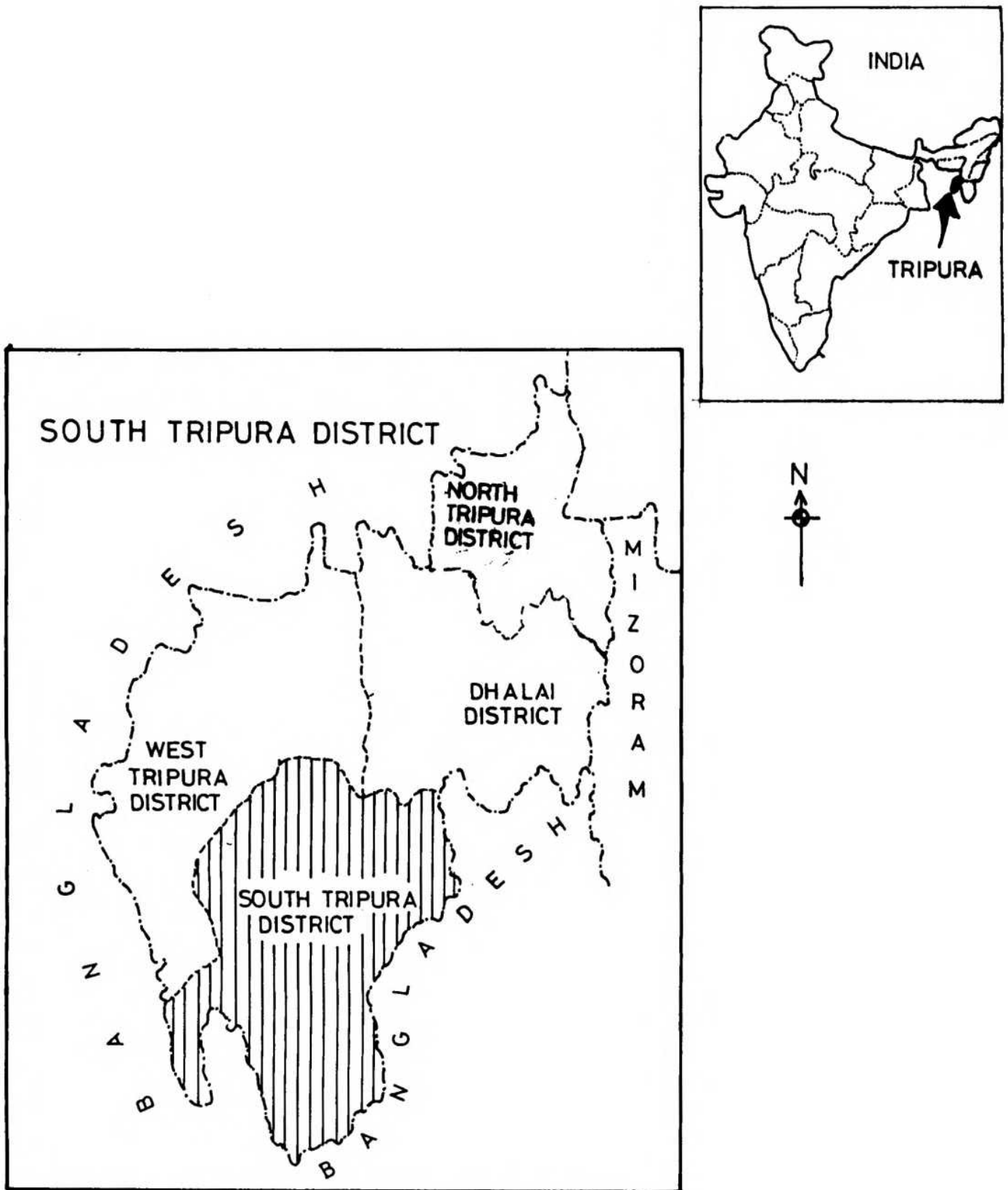


Table 5. Land utilisation pattern of Tripura state

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	(Area in ha)
1. Geographical area	10,49,169
2. Area under forest	6,06,168
3. Net area sown	2,76,650
4. Gross cropped area	4,60,000
5. Area sown more than once	1,83,350
6. Not-available for cultivation	
a) Area under non-agri use	
b) Barren and uncultivable land	1,35,500
7. Other uncultivable land	
excluding fallow	
a) Permanent pasture and other grazing land	27,000
b) Land under miscellaneous area crops	
8. Culturable waste land	600
9. Fallow land	
a) Current fallow	4,551
b) Fallow land other than current fallow	700

(Source : Dept. of Agriculture, Govt. of Tripura, 93-94)

3.1.1. Soil

The soil is laterite with very little water absorption capacity. The flat land in the valleys known as 'Lunga' is alluvial, the forest soil or 'Tillas' are generally loamy sand devoid of humus. Moreover, these soil which are grossly deficient in nitrates, phosphorus and potash as well as organic matter, trace minerals and acidic and therefore, it cannot be treated with the usual acid fertilizers. The mineral deficient thus created affect the health of plants, animals and men. This is true even in the forest areas because of the perpetual burning in the course fo shifting cultivation and on the exposed up land the combination of tropical sun and torrential rains has leached minerals from the soil.

3.1.2. Climate

The climate is generally hot and humid and with maximum temperature near about 37.1°C and the extreme low temperature at 5.9°C during peak winter season (January). The mean annual rainfall is about 2166 mm. During the winter season ie., from November to February, weathr remains almost dry and the rainfall being almost nil. But with the beginning of March the temprature starts raising. From April onwards to May, occasional thunderstorm and rains takes place. In May, monsoon emerges along with a storm and heavy rain. During the rainy season the humidity reaches at about saturation point and heavy cloud is almost continuous and frequent rains occur. During rainy season ie., June to September the temprture slowly diminishes, but in the month of September is very sultry. During latter half of September and throughout October cloudy weather

replaced by bright sunshine. This bright sunshine gradually lengthens due advent of the winter season.

3.1.3. Cropping pattern

The cropping pattern of Tripura is influenced by the seasonal, topographic and socio-economic characteristics of the farmers.

The low elevation areas are utilised for cultivation of crops like paddy, wheat, jute and vegetables. The uplands are used for jhum cultivation, crops are maize, mesta, sesamum, hilly vegetables etc. The lands having slope above 10 per cent are used for agro-forestry and some plantation crops like rubber etc. The main crop paddy is cultivated in an area of 3.05 lakh ha followed by wheat and jute etc. 0.69 and 0.27 lakh ha respectively. The estimated cropping intensity is 167%.

There are three main cropping seasons viz., kharif (July to October), rabi (November to February) and summer crop (March to June).

3.1.4. Livestock resource

The vegetation under the temperate humid climate prevailing in the South Tripura facilitates in development of allied activities like dairy farming, goat rearing and piggery.

3.1.5. Agro-forestry

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Being in a high rainfall area, the land contain valuable timber like sal (*Shorea robusta*), Jarul, Segun (*Tectona grandis*) and Karoi which act as source of income. Thick bamboo and heavy sungrass are the favourite species for agro-forestry.

Besides the various types of fruit trees are also found most common of these are Bel (*Aegle marmelows*), Jambura (*Citrus decumana*), Jalpai (*Elacoearpous seratures*), Kalajam (*Engenia Jambolana*), Kathal (*Artrocarpous irtegrifolia*), litchi (*Lichi Chinensis*), Kamala (*Citrus aurantium*) etc.

3.1.6. Selection of district

The South Tripura district has been purposively selected keeping in view the following criteria.

- (i) It has been observed that majority of the tribal women of the district have been involved in farming.
- (ii) The researcher is familiar with socio-economic condition, local farming system and farming community.
- (iii) Large concentration of tribal (45.84% of the total district population) live in the district.
- (iv) There are no earlier extension studies on tribal farm women in the district.
- (v) Necessary physical facilities are available to the researcher.

3.1.4. Description of the study area : South Tripura district

South Tripura district is one of the four districts of Tripura State with administrative headquarter, at Udaipur. According to the 1991 census, the total population of the district, 7,18,732, among 3,29,55 persons are tribals (45.85). The total geographical area of 2,62,400 ha of the district comprises of nine major agricultural division viz., Matabari, Killa, Bagafa, Amarpur, Karbook, Rupaichari, Rajnagar, Satchand and Gandachara.

Table.6. Land utilisation pattern of South Tripura district

1.	Geographical area	2,62,400 ha
2.	Area under forest	1,72,300 ha
3.	Net agricultural cropped area (excluding vegetable)	53,919 ha
4.	Area under horticultural plantation	13,200 ha
5.	Area under vegetables (Kharif and Rabi)	5,611 ha
6.	Gross cropped area	96,886 ha
7.	Cropping intensity	180 %
8.	Area under irrigation	
	a) Assured	5,976.5 ha
	b) Non-assured	7,773.5 ha

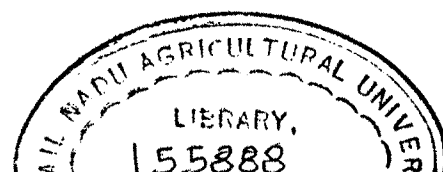


Table.7. Area under major crops in South Tripura district

1.	Paddy (Rabi + Kharif + Summer + jhum)	81.039 ha
2.	Wheat	398 ha
3.	Potato	2698 ha
4.	Kharif vegetables	2635 ha
5.	Rabi vegetables	2976 ha
6.	Maize	672 ha
7.	Jute/Mesta	1303 ha
8.	Oilseed	2629 ha
9.	Pulses	2529 ha

(Sources : Deputy Director of Agriculture, Dept. of Agriculture, 1998-99)

3.2. Sample and sampling procedure

3.2.1. Selection of blocks

Out of eight blocks of South Tripura district of Tripura State, three blocks namely Matabali, Kill and Bagafa blocks were selected randomly.

Table.8. Distribution of tribal families and population in Matabari, Killa and Bagafa block

Name of block	Families				Population			
	ST	SC	Others	Total	ST	SC	Others	Total
Matabari	6465	10153	23151	39769	92174	47270	108170	187614
Killa	5548	625	208	6381	30642	3447	1149	35238
Bagafa	9114	580	2891	12585	142015	2526	12733	57274

(Sources : B.D.O.s' of different blocks, 1998-1999)

The total population of the Killa, Bagafa and Matabari are 35238, 57274 and 187614 of which the Scheduled Tribes constitute about 86.95 per cent, 73.35 per cent and 17.15 per cent respectively.

The total farm families of the Killa, Bagafa and Matabari are 6381, 12585 and 37769 of which the Scheduled Tribe families are 5548, 9114 and 6465 respectively.

Table.9. Land utilisation pattern of Matabari, Killa and Bagafa blocks

(Area in ha)

Category of land mass	Bagafa	Killa	Matabari
Total area	54160	19642	45834
Cultivable area	12202.16	5423.4	12654.6
a) Annuals	10981.94	4881	11389.1
b) Perennials	1220.22	542.4	1265.5
Current fallows	52	81	19
Other fallows	Nil	14	6
Cultivable waste land	644.05	7	3
Permanent pastures and grazing land	Nil	584	146
Area under miscellaneous trees	4098.2	2600	3900
Forests	24124	10620	3540

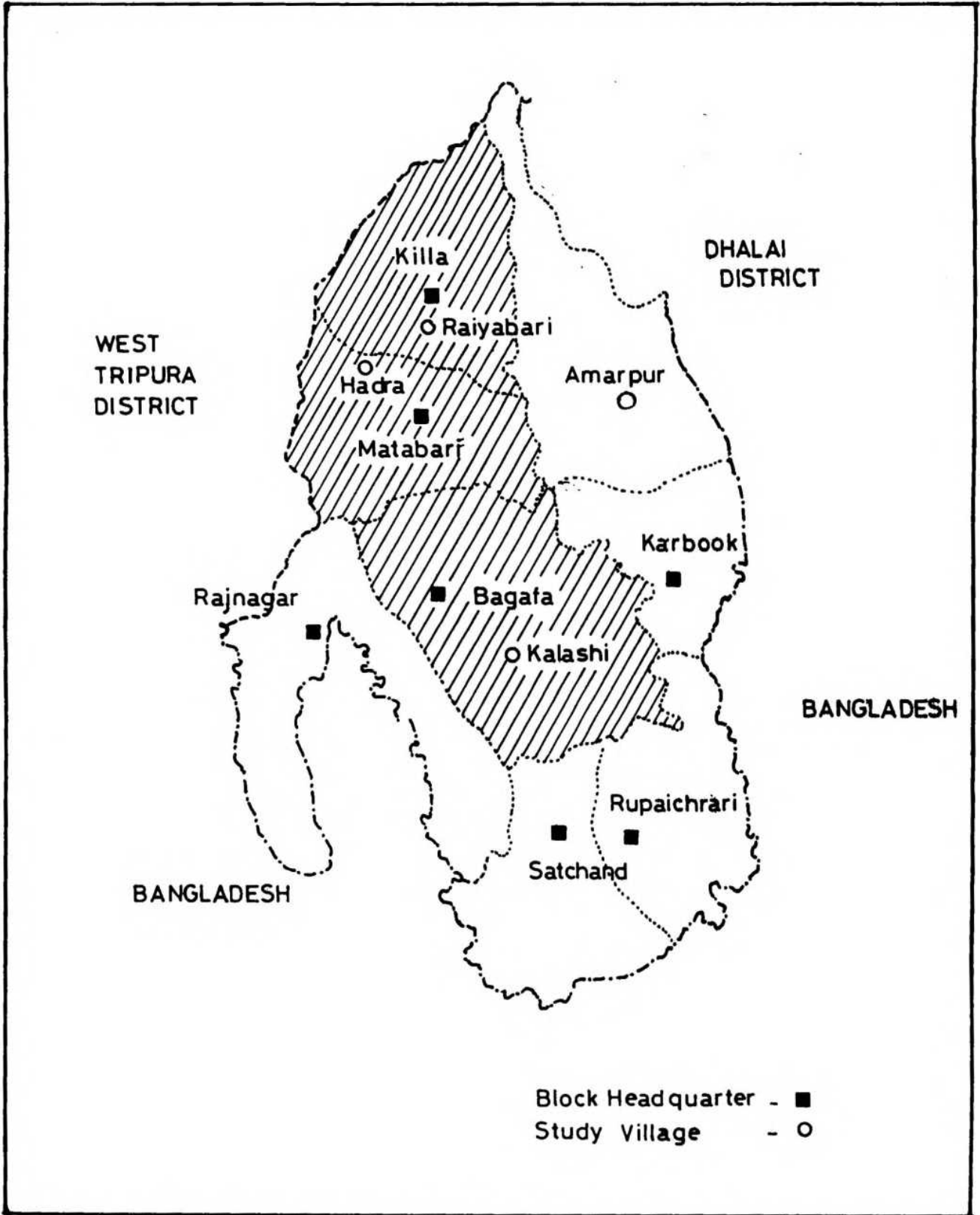
(Source : Superintendents of Agriculture, 1998-99)

Table.10. Area and production of major crops under Matabari, Killa and Bagafa blocks

Crop	Matabari		Killa		Bagafa	
	Area (in ha)	Production (MT)	Area (in ha)	Production (MT)	Area (in ha)	Production (MT)
Paddy	18065	51485.25	6505	13660.5	12258	33663
Jute	120	132	53.5	58.85	48	52.8
Mesta	132	132	43	43	193	193
Maize	30	27	102.3	98	63	56.70
Pulse	211	191	27	21	449	351
Oilseed	202	141.4	141	100	118	115
Wheat	122	610	30	120	92	441.6
Potato	607	17603	90	2520	906	26746.932
Cauliflower	789	4734	17	76.5	68	380
Cabbage	236.7	1183.7	13	61.75	62	310
Brinjal	157.8	2840	31	620	65	1170

(Source : Superintendent of Agriculture, Matabari, Killa and Bagafa blocks 1997-98)

FIG.2 MAP SHOWING STUDYAREA OF MATABARI, KILLA AND BAGAFI BLOCKS WITH SELECTED VILLAGES 56



3.2.2. Selection of villages

There are fifteen, twenty five and thirty two tribal village panchayats in Killa, Matabari and Bagafa blocks respectively. One village was randomly selected from each of the three blocks after arranging the villages in alphabetical order. The selected villages were (i) Raiyabari, (ii) Hadra and (iii) Kalashi.

Table.11. Distribution of tribal farm families and population in selected villages

Village	No.of farm families	Total population
1. Raiyabari	375	1838
2. Hadra	123	731
3. Kalashi	275	1144

3.2.3. Selection of respondents

The list of tribal farm women in the selected villages was obtained from the concerned panchayat union. One hundred and fifty tribal farm women were selected (Fifty from each village).

Table.12. Distribution of respondents in the sample villages

Selected villages	Total no. of tribal farm women	No. of respondents selected
Raiyabari	603	50
Hadra	200	50
Kalashi	254	50
		150

3.3 Operationalisation of variables and their measurement :

The importance of any research study mainly depends on the variables taken into account. By pursuing related literature and discussion with social scientists of TNAU and other Southern Universities, the variables were identified. The measurement procedure followed are indicated below.

Variables	Techniques of measurement
INDEPENDENT VARIABLES	
Socio-psychological characteristics	
i. Age	Procedure followed by Karthikeyan (1994)
ii) Educational status	Scoring procedure followed by Mansingh (1993).
iii) Occupational status	Scoring procedure developed for the study.

iv) Farming experience	Scoring procedure followed by Selvakumar (1988) was adopted for the study.
v) Farm size	Scoring procedure followed by Helen (1990).
vi) Annual income	Scoring procedure followed by Subramanian (1991).
vii) Social participation	Scoring procedure followed by Mallika (1995) was adopted.
viii) Mass media participation	Scoring procedure followed by Savitri (1992) was adopted with slight modification.
ix) Contact with extension agency	Scoring procedure followed by Manivannan (1980) was adopted with slight modification.
x) Value orientation (Cosmopolitaness-localiteness)	Scale developed and used by Singh (1964)
xi) Innovativeness	Scoring procedure followed by Singh (1977).
xii) Conservatism-Liberalism	Scale developed and used by Chattopadhyay (1968).
xiii) Credit orientation	Scoring procedure used by Seetharaman (1988).
xiv) Scientific orientation	Scale developed and used by Supe (1969).
xv) Fatalism-Scientism	Scale developed and used by Sinha (1963).
xvi) Self reliance	Scoring procedure followed by Porchezian (1991) was adopted.
xvii) Progressivism - Traditionalism	Scale developed by Sinha(1963).

xviii) Achievement motivation	Scale developed and used by Singh (1969).
xix) Economic motivation	Scale developed and used by Supe (1969).
xx) Intra tribal communication	Scoring procedure followed by Sripal (1983).
xxi) Family norms	Scale developed and used by Vasanthakumar (1979).
xxii) Gregariousness	Scale developed and used by Sripal (1983).
xxiii) Religious belief	Scale developed & used by Kumar (1998)

DEPENDENT VARIABLES

xxiv) Extent of Participation in agriculture and allied activities	Scoring procedure followed Premavathi (1997) was adopted with slight modification
xxv) Extent of participation in decision-making	Scoring procedure followed by Premavathi (1997).

The procedure followed for the measurement of each of the variable is presented below.

3.3.1. Age

Age was operationalised as the number of completed years of respondents at the time of enquiry and the chronological age was taken as a measure. The age has been categorised into three groups namely, young,

middle and old on as followed by Karthikeyan (1994). Actual age was taken as individual score.

Category	Age
Young	Upto 30 years
Middle	31-45 years
Old	More than 45 years

3.3.2. Educational Status

Educational status was operationalised as the level of literacy possessed by the individual. The scoring procedure followed was Mansingh (1993).

Category	Score
a) Illiterate	1
b) Primary education	2
c) Middle education	3
d) Secondary education	4
e) Higher Secondary education	5
f) Collegiate education	6

3.3.3. Occupational status

Occupational status was operationalised as the extent to which the respondents involve themselves in agricultural and non-agricultural activities. For scoring purpose the occupational status was categorised (1) agriculture and allied activities (2) agriculture and allied activities + other economic

activities (gathering forest products, fuel collection and brewing liquor and selling them) (3) agriculture and allied activities + business (4) agriculture and allied activities + service.

Occupation	Score
Agriculture & allied activities	4
Agriculture & allied activities + other economic activities	3
Agriculture & allied activities + business	2
Agriculture & allied activities + service	1

3.3.4. Farming experience

Farming experience was operationalised as the number of completed years of experience in farming. The scoring procedure followed by Selvakumar (1988) was adopted for this study. The respondents categorised into low, medium and high according to cumulative frequency method. One score was given to every year of experience in farming.

Category	Years
Low	Upto 12 years
Medium	13-25 years
High	Above 25 years

3.3.5. Farm Size

Farm size refers to the number of acres owned and cultivated by an individual. Farm size was classified into 4 categories with appropriate scale value. The procedure was followed by Helen (1990).

Category	Score
Upto 2.5 acres	1
2.51 - 5 acres	2
5.01 - 10 acres	3
> 10 acres	4

3.3.6. Annual income

This was operationalised as the total income obtained from farming and off farming employment. The actual income obtained by the respondents were over a period of one year was considered for analysis and the respondents were categorised into low, medium and high based on cumulative frequency method. The scoring procedure adopted by Subramanian (1991) was followed.

Annual income	Category	Score
Rs. 5000 and below	Low	1
Rs.5,000 - Rs.15,000	Medium	2
Above Rs.15,000	High	3

3.3.7. Social participation

Social participation referred to the degree of involvement of the respondent in formal organisation. The scoring was based on the respondents involvement as just a member or office bearer in one or more organisations as adopted by Mallika (1995).

	Score
Non-member	1
Member in one organisation	2
Member in more than one organisation	3
Office bearer in one organisation	4
Office bearer in more than one organisation	5

The respondents were categorised into low, medium and high by using cumulative frequency.

3.3.8. Mass media participation

Mass media participation was operationalised as the degree to which the respondents sought to the agricultural information in radio, TV, newspaper, magazine etc. The scoring procedure with regard to radio, TV, newspaper and magazines was adopted as followed by Savitri (1992) with slight modification.

Details of exposure	Score
Daily	4
Occasionally	3
Rarely	2
Never	1

65

Respondents were categorised into low, medium and high based on the cumulative frequency method.

3.3.9. Contact with extension agency

The variable was measured in terms of awareness, frequency and purpose of contacting the different change agents by the farmers. The scores given by Manivannan (1980) were used with slight modification for this study which are as follow:

	Score
a) Not aware about extension agent	1
b) Aware about extension agents	2
c) Frequency of contact	
Rarely	1
Sometime	2
Often	3
d) Purpose	
Casual	1
Non-agriculture	2
To avail input assistance	3
Subsidies and agricultural implement	4
Technical guidance	5

The scores were summed up to get total score of an individual. The respondents were categorised into low, medium and high based on the cumulative frequency method.

3.1.10. Cosmopolitaness/Localitiness (Value Orientation)

Value orientation (cosmopolitaness-localitiness) is the psychological tendency of an individual to maintain contacts external to his/her social system, while localite value alienation refers to the psychological make up of an individual limit - his/her contact within the community. The scale developed by Singh (1964) was followed in this study. The scale constituted of five statements, of which, the scoring procedure followed is given below.

Responses	Strongly agree	Agree	Disagree	Strongly disagree
Score of positive statements	4	3	2	1
Score of negative statements	1	2	3	4

First 3 were negative and the last two statements were positive. The scores for the positive and negative statements were summed up to get total score for an individual. The respondents were categorised into low, medium and high based on the cumulative frequency method.

3.3.11. Innovativeness

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Rogers and Shoemaker (1971) defined innovativeness as the degree to which an individual is relatively earlier in adopting new ideas than other members of the social system. The questions, the responses and scoring procedure developed by Singh (1977) was used to measure innovativeness.

a) When would you prefer to adopt an improved agricultural practice?

	Score
i) As soon as it is brought to your knowledge	3
ii) After you have seen other farmers have treated successfully in their farms	2
iii) You prefer to wait and take your own time	1

3.3.12. Conservatism-liberalism

It refers to the positive attitude of an individual towards traditional institutions and practices. Further it also refers to the maintenance of 'status quo' producing a tendency to resist change or search for new ways and ideas or modification or change in the 'status quo'. The scale developed by Chattopadhyay (1968) consisted of 10 statements of which first five statements are negative and the rest are positive. The scoring procedure followed is as given below.

Response	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
For positive statement	5	4	3	2	1
For negative statement	1	2	3	4	5

The scores for the positive and negative statements were summed up to get total score for conservatism and liberalism, (value orientation) for an individual respondent.

3.3.13. Credit orientation

Credit orientation in this study refers to the orientation of an individual towards source of credit. Keeping into account the rate of interest charged, the following scoring procedure used by Scetharaman (1988) was adopted.

Credit sources	Score
Village money lender	1
Other bank	6
Co-operative/nationalised bank	9
Friends and relatives	12

3.3.14. Scientific orientation

Supe (1969) defined scientific orientation as the degree to which a farmer is oriented towards the use of scientific method of farming. There were six statements in this scale of which 2nd alone was negative. The scoring procedure followed by Supe (1969) was adopted in the study which is given below :

Response	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
Scores for positive statement	7	5	4	3	1
Scores for negative statement	1	3	4	5	7

The scores for the positive and negative statements were summed up to get total score for an individual respondent. The respondents were categorised into low, medium and high based on the cumulative frequency method.

3.3.15. Fatalism-Scientism

This was operationalised as a belief held by a farmer that human situations and acts are pre-determined by some super-natural power and can

never or be little influenced by individual volition or by acts of anyone else and 'scientism' as a belief held by a farmer that human situations and acts are the results of natural and/or social forces which can be understood and changed by volition or human effort'.

These operationlisation were made based on the definition given by Singh (1963).

The scale developed by Sinha (1963) was used for this study. The scale consisted of three statements and respondents were asked to state their agreement on the three point continuum. The scores for the responses of each statement in terms of agree, undecided and disagree with 3, 2 and 1 respectively.

The scores for the statements were summed up to get total score for an individual respondent.

3.3.16. Self-reliance

Self reliance is conceptually related to fiseal and planning orientation. Borrowing capital for introducing changes in farming and to do it in a planned way pre-supposes confidence in oneself along with the realisation that all the environmental factors are not inscrutable supernatural forces beyond or control.

The scoring procedure as followed by Porchzhian (1991) was adopted in this study.

	Score
100 per cent	5
75-99 per cent	4
50-74 per cent	3
25-49 per cent	2
Less than 25 per cent	1
Not at all	0

3.3.17. Progressivism - Traditionalism

It refers to the relative receptivity of a tribal farm woman towards modern values and practices. The scale developed by Sinha (1963) was used. The scale consisted of 3 statements and the respondents were asked to state their agreement on 3 point continuum. The scores for responses for each statement in terms of 'agree', 'undecided' and 'disagree' were 3, 2 and 1 respectively.

The scores for the statements were summed up to get total score for an individual respondent.

3.3.18. Achievement motivation

Achievement motivation is a social value that emphasise a desire for excellence in order for an individual to attain a sense of personal accomplishment.

To measure the achievement of the respondents, achievement motivation scale of Singh (1969) was used. It is six item scale with five alternative responses to each item with score 5 to 1. The respondents were asked to give their responses to each item. Total score was attained by summing up for an individual respondent.

3.3.19. Economic motivation

Economic motivation was operationalised in terms of profit maximization and the relative value placed by a tribal farm woman on economic ends. It was measured with the help of the scale developed by Supe (1969). The scale consisted of six statements of which first five were positive and the last one was negative. The responses for each statement were rated over a five point continuum, which strongly agree to strongly disagree.

To get final score of economic motivation for each individual, the score of each statement were added. The maximum score an individual can get was 42 and minimum 6.

3.3.20 Intra-tribal communication

It refers to all such activities performed by the tribal farm women to share their ideas and experiences with regard to agriculture with their community persons. The following weightages were given on the strength of the decision taken by the member of tribal society with respect to the degree

of credibility of the information source. Scores as followed by Sripal (1983) was adopted.

a) Village leader	1
Religious leader	2
School teacher	3
b) Village people	3
Villagers	2
Group discussion	1
c) Interpersonal	2
Tom tom	1
d) Input	1
Training	2
Loans	3
e) Acceptance fully	2
Acceptance partially	1

3.3.21. Family norms

It refers to the norms of the tribal farm families. Family norms were operationalised by the items covering positive and negative dimensions of eight areas. The areas include (a) authority position of the family, (b) using resources, (c) viewing family prestige, (d) orientation to credit, (e) empathy, (f) orientation towards innovations, (g) group conformity or independence and (h) information seeking habit. The items c, d, e and h were positive

while the rest were negative in nature, scoring procedure followed by Vasanthakumar (1979) was adopted in the study.

Response	Strongly agree	Agree	Disagree	Strongly disagree
For positive statements	4	3	2	1
For negative statements	1	2	3	4

The scores for the positive and negative statements were summed up to get total score for an individual respondent.

3.3.22. Gregariousness

Gregariousness was operationalised as the extent of one’s social contact. A schedule containing four statements concerning the social affairs of the village and working with other people was developed by Sripal (1983) to measure gregariousness. The schedule contained three positive statements and one negative statement. The scores obtained by an individual for each statement was summed up and the total score was considered as the measure of gregariousness.

Response	More Frequently	Frequently	Less Frequently	Never
For positive statements	4	3	2	1
For negative statements	1	2	3	4

3.3.23. Religious belief

This was operationalised as the belief of the individual in accordance with his/her religions and its nexus to performance of occupation. For assessing this variable the respondents were asked to respond to five statements in terms of agree, undecided and disagree and scores were allotted as 3, 2 and 1 respectively as followed by Dilip Kumar (1998). The scores obtained by an individual for each statement was summed up to get total score for an individual.

DEPENDENT VARIABLES

3.3.24. Extent of participation in agriculture and allied activities

It means the extent of participation of tribal women in agriculture and allied activities. The selected agriculture activities included major operations like field preparation, seed and sowing, intercultivation, harvesting,

marketing and also allied activities like dairy, poultry, piggery, goat rearing and farm forestry.

The participation was assessed in terms of self doing, assisting, supervising and nonparticipation and scores of 3, 2, 1 and 0 were allotted respectively as followed by Premavathi (1997) with slight modification.

Respondents who self did the operations received a maximum score of 3. Respondents who assisted were given a score of 2, because of lesser degree of involvement, respondents who supervised were given a score of 1 because of the less direct involvement. By summing up the scores obtained for each agriculture and allied activities the participation score was arrived at for each respondent.

3.3.25. Extent of participation in decision-making

It is referred to the degree to which an individual tribal woman participated in decision-making regarding various agriculture and allied activities.

Participation in decision-making of tribal women in agriculture and allied activities were assessed in the major decision-making areas and also in specific items under each major decision-making area of agriculture and allied activities.

Major decision-making areas in farming included operational decision and involvement decision and also related to allied activities like dairy and poultry keeping.

In each major decision-making areas as well as specific items was assessed by the use of a five point scale with the points as self without consulting others, consulting the spouse/elders, consulting all the family members, help others in decision-making and no participation in decision-making with scores of 5, 4, 3, 2, 1 as followed by Premavathi (1997). By summing up the scores obtained for each agriculture and allied activities the decision-making score was arrived at for each respondent.

3.4. Collection of data

A well structured and comprehensive interview schedule was prepared taking into consideration the specific objectives of the study. The interview schedule was pretested with a sample tribal women in the Coimbatore district of Tamilnadu. After pre-testing, the interview schedule was finalised. The data were personally gathered by interviewing the selected members of tribal women. The collected data were coded and tabulated for statistical analysis.

3.5. Statistical tools used

Percentage analysis: Percentage analysis were carried out to make simple comparison.

Cumulative root frequency

Cumulative root frequency was preferred for classifying the socio-psychological characteristics of tribal women, their extent of participation in agriculture and allied activities and extent of participation in decision-making into three categories, low, medium and high. By this method two limits namely L1 and L2 were found. The value L1 were taken as low, between L1 and L2 were taken as medium and above L2 were taken as high.

Simple correlation

This tool was employed to examine the socio-psychological correlates in relation to extent of participation in agriculture and allied activities and participation in decision-making. The formula utilised was :

$$r = \frac{xy - (x)(y)/n}{\sqrt{x^2 - (x)^2/n \cdot Y^2 - (y)^2/n}}$$

where,

n = sample size, XY = correlation coefficient

X = Independent variables

Y = Dependent variables

$$Xy = \frac{(x)(y)}{n} = \text{Sum of product of XY}$$

$$X^2 = \frac{(X)^2/n}{} = \text{Sum of squares of X}$$

$$Y^2 = \frac{(Y)^2/n}{} = \text{Sum of squares of Y}$$

The 't' test of significance was used to test the simple correlation computed between the variables. The significance of calculated correlation coefficient was taken by using the formula.

$$t(n-2) = \frac{r^2}{\sqrt{1-r^2/n-2}}$$

Multiple regression analysis

To find out the functional relationship between dependent and independent variables, multiple regression equation was fitted. Multiple regression analysis helps to find out the extent of contribution of all independent variables on a single set to the dependent variable.

The following is the general form of multiple regression equation

$$\hat{y} = a + b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_n X_n$$

where \hat{y} = Expected value of dependent variable

a = Intercept

X1 - Xn = Independent variables

b1 to bn = Partial regression coefficients

Path analysis

The path coefficient as the ratio of the standard deviation of the effect due to a given cause to the total standard deviation of the effect. Path analysis was carried out to find out the direct and indirect effect of important independent variables on the dependent variables.

FINDINGS AND DISCUSSION

CHAPER - IV

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FINDINGS AND DISCUSSION

This chapter highlights the findings of the study along with discussion under the following sections in the light of the objectives setforth.

- SECTION A** : Extent of participation of tribal women in agriculture & allied activities.
- SECTION B** : Extent of participation of tribal women in decision making in agriculture & allied activities.
- SECTION C** : Socio-psychological characteristics of tribal women.
- SECTION D** : Cultural characteristics of tribal women.
- SECTION E** : Relationship of socio-phychological characteristics with the participation of tribal women in agriculture & allied activities and their participation in decision making.
- SECTION F** : Preference and non-preference in differential participation of tribal women in agriculture & allied activities and reasons accounted for the same.
- SECTION G** : 'Hope of Success' and 'Fear of Failure' of tribal women in agriculture & allied activities.
- SECTION H** : Sources of farm information and their perceived credibility by tribal women.
- SECTION I** : Training needs of tribal women in agriculture and allied activities.
- SECTION J** : Participation of tribal women in development programmes.

SECTION - A

4.1 Extent of Participation of tribal women in Agriculture and Allied activities

Table.13. Extent of participation in agriculture and allied activities

n = 150

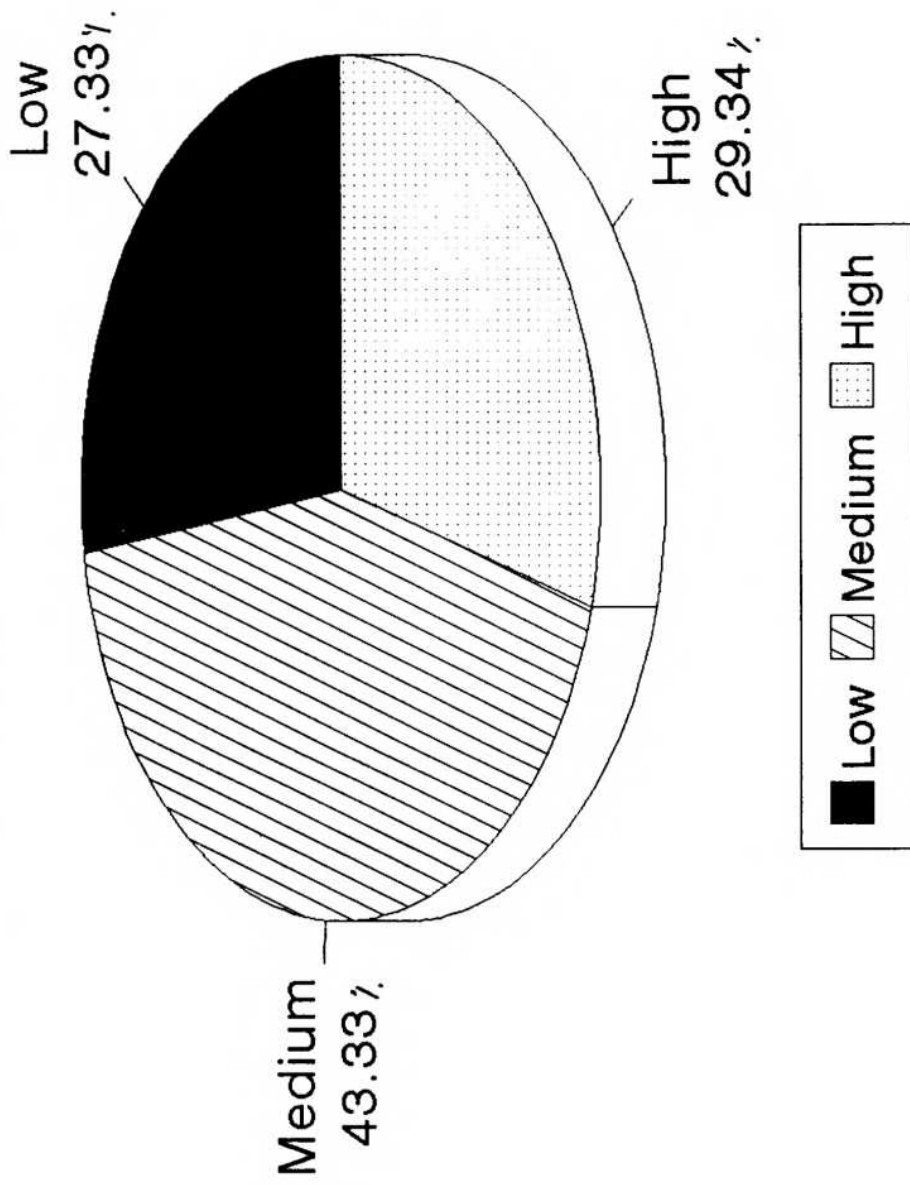
Sl. No.	Category	Number	Percent
1.	Low	41	27.33
2.	Medium	65	43.33
3.	High	44	29.34

From the table 13 it is seen that less than half (43.33%) of the tribal women possessed medium level of participation followed by 29.33 per cent of the respondents possessed high level of participation in agriculture and allied activities. Only 27.33 per cent of the respondents had low level of participation in agriculture and allied activities.

The participation of tribal women in agriculture was assessed under the following five major aspects.

- Field preparation
- Sowing activities
- Inter cultivation
- Harvesting
- Post harvest
- Marketing

Fig.3. Extent of participation of tribal women in agriculture and allied activities



Other allied activities included dairy, poultry keeping, piggery, goat rearing and farm forestry. The extent of participation of the respondents was assessed as self doing, assisting, supervising and non participation by assigning scores of 3, 2, 1 and 0 respectively. Under each major heading various items were included.

The practicewise participation of tribal women in agriculture and allied activities is presented below under each major aspect.

4.1.1. Participation of tribal women in field preparation

The extent of participation in six activities under field preparation is presented below in table 14 (Fig. 4.)

It could be observed from the table that tribal women had a higher percentage of participation (48.67) by self doing in stubble collection and 34.67 participation in assisting. 4.66 per cent of tribal women supervised in stubble collection.

Table 14. Participation of tribal women in field preparation

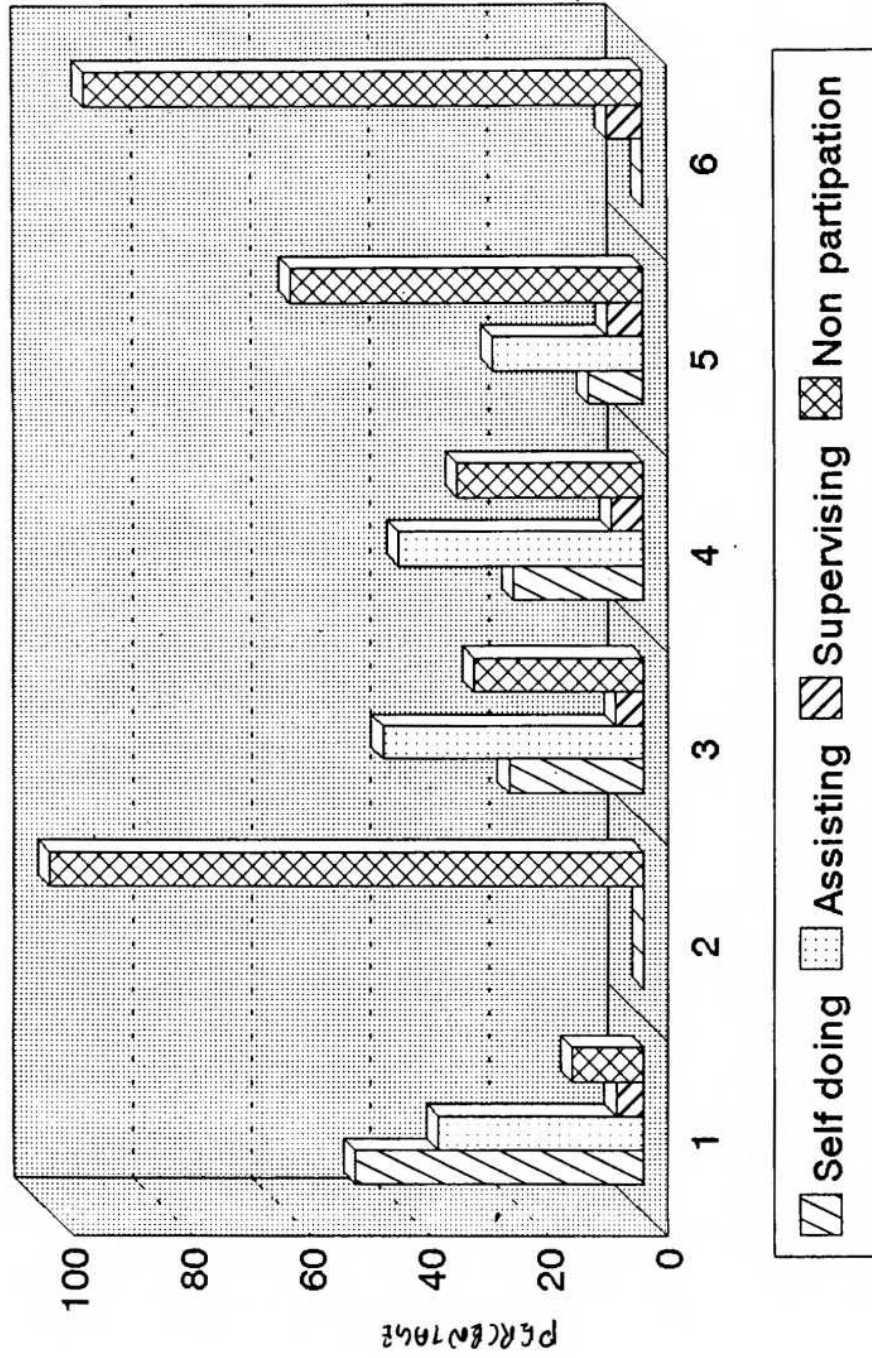
(n=150)

Activities	SD		A		SV		NP	
	No.	%	No.	%	No.	%	No.	%
Stubble collection	73	48.67	52	34.67	7	4.66	18	12.00
Land ploughing and levelling	-	-	-	-	-	-	150	100.00
Forming ridges and furrows	34	22.67	66	44.00	7	4.67	43	28.66
Forming drainage channels	33	22.00	62	41.33	8	5.33	47	31.34
Basal application of FYM	14	9.33	38	25.33	9	6.00	89	59.34
Basal application of fertilizer	-	-	-	-	9	6.00	141	94.00

SD - Self doing; A - Assisting; SV - Supervising; NP - Non-participation.

In land ploughing and levelling activity, cent per cent of the respondents did not participate. It might be due to the fact that land ploughing and levelling was fully men-oriented job. Almost half (44%) of the respondents assisted in forming ridges and furrows followed by 28.66 per cent of tribal women who did not participate in the same activity whereas 22.67 and 4.67 per cent of the respondents performed self doing and supervisory work respectively. Self doing and assistance in the application of farm yard manure were noticed by 9.33 and 25.33 per cent of the respondents respectively. More than half of the tribal women (59.34%)

Fig.4. Participation of tribal women in field preparation



1. Stubble collection; 2. Land ploughing & levelling; 3. Forming ridges & furrows;
 4. Forming drainage channels; 5. Basal application of FYM; 6. Basal application of fertilizers

reported non-participation in farm yard manure application. About 94 per cent of the tribal women reported non-participation in basal application of fertilizers.

From the table it is seen that the tribal women participated in the four activities (except land ploughing and levelling and basal application of fertilizer) performing all the three roles viz., self-doing, assisting and supervising at varying degrees, mainly they participated in labour intensive activities. But in the case of land ploughing and levelling the tribal women are not traditionally allowed to touch the plough. Moreover, it is felt that they are physically (physical strength involve) for handling plough. Therefore, none of the respondent participated in land ploughing and levelling activity. In the application of basal fertilizers, technical knowledge and skill is required for admixture of various fertilizers, so non participation was found in self doing and assisting in the same activity. This finding is in conformity with the findings of Premavathi (1997).

4.1.2 Extent of participation of tribal women in sowing/transplanting activities

Under this item, seed treatment and sowing or transplanting were the two activities taken into account to work out the extent of participation. The details are presented in table 15. (Fig.5.)

Table.15. Participation of tribal women in sowing activities

(n=150)

Activities	SD		A		SV		NP	
	No.	%	No.	%	No.	%	No.	%
Seed treatment	-	-	2	1.33	-	-	148	98.67
Sowing/ transplanting	123	82.00	20	13.33	7	4.67	-	-

SD - Self doing; A - Assisting; SV - Supervising; NP - Non-participation.

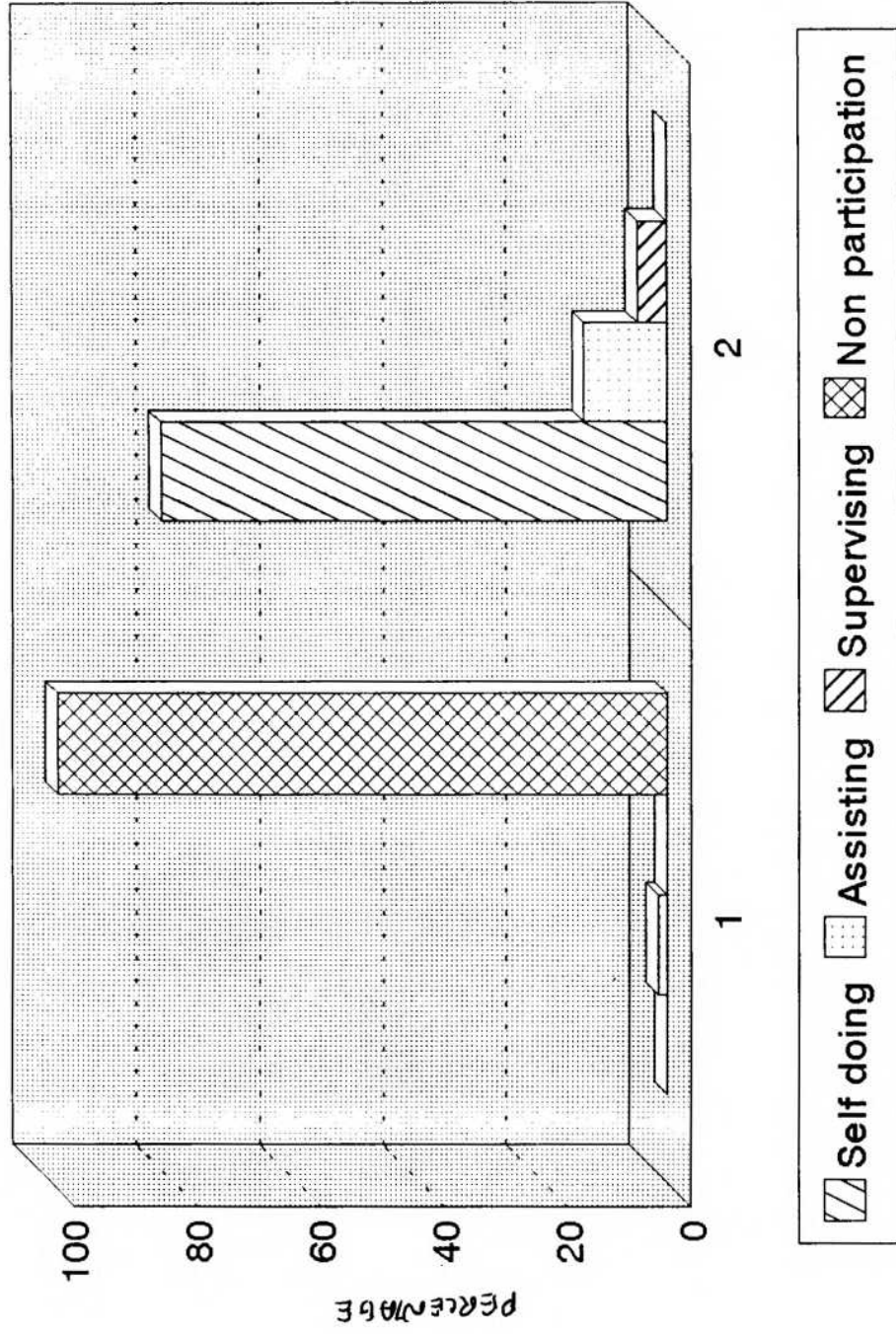
The above table reveals that majority of the tribal farm women (98.67%) did not participate in the seed treatment as it was a skill oriented activity except 1.33 per cent who played an assisting role. In the sowing or transplanting activity, nearly 82 per cent of the tribal farm women reported self doing, 13.33 per cent assisting the activity and 4.67 per cent supervised the persons involved in this activity.

It can be concluded that the tribal farm women are more involved in the sowing/transplanting activities as a whole. The cause might be that transplanting meant bending the whole days and wading through the muddy soil. The entire operation is purely manual and does not involve tools and implements. So participation of women was found to be higher.

4.1.3. Extent of participation of tribal women in intercultivation

The extent of participation of tribal women in intercultivation operations was analyzed with five activities, hoeing and weeding, earthing up,

Fig.5. Participation of tribal women in sowing/transplanting activities



1. Seed treatment; 2. Sowing/transplanting;

irrigation, plant protection measures and top dressing of fertiliser. The details are presented in table 16. (Fig.6.)

Table 16. Participation of tribal women in inter cultivation activities

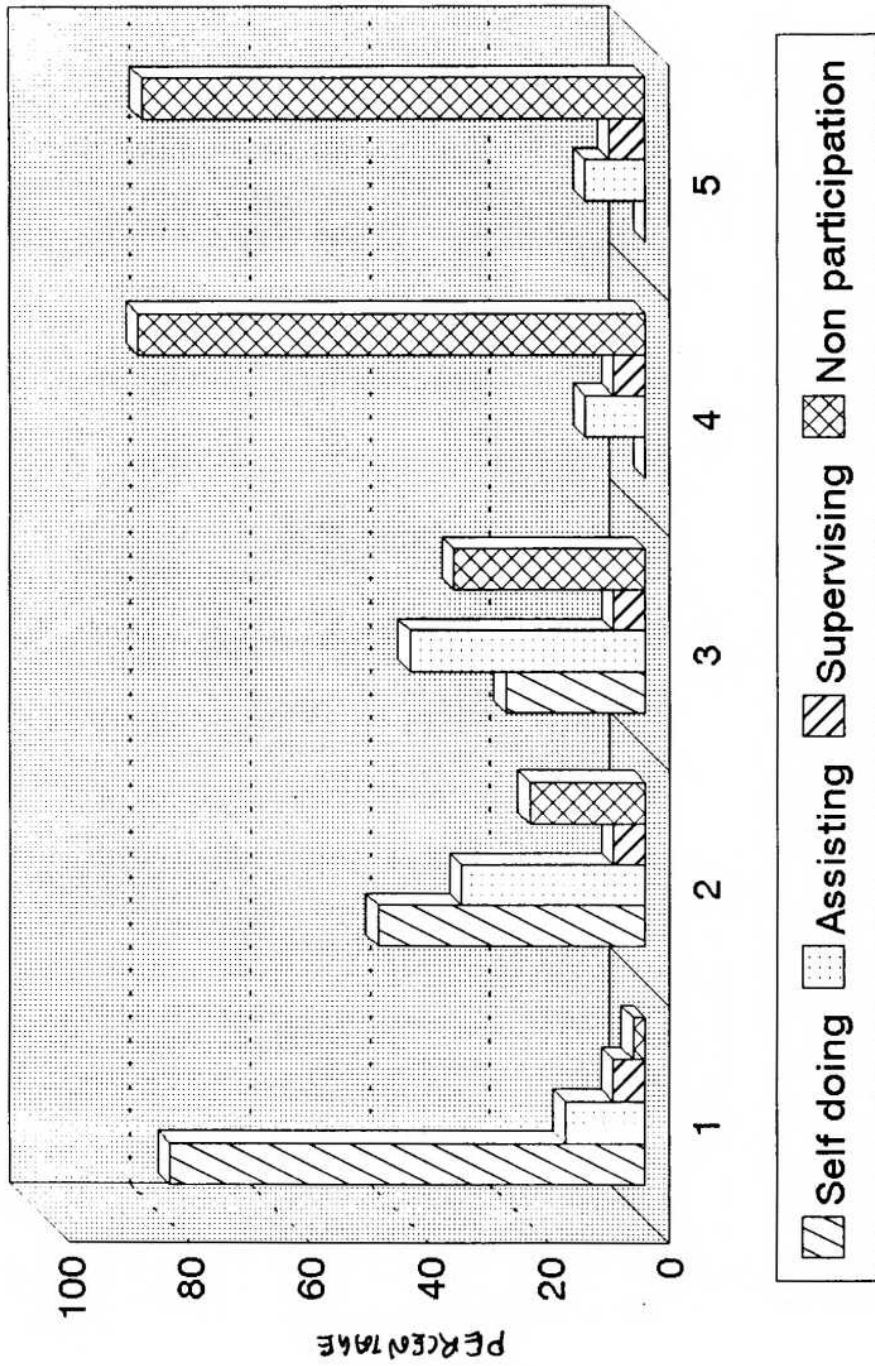
(n=150)

Activities	SD		A		SV		NP	
	No.	%	No.	%	No.	%	No.	%
Howing and weeding	119	79.33	20	13.33	8	5.34	3	2.00
Earthing up	67	44.67	46	30.66	8	5.34	29	19.33
Irrigation	35	23.33	59	39.33	8	5.34	48	32.00
Plant protection measure	-	-	15	10.00	8	5.34	127	84.66
Top dressing of fertilizer	-	-	15	10.00	9	6.00	126	84.00

SD - Self doing; A - Assisting; SV - Supervising; NP - Non-participation.

It could be evident from the table that more than three-fourth of the (79.33%) tribal women were engaged as self doers in hoeing and weeding activity. Self doing also reported by slightly less than half (44.67%) of the tribal women in earthing up operation. 13.33 and 30.66 per cent of the respondents reported assistance in weeding and earthing up respectively. In irrigation, 23.33, 39.33 and 5.34 per cent of the respondents reported to take part as self doers, assistant and supervisor respectively. Non-participation on plant protection measures was reported by 84.66 and 84 per cent in plant protection measures and top dressing of fertilizer respectively. In plant

Fig.6. Participation of tribal women in intercultivation activities



- 1. Hoeing and weeding; 2. Earthing up; 3. Irrigation;
- 4. Plant protection measures; 5. Top dressing of fertilizer

protection measures, assisting and supervising were expressed by 10 and 6 per cent of the tribal women respectively in top dressing of fertilizer.

It can be inferred that weeding is mainly done by women. Weeding is an occupation which requires very careful watching and picking for which women have to bend over the crops for hours for days together. It is done mainly by women because patience is more virtues in women than in men. Again, their activities were less in irrigation, plant protection measures and top dressing because of requirement of more technical knowledge and the complex nature of the activities due to which tribal women found it difficult to perform. This finding contradicts the findings of Choudhury and Ganorkar (1992).

4.1.4 Extent of participation of tribal women in harvesting

Under harvesting, reaping the crops, bundling and transporting to threshing yard were the three activities the extent of participation was assessed. The details are presented below in table 17. (Fig.7.)

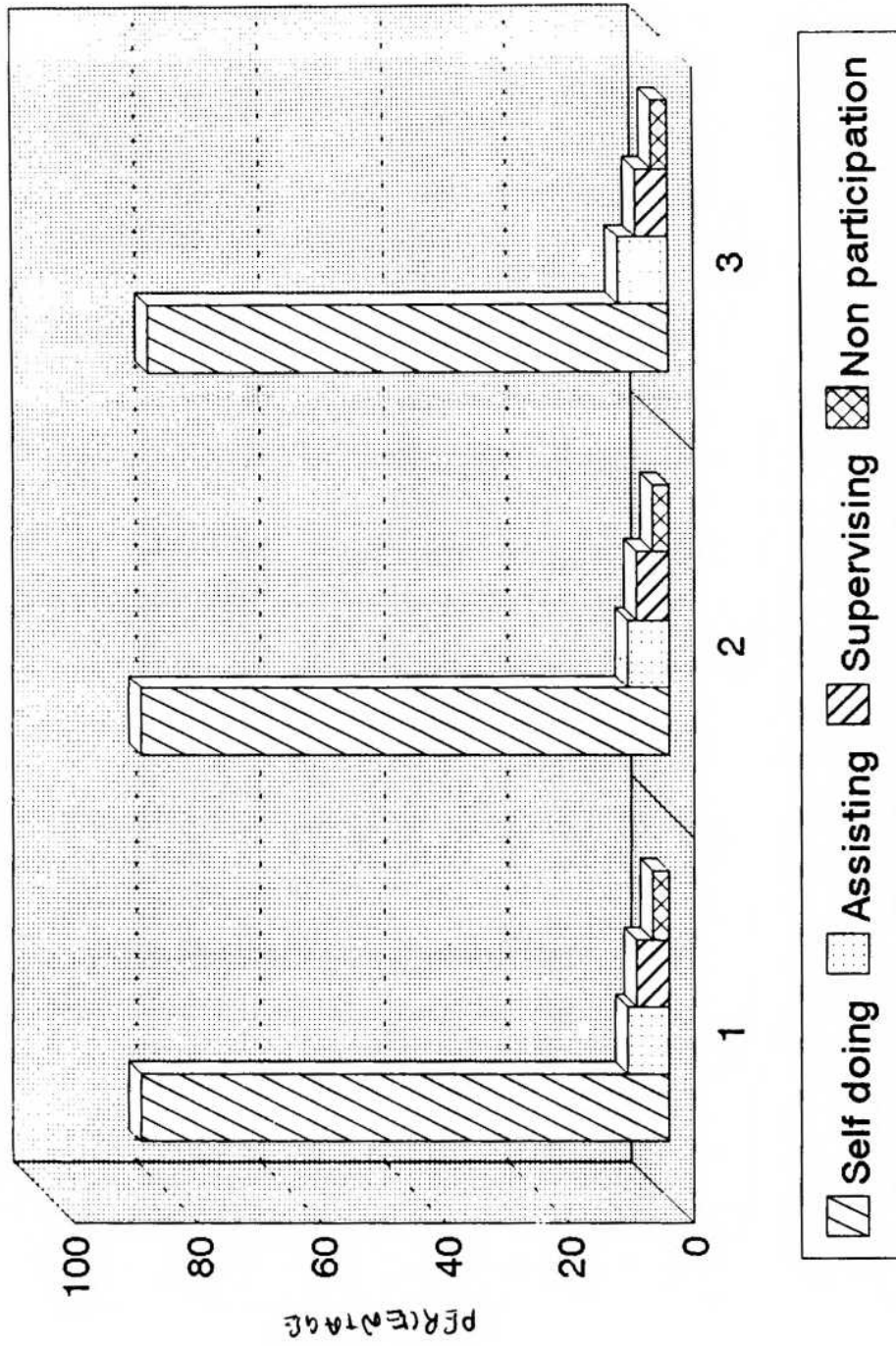
Table 17. Participation of tribal women in harvesting activities

(n=150)

Activities	SD		A		SV		NP	
	No.	%	No.	%	No.	%	No.	%
Reaping the crops	128	85.33	10	6.67	8	5.33	4	2.67
Bundling the crops	128	85.33	10	6.67	8	5.33	4	2.67
Transporting to the threshing yard	126	84.00	12	8.00	8	5.33	4	2.67

SD - Self doing; A - Assisting; SV - Supervising; NP - Non-participation.

Fig.7. Participation of tribal women in harvesting activities



1. Reaping the crops; 2. Bundling the crops; 3. Transporting to the threshing yard

More than four-fifth of the tribal farm women (85.33%) expressed self doing and 6.67 per cent reported assistance in the reaping and bundling activities. Eighty per cent of tribal women were found to selfdoers in transporting the crop to threshing yard. Thus it can be evidently concluded that most of the tribal women predominantly take part in harvesting activities. This findings contradict the finding of Premavathi (1997).

4.1.5 Participation of tribal women in post harvest activities

The extent of participation in post harvest activities was assessed under four sub-items mentioned in the table 18. (Fig.8.)

Table 18. Participation of tribal women in post-harvest activities

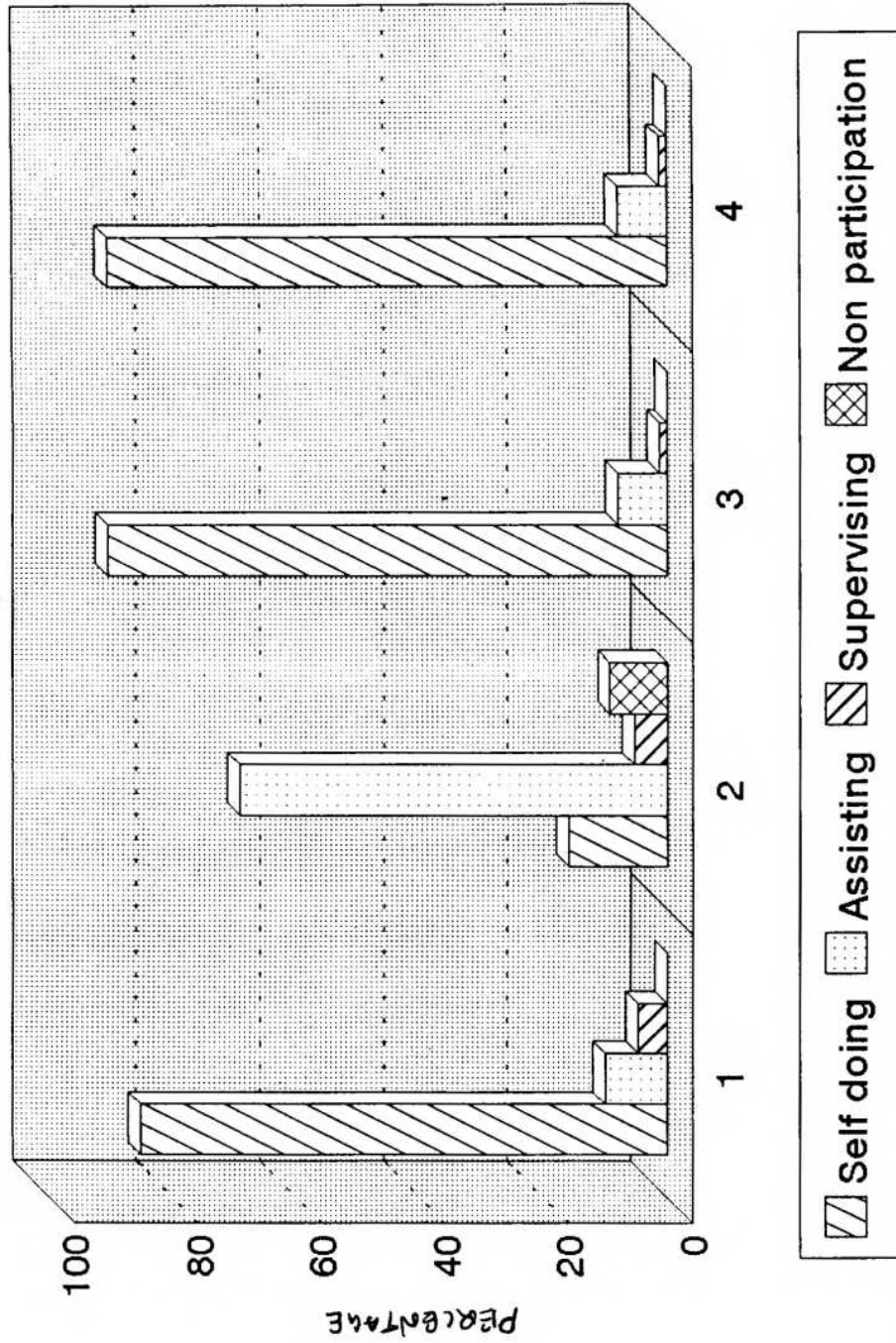
(n=150)

Activities	SD		A		SV		NP	
	No.	%	No.	%	No.	%	No.	%
Threshing	128	85.33	15	10.00	7	4.67	-	-
Winnowing	24	16.00	104	69.33	8	5.33	17	9.34
Drying / Cleaning	136	90.67	12	8.00	2	1.33	-	-
Storing	136	90.67	12	8.00	2	1.33	-	-

SD - Self doing; A - Assisting; SV - Supervising; NP - Non-participation.

The participation of tribal farm women by self doing, assisting and supervising was reported to be 85.33, 10.00 and 4.67 per cent respectively in threshing activity.

Fig.8. Participation of tribal women in post-harvest activities



1. Threshing; 2. Winnowing; 3. Drying/Cleaning; 4. Storing.

Regarding the participation of tribal women in winnowing, 16 per cent in self doing, 69.33 per cent in assisting and 5.33 per cent in supervising was noticed among tribal women. An equal percentage were found participating in the drying/cleaning and storing activities as self doers (90.67%) assisting (8%) and supervising (1.33%) by tribal farm women.

It can be concluded from the finding that except winnowing the participation of tribal women is found relatively high as self doers but in case of winnowing where large quantities of grains are involved, men take predominant role in tribal society and in case of cleaning/drying and storing which depends on human labour, to complete these activities, they are predominantly performed by women. This findings agrees with the findings of Helen (1990).

4.1.6 Participation of tribal women in marketing

Under marketing the extent of participation was found in the sub-items viz., grading, loading and marking. The details on the extent of participation in the above items are presented in table 19 (Fig.9.).

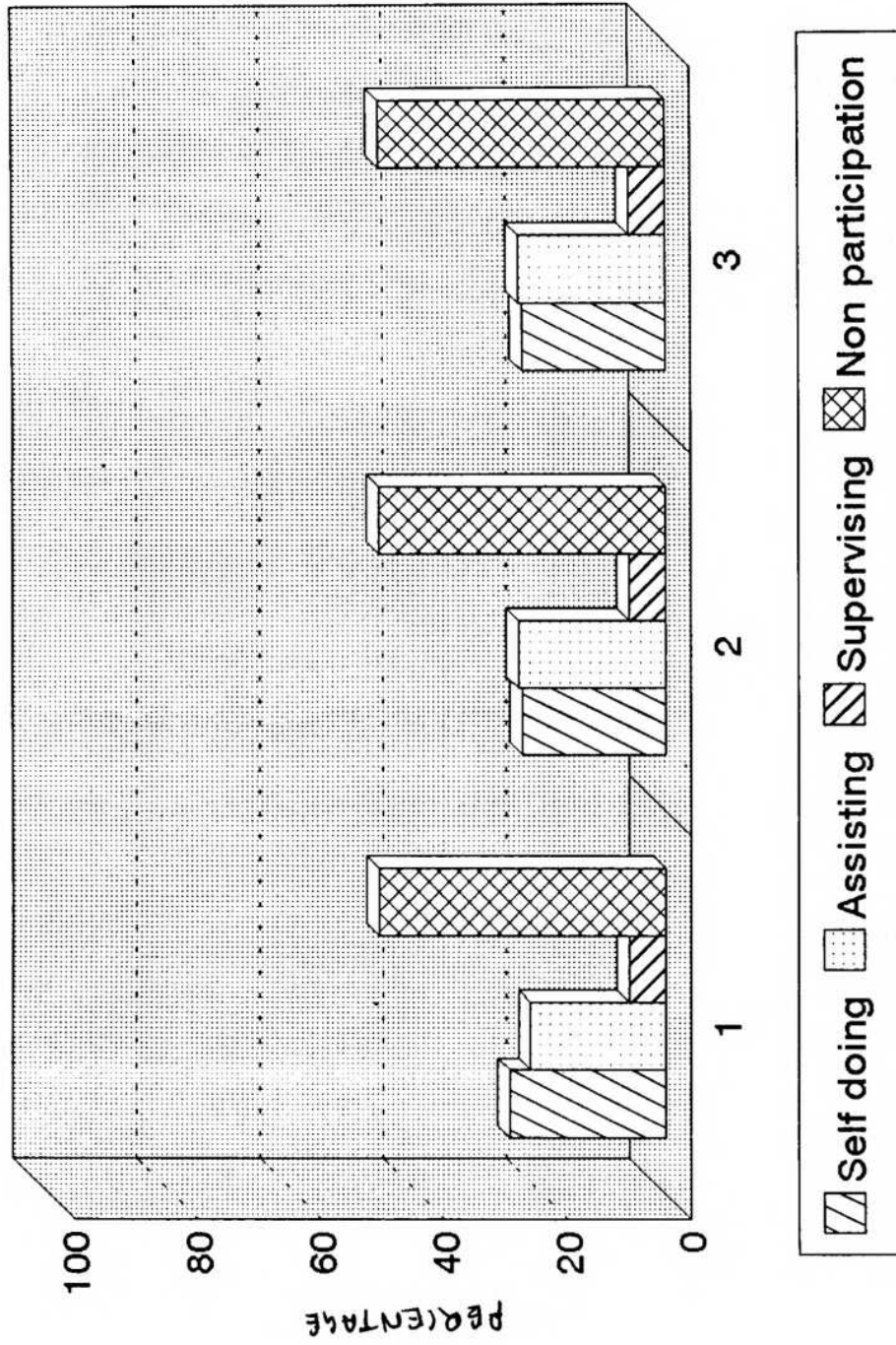
Table 19. Participation of tribal women in marketing activities

(n=150)

Activities	SD		A		SV		NP	
	No.	%	No.	%	No.	%	No.	%
Grading	38	25.33	33	22.00	9	6.00	70	46.67
Loading	35	23.33	36	24.00	9	6.00	70	46.67
Marketing	35	23.33	36	24.00	9	6.00	70	46.67

SD - Self doing; A - Assisting; SV - Supervising; NP - Non-participation.

Fig.9. Participation of tribal women in marketing activities



1. Grading; 2. Loading; 3. Marketing.

More than 25 per cent of tribal women were found as self doers in grading activity, followed by 22 and 9 per cent of respondents who were found to assist and supervise respectively. The tribal women participated in the loading activity by all the three roles of self doing, supervising and assisting, their percentage being 23.33, 24 and 6 per cent respectively. Further 23.33 per cent of the tribal farm women reported self-doing in the marketing the farm produce in absence of male family members.

It can be understood from the table that among the tribal farm women the participation in marketing is comparatively low. The reason may be that they are not much conscious of market trends and also the tribal families mostly sell paddy grain immediately after harvest from the threshing yard, however the remaining paddy is brought to the nearby market. This is in agreement with the finding of Premavathi (1997).

4.1.7. Participation of tribal women in dairy management

Under dairy, the extent of participation was found by the sub-items viz., purchase of animals, feeding the animals, grazing the animals, cleaning the animals' shed, milking and marketing of milk or milk products. Out of 150 respondents only 44 respondents were found to rear dairy animals. The details on the extent of participation in the above items are presented in table 20. (Fig.10.)

Table 20. Participation of tribal women in dairy management

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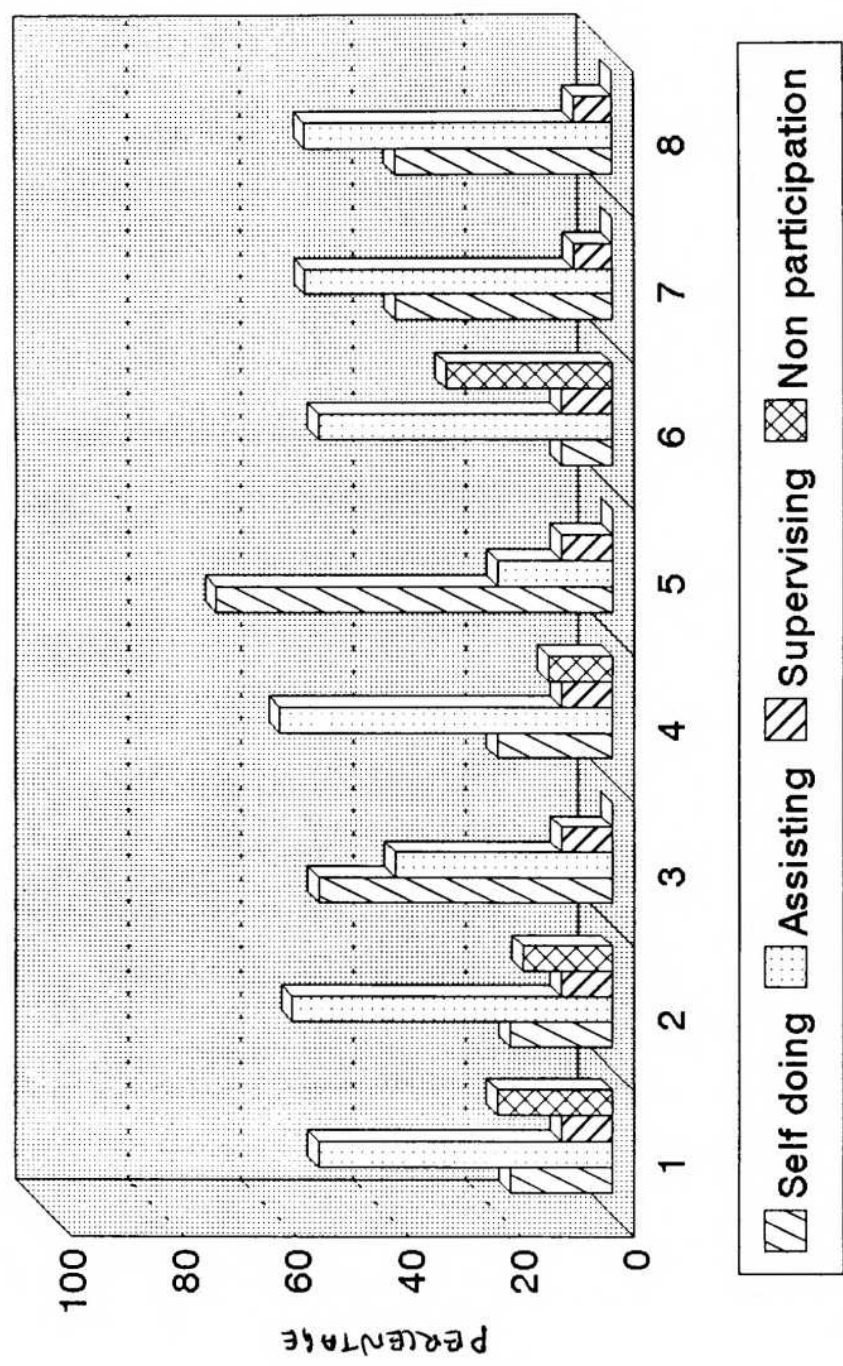
(n=44)

Activities	SD		A		SV		NP	
	No.	%	No.	%	No.	%	No.	%
Grazing the animal	8	18.18	23	52.27	4	9.09	9	20.46
Collection of animal feed	8	18.18	25	56.82	4	9.09	7	15.91
Feeding the animals	23	52.27	17	38.64	7	9.09	-	-
Bathing the animals	9	20.46	26	59.09	4	9.09	5	11.36
Cleaning the animal shed	31	70.45	9	20.46	4	9.09	-	-
Taking care of sick animal	4	9.09	23	52.27	4	9.09	13	29.55
Milking	17	38.64	24	54.55	3	6.81	-	-
Marketing of milk/ milk products	17	38.64	24	54.55	3	6.81	-	-

SD - Self doing; A - Assisting; SV - Supervising; NP - Non-participation.

It could be seen from the table that 18.18 per cent of the respondents grazed the animals by themselves. Assisting and supervising were reported by 52.27 and 9.90 per cent of the tribal farm women respectively. Regarding the collection of animal feed the tribal women were found to involve by performing all the three roles of self doing, assisting and supervising and their percentage being 18.18, 56.82 and 9.90⁹ respectively.

Fig.10. Participation of tribal women in dairy management



- 1. Grazing the animals; 2. Collection of animal feeds; 3. Feeding the animals; 4. Bathing the animals;
- 5. Cleaning the animal shed; 6. Taking care of sick animals; 7. Milking;
- 8. Marketing of Milk/Milk products



More than half (59.09%) of the respondents had reported to provide assistance in bathing the animals followed by self doing and supervising were expressed by 20.46 and 9.90 per cent of the respondents respectively. In cleaning the animal shed majority (70.45%) of respondents reported to participate as self doers. Self doing, assisting and supervising was reported by 9.90, 52.27 and 9.90 per cent of the tribal farm women respectively in the activity of taking care of sick animals. In milking and marketing activities an equal percentage of tribal farm women participated as self doers (98.64%), assistants (54.55%) and supervisor (6.81%). This finding is not in line with the findings of Manjula (1991).

4.1.8 Participation of tribal women in poultry keeping

Under poultry, feeding the birds, cleaning the shed, taking care of sick birds and selling the eggs/birds were the four activities taken into account to work the extent of participation. 134 out of 50 respondents were rearing poultry birds in the selected villages. The details are presented below in table 21 (Fig.11).

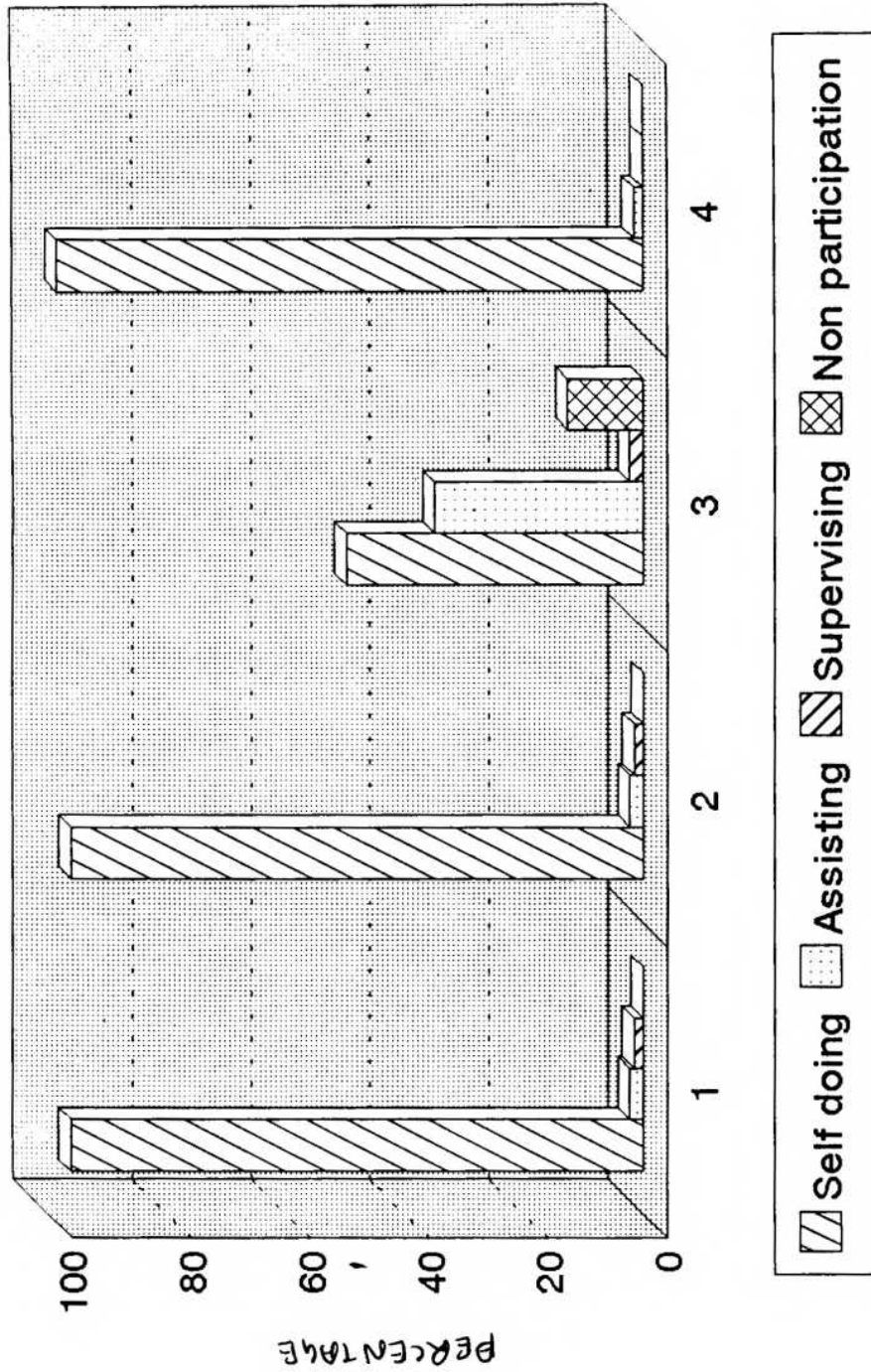
Table 21. Participation of tribal women in poultry keeping

(n=134)

Activities	SD		A		SV		NP	
	No.	%	No.	%	No.	%	No.	%
Feeding the birds	129	96.27	3	2.23	2	1.50	-	-
Cleaning the shed	129	96.27	3	2.23	2	1.50	-	-
Taking care of sick birds	67	50.00	47	35.08	3	2.23	17	12.69
Selling the eggs/birds	132	98.50	2	1.50	-	-	-	-

SD - Self doing; A - Assisting; SV - Supervising; NP - Non-participation.

Fig.11. Participation of tribal women in poultry keeping



1. Feeding the birds; 2. Cleaning the shed; 3. Taking care of sick birds;
4. Selling the eggs/birds.

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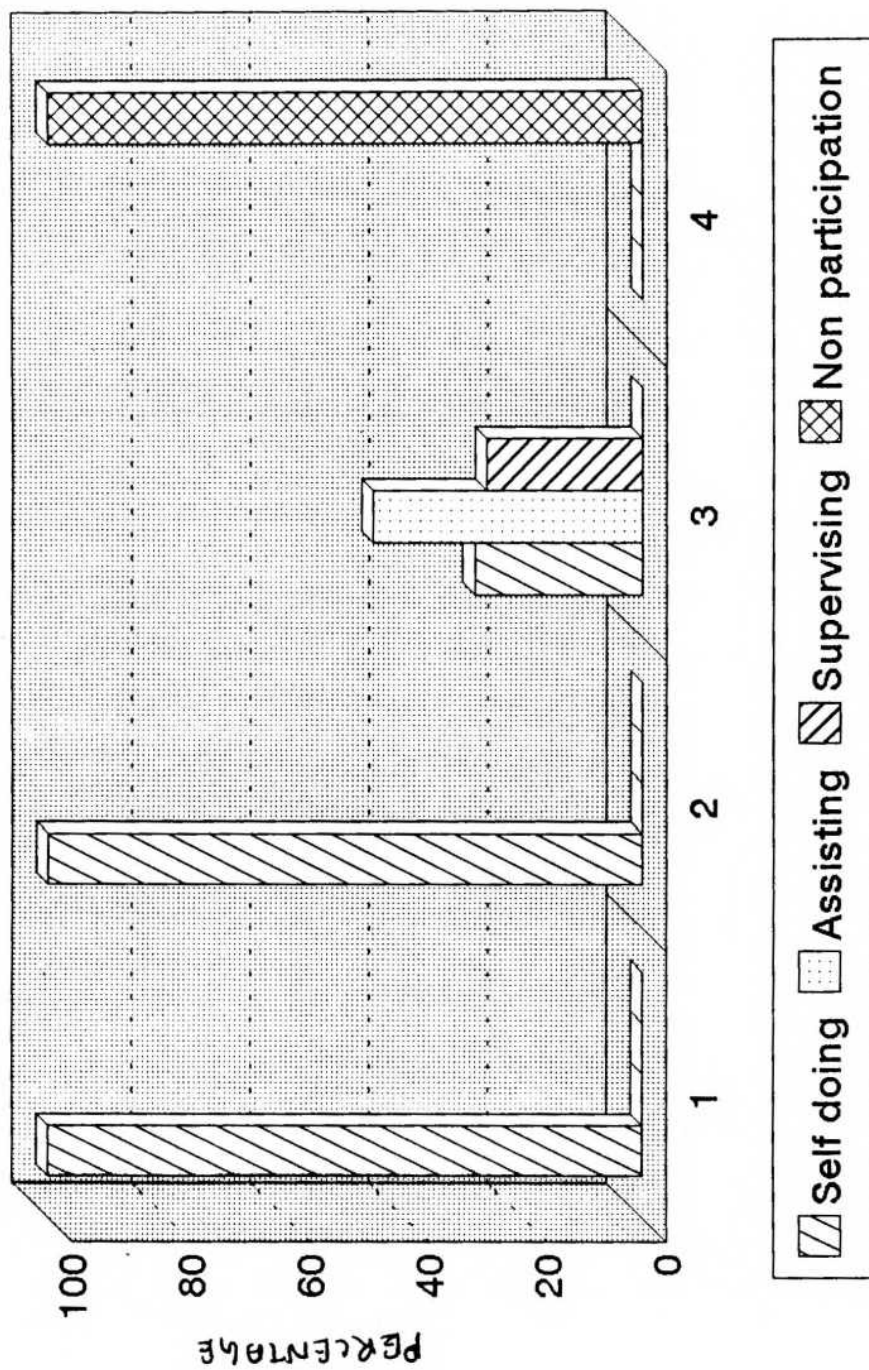
It could be observed from the table that more than 96 per cent of the tribal women participated as self doers in feedings the birds and cleaning the bird sheds. In taking care of sick birds, self doing, assisting and supervising were expressed by 50, 35.08 and 2.23 per cent of the tribal farm women respectively. Non-participation in taking care of sick birds was reported by 12.69 per cent of the respondents because of inadequate knowledge in treatment.

More than 98 per cent of tribal women reported self doing in selling of birds/eggs and 1.50 per cent assisted in this activity. It could be concluded that tribal farm women are more involved in all the activities of poultry keeping by self doing. Though the birds are let free into the streets and neighbouring fields but the women are most concerned about feeding, them, collection of eggs and selling eggs.

4.1.9 Participation of tribal women in piggery

The extent of participation of tribal women in piggery was analysed by four activities viz., feeding the pigs, bathing, taking care of sick animals and selling the pork. Out of 150 respondents 99 were having piggery. The details are presented in table 22 (Fig.12).

Fig. 12. Participation of tribal women in piggery



1. Feeding the pigs; 2. Bathing; 3. Taking care of sick pigs;
4. Selling the pork

Table 22. Participation of tribal women in piggery

(n=99)

Activities	SD		A		SV		NP	
	No.	%	No.	%	No.	%	No.	%
Feeding the pigs	99	100.00	-	-	-	-	-	-
Bathing	99	100.00	-	-	-	-	-	-
Taking care of sick pigs	28	28.28	45	45.45	26	26.27	-	-
Selling the pork	-	-	-	-	-	-	99	100.00

SD - Self doing; A - Assisting; SV - Supervising; NP - Non-participation.

It could be noted from the table that cent per cent of the tribal farm women performed the feeding and bathing the pigs by self doing. In the case of taking care of sick pigs, self doing and assisting were reported by 28.28 per cent and 45.45 per cent of the tribal farm women respectively. Non-participation in the activity of taking care of pigs was also expressed by 26.27 per cent of the respondents because of inadequate knowledge in treatment. Cent per cent of the tribal farm women reported non-participation in selling of pork because of lack of skill in pork processing and selling.

It can be inferred from the findings that tribal women predominantly participant in feeding and bathing of pigs whereas taking care of sick pigs is combined work of both men and women. In selling of pork men play the major role.

4.1.10 Extent of participation of tribal women in goat rearing

Care, maintenance and marketing were the two activities by which the extent of participation was assessed. 46 tribal women out of 150 respondents were rearing goats. The details are presented below in table 23 (Fig.13).

Table 23. Participation of tribal women in goat rearing

(n=46)

Activities	SD		A		SV		NP	
	No.	%	No.	%	No.	%	No.	%
Care and maintenance	38	82.60	8	17.40	-	-	-	-
Marketing	-	-	-	-	-	-	46	100.00

SD - Self doing; A - Assisting; SV - Supervising; NP - Non-participation.

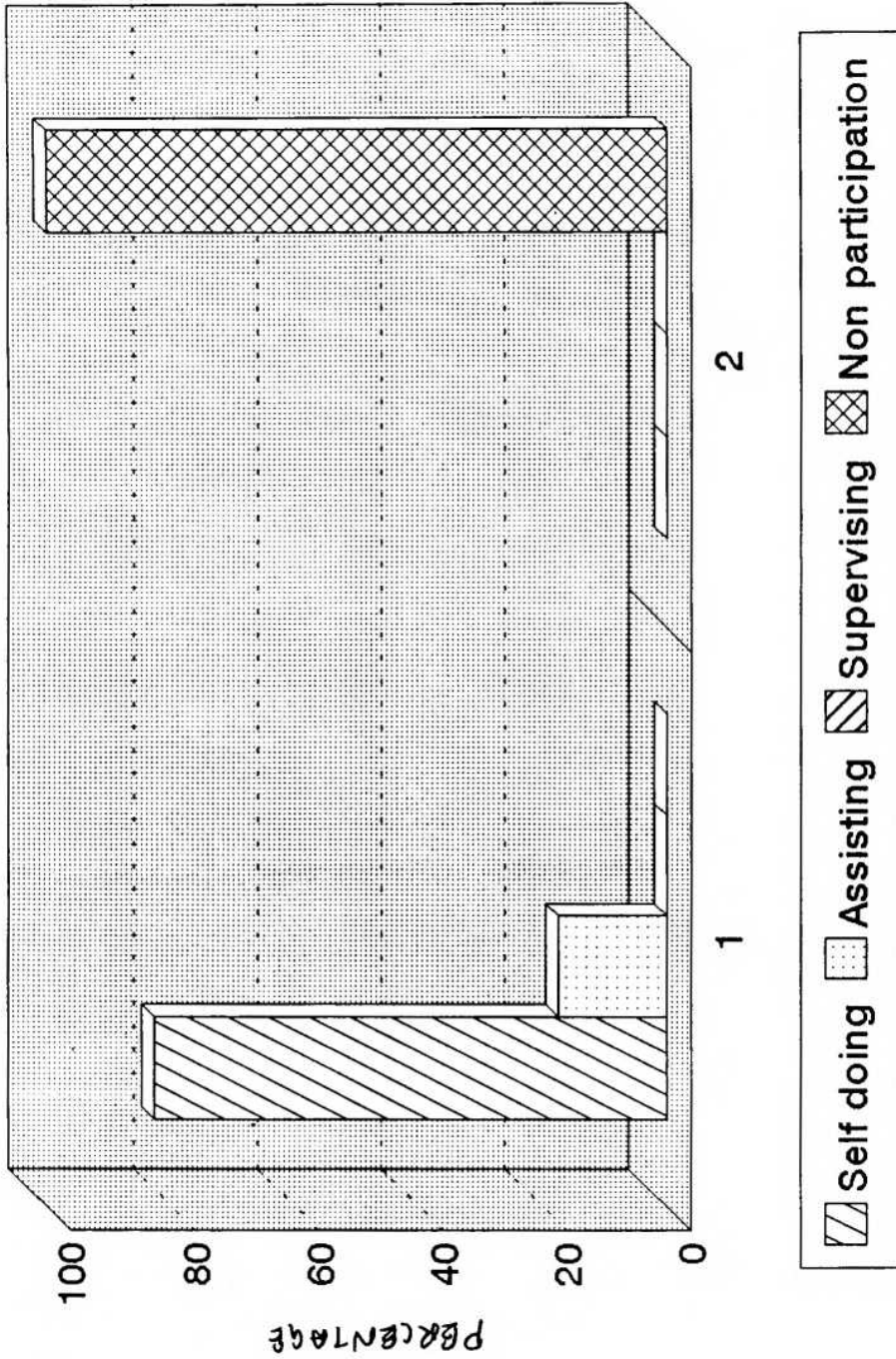
It is evident from the table that in care and maintenance of goats, self doing and assisting was reported by 82.60 and 17.40 per cent of the tribal farm women respectively. Non-participation in marketing was expressed by cent per cent of the respondents.

It can be concluded that the care and maintenance of goats is the role of women and while marketing is the job of menfolk.

4.1.11 Participation of tribal women in farm forestry

Under farm forestry, the extent of participation was found in the sub-items like collection of seedling, digging of pits, planting, fencing and

Fig.13. Participation of tribal women in goat rearing



1. Care and maintenance; 2. Marketing

maintenance. Out of 150 only 12 household tribal women had farm forestry. The details are presented in table 24 (Fig.14).

Table 24. Participation of tribal women in farm forestry

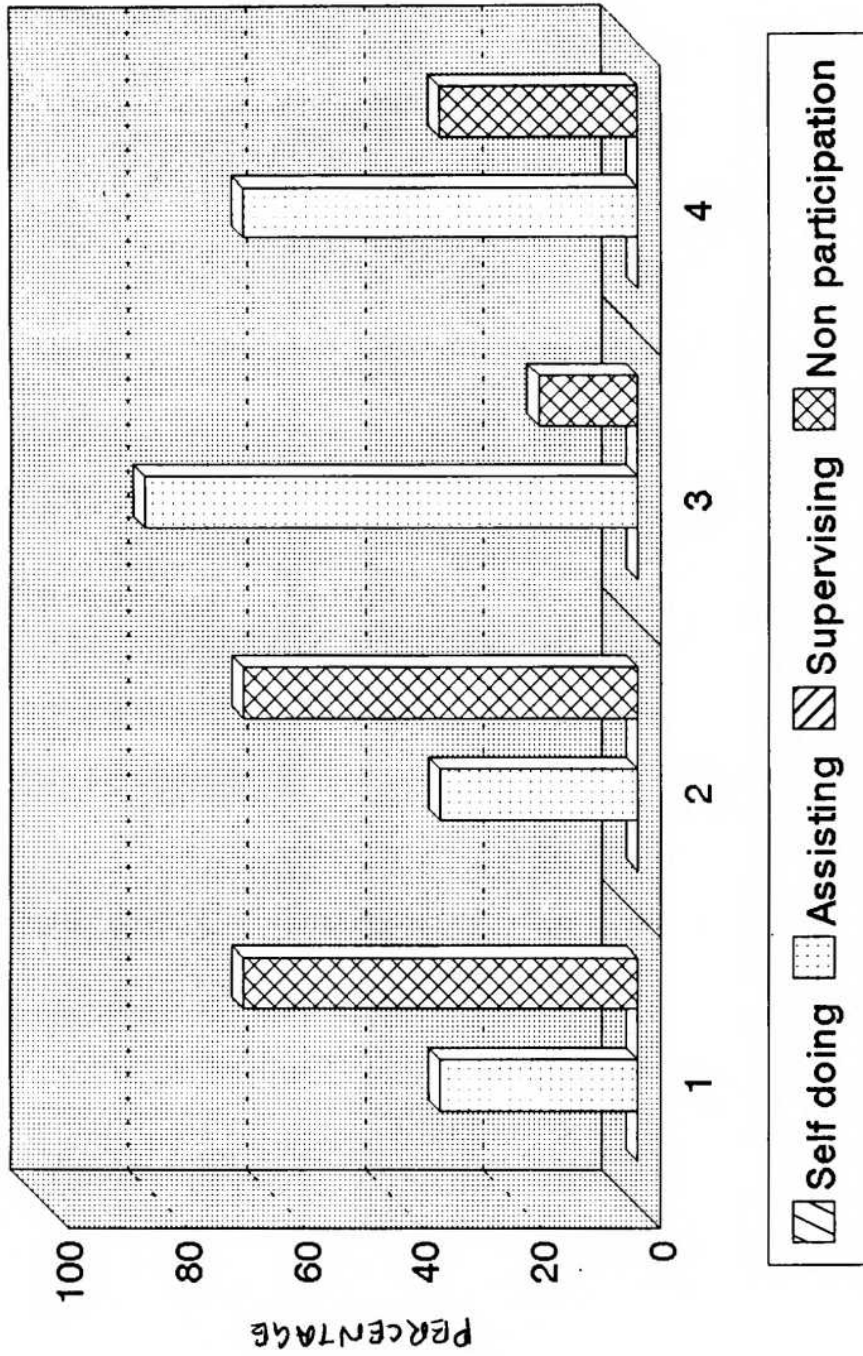
(n=12)

Activities	SD		A		SV		NP	
	No.	%	No.	%	No.	%	No.	%
Collection of seedling	-	-	4	33.33	-	-	8	66.67
Digging of pits	-	-	4	33.33	-	-	8	66.67
Planting	-	-	10	83.33	-	-	2	16.67
Fencing	-	-	8	66.67	-	-	4	33.33
Maintenance	-	-	7	58.34	-	-	5	41.66

SD - Self doing; A - Assisting; SV - Supervising; NP - Non-participation.

It could be seen from the table that non-participation was reported by 66.67 per cent of tribal farm women in collection of seedlings and digging of pits. Assisting was reported by 33.33 per cent of the respondents in both the collection of seedlings and digging of pits. More than 83 per cent of the respondents assisted in planting of seedlings followed by non-participation in the activity by 16.67 per cent of the respondents. In fencing and maintenance of farm forestry, assisting was expressed by 58.33 and 66.67 per cent of the respondents respectively. Non-participation was reported by

Fig.17. Participation of tribal women in farm forestry



1.Collection of seedling; 2.Digging of pits;
3.Planting; 4.Fencing

33.33 and 41.66 per cent of the tribal farm women in fencing and maintenance activities respectively. So, the overall tribal women's participation in farm forestry is assisting in nature.

SECTION - B

4.2 Participation of tribal women in decision making in agriculture and allied activities

Tribal women's participation in decision-making was in terms of referred to self decision, consulting spouse / elders, consulting all the family members, helping others in decision making and non-participation. The decision-making was related to crop, animal husbandry practices and farm forestry.

Every decision roots in the past reflects upon the future decisions. To know about tribal women's participation in decision-making on various agricultural activities, it becomes imperative to understand their willingness first about self decision-making and then deciding after consulting the spouse / elders, family members, helping others in decision-making and non-participation in decision-making.

4.2.1 Extent of participation of tribal women in decision making in agriculture and allied activities

Table.25. Extent of participation of tribal women in decision making in agriculture and allied activities

(n = 150)

Sl. No.	Category	Number	Percent
1.	Low	41	27.33
2.	Medium	66	44
3.	High	43	28.67

It could be observed from the table that 44 % of the respondents had medium level of participation in decision making in agriculture and allied activities. 28.67 and 27.33 per cent of the tribal women had high and low level of participation in decision making in agriculture and allied activities respectively.

The operationwise findings are presented below :

4.2.2 Participation of tribal women in decision making in seeds and sowing

Under the decision of seeds and sowing, six sub-items viz., seed purchase, variety and selection of seeds, seed rate, seed treatment with fungicide / bio-fertiliser, sowing time and season and method of sowing were considered. The results are presented in table 26 (Fig.16).

Fig.15. Extent of participation of tribal women in decision-making in agriculture and allied activities

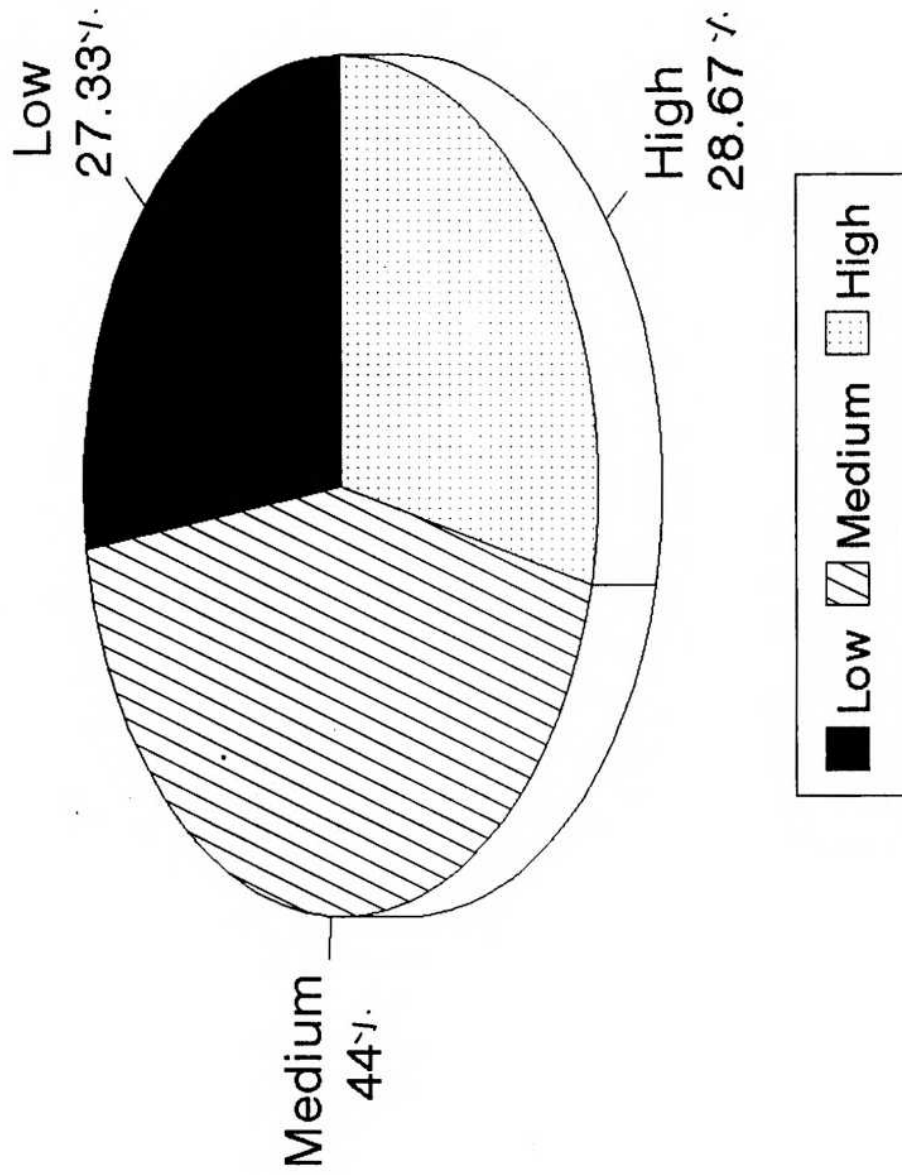
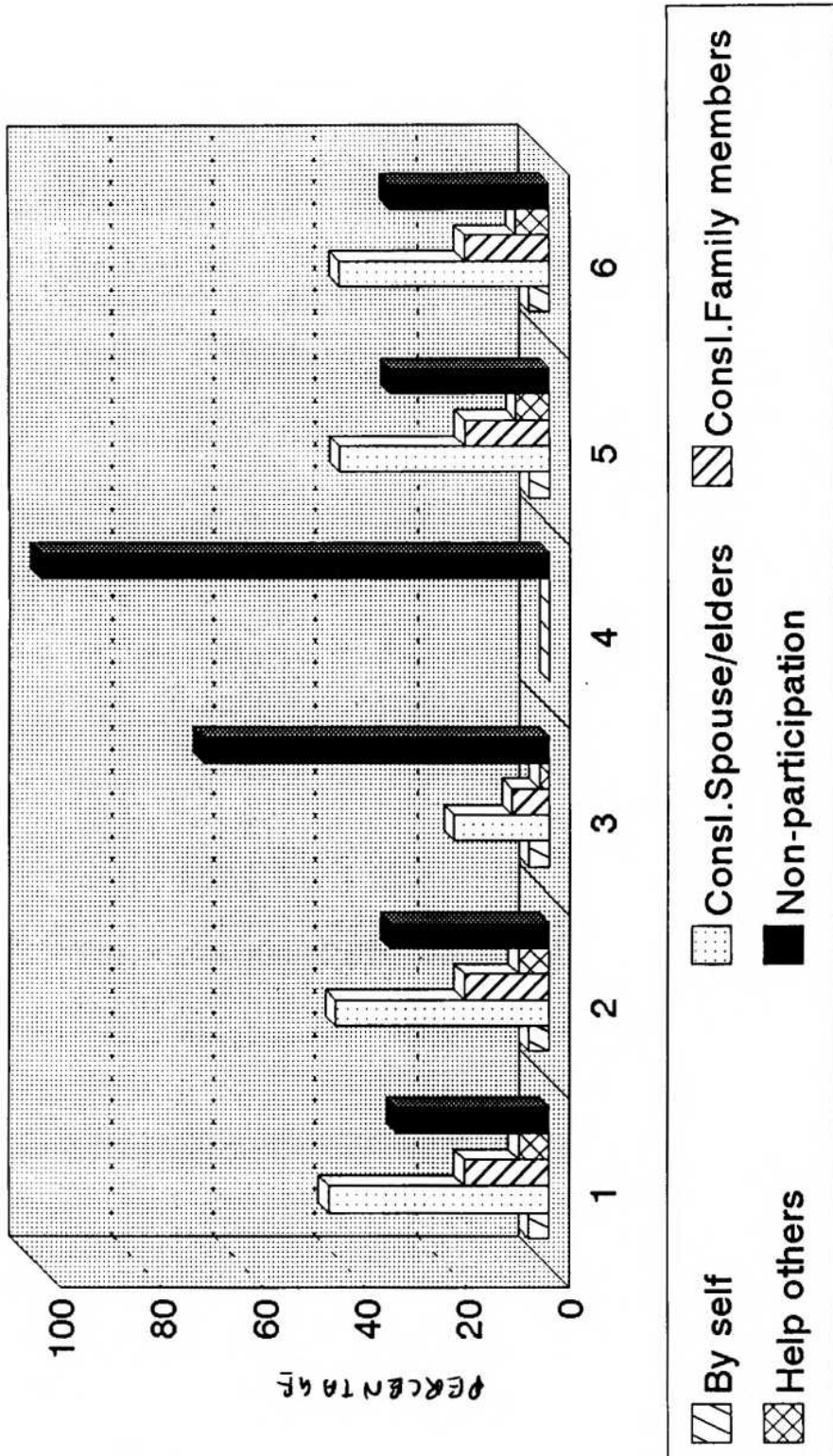


Table.26. Participation of tribal women in decision - making in seeds and sowing

(n=150)

Sl. No.	Activities	By self without consulting others		Consulting the spouse/elders		Consulting all the family members		Help others		Non-participation	
		No.	%	No.	%	No.	%	No.	%	No.	%
1.	Seed purchase	6	4.00	65	43.33	25	16.67	9	6.00	45	30.00
2.	Variety and selection of seeds	6	4.00	63	42.00	25	16.67	9	6.00	47	31.33
3.	Seed rate	6	4.00	28	18.67	11	7.33	3	2.00	102	68.00
4.	Seed treatment with fungicide / biofertilizer	-	-	-	-	-	-	-	-	150	100.00
5.	Sowing time & season	6	4.00	62	41.33	25	16.67	10	6.67	47	31.33
6.	Method of sowing	6	4.00	62	41.33	25	16.67	10	6.67	47	31.33

Fig.16. Participation of tribal women in decision-making in seeds and sowing



1. Seed purchase; 2. Variety and selection of seeds; 3. Seed rate;
4. Seed treatment with fungicide/biofertilizer; 5. Sowing time & season; 6. Method of sowing

It was found that 4 to 6 per cent of the tribal women had taken their own decisions, while 18.67 to 43.33 per cent of the tribal women had consulted their spouse / elders to take decision regarding all the activities except seed treatment. Cent per cent of the tribal women reported non-participation in decision-making regarding seed treatment with fungicide or bio-fertilizer.

Though the farm women had resorted to all methods of decision-making, majority of them took decision by consulting their spouse / elders or consulting all the family members. Self decision-making was adopted by a few of the tribal farm women. There was no participation in decision-making of seed treatment because of lack of knowledge, skill and complexity involved in seed treatment. This study indicates the continued influence of menfolk and other family members leading to joint decision making related to various agricultural operations. For being self decision makers the farm women should further improve their social participation, mass media exposure, contacts with extension agency and also urban contacts. It is suggested that extension agency should include more tribal women in their training programmes and thereby ^{or} infuse self confidence in them to practice ^{take} self decision-making. This finding agrees with the finding of Premavathi (1997).

4.2.3 Participation of tribal women in decision-making in inter-cultivation activities

In intercultivation aspects, seven sub-items viz., thinning and gap filling, weeding, type of fertilizer, fertilizer dose, time of fertilizer application, use of weedicides and pesticides were included. The findings are given in table 27 (Fig.17).

From the findings in the table, it could be noticed that 4 per cent of the tribal women had taken self-decision on thinning, gap filling and weeding operation, while 47.33 per cent of them had taken decision on above activities in consultation with spouse / elders. Only 1.33 per cent of the tribal women participated in decision-making on type of fertilizers, fertilizer dose and time of fertilizer application while a majority of them did not participate at all in above activities. There was no participation in decision-making on use of weedicides.

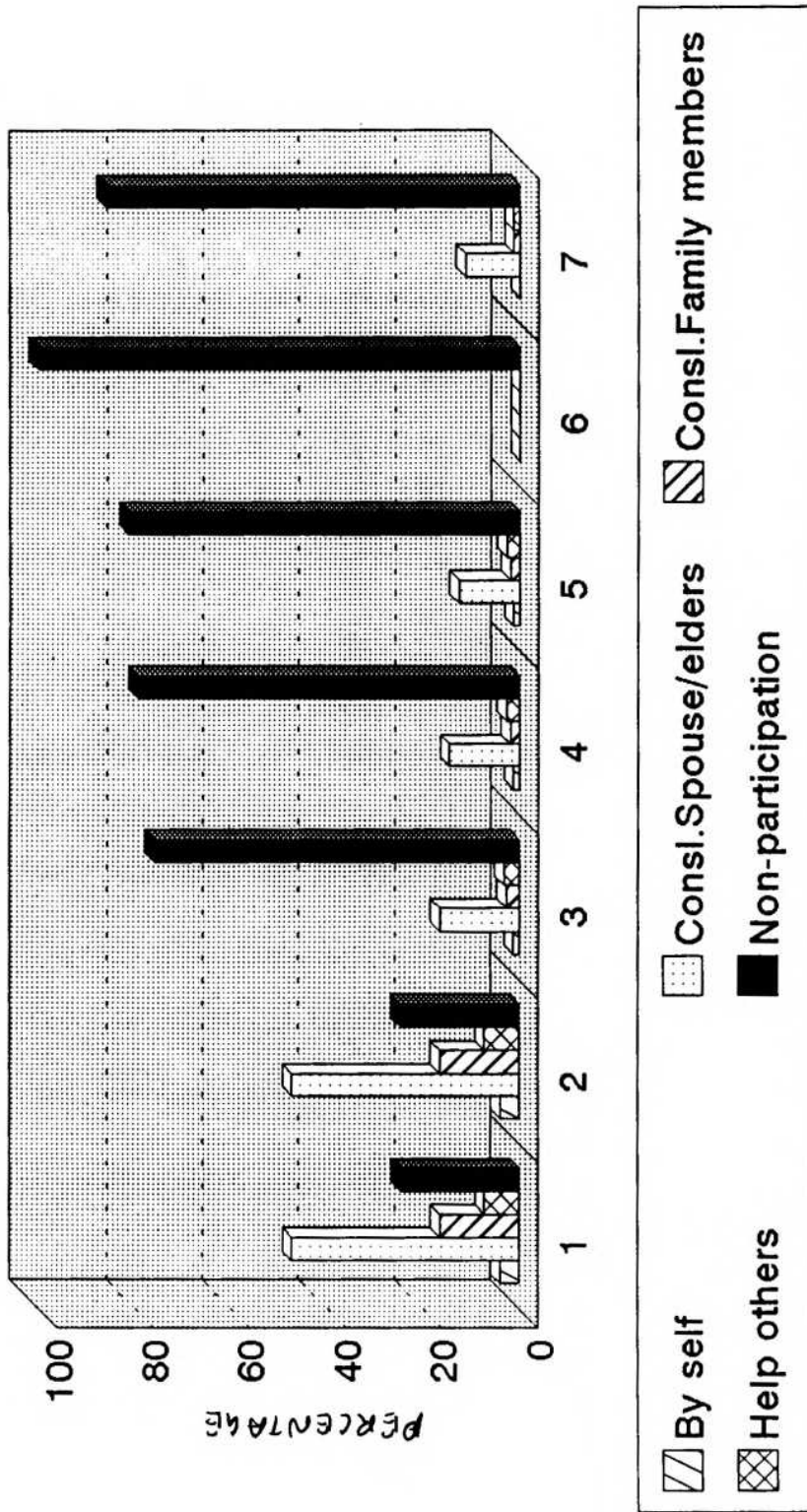
Thinning and gap filling and weeding were the two women dominated operations, even in these activities majority of them had consulted their spouse / elders. However, it is disturbing to note that very few tribal women had taken self decision. This finding is in agreement with the finding of Achanta (1982).

Table.27. Participation of tribal women in decision making in intercultivation activities

(n=150)

Sl. No.	Activities	By self without consulting others		Consulting the spouse/elders		Consulting all the family members		Help others		Non-participation	
		No.	%	No.	%	No.	%	No.	%	No.	%
1.	Thinning and gap filling	6	4.00	71	47.33	25	16.67	11	7.33	37	24.67
2.	Weeding	6	4.00	71	47.33	25	16.67	11	7.33	37	24.67
3.	Type of fertilizer	2	1.33	25	16.67	4	2.67	5	3.33	114	76.00
4.	Fertilizer dose	2	1.33	22	14.67	3	2.00	4	2.67	119	79.33
5.	Time of fertilizer application	2	1.33	19	12.67	3	2.00	4	2.67	122	81.33
6.	Using weedicide	-	-	-	-	-	-	-	-	150	100.00
7.	Using pesticide	-	-	17	11.34	2	1.33	2	1.33	129	86.00

Fig.17. Participation of tribal women in decision-making in intercultivation activities



1. Thinning and gap filling; 2. Weeding; 3. Type of fertilizer; 4. Fertilizer dose
 5. Time of fertilizer application; 6. Using weedicide; 7. Using pesticide

4.2.4 Participation of tribal women in decision-making in harvesting

Under harvesting, there were two sub-items namely time of harvest and method of harvest. The findings on these aspects are presented in table 28 (Fig.18).

Almost half (48%) of the respondents had taken decision in consultation with spouse / elders and the percentage of self decision-makers was low in harvesting also (4%). They (16.67%) consulted all other family members. However, 24 per cent reported non-participation in decision on time and method of harvesting (whether contract/casual labour). Time of harvest and method of harvest is decided only after ascertaining the availability of agricultural labourers, in their own village or nearby villages. Fixing the labour and wages, whether to pay in cash or kind require much experience. Hence the above reason could have restricted some of the women in taking self-decision rather referring the idea to their spouse/elders.

4.2.5 Participation of tribal women in decision-making in storage

In storage, there was only one activity namely quantity to be stored. The findings are given in table 29 (Fig.19).

After harvesting, the most important decision is on quantity to be stored for the purpose of family consumption or marketing at a later stage when prices are remunerative.

Table.28. Participation of tribal women in decision - making in harvesting

(n=150)

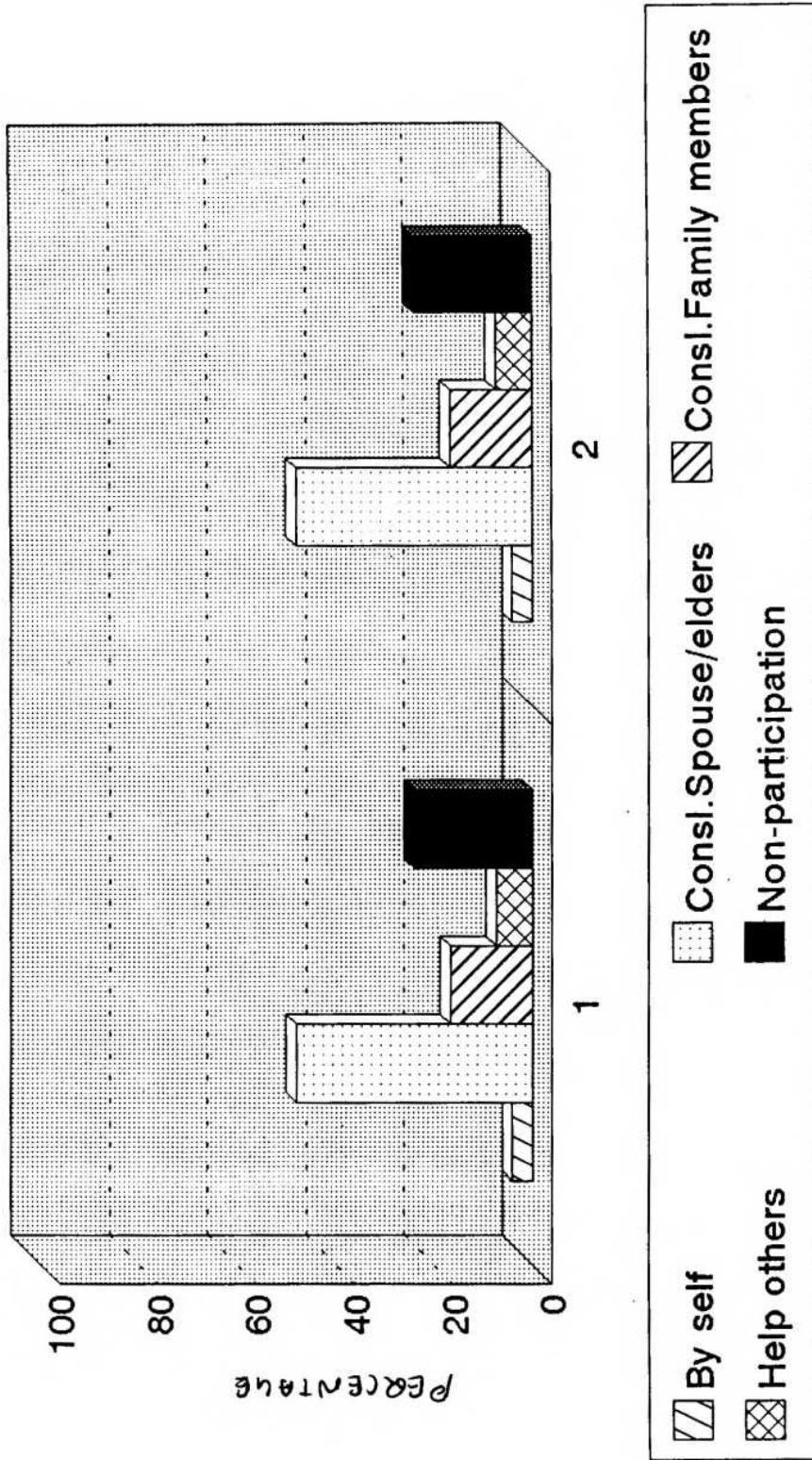
Sl. No.	Activities	By self without consulting others		Consulting the spouse/elders		Consulting all the family members		Help others		Non-participation	
		No.	%	No.	%	No.	%	No.	%	No.	%
1.	Time of harvest	6	4.00	72	48.00	25	16.67	11	7.33	36	24.00
2.	Method of harvest	6	4.00	72	48.00	25	16.67	11	7.33	36	24.00

Table.29. Participation of tribal women in decision - making in storage

(n=150)

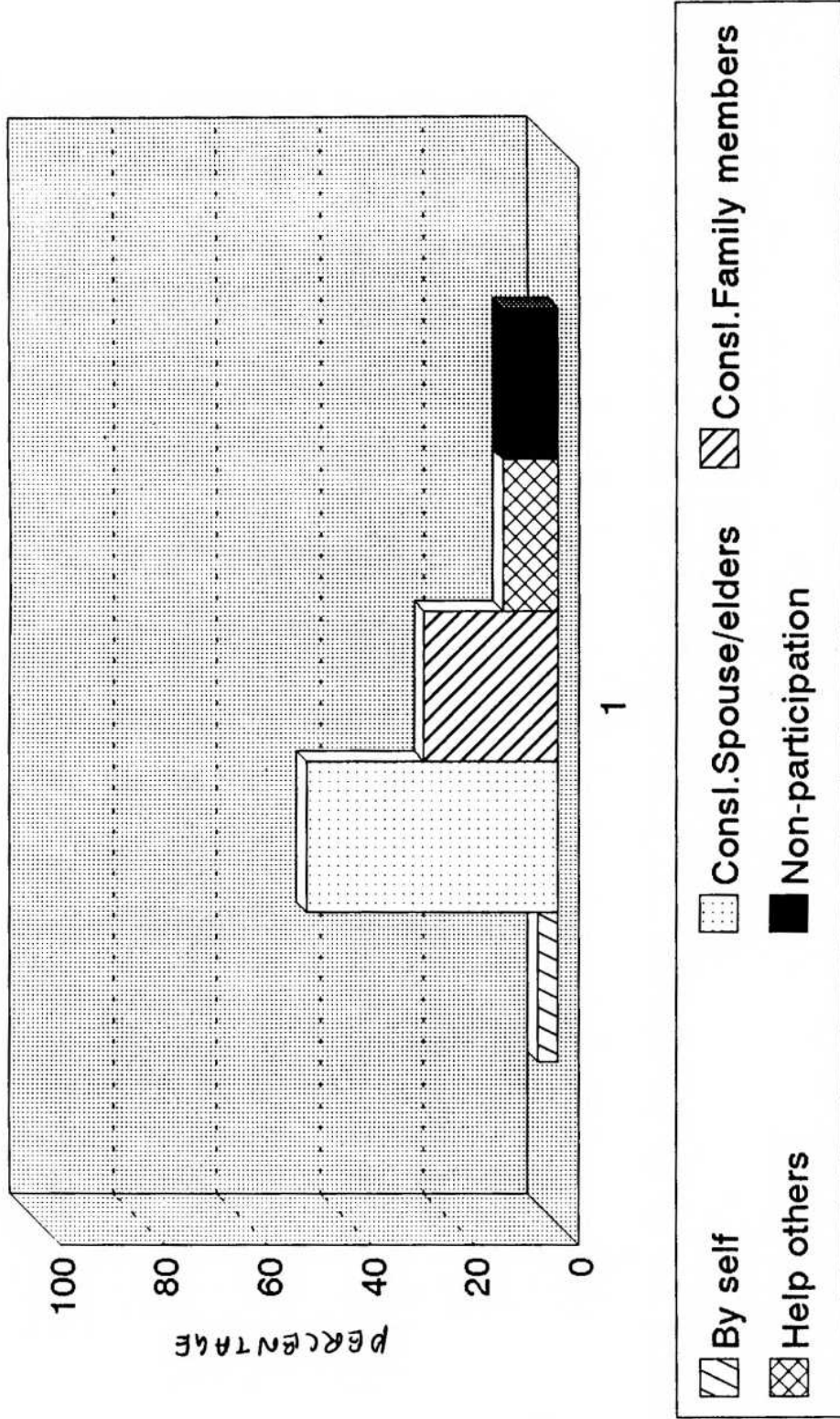
Sl. No.	Activities	By self without consulting others		Consulting the spouse/elders		Consulting all the family members		Help others		Non-participation	
		No.	%	No.	%	No.	%	No.	%	No.	%
1.	Quantity to be stored	6	4.00	73	48.66	39	26.00	16	10.67	16	10.67

Fig.18. Participation of tribal women in decision-making in harvesting



1. Time of harvest; 2. Method of harvest

Fig.19. Participation of tribal women in decision-making in storage



1.Quantity to be stored

Ascertaining the quantity required for family consumption and adequate knowledge on the price trend prevailing during previous years are two important requisites for deciding the quantity to be stored. Hence a majority of them decided in consultation with their spouse/ elder.

4.2.6 Participation of tribal women in decision-making in marketing

Decision in marketing involve deciding the quantity to be sold, time of selling, choosing the market place and deciding the type of payment. The results on these aspects of marketing are presented in table 30. (Fig.20)

It could be understood from the table, that among the tribal women, self decision-makers were comparatively less than decision-makers in consultation with spouse / elders. All the family members were consulted by about 10.66 per cent of the respondents. This study indicates the tribal women's poor market orientation. Therefore it is essential to improve their market orientation by encouraging them to keep a track of market trends by reading newspapers or listening to radio. The tribal women also need to be educated about the advantages of marketing their produce through regulated market. This finding agrees with the finding of Premavathi (1997).

4.2.7 Participation of tribal women in economic decision-making

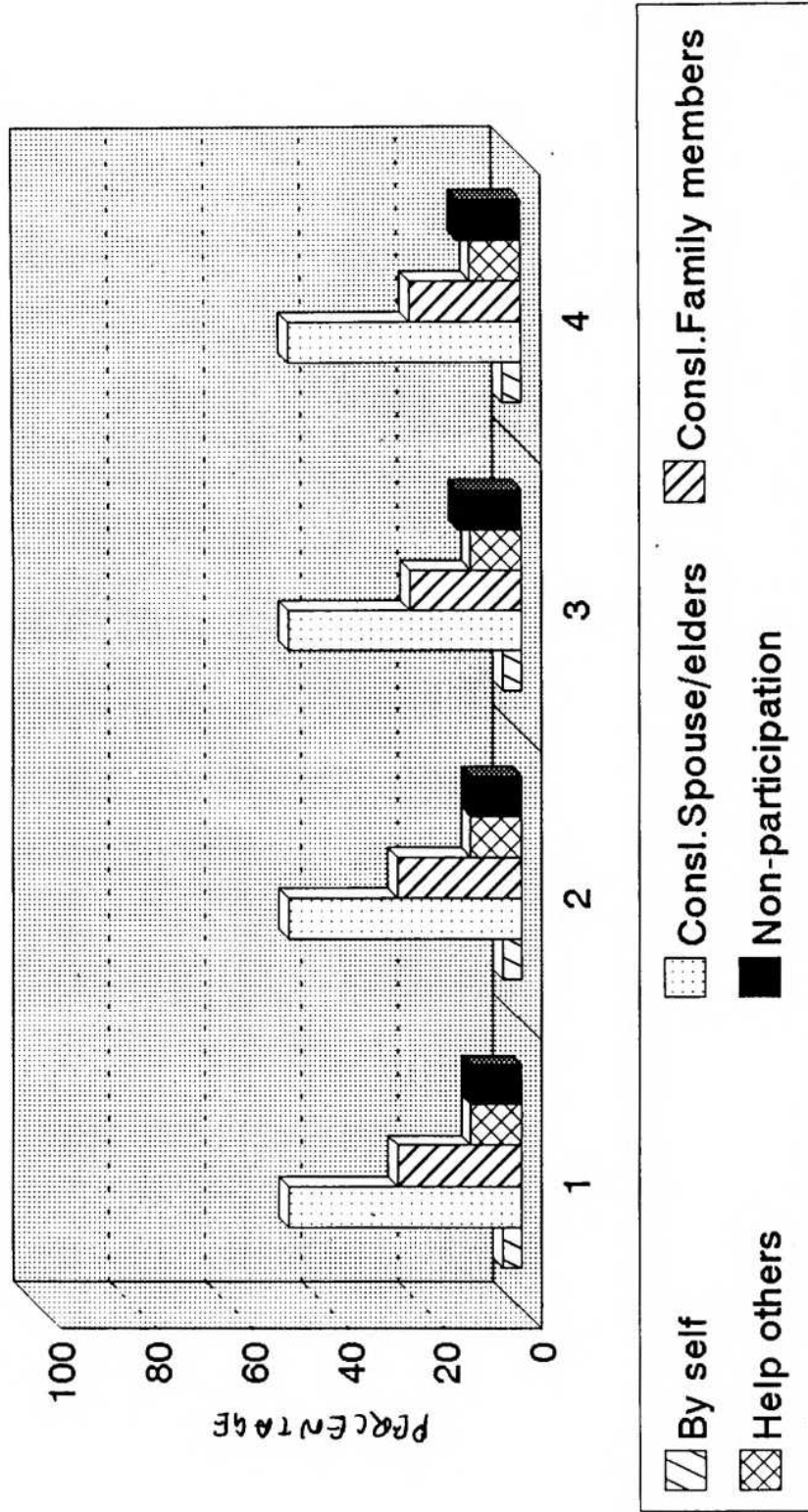
In economic decisions there were eleven sub-items as presented in table 31 (Fig.21).

Table.30. Participation of tribal women in decision-making in marketing

(n=150)

Sl. No.	Activities	By self without consulting others		Consulting the spouse/elders		Consulting all the family members		Help others		Non-participation	
		No.	%	No.	%	No.	%	No.	%	No.	%
1.	Quantity to be sold	6	4.00	73	48.67	39	26.00	16	10.66	16	10.67
2.	Selling time	6	4.00	73	48.67	39	26.00	16	10.66	16	10.67
3.	Selection of market price	6	4.00	73	48.67	35	23.34	16	10.66	20	13.33
4.	Payment (Cash/kind)	6	4.00	73	48.67	35	23.34	16	10.66	20	13.33

Fig.20. Participation of tribal women in decision-making in marketing



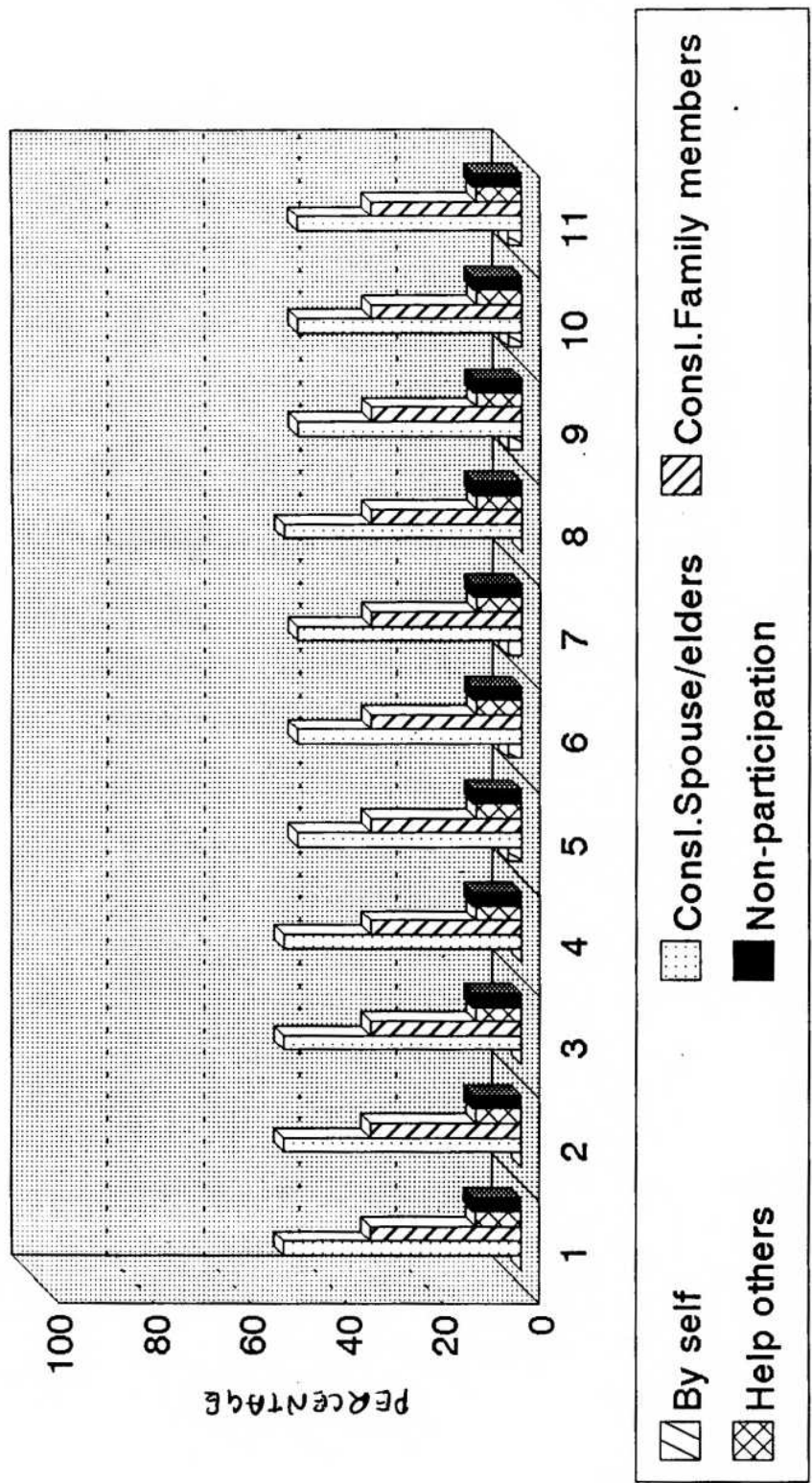
1.Quantity to be sold; 2.Selling time; 3.Selection of market price;
4.Payment (Cash/kind)

Table.31. Participation of tribal women in economic decision making

(n=150)

Sl. No.	Activities	By self without consulting others		Consulting the spouse/elders		Consulting all the family members		Help others		Non-participation	
		No.	%	No.	%	No.	%	No.	%	No.	%
1.	Buying	-	-	74	49.34	47	31.33	14	9.33	15	10.00
2.	Selling the land	-	-	74	49.34	47	31.33	14	9.33	15	10.00
3.	Leasing the land	-	-	74	49.34	47	31.33	14	9.33	15	10.00
4.	Leasing out land	-	-	74	49.34	47	31.33	14	9.33	15	10.00
5.	Purchasing agricultural equipments	4	2.67	70	46.67	47	31.33	14	9.33	15	10.00
6.	Hiring agricultural equipments	4	2.67	70	46.67	47	31.33	14	9.33	15	10.00
7.	Engaging labour	4	2.67	70	46.67	47	31.33	14	9.33	15	10.00
8.	Getting loan on credit	-	-	74	49.34	47	31.33	14	9.33	15	10.00
9.	Purchasing of agricultural inputs	4	2.67	70	46.67	47	31.33	14	9.33	15	10.00
10.	Amount to be saved	4	2.67	70	46.67	47	31.33	14	9.33	15	10.00
11.	Fixation of wages for agricultural labourers	4	2.67	70	46.67	47	31.33	14	9.33	15	10.00

Fig.21. Participation of tribal women in economic decision-making



1. Buying; 2. Selling the land; 3. Leasing the land; 4. Leasing out land; 5. Purchasing agricultural equipments; 6. Hiring agri. equipments; 7. Engaging labour; 8. Getting loan on credit; 9. Purchasing of agri. implements; 10. Amount to be saved; 11. Fixation of wages for agri. labourers

It could be observed from the table about half (46.67-49.34%) of the respondents had taken joint decisions in consultation with spouse / elders in economic decision making area. In all the cases 31.33 per cent of tribal women took a decision in consultation with all the family members. Non-participation was reported by 10 per cent of the respondents in all the activities under economic decision-making.

The results clearly indicates that regarding all the activities joint decisions are taken as they involve decisions on permanent assets, lands and investment of money on long term basis. Only a few women were reported to help others in economic decision-making. This findings supported the finding of Hiranand and Kumar (1980).

4.2.8 Participation of tribal women in decision-making in dairy management

Under dairy management there were seven tasks viz., selection of milch animals, purchasing animals, number of animals to be kept, purchasing the fodder, type of feed and feeding, treatment of sick animals, selling price for milk. 44 women out of 150 were having dairy animals. The details on decision-making are presented in table 32. (Fig.22).

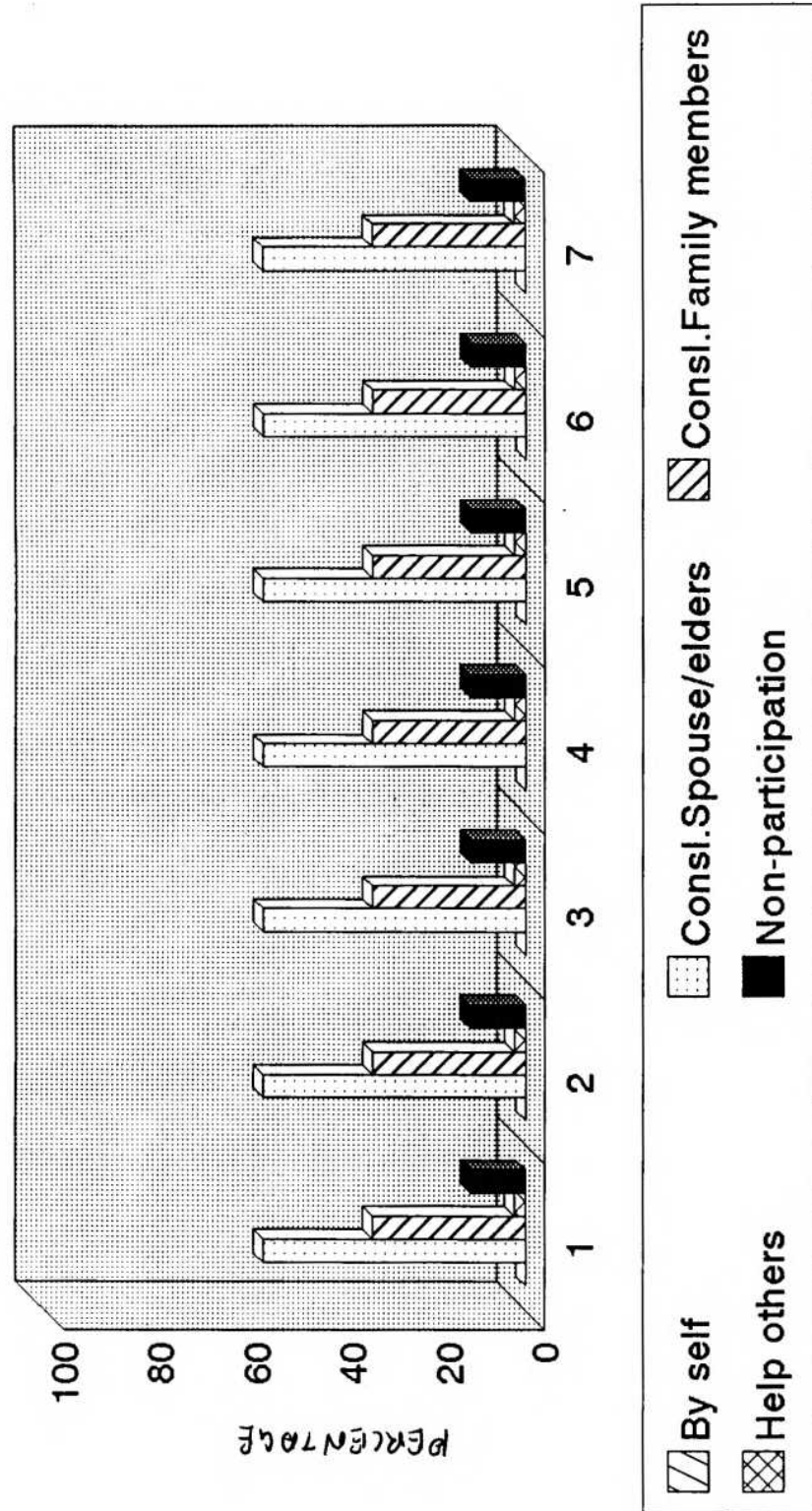
The analysis revealed that cent per cent of the tribal women reported not to have taken decision by self in all eight dairy animal related tasks. Considerable percentage of tribal women (more than 54%) consulted their spouse/elders. They (2.27%) also consulted all other family members.

Table.32. Participation of tribal women in decision making in dairy management

(n=44)

Sl. No.	Activities	By self without consulting others		Consulting the spouse/elders		Consulting all the family members		Help others		Non-participation	
		No.	%	No.	%	No.	%	No.	%	No.	%
1.	Selection of milch animals	-	-	24	54.55	14	31.82	1	2.27	5	11.36
2.	Purchasing of animals	-	-	24	54.55	14	31.82	1	2.27	5	11.36
3.	No. of animals to be kept	-	-	24	54.55	14	31.82	1	2.27	5	11.36
4.	Purchasing fodder	-	-	24	54.55	14	31.82	1	2.27	5	11.36
5.	Type of feed and feeding	-	-	24	54.55	14	31.82	1	2.27	5	11.36
6.	Treatment of sick animals	-	-	24	54.55	14	31.82	1	2.27	5	11.36
7.	Selling price for milk	-	-	24	54.55	14	31.82	1	2.27	5	11.36

Fig.22. Participation of tribal women in decision-making in dairy management



1. Selection of milch animals; 2. Purchasing of animals; 3.No. of animals to be kept; 4.Purchasing fodder; 5. Type of feed and feeding; 6. Treatment of sick animals; 7. Selling price for milk

However, 11.36 per cent of the tribal women did not participate in all the activities.

From the above findings, it is apparent that in majority of the cases, decisions were taken in consultation with spouse/ elders. This may be due to the fact that often milch animals and fodder were purchased from nearby or far off villages and shandies by the menfolk of the household. So, the above reason could have restricted the tribal women in taking self decision. This finding is in line with the findings of Puri (1981).

4.2.9 Participation of tribal women in decision-making in poultry keeping

Like rearing of milch animals, rearing of poultry birds is in the interest of earning additional family income by selling of birds and eggs after meeting their family requirement.

134 out of 150 respondents were rearing considerable number of birds, Their participation in decision-making in various activities was assessed and details are presented in table 33. (Fig.23)

Decision in all the four sub-items considered were taken by 9.70 per cent of the respondents concerned without consulting others. Decision-makers in consultation with spouse/elders were majority (66.41%) and 23.89 per cent of the respondents had taken decision after consulting all the family

Table.33. Participation of tribal women in decision making in poultry keeping

(n=34)

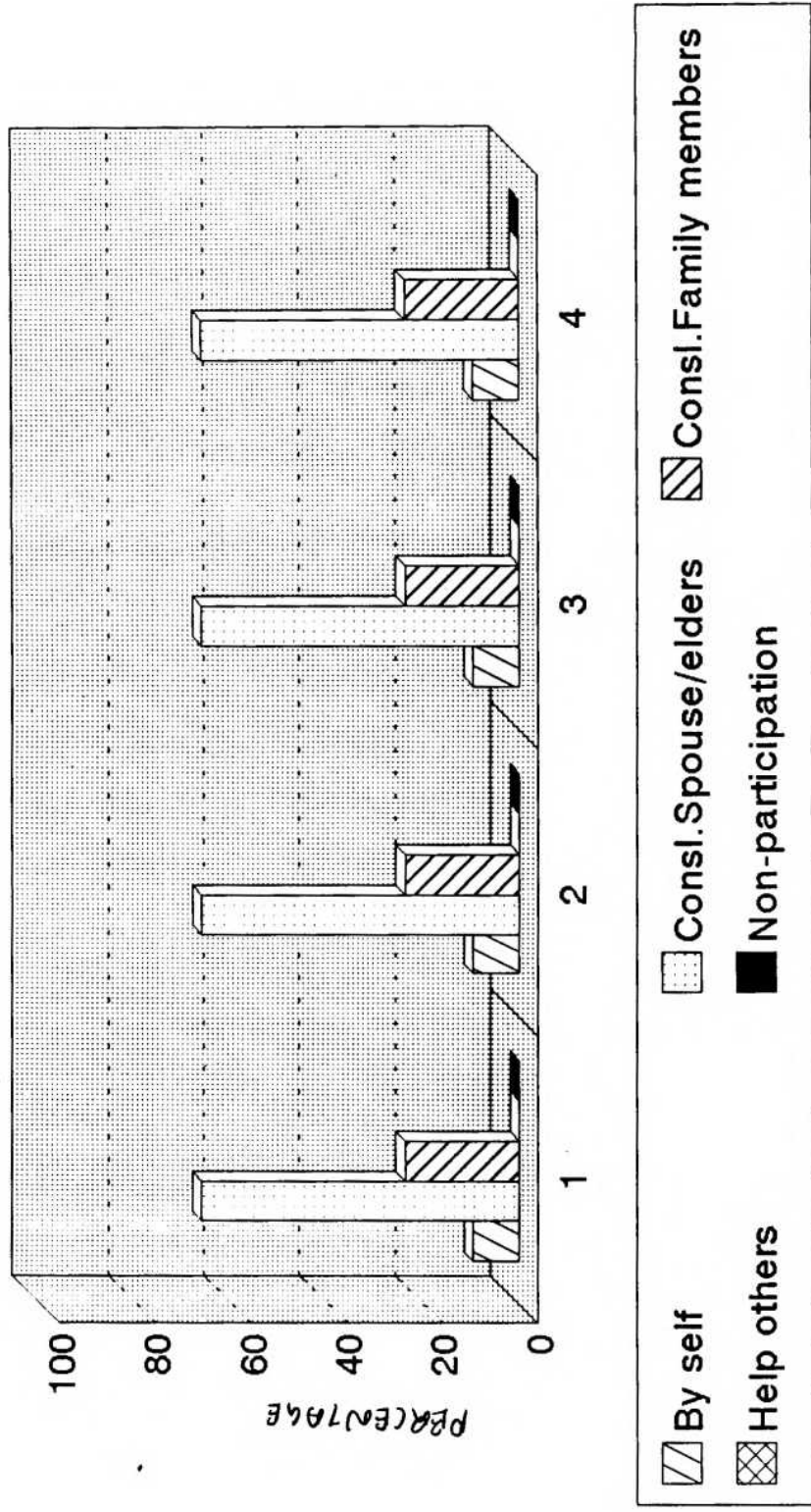
Sl. No.	Activities	By self without consulting others		Consulting the spouse/elders		Consulting all the family members		Help others		Non-participation	
		No.	%	No.	%	No.	%	No.	%	No.	%
1.	Selection of birds	13	9.70	89	66.41	32	23.89	-	-	-	-
2.	Purchase of birds	13	9.70	89	66.41	32	23.89	-	-	-	-
3.	No. of birds to be kept	13	9.70	89	66.41	32	23.89	-	-	-	-
4.	Construction of poultry shed	13	9.70	89	66.41	32	23.89	-	-	-	-

Table.34. Participation of tribal women in decision making in piggery

(n=44)

Sl. No.	Activities	By self without consulting others		Consulting the spouse/elders		Consulting all the family members		Help others		Non-participation	
		No.	%	No.	%	No.	%	No.	%	No.	%
1.	Selection of piglets	6	6.06	59	59.60	29	29.29	5	5.05	-	-
2.	Selling of pork	-	-	53	53.54	29	29.29	9	9.09	8	8.08

Fig.23. Participation of tribal women in decision-making in poultry keeping



1. Selection of birds; 2. Purchase of birds; 3.No. of birds to be kept;
4. Construction of poultry shed

members. Non-participation was not reported in the activities of poultry keeping.

As stated earlier, that although the tribal women do not maintain the poultry on commercial scale, they rear a considerable number of birds. The income derived from these poultry birds is seldom pooled with the family income, but goes to the saving of the women folk. But still in male dominated society, majority of the decisions are taken jointly in poultry keeping.

This finding contradicts with the finding of Pramavathi (1997).

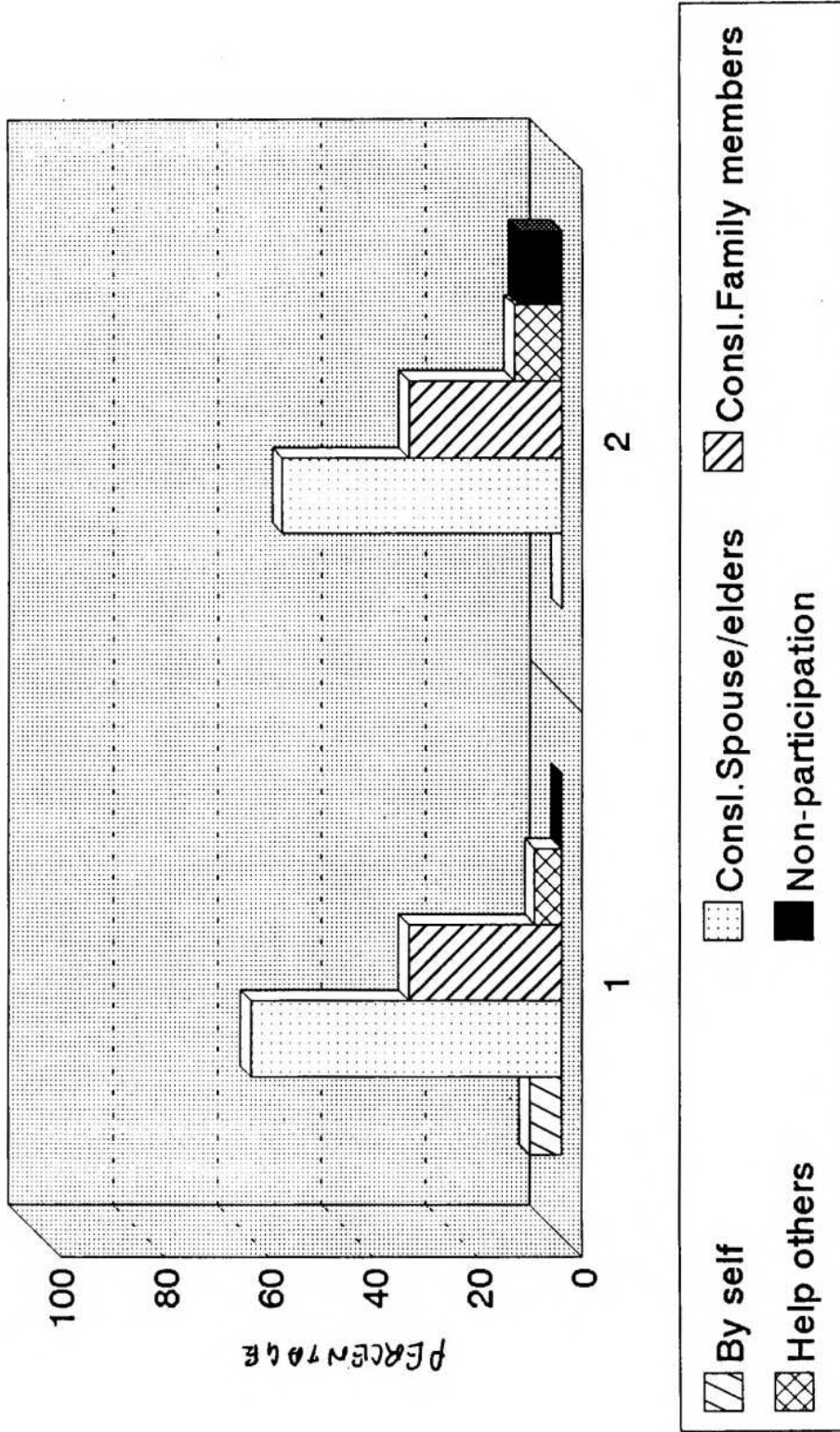
4.2.10 Participation of tribal women in decision-making in piggery

In piggery there were two activities namely selection of piglets and selling of pork. 99 out of 150 respondents had piggery. The results of these two activities under piggery is presented in table 34. (Fig.24).

It is observed that 6.06 per cent of the tribal women decided themselves in selection of piglets in absence of male member of the household. While 59.60 per cent had consulted their spouse/elders and 29.29 per cent consulted all the family members.

In selling pork, none of them decided themselves and majority of them (53.54%) consulted their spouse/elders for selling pork. 29.29% per

Fig.24. Participation of tribal women in decision-making in piggery



1. Selection of piglets; 2. Selling of pork

cent of the tribal women consulted all the family members while 9.09 per cent of the respondents helped others in decision for selling pork and 8.08 per cent of the respondents reported non-participation in decision making in selling pork.

The study reveals that the decision regarding marketing concerning pigs is made jointly by the tribal women and her spouse/elders.

4.2.11 Participation of tribal women in decision-making in goat rearing

Under goat rearing two sub-items viz., care, maintenance and marketing were studied and the results are presented in table 35 (Fig.25). 46 out of 150 respondents were practicing goat rearing.

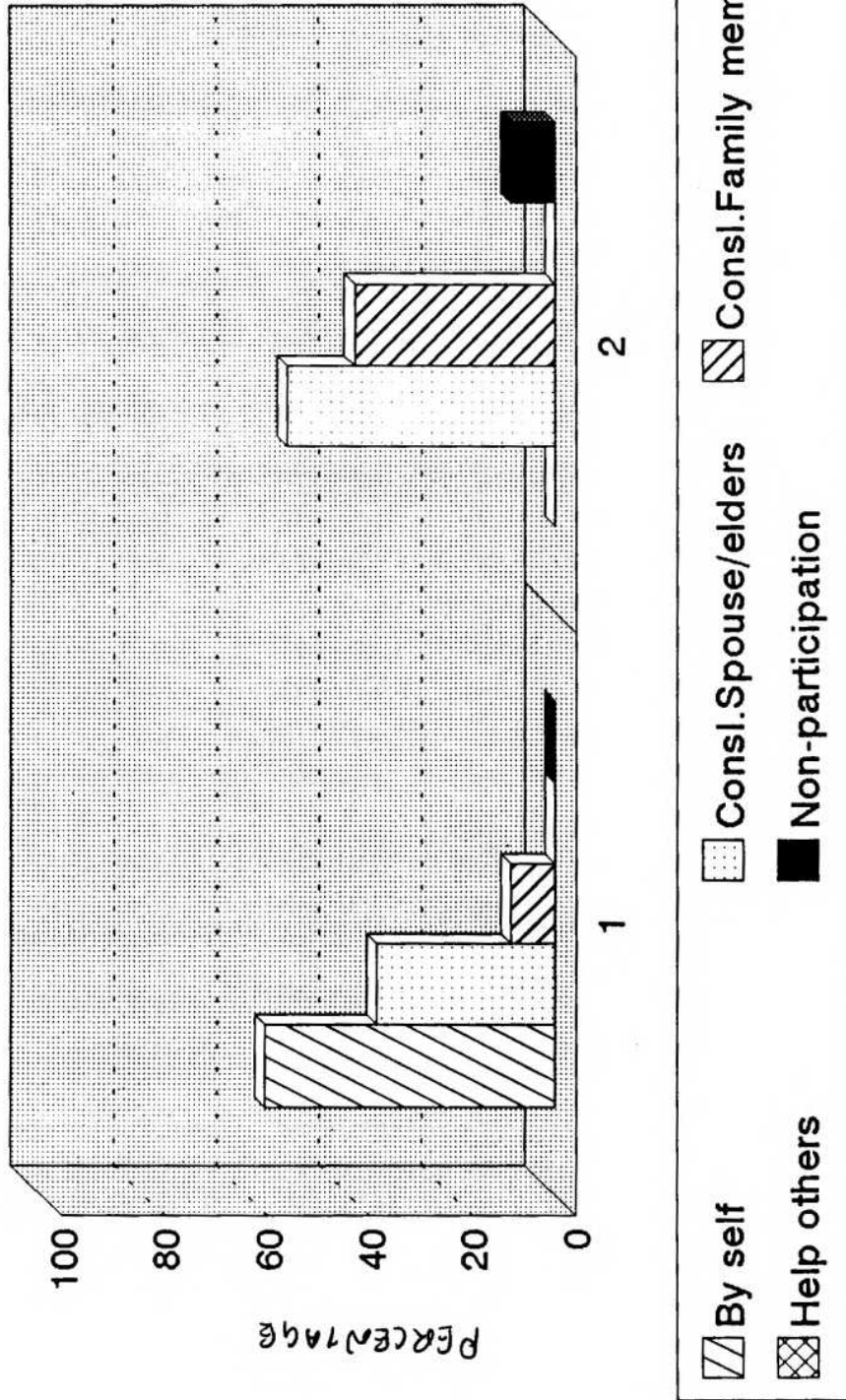
It was found from the table that in case of care and maintenance, tribal women played a predominant role, self doing percentage being at 56.52. The goats in the sampled villages were grazed in nearby fields and forests and were not given any additional ration at home. Even though majority of the women took decision when to bring them back home. 34.78 per cent and 8.70 per cent of the tribal women took care and maintenance decision by consulting spouse/elders and consulting all the family members. Non-participation in decision-making was not reported by tribal women in care and maintenance of goats.

Table.35. Participation of tribal women in decision making in goat rearing

(n=46)

Sl. No.	Activities	By self without consulting others		Consulting the spouse/elders		Consulting all the family members		Help others		Non-participation	
		No.	%	No.	%	No.	%	No.	%	No.	%
1.	Care and maintenance	26	56.52	16	34.78	4	8.70	-	-	-	-
2.	Marketing of goat	-	-	24	52.17	18	39.13	-	-	4	8.70

Fig.25. Participation of tribal women in decision-making in goat rearing



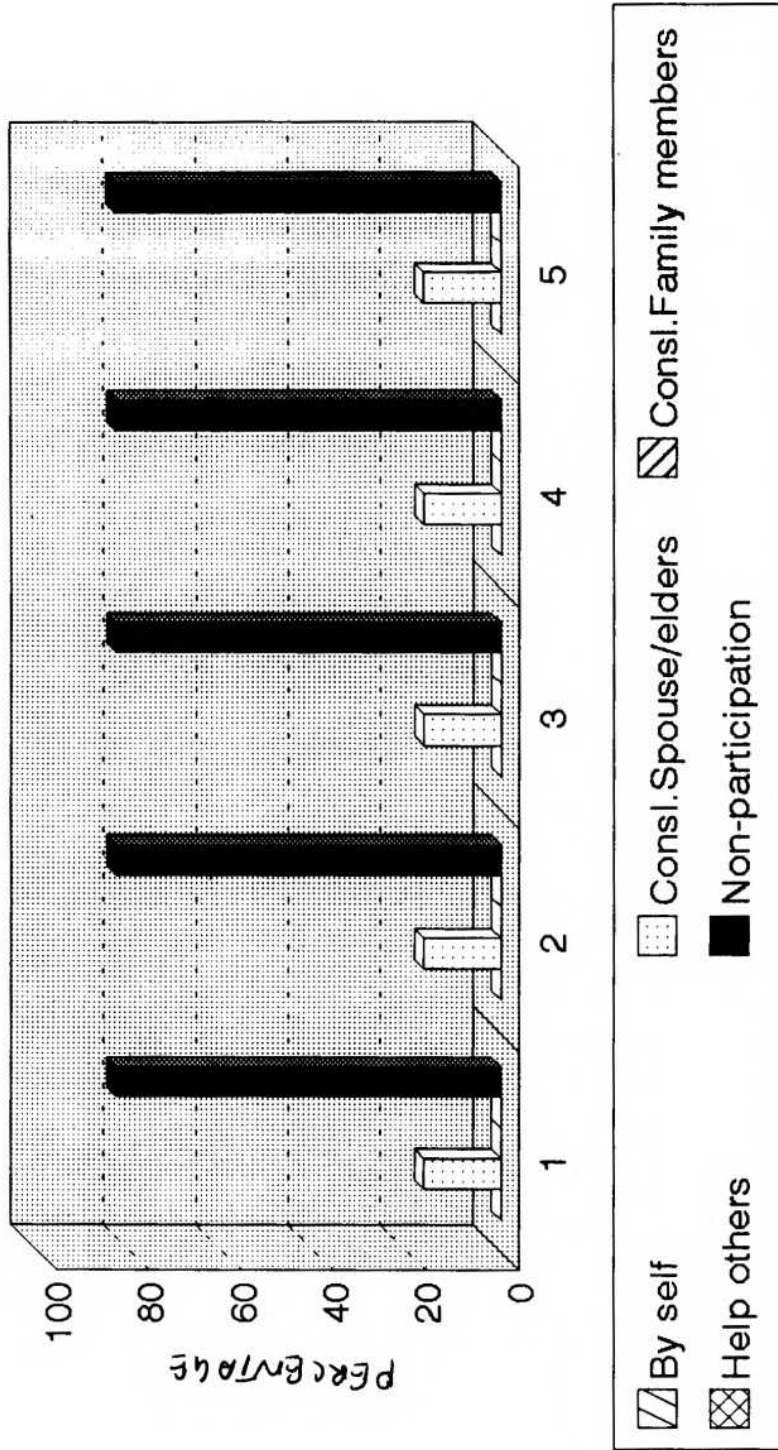
1. Care and maintenance; 2. Marketing of goat

Regarding marketing, majority (52.17%) of the tribal women took decision after consulting spouse/elders followed by consulting with all the family members (39.13%). Non-participation in decision-making in marketing was found by 8.70 per cent of the respondents.

It can be concluded that in goat rearing, economic decisions involving outdoor activity (marketing) is taken jointly by men and women whereas other activity care and maintenance is taken predominantly by women alone.

The study reveals that the decision regarding economic activities concerning agriculture and allied activities are made jointly by the tribal women and her spouse. In spite of high involvement of tribal women in agriculture and allied activities, their participation in decision making in these activities is limited. This limited participation is probably a direct function of social, cultural, environmental and geographical limitation, but nevertheless an essential contribution to their economic well being. It is therefore, necessary that they are weaned away from their sub- subsistence household economy through training and extending the extension programmes to cater to the needs of knowledge about agriculture and allied activities and required skill in performing the adaptable and economically viable package of practices in order to generate employment and income for the family.

Fig.26. Participation of tribal women in decision-making in farm forestry



1.Collection of seedlings; 2.Digging of pits; 3.Planting;
4.Fencing; 5.Maintenance

4.2.12 Farm forestry

Out of 150 respondents only 12 respondent families were having farm forestry.

Table 36. Participation of tribal women in decision making in Farm forestry

(n=12)

	By self		Consulting with the spouse/ elders		Consulting all the Family members		Help others in decision making		Not participating	
	No	%	No	%	No	%	No	%	No	%
Collection of seedling	-	-	2	16.66	-	-	-	-	10	83.34
Digging of pits	-	-	2	16.66	-	-	-	-	10	83.34
Planting	-	-	2	16.66	-	-	-	-	10	83.34
Fencing	-	-	2	16.66	-	-	-	-	10	83.34
Maintenance	-	-	2	16.66	-	-	-	-	10	83.34

It could be seen from the table that only 16.66 per cent of the tribal women participated in decision making in consultation with elders / spouse in farm forestry. Majority (83.34%) of the tribal women reported non participation in decision making in farm forestry.

SECTION - C

Socio-psychological characteristics of tribal women

In this connection 23 socio-psychological characteristics of tribal farm women were studied. The respondents were categorised based on cumulative

frequency method. The findings are summarised in the following paragraph in table 37 to 59.

4.3.1 Age

Table.37. Distribution of respondents according to Age

(n=150)

Category	No.	%
Young (upto 30)	47	31.33
Middle (31-45 yrs)	66	44.00
Old (> 45 yrs)	37	24.67

An analysis of the age of tribal farm women shows that majority of them (44%) belonged to middle age group, 31.33 per cent ^{young} ~~old~~ age group and 24.67 per cent old age group.

4.3.2 Educational status

Table. 38. Distribution of respondents according to their Educational status

(n=150)

Category	No.	%
Illiterate	122	81.33
Primary	20	13.33
Middle	8	5.34

An analysis of the educational status of the tribal women showed that more than (81.33%) were illiterate. Only 13.33 and 5.34 per cent of the respondents were having primary and middle school education. None of them were having secondary and collegiate education.

4.3.3 Occupational status

It could be observed from the table that majority of the tribal women (50.67%) reported that they involved in both agriculture and allied activities. 45.33 per cent was in agriculture and allied activities as well as other economic activities like gathering of forest products, collection of fuel, brewing of liquor and selling them while 2 per cent of the tribal women were involved in petty business along with their husbands with other members of the family or alone besides participating in agriculture and allied activities. Only 2 per cent of the tribal women were employed in government organisations besides being engaged in agriculture and allied activities. It could be evidently concluded that a relative less percentage of tribal women were involved in business and employed in government or private organisation.

Table.39. Distribution of respondents according to Occupational status

(n=150)

Category	No.	%
Agri. & allied activities	76	50.67
Agri. & allied activities + other economic activities	68	45.33
Agri. & allied activities + business	3	2.00
Agri. & allied activities + service	3	2.00

4.3.4 Farm size

Table.40. Distribution of respondents according to their Farm size

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(n=150)

Category	No.	%
Marginal (upto 2.5 acres)	88	58.67
Small (2.51 - 5 acres)	44	29.33
Medium (>10 acres)	18	12.00

It could be seen from the table that majority of the tribal farm women (58.67%) owned marginal sized holdings. 29.33 per cent and 12 per cent belonged to the small and medium farmers category respectively, while there was no one belonging to big farm category. It may be pointed out that they possessed lands which cannot be sold to non-tribals.

4.4.5 Farming experience

Table. 41. Distribution of respondents according to Farming experience

(n=150)

Category	No.	%
Low (upto 12 years)	50	33.33
Medium (upto 25 years)	60	40.00
High (>25 years)	40	26.67

An analysis on the farming experience indicated that 40 per cent of the farmers had medium level of farming experience, 33.33 per cent with

low level of farming experience and 26.67 per cent with high level of farming experience. Majority of the farm women belonged to middle age group and had medium level of farming experience.

4.4.6 Annual income

Table.42. Distribution of respondents according to their Annual income

(n=150)

Category	No.	%
Low (upto Rs.5000)	46	30.67
Medium (upto Rs.15000)	80	53.33
High (>Rs.15000)	24	16.00

It is evident from the table that the annual income of the tribal farm was medium for 53.33 per cent of the respondents, low for 30.67 per cent and high for 16.00 per cent. In general, the income of the tribal farm families was low. It is quite evident from the table that majority of the respondents earning income varying from Rs.5001 to Rs.15000/annum.

4.4.7 Social participation

Table. 43. Distribution of respondents according to their Social participation

(n=150)

Category	No.	%
Low	104	69.33
Medium	39	26.00
High	7	4.67

The social participation of the respondents revealed that 69.33 per cent of the tribal farm women had a low level of social participation, 26 per cent with medium level of participation and 4.67 per cent with high level of social participation. Among the tribal farm women, 69.33 per cent were not members of any organisation.

4.4.8 Mass media participation

Table.44. Distribution of respondents according to their Mass media participation

(n=150)

Category	No.	%
Low	75	50.00
Medium	46	30.67
High	29	19.33

Half (50%) of the respondents reported that they had a low level of mass media participation followed by a medium level of participation by 30.67 per cent. Only 19.33 per cent of the tribal women had high level of mass media participation. From the above information it can be inferred that tribal women were not much interested in gaining information regarding farming through various mass media.

4.4.9. Contact with extension agency

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The table shows that the majority (72.67%) of the respondents had poor contacts with extension agency, 20 per cent and 7.33 per cent of the tribal farm women had high and medium level contacts with extension agency respectively. This may be attributed to the fact that no much communication facility is available to these villagers and the agriculture offices were located far from their residence. Only 22 per cent were not aware about the extension agency.

Table.45. Distribution of respondents according to their contact with Extension agency

(n=150)

Category	No.	%
Low	109	72.67
Medium	11	7.33
High	30	20.00

4.4.10 Value orientation (Localitiness-Cosmopoliteness)

It could be observed from the table that 38.66 per cent of the respondents were neither fully localities nor fully cosmopolites followed by 32.67 and 28.67 per cent fully localities and fully cosmopolites respectively.

Table.46. Distribution of respondents according to their Value orientation

(n=150)

Category	No.	%
Low	49	32.67
Localite/cosmopolite	58	38.66
Cosmopolite	43	28.67

4.4.11 Conservatism-Liberalism**Table.47. Distribution of respondents according to their Conservatism - Liberalism**

(n=150)

Category	No.	%
Low	51	34.00
Medium	51	34.00
High	48	32.00

This finding indicates that the tribal farm women (34%) continued to remain conservative and same percentage of the respondents were at the medium level of liberalistic value. Only 32 per cent of the respondents were at high level of liberalistic value.

It could be inferred that majority of the respondents possessed low to medium level of liberalistic value.

4.4.12. Credit orientation

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Table.48. Distribution of respondents according to their Credit orientation

(n=150)

Category	No.	%
Low	56	37.33
Medium	35	23.33
High	59	39.34

Credit orientation study revealed that all the tribal farm women borrowed money but the sources differed. 39.34 per cent of the tribal farm women borrowed money from relatives and friends which was categorised as high level credit orientation as they did not have to pay interest. The private money lenders were the source of credit for tribal women (37.33%) for which they had to pay higher interest rate, considered as low credit orientation and 23.33 per cent to tribal women took loan from PACS to meet farming expenditure.

4.4.13. Scientific orientation

Table.49. Distribution of respondents according to their Scientific orientation

(n=150)

Category	No.	%
Low	70	46.67
Medium	39	26.00
High	41	27.33

From the table, it could be stated that almost half (46.67%) of the respondents had low level of scientific orientation. This was followed by high level (27.33) and medium level (25%) of scientific orientation.

As already reported, the tribal farm women had less contact with extension personnel. This made them unable to gain scientific knowledge about farm related activities.

4.4.14 Innovativeness

Innovativeness of respondents was analysed and the results are presented in table 50.

Table.50. Distribution of respondents according to their Innovativeness

(n=150)

Category	No.	%
Low	65	43.33
Medium	69	46.00
High	16	10.67

The table revealed that 46 per cent of the respondents had a medium level of innovativeness followed by 43.33 per cent with a low level and only 10.67 per cent had a high level of innovativeness. From the findings, it could be inferred that most of the tribal farm women were not aware of adopting modern crop varieties and cultivation practices.

4.4.15 Economic motivation

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Table.51. Distribution of respondents according to their Economic motivation

(n=150)

Category	No.	%
Low	54	36.00
Medium	57	34.00
High	45	30.00

It is noted that 36 per cent tribal women had low economic motivation followed by 34% & 30% of respondents who had medium & high level economic motivation respectively.

4.4.16 Fatalism - Scientism

Table.52. Distribution of respondents according to their Fatalism - Scientism

(n=150)

Category	No.	%
Low	53	35.33
Medium	22	14.67
High	75	50.00

It could be seen from table that half of the tribal farm women had a high level of fatalism. More than 35 per cent of the respondents had a low level of fatalism followed by medium level of fatalism. (14.67%).

4.4.17 Self reliance

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It is the degree to which an individual perceives that he or she is correct in all the activities. The distribution of respondents according to their self-reliance is shown in table 53.

Table.53.Distribution of respondents according to their Self reliance

(n=150)

Category	No.	%
Low	81	54.00
Medium	59	39.33
High	10	6.67

It is evident from the table that majority of the respondents (54%) possessed a low level of self reliance while 39 per cent were possessing a medium level of self reliance. Only a meagre percentage (6.67%) had high level of self reliance.

It can be concluded that the respondents have a low level of self-reliance.

4.4.18 Religious belief

This was operationalised as the belief of the individual in accordance with his / her religion and its nexus to performance of occupation.

Table.54. Distribution of respondents according to their Religious belief

(n=150)

Category	No.	%
Low	38	25.33
Medium	51	34.00
High	61	40.67

It could be seen from the table that 40.67 per cent of the respondents had a high religious belief followed by 34 per cent medium level religious belief. Only 25.33 per cent were having low religious belief. So, it could be inferred that the religious belief of the tribal women was high to medium.

4.4.19 Progressivism -Traditionalism

Progressiveness deals with the farmer's receptivity towards modern values and practices. The relevant data collected in respect of their variable are presented in table 55.

Table.55. Distribution of respondents according to their Progressivism - Traditionalism

(n=150)

Category	No.	%
Low	75	50.00
Medium	45	30.00
High	30	20.00

It could be seen from the table that half (50%) of the tribal farmers were low in their progressiveness and 30 per cent in medium group. Only 20 per cent of the respondents were highly progressive in nature.

It could be concluded that half of the tribal farm women had a low level of progressiveness.

4.4.20 Achievement motivation

Table.56. Distribution of respondents according to their Achievement motivation

(n=150)

Category	No.	%
Low	54	36.00
Medium	61	40.67
High	35	23.33

It could be stated from the table that 40.67 per cent of the respondents were having medium level of achievement motivation followed by 36 per cent low level and 23.33 per cent high level of achievement motivation.

4.4.21 Intra-tribal communication

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Table.57. Distribution of respondents according to their Intra-tribal communication

(n=150)

Category	No.	%
Low	66	44.00
Medium	33	22.00
High	51	34.00

It is evident that their intra-tribal communication seemed to be of low level as expressed by almost half (44%) of the tribal women. Exactly 34 per cent and 22 per cent of the respondents had high and medium level of intra-tribal communication respectively. Their intra-tribal communication was mostly woven around their community affairs. Agricultural matters were seldom discussed.

4.4.22 Family norms

It was operationalised as the norms of the tribal farm families.

Table.58. Distribution of respondents according to their Family norms

(n=150)

Category	No.	%
Low	28	18.66
Medium	61	40.67
High	61	40.67

An equal percentage of the respondents expressed as their family norms were at medium and high (40.67) order. Low level of family norms had been reported by only 18.66 per cent of the respondents.

4.4.23 Gregariousness

Gregariousness was operationalised as the extent of one's social contact of the inclination of an individual to associate with others.

Table.59. Distribution of respondents according to their Gregariousness

(n=150)

Category	No.	%
Low	61	40.67
Medium	59	39.33
High	30	20.00

As it is seen from the table that 40.67 per cent of the respondents had low level of gregariousness followed by medium level and high level of gregariousness as expressed by 39.33 and 20 per cent of the respondents respectively. In general it can be concluded that their gregariousness is low.

SECTION - D

4.4.1 Cultural characteristics of tribal women

The tribal farm women are bound within the frame work of their social values and traditional beliefs. The tribals as a whole and tribal women

in particular become completely disoriented outside their traditional frame work. The tribal farm families hold many believes towards agricultural and allied activities. The traditional resistance of tribals also hinders their development. Tribal institutional cultures and taboos played a fundamental role and were inimitable to change. The cultural characteristics of tribal women were studied and presented in table 60.

Table.60. Cultural characteristics of tribal women

n = 150			
Sl. No.	Particulars	No.of tribal women	Per cent
A. Cultural norm			
a)	Polyandary		
	(i) Yes	-	-
	(ii) No	150	100.00
b)	Food habit		
	(i) Eating thrice a day	65	43.33
	(ii) Eating twice a day	85	56.67
	(iii) Rice eating	150	100.00
	(iv) Drinking arrack	64	42.67
	(v) Chewing tobacco/arecanut	142	94.67
	(vi) Smoking beedi/hukhah	130	86.67
c)	Dress habit		
	(i) Primitive	37	24.67
	(ii) Middle	105	70.00
	(iii) Modern	8	5.33

d)	Recreation			157
	(i) Enacting drama	-	-	
	(ii) Singing	128	85.33	
	(iii) Dancing	22	14.67	
B.	Norms			
a)	All the family matters are decided by head of the family	150	100.00	
b)	Ladies should rear children and assist in farm operations	150	100.00	
c)	Ladies can go to temple	150	100.00	
C.	Mores			
a)	Fixing of engagement for the female Child at the date of birth	YES	-	-
		NO	150	100
b)	Getting opinion of the girl for marriage	YES	150	100
		NO	-	-
c)	Permitting divorce	YES	150	100.00
		NO	-	-
d)	Preference of joint family	YES	91	60.67
		NO	59	39.33
D.	Taboos			
a)	Permission of intercaste marriage		24	16.00
b)	Men permitted to have illegal wife -	YES	-	
c)	Allowing to wear sari and blouse	YES	8	5.33
d)	The girls permitted to go to farm work	YES	98	65.33
e)	The girls allowed to go to school	YES	121	80.67
E.	Tribal leadership			
a)	Kinds of leadership in the village			
	(i) Formal : Political		28	18.67
	Traditional		122	81.33

	(ii) Informal:Innovative person - Land Lord Highly advocatedPerson		158
F.	Tribal Marriage		
a)	Dowry system prevalent in the family		
	(i) Yes	50	33.33
	(ii) No	100	66.67
b)	If yes Cash	-	
	Kind	50	33.33
c)	Dowry is given by		
	(i) Girls family to boys family	6	4.00
	(ii) Boys family to girls Family	44	29.33

It is seen from the table that the tribal women of Tripura are not polyandry even though they enjoy freedom to select their husbands as expressed by the respondents. Their staple food is rice. Meat and dried fish are preferred than vegetables. Most of the tribal families consumed rice twice in day but well to do families were found to consume rice thrice. They are very much fond of drinks and 42.67 per cent of the tribal women were found drinking arrack. The tribals of Tripura has right to distill the wine in an indigenous manner and practically each household brew their requirement of country liquor i.e., Arrack. Chewing betelvine/betelnut and smoking either beedi or 'hukkha' are common among tribal women, the percentage was found to be at 96.67 and 86.67 respectively. Even though dresses of tribal women are changing, still 24.67 per cent of tribal women were the traditional dress. The women wear a long piece of hand woven cloth called 'Rignai' or 'Pachhra' which is wrapped around the waist hanging

down to knees. The breast garment is known as 'Riah'; 70 per cent of the tribal women were found wearing dresses which were slightly improved over the traditional dress 'Rignai' and 'Riah' by wrapping one more cloth over the body. Only 8 per cent of tribal women of younger generation wore sarees and blouse especially when they went for marketing to the nearby their villages.

Dance and music are an integral part of the tribals of Tripura. This love of music lends colour to their otherwise drab life. At the family level, the decision is taken by the head of the family usually father or husband or elderly person and the tribal women share an equal power with tribal men in respect of decision-making regarding sale and purchase of land, borrowing and lending of money, education to children.

Cent per cent opinioned about the necessity of tribal women to assist their counterpart in farm operations. Tribal women are allowed to worship God in temple.

Generally child marriage is not prevalent among the tribals of Tripura even if bridegroom is generally found of same age of his bride, but in the modern times through influence, they have a freedom in the choice of husbands.

Divorce is allowed and remarriage is permitted without any hindrance. Traditional joint family system among the tribal families is eroding and nucleus family system is taking its place. Only 60 to 67 per cent of the tribal women preferred joint family system. They do not marry outside their tribal community. Previously even parallel cousin marriage was predominant among some tribes, however now the frequency of parallel cousin marriage is declining. Only 16 per cent of the respondents agreed to intercaste marriage.

Though monogamy is the general rule, the affluent men among tribal community may have many wives. Due to the occurrence of transition among the tribal society, 80.67 per cent of the tribal women agreed with sending of girl children to schools and 65.33 per cent of tribal women agreed to send their children to schools as well as to farm work.

It is very common in the tribal society that many girl children have to look after younger children, to take care of the home, to help mother in work both inside and outside home.

The tribals have their traditional villages council and the headman is called 'Chowdhury' and simple disputes of socio-political matters at village level is settled by the village Chowdhry. Justice is meted out sometime in consultation with 'Mulluk' sardar of regional council according to gravity of the situation/confrontation. Mulluk sardar is elected on the basis of his

wealth and status. But in modern days, to derive benefits from village panchayats tribals show loyalty toward political leaders. It is seen from the table that still 81.33 per cent of the respondents were in favour of traditional leader.

Two systems of dowry are prevalent in the tribal community, (i) bride price and (ii) dowry. In bride price, the customary payment are required to be made by the bridgroom to the brides parents during marriage. The custom of paying bride price for acquiring a bride prevailed among 29.33 per cent of the respondents families. In 4 per cent of the tribal families dowry system was prevailing because of the penetration of male dominated Hindu culture in the tribal areas along with a change in their economy.

4.4.2 General characteristics of tribal women

The study was conducted to findout the general characteristics of tribal women of Tripura and findings are presented below :

Table.61. General characteristics of tribal women

Sl. No.	Characteristics	No.	Percentage
A.	Ambition in life		
i.	Simple life	67	42.67
ii.	Better life	65	43.33
iii.	Prosperous life	21	14.00
B.	Ambition in farming		
i.	Good yield	45	30.00

			162 ¹⁶²
ii.	Better yield	67	44.67
iii.	Best yield	38	25.33
C.	Self image		
i.	Backward women	72	48
ii.	Ordinary women	74	49.33
iii.	Progressive women	4	2.67
D.	Agriculture Minister of Tripura		
i.	Correct	28	18.67
ii.	Incorrect	122	81.33
E.	Agriculture Minister of India		
i.	Correct	-	-
ii.	Incorrect	150	100.00

From the table it could be said that 43.33 per cent of the tribal women aimed to have better life followed by 42.67 per cent of respondent aimed for simple life. 17 per cent of the tribal women aimed for prosperous life.

Better yield was the ambition for almost half (44.67%) of the respondents. In farming good yield and best yield was expressed as the aim in farming by 30 and 25.33 per cent of the respondents respectively.

Almost equal percentage of tribal women felt themselves as backward and ordinary women (Self image) whereas only 2.67 % of the tribal women expressed themselves as progressive women.

Cent per cent of respondents did not know the name of Agriculture Minister of India. Similarly majority (81.33%) of the respondents did not know the name of the Agriculture Minister of their state (Tripura).

Above study indicates their simple mindedness and lack of awareness about the happening outside their community.

4.4.3 Indigenous practices followed by tribals in Tripura

The following indigenous practices were identified as they were not only known to them but also many of them were in continuous use by tribal farm family.

Agriculture

1. Raw cowdung is mixed with water in the ratio of 1:7 and applied on the cucurbit plants against bacterial and fungal diseases.
2. Near the Jhum fields, heaps of straw are burnt during night in several places to attract and kill moths and jassids.
3. Dry fish is soaked in water for one day and the water is applied the base of pumpkin, bottle gourd, ash gourd and bridge gourd to correct phosphorus deficiency and to improve soil conductivity.
4. The twigs of Siam weed, (*Eupatorium odoratum*), locally called as 'Kurcha' are planted in the paddy field after transplanting to prevent Hispa and Brown Plant Hopper entering into the field.
5. Burning of the leaves and dry stalk and dusting the ash on the foliage of brinjal, bottle gourd and ash gourd against the sucking pests and fungal diseases.

6. Decoction of tobacco waste is prepared and sprayed to control sucking pests and caterpillars.
7. Wooden pegged harrow (2 m length) is used in 20 days old directly sown upland paddy crop for thinning and weeding operation.
8. Rice gruel is applied at the base of cucurbiteceae plants as a growth promoter.
9. Used tea leaf is mixed with water and applied at the base of betelvine and cucurbit plants against root rot and caterpillars.
10. One litre kerosene is mixed with 20 litres of water and is sprayed on paddy plants to control leaf roller.
11. Special bamboo made Bow-Arrow trap is used for rat control.
12. Keeping dead crabs in the bund of the field to attack stemborer caterpillars.

Livestock

1. Smart weed (*Polygonum hydropiper*) is crushed and extracted juice is applied all over the body of cows and buffaloes to prevent ticks and lice.
2. Water of 'Hukkha' (bamboo made special type for smoking tobacco) is given to the animals to get relief from gastric trouble.
3. Chicken can be infected by a disease that causes drops and become inactive. As a treatment tamarind water or limes juice is fed to the bird's.
4. Beating of empty drum, or tin to ward-off birds in jhum field.
5. Human efficacy tied over a long pole with cloth it is placed in the centre of the field. The purpose is to drive away the crows and cattles.

4.4.4 Traditional beliefs held by tribals towards agriculture and allied activities

1. Field should not be ploughed on the day of Amavasya (moonless night).
2. Women should not touch a plough.
3. A farmer should not till his land from 7-14 of Shravan (July). Tilling those days symbolise the stabbing the God of soil (Vasumati).
4. Harvesting should be started from South east corner of the field.
5. Harvesting should be started only either on Monday or Thursday as these two days are auspicious
6. The first harvested produce would be given as offering to the Goddess 'Mailongma' (Laxmi).
7. After selection of Jhum land puja to the God of jungle (Buraccha) is performed for good crop and a bird is sacrificed in the name of God.
8. Stray incidence of false smut on paddy indicate bumper yield.
9. Termites flying in large number predicts rain.
10. Showers follow when frogs crow.
11. Dense fog in the early morning indicates there may not be rain.
12. When crabs come to the bund it may rain.
13. The rainbow in the western sky indicates no rain, but when it appears in the eastern sky it indicates a shower.
14. If stars are visible in the sky it indicates good weather.
15. Ants shifting their eggs to safer places forecast rain.

SECTION - E

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Relationship of Socio-psychological characteristics with the participation of tribal women in agriculture and allied activities and their participation in decision-making**4.5.1 Relationship of Socio-psychological characteristics with the participation of tribal women in agriculture and allied activities.**

Table 62 indicated that out of 23 variables studied occupational status, fatalism-scientism and religious belief showed a positive and highly significant association. This indicates that tribal women with high level of occupational status, high level of fatalism-scientism and high religious belief showed more participation in agriculture and allied activities. The variables educational status annual income, mass media participation, value orientation, conservatism-liberalism, credit orientation, economic motivation, progressivism-traditionalism & achievement motivation showed a negative and highly significant association with the extent of participation in agriculture and allied activities. This indicates that tribal women with more annual income, high education, high mass media participation, value orientation, conservatism-liberalism, credit orientation, economic motivation, progressivism-traditionalism & achievement motivation the level of participation, decreases very much. The fact emanate from the finding that the increasing access to education make tribal women's participation in agriculture & allied activities lower. This indicates educated tribal women

Table.62. Zero order correlation coefficient of the socio-psychological characteristics of tribal women with the participation in agriculture and allied activities

Variable	Independent variables	Participation in agricultural & allied activities
X1	Age	0.04732 NS
X2	Educational status	-0.37808**
X3	Occupational status	0.21203**
X4	Farming experience	0.04179 NS
X5	Farm size	0.02622 NS
X6	Annual income	-0.25713**
X7	Social participation	-0.17988 **
X8	Mass media participation	-0.28415 **
X9	Contact with extension agency	-0.20485 *
X10	Value orientation (Localitiness - cosmopolitiness)	-0.32746 **
X11	Conservatism - liberalism	-0.22368 **
X12	Credit orientation	-0.22235 **
X13	Scientific orientation	-0.31085 **
X14	Innovativeness	-0.00621 NS
X15	Economic motivation	-0.28161 **
X16	Fatalism - Scientism	0.28328 **
X17	Progressivism - traditionalism	-0.24983 **
X18	Self reliance	-0.19172 NS
X19	Achievement motivation	-0.30019 **
X20	Religious belief	0.20168 **
X21	Gregariousness	0.18609 *
X22	Intra-tribal communication	-0.19429 *
X23	Family norms	-0.17944 *

** Significant at 1% level

* Significant at 5% level

NS Non significant

mostly do not participate in agriculture and allied activities. This finding is in consistent with the finding of Chakrabarthy (1997).

The variable gregariousness showed a positive and significant association with the extent of participation. It indicates that with an increase in gregariousness the extent of participation increases.

The variables like social participation, extension agency contacts, self reliance, intra-tribal communication and family norms showed negative and significant association with the level of participation. It indicates that with the increase in social participation, extension agency contacts, self reliance, intra-tribal communication and family norms, the extent of participation decreases. But in variables like farm size, farming experience, age, innovativeness, showed non-significant association with extent of participation in agriculture and allied activities. This finding is in line with the findings of Sujatha (1996), Chakrabarty (1997) and Premavathi (1997).

4.5.2 Relationship of Socio-psychological characteristics with the participation of tribal women in decision-making in agriculture and allied activities

Correlation analysis was carried out to find out the relationship of socio-psychological characteristics of tribal women and their participation in decision-making in agriculture and allied activities. The results are given in table 63.

Table.63. Zero order correlation coefficient of the socio-psychological characteristics of tribal women with the participation in decision making in agriculture and allied activities

Variable	Independent variables	Participation in decision making
X1	Age	0.05930 NS
X2	Educational status	-0.24238**
X3	Occupational status	0.09939 NS
X4	Farming experience	0.05317 NS
X5	Farm size	-0.11118 NS
X6	Annual income	-0.23601**
X7	Social participation	0.08154 NS
X8	Mass media participation	-0.09965 NS
X9	Contact with extension agency	0.03036 NS
X10	Value orientation (Localitiness - cosmopolitiness)	-0.06720 NS
X11	Conservatism - liberalism	0.03765 NS
X12	Credit orientation	-0.04374 NS
X13	Scientific orientation	0.02354 NS
X14	Innovativeness	0.18702 *
X15	Economic motivation	0.05856 NS
X16	Fatalism - Scientism	0.03507 NS
X17	Progressivism - traditionalism	0.06496 NS
X18	Self reliance	0.07582 NS
X19	Achievement motivation	0.02511 NS
X20	Religious belief	0.08038 NS
X21	Gregariousness	-0.08198 NS
X22	Intra-tribal communication	-0.06098 NS
X23	Family norms	0.01279 NS

** Significant at 1% level

* Significant at 5% level

NS Non significant

It could be observed from the table that out of 23 characteristics studied, innovativeness alone was found to be positively and significantly associated with their participation in decision-making of tribal women.

The other variables, viz., education and annual income had negatively and highly significant relationship with the participation of tribal women in decision-making. This finding was in conformity with the findings of Rexlin (1984).

The other variables, age, occupational status, farming experience, social participation, extension agency contact, conservatism-liberalism, scientific orientation, economic motivation, fatalism - scientism, progressivism - traditionalism, self reliance, achievement motivation, religious belief and family norms were found to be positive but non-significant association with the participation of tribal women in decision-making.

The extension agency contact and extent of participation in decision-making were not associated with one another since tribal women maintained very less contact with extension agency. So, the influence of agency on tribal women's participation in decision-making seems to be very weak and insignificant. This finding is in agreement with the finding of Rexlin (1984).

The other variables - farm size, mass media participation, value orientation, credit orientation, gregariousness and family norms showed

negative non-significant association with the participation of tribal women in decision-making.

4.5.3 Multiple regression analysis of independent variables (X'n) with the participation of tribal women in agriculture and allied activities

The multiple regression analysis not only gives the direction of association of variables, but also the quantum of change produced in one dependent variable because of change in independent variable. The multiple regression analysis was carried out for participation in agriculture and allied activities and the results as furnished in table 64.

It could be concluded from the table that all the 23 variables put together explained about 29.66 per cent contribution towards the dependent variable the participation of tribal women in agriculture and allied activities. The 'F' value 2.310 was found to be significant.

An overview of the table revealed that though all the 23 variables were collectively significant in prediction as indicated by the 'F' values, only coefficient of certain variables were found to be significant by their 'F' value. The table indicated that the variables like occupational status and education were individually significant in the prediction.

Table.64. Multiple regression analysis of independent variables with that of dependent variable participation in agriculture and allied activities

Variable	Independent variables	Regression coefficient	Std. Error	T (DF)
X1	Age	0.518	0.4922	0.105 NS
X2	Educational status	-3.3303	1.5041	-2.214 *
X3	Occupational status	4.0506	2.0150	2.0100 *
X4	Farming experience	-0.2738	0.4914	-0.557 NS
X5	Farm size	1.9848	2.0597	0.964 NS
X6	Annual income	-1.2507E-04	4.18330E-04	-0.299 NS
X7	Social participation	-0.0343	1.9515	-0.018 NS
X8	Mass media participation	-0.0223	1.2529	-0.018 NS
X9	Contact with extension agency	0.5247	0.9710	0.540 NS
X10	Value orientation (Localiteness - cosmopoliteness)	-0.9126	0.6504	-1.403 NS
X11	Conservatism - liberalism	0.5944	0.4126	1.441 NS
X12	Credit orientation	-0.4314	0.2734	-1.578 NS
X13	Scientific orientation	-0.5113	0.6675	-0.766 NS
X14	Innovativeness	3.0081	2.0819	1.445 NS
X15	Economic motivation	-0.0134	0.8233	-0.016 NS
X16	Fatalism - Scientism	0.2336	1.4938	0.156 NS
X17	Progressivism - traditionalism	-0.3354	1.3130	-0.255 NS
X18	Self reliance	4.5449	3.5218	1.290 NS
X19	Achievement motivation	0.7754	0.8797	-0.881 NS
X20	Religious belief	0.3817	0.5393	0.708 NS
X21	Gregariousness	-0.6144	0.9631	-0.638 NS
X22	Intra-tribal communication	-0.9255	0.8335	-1.110 NS
X23	Family norms	-0.2868	0.5263	-0.545 NS

** Significant at 1% level

* Significant at 5% level

R² = 0.2966

NS Non significant

F = 2.310

a = 71.1765

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The prediction equation as follows:

$$Y = 71.1765 + 0.518 X_1 - 3.3303 X_2^* + 4.0506 X_3^* - 0.2738 X_4 + 1.9848 X_5 - 1.250E-04 X_6 - 0.0343 X_7 - 0.0223 X_8 + 0.5247 X_9 - 0.9126 X_{10} + 0.5944 X_{11} - 0.4314 X_{12} - 0.5113 X_{13} + 3.0081 X_{14} - 0.0134 X_{15} + 0.2336 X_{16} - 0.3354 X_{17} + 4.5449 X_{18} + 0.7754 X_{19} + 0.3817 X_{20} - 0.6144 X_{21} - 0.9255 X_{22} - 0.2868 X_{23}$$

The regression equation given above clearly depicts that the absolute values of the unit increases or decreases in the participation of different variables. The prediction equation revealed that an unit increase in the occupational status would increase the participation by 4.0506 unit *ceteris paribus*.

On the contrary, an unit increase in educational status, the participation in agriculture and allied activities decreased by 3.3303 unit when all others kept constant. The significant contribution of occupational status towards participation in agriculture and allied activities shows that the tribal women with higher occupational status (agriculture/allied activities alone) would show more in participation in agriculture and allied activities by tribal women than those who are engaged in business and service also. The negative contribution of educational status towards participation in agriculture and allied activities may be because an increase in the access to education, it makes women's participation in agriculture and allied activities lower.

These findings are in the line with the findings of Chakrabarty (1997).

The other variables such as age, farming experience, farm size, annual income, social participation, mass media participation, extension agency contact, value orientation, conservatism-liberalism, credit orientation, fatalism-scientism, progressivism-traditionalism, self-reliance, achievement motivation, religious belief, gregariousness, intra-tribal communication and family norms did not show significant effect in participation in agriculture and allied activities.

4.5.4 Multiple regression analysis of independent variables (X'n) with the participation of tribal women in decision-making in agriculture and allied activities

The multiple regression analysis not only give the direction of association of variables, but also the quantum of change produced in one dependent variable because of unit change in independent variable. The multiple regression analysis was carried out for participation in decision-making and the results are furnished in table 65.

From the table it could be observed that the coefficient of multiple regression viz., R^2 was 0.3169 which was found to be significant at 0.01 level of probability. This meant that 31.69 per cent variation in the dependent variable is explained by the independent variables chosen for the study. The 'F' test was also found to be significant at one per cent level.

Table.65. Multiple regression analysis of independent variables with that of dependent variable participation in decision making

Variable	Independent variables	Regression coefficient	Std. Error	T (DF)
X1	Age	0.9573	1.0993	0.871 NS
X2	Educational status	-13.9784	3.3594	-4.161 **
X3	Occupational status	0.5730	4.5004	0.127 NS
X4	Farming experience	-0.6876	1.0976	-0.626 NS
X5	Farm size	-4.7039	4.6003	-1.023 NS
X6	Annual income	-0.0019	9.34318E-04	-2.028 *
X7	Social participation	6.1995	4.3586	1.422 NS
X8	Mass media participation	0.6391	2.7982	0.228 NS
X9	Contact with extension agency	2.0604	2.1688	0.950 NS
X10	Value orientation (Localitiness - cosmopoliteness)	-0.7323	1.4526	-0.504 NS
X11	Conservatism - libaralism	0.7060	0.9215	0.766 NS
X12	Credit orientation	-0.4781	0.6106	-0.783 NS
X13	Scientific orientation	0.0171	1.4908	0.011 NS
X14	Innovativeness	10.9274	4.6498	2.350 *
X15	Economic motivation	2.1504	1.8387	1.170 NS
X16	Fatalism - Scientism	2.6025	3.3363	0.780 NS
X17	Progressivism - traditionalism	5.7244	2.9324	1.952 NS
X18	Self reliance	5.1197	7.0658	0.651 NS
X19	Achievement motivation	-0.8942	1.9648	-0.455 NS
X20	Religious belief	-0.2323	1.2046	-0.193 NS
X21	Gregariousness	-1.8293	2.1511	-0.850 NS
X22	Intra-tribal communication	-1.5841	1.8615	-0.851 NS
X23	Family norms	0.0907	1.1754	0.077 NS

** Significant at 1% level

* Significant at 5% level

NS Non significant

a = 45.5460

R² = 0.3169

F = 2.541

174.

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This prediction equation is as follows:

$$\begin{aligned}
 Y = & 45.5460 + 0.9573 X_1 - 13.9784 X_2^{**} + 0.5730 X_3 - 0.6876 X_4 \\
 & -4.7039 X_5 - 0.0019 X_6^* + 6.1995 X_7 + 0.6391 X_8 + \\
 & 2.0604 X_9 - 0.7323 X_{10} + 0.7060 X_{11} - 0.4781 X_{12} - \\
 & 0.0171 X_{13} + 10.9274 X_{14}^* + 2.1504 X_{15} + 2.6025 X_{16} + \\
 & 5.7244 X_{17} + 5.1197 X_{18} - 0.8942 X_{19} - 0.2323 X_{20} - \\
 & 1.8293 X_{21} - 1.5841 X_{22} - 0.9907 X_{23}
 \end{aligned}$$

It could be seen that out of the 23 variables taken for multiple regression analysis only one variable, innovativeness had significant and positive contribution towards the dependent variable participation in decision-making, whereas the independent variable, education and annual income had significant and negative contribution towards the dependent variable participation in decision-making.

The prediction equation revealed that an unit increase in innovativeness increased the participation in decision-making by 10.9274 units when all others are kept constant. On the contrary, an unit increase in the educational status and annual income would decrease the participation in decision making by 13.9784 and 0.0019 units respectively when all others are kept constant.

All the remaining variables such as age, occupational status, farming experience, farm size, social participation, mass media participation, extension agency contact, value orientation, conservatism-liberalism, credit

orientation, scientific orientation, economic motivation, fatalism-scientism, progressivism-traditionalism, self-reliance, achievement motivation, religious belief, gregariousness, intra-tribal communication and family norms did not contribute substantially towards the participation of tribal women in decision-making.

The significant contribution of innovativeness towards participation in decision-making shows that an increase in innovativeness will increase the participation in decision-making.

4.5.5 Path analysis showing direct, indirect and substantial indirect effects of independent variables of tribal women on participation in agriculture and allied activities.

The results of the path analysis show direct, indirect and substantial indirect effects of independent variables of tribal farm women on participation in agricultural and allied activities. The direct effects of conservatism-liberalism, self-reliance, occupation, innovativeness, farm size, religious belief, contact with extension agency and age are of the highest order (ie) these variables have directly helped for participation in agricultural and allied activities. Similarly, educational status, farming experience, annual income, social participation, mass media participation, value orientation, credit orientation, scientific orientation, economic motivation, progressivism - traditionalism, achievement motivation, gregariousness, intra-tribal communication and family norms have direct

Table.66. Path analysis showing direct, indirect and substantial indirect effects of independent variables of tribal farm women on participation in agriculture of allied activities

Sl. No.	Variable	Direct effect	Indirect effect	Substantial indirect effect		
				I	II	III
1.	Age	0.0375	.0098	-.19316 (X4)	.10421 (X2)	-.09438 (X11)
2.	Educational status	-.2799	-.0982	.15637(X11)	.10953(X18)	-.10857(X10)
3.	Occupational status	.1704	0.0416	.02877(X4)	.01420(X2)	-.01293(X19)
4.	Farming experience	-.1986	.2404	.10752(X2)	.09429(X11)	.06928(X19)
5.	Farm size	.0928	-.0666	.03694(X3)	.0226(X11)	-.02663(X10)
6.	Annual income	-.0371	-.2200	.09865(X11)	-.0797(X10)	.07707(X18)
7.	Social participation	-.0020	-.0.1779	-.14446(X2)	.12216(X11)	.09767(X18)
8.	Mass media participation	-.0022	-.0.282	-.18027(X2)	.12960(X11)	.10763(X18)
9.	Contact with Extn. agency	.0704	-.2753	-.16192(X2)	.15049(X11)	.12049(X18)
10.	Value orientation	-.1791	-.1484	-.16970(X2)	.16658(X11)	.13189(X18)
11.	Conservatism-liberalism	.2422	-.4659	-.18070(X2)	.14680(X18)	-.13375(X19)
12.	Credit orientation	-.1398	-.0826	.07214(X11)	.07010(X2)	-.06897(X19)
13.	Scientific orientation	-.1399	-.1710	-.2010(X11)	-.18161(X2)	.14359(X18)
14.	Innovativeness	.1305	-.1367	.08232(X18)	-.07949(X2)	.07343(X11)
15.	Economic motivation	-.0030	-.2786	.18674(X11)	-.17807(X2)	.17233(X18)
16.	Fatalism-scientism	.0267	.2566	.18753(X11)	.18269(X2)	-.14755(X18)
17.	Progressivism-traditionalism	-.0359	-.2139	.17865(X11)	.17100(X2)	.13636(X18)
18.	Self-reliance	-.1916	-.0.3833	.18561(X11)	-.16004(X2)	-.13047(X19)
19.	Achievement motivation	-.1683	-.1319	.19753(X11)	-.17350(X2)	.14854(X18)
20.	Religious belief	.0652	.1335	.13257(X2)	.10413(X11)	-.08495(X18)
21.	Gregariousness	-.0594	-.1267	.11003(X11)	-.10764(X2)	.08598(X18)
22.	Intra-tribal communication	-.0992	-.0951	.08142(X2)	.07665(X18)	-.07341(X19)
23.	Family norms	-.0508	-.1286	.12233(X11)	-.10171(X2)	-.08264(X19)

Residual effect = .8387

effects which are negative (i.e). These variables did not help and they affected on participation. These results are in confirmation with the results of multiple regression analysis.

Regarding the indirect effects of twenty three variables, twenty variables have routed their indirect effect through educational status (X_2) and conservatism-liberalism (X_{11}), sixteen variables have routed through self reliance (X_{18}), seven variable have routed through achievement motivation. (X_{19}) and two variables have routed through farming experience (X_4) and value orientation. (X_{10}).

Thus conservatism-liberalism (X_{11}) has directly and indirectly helped the participation in agriculture and allied activities while educational status, self reliance, indirectly helped the participation in agriculture and allied activities. Hence, conservatism-liberalism (X_{11}) can be taken as a crucial variable for participation in agriculture and allied activities.

4.5.6 Path Analysis showing direct, indirect and substantial indirect effect of independent variables of tribal women on participation in decision making

The results of the path analysis show a direct, indirect and substantial indirect effects of independent variables of tribal women in decision making in agriculture and allied activities. The direct effects of age, progressivism-traditionalism, economic motivation, innovativeness, social participation.

Table.67. Path analysis showing direct, indirect and substantial indirect effects of independent variables of tribal farm women on participation in decision making

Sl. No.	Variable	Direct effect	Indirect effect	Substantial indirect effect		
				I	II	III
1.	Age	.2674	-.2081	.19276 (X2)	-.17566(X4)	-.11907(X17)
2.	Educational status	-.5177	.2753	.15973(X17)	.15677(X15)	.09024(X11)
3.	Occupational status	-.1051	.1145	.05293(X14)	.03562(X6)	.02628(X2)
4.	Farming experience	-.1806	.2337	.26010(X1)	.19889(X2)	-.11432(X17)
5.	Farm size	-.0541	-.0571	-.12609(X6)	-.04798(X17)	-.04141 (X2)
6.	Annual income	-.2920	.0560	-.25151 (X2)	.10122(X17)	.09740(X15)
7.	Social participation	.1624	-.0809	-.26722(X2)	-.14146(X6)	.13247(X15)
8.	Mass media participation	.0308	-.01304	-.33346(X2)	-.8281 (X6)	.14018(X17)
9.	Contact with Extn. agency	.1263	-.0959	-.29952(X2)	-.17429(X6)	.15003(X15)
10.	Value orientation (Localiteness - cosmopoliteness)	-.0607	-.0065	-.31392(X2)	-.16848(X15)	.15917(X17)
11.	Conservatism-libaralism	.1398	-.1021	-.33425(X2)	.19284(X17)	.18999(X15)
12.	Credit orientation	-.0579	.0142	-.12968(X2)	.10197(X17)	.09291 (X15)
13.	Scientific orientation	-.0257	.0492	-.33593 (X2)	-.20907(X15)	.17824(X17)
14.	Innovativeness	.2402	-.0532	-.14703 (X2)	-.09615(X15)	.09377(X17)
15.	Economic motivation	.2464	-.1878	-.032937(X2)	.18216(X17)	-.12218(X16)
16.	Fatalism-scientism	.1504	-.1153	.33794(X2)	-.20019(X15)	-.19882(X17)
17.	Progressivism-traditionalism	.2614	.1964	-.3162(X2)	-.17170(X15)	-.12180(X1)
18.	Self-reliance	.0849	-.0091	-.29605(X2)	.18610(X17)	.18309(X15)
19.	Achievement motivation	-.0850	.02595	-.32095(X2)	.20727(X15)	.19714(X15)
20.	Religious belief	-.10126	.0930	-.24522(X2)	-.12638(X17)	-.34185(X15)
21.	Gregariousness	-.0611	-.0209	-.19911 (X2)	.11550(X17)	.11502(X15)
22.	Intra-tribal communication	-.0719	.0109	-.15061 (X2)	.10293(X17)	.07978(X15)
23.	Family norms	.0092	.0036	-.18814(X2)	.12156(X15)	.09254(X17)

Residual effect = .8214

Conservatism-liberalism, contact with extension agency, self-reliance and family norms are of the highest order (i.e.) these variables have directly helped for participation on decision making. Similarly educational status, occupational status, farming experience, farm size, annual income, value orientation, credit orientation, scientific orientation, achievement motivation, religious belief, gregariousness and intra-tribal communication had direct effects which are negative (i.e.) these variable did not help and they affected the participation in decision-making. The results are in confirmation with the result of multiple regression analysis.

Regarding the indirect effect of twenty three variables, twenty two variables have routed their indirect effect through educational status (X_2), nineteen variables have routed through progressivism-traditionalism (X_{17}), seventeen have noted through economic motivation (X_{15}), five variables have routed through annual income (X_4). So, educational status, progressivism - traditionalism and economic motivation indirectly helped in participation of tribal women in decision making in agriculture and allied activities.

SECTION - F

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Preference and non-preference in differential participation in agriculture and allied activities and reasons accounted for the same

The preference and non-preference in differential participation in agriculture and allied activities was assessed under the following major aspects mentioned in the table 68.

Table.68. Preference and non-preference in differential participation by tribal farm women in agriculture and allied activities.

n = 150

Sl. No.	Activities	Preferred		Non preferred	
		No.	%	No.	%
A. Agriculture (n=150)					
1.	Field preparation	-	-	150	100.00
2.	Sowing / Transplanting	148	98.67	2	1.33
3.	Weeding	148	98.67	2	1.33
4.	Application of FYM/fertilizer	-	-	150	100.00
5.	Irrigation	38	25.33	112	74.67
6.	Plant protection measure	-	-	150	100.00
7.	Harvesting	132	88.00	18	22.00
8.	Threshing	150	100.00	-	-
9.	Storing	150	100.00	-	-
10.	Marketing	102	68.00	48	32.00
B. Dairy (n=44)					

1.	Grazing the animal	27	61.37	17	38.63
2.	Collection of animal feeds	33	75.00	11	25.00
3.	Feeding the animals	44	100.00	-	-
4.	Bathing the animals	33	75.00	11	25.00
5.	Cleaning the shed	44	100.00	-	-
6.	Milking	44	100.00	-	-
7.	Selling the milk	44	100.00	-	-
C.	Poultry (n=134)				
1.	Feeding the birds	134	100.00	-	-
2.	Cleaning the sheds	134	100.00	-	-
3.	Selling the eggs/birds	134	100.00	-	-
D.	Piggery (n=99)				
1.	Feeding the pig	99	100.00	-	-
2.	Selling the pork	-	-	99	100.00
E.	Goat rearing (n=46)				
1.	Care and maintenance	46	100.00	-	-
2.	Marketing	-	-	46	100.00
F	Farm forestry (n=12)				
1.	Digging pit and planting	-	-	12	100.00
2.	Fencing	-	-	12	100.00
3.	Maintenance	-	-	12	100.00

Out of 150 respondents only 44, 136, 99, 46 and 12 respondents possessed dairy, poultry, piggery, goat rearing and farm forestry respectively as allied activities.

It could be seen from in table that :

1. In agriculture, cent per cent of the respondent did not prefer to participate in the activities like field preparation, application of FYM/ fertilizer and plant protection measures because knowledge, skill and physical strength are required to perform these activities. Almost cent per cent of respondents reported their preference of transplanting, weeding, threshing and storing activities. Majority of the tribal women (74.67 per cent) did not prefer to participate in irrigation. 88 and 68 per cent of the respondents preferred to participate in harvesting and marketing activity respectively.
2. Cent per cent of the tribal women preferred to be involved in the activities like feeding in animal, cleaning the shed, milking and selling the milk under dairy management and 61.37, of the respondents preferred to participate in grazing of animal. Same percentage of the tribal women preferred to be involved in collection of animal feed and bathing the animal. (75%)
3. In poultry, cent per cent of the respondents preferred to be involved in all the three activities.
4. Cent per cent of the tribal women preferred to participate in feeding the pig but cent per cent did not prefer be involved in selling of pork.

5. Care and maintenance of goat was preferred by 100 per cent of the tribal women but marketing was not preferred by cent of the respondents in goat rearing.
6. Cent per cent of the tribal women did not prefer to involve in all the three activities of farm forestry.

Reasons accounted for preference and non-preference in differential participation in agriculture and allied activities

Reasons for preference and non-preference in differential participation in agriculture and allied activities were studied and results are mentioned in the table.69.

Table.69. Reasons accounted for preference and non-preference in differential participation of tribal women in agriculture and allied activities.

(n=150)

Reasons		No.	%	Rank
A. Preference :				
1.	Non-involvement of tools and machinery	150	100	1
2.	Non-requirement of technical knowledge and skills	127	84.67	11
3.	Physically suitable for women	123	82	111
B. Non-preference :				
1.	Complexity in practice	150	100	1
2.	Requirement of physical strength	117	78	11
3.	More outdoor involvement	48	32	111

(multiple response)

It could be stated that non-involvement of tools and machinery was the reason for preference in the activities like harvesting, threshing and storing by cent per cent of the respondents. More than 84 per cent of the tribal women opined that less technical knowledge and skills requirement was reason for preference of certain activities. It may be noted that harvesting, threshing and storing require no technical knowledge and skills unlike application of fertilizer and plant protection measures. Eighty two per cent of the respondents expressed physical suitability as the reason for preference of the activities like harvesting, threshing and storing. Because of the complexity of practices like application of fertilizer and plant protection measures non-preference was expressed by cent per cent of the respondents. Handling of plough and spade are requires for land preparation and making irrigation channels respectively which need much physical strength which was stated as a reason for non-preference by 78 per cent of the respondents.

More outdoor involvement was expressed as the reason by 32 per cent of the respondents for non-preference in the activities like marketing.

SECTION - G

4.7.1 'Hope of success' and 'Fear of Failure' of tribal women in agriculture and allied activities

To study 'Hope of Success' and 'Fear of Failure' of tribal women four major enterprises were considered under agriculture and allied activities. The detail of the findings are presented in the table 69 (Fig.27).

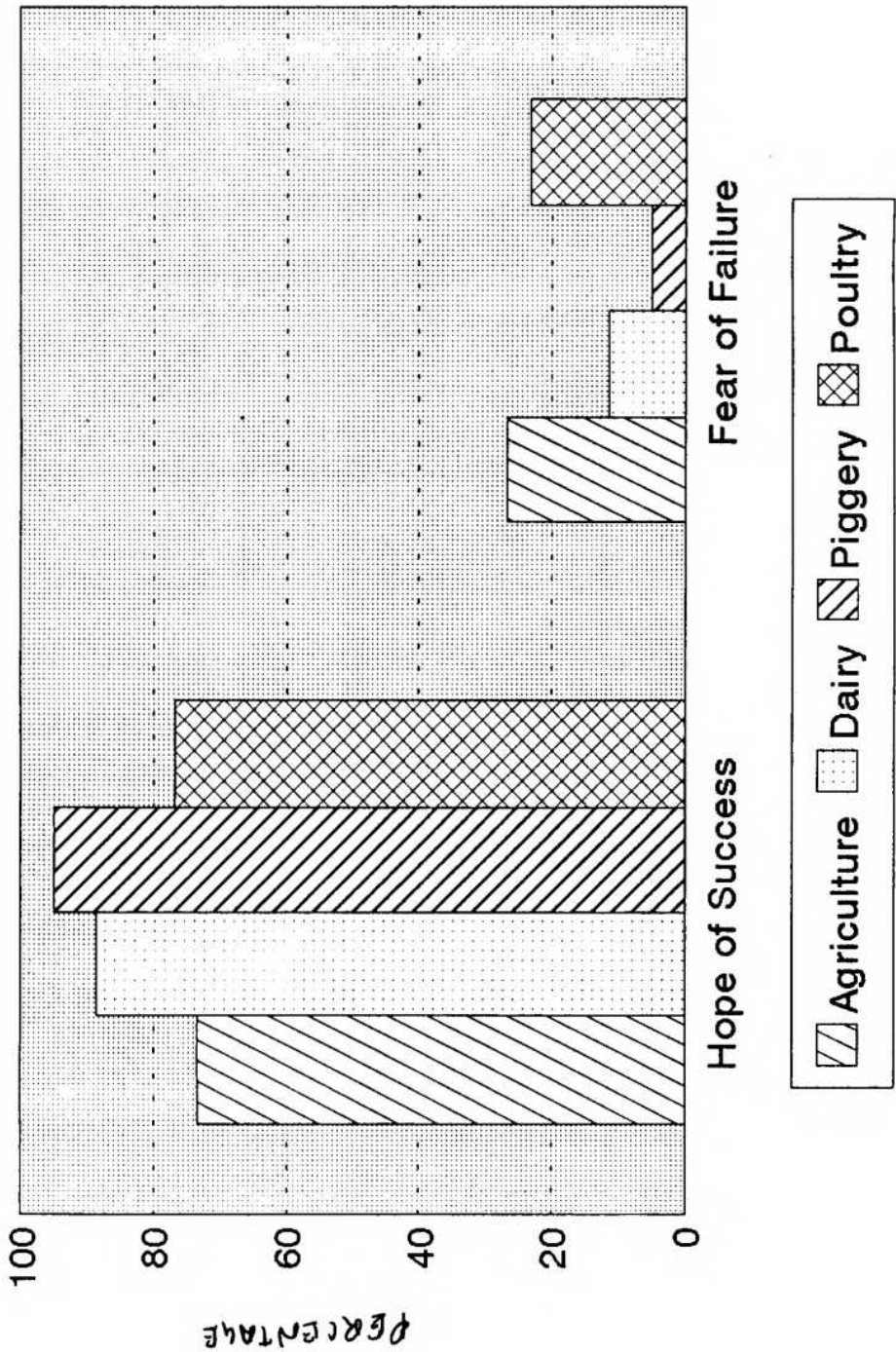
Table 70. Distribution of respondents according to their 'Hope of Success' and 'Fear of Failure' in agriculture and allied activities

(n=150)

Name of items		No. of respondents	'Hope of Success'		'Fear of failure'	
			No.	%	No.	%
1.	Agriculture as main activity	150	110	73.33	40	26.67
2.	Dairy as allied activity	44	39	88.63	5	11.37
3.	Piggery as allied activity	99	94	94.94	5	5.06
4.	Poultry as allied activity	134	103	76.87	31	23.13

It could be observed from the table that 73.33 per cent of the tribal women had 'Hope of Success' in agriculture where-as 26.67 per cent of respondents had 'Fear of Failure' in the same. 'Hope of Success' on dairy was expressed by 88.63 per cent of the respondents having dairy as subsidiary occupation and in the same enterprise 11.37 per cent of the respondents expressed 'Fear of Failure'. Majority of respondents (94.94) who had piggery as subsidiary occupation stated 'Hope of Success' on piggery and 5.06 per cent of them expressed 'Fear of Failure' on piggery. Majority (76.87 per cent) of tribal women who were having poultry had expressed 'Hope of Success' on poultry, similarly 23.13 per cent of them expressed 'Fear of Failure' about poultry farming.

Fig.27. 'Hope of Success' and 'Fear of Failure' of tribal women in agriculture and allied activities



Reasons for 'Fear of Failure' by tribal women in agriculture and allied activities

Reasons for 'Fear of Failure' in agriculture and allied activities by tribal women was studied and their 'Fear of Failure' in agriculture and allied activities for different reasons are presented in table.71.

Table.71. Reasons accounted for 'Fear of Failure' in agriculture and allied activities

Sl. No.	Reason	No.	Per cent
(n=150)			
Agriculture			
1.	Uneconomic holding of land	20	13.33
2.	Water scarcity for irrigation	17	11.33
3.	Limited opportunities for farm employment	11	7.33
4.	Degradation of soil fertility	8	5.33
5.	Pest and disease incidence	5	3.33
6.	Low price and price fluctuation for farm produce	5	3.33
Dairy Management :			
7.	High initial investment and high cost of maintenance	5	3.33
8.	Lack of marketing facilities	5	3.33
Poultry			
9.	Incidence of epidemic and endemic diseases	10	6.66
Piggery			
10.	High initial investment cost	5	3.33

(Multiple response)

Agriculture

Uneconomic land holding was perceived as 'Fear of Failure' by 13.33 per cent of the respondents. There were 58.67 per cent of the marginal tribal farm families with more than four members. This group would have experienced financial constraints to meet the needs of their family members. In the absence of any other alternative viable sources of income, this group felt that the presently owned holding was uneconomic.

Water scarcity for irrigation was expressed as a factor for 'Fear of Failure' by 11.33 per cent of the respondents. The streams of Tripura are subjected to floods due to heavy rains on the hill slopes and dry up very soon. They usually remain sandy from October to March. So, in most of the areas monocropping is followed which does not provide round the year consumption.

Limited opportunities for farm employment were considered as a 'Fear of Failure' by 7.33 per cent of the respondents. Farm labours of the respondent families were found to remain unemployed for about 6-7 months a year. The above reason would have influenced the respondent to consider limited opportunity for farm employment.

Degradation of soil fertility was expressed as a factor for 'Fear of Failure' by 7.33 per cent of the respondents. Due to a decrease in jhum area, the cultivators practice Jhuming in the same area over the years and because

of the perpetual burning in the course of Jhum cultivation exposes the land to a combination of tropical sun and torrential rains which causes leaching of minerals from the soil. Similarly the flat land in the valleys known as 'Lunga' is accumulated with sand. Henceforth the return from the flat land and jhum is very low. This was the concern for 'Fear of Failure' by the respondents.

Tribal farmers were using same variety and age old seeds for years together, so there was high incidence of pests like Gundhi bug and diseases like blast and bacterial leaf blight. So, 3.33 per cent of respondents expressed pest and disease incidence as grave concern for 'Fear of Failure' in agriculture.

Low price and fluctuation of price for farm produce were expressed as a factor for 'Fear of Failure' by 3.33 per cent of the tribal women. Tribal farm families get a lower price because they need to sell the farm produce from the threshing yard itself because of indebtedness and the involvement of middleman.

Allied activities

High initial investment for the purchase of milch animals were perceived as one of the factor for 'Fear of Failure' in dairy. Unless a family keeps 2-3 milch animals the dairy farming is not viable and it is costly to maintain 2-3 milch animals with proper care for obtaining good return.

Combinely the high initial investment and high cost of maintenance was expressed by 3.33 per cent of the respondents as a 'Fear of Failure' in dairy farming.

Lack of organised marketing facilities like co-operative milk society milk fetches lower price. So it was expressed by 3.33 per cent of the respondents as factor for "Fear of Failure". Incidence of epidemic and endemic diseases on poultry birds which ultimately caused mortality of birds was expressed as 'Fear of Failure' by 20.66 per cent of the respondents. High initial cost viz., purchasing of piglets was perceived as one of factor for 'Fear of Failure' by 3.33 per cent of the respondents.

4.7.2. Measures suggested by tribal women for their better farming

Table.72. Measures suggested by tribal women for their better farming

Sl. No.	Suggestions	Respondents	
		No	%
1.	Land reforms programme	26	17.33
2.	Better transport and marketing facilities	25	16.67
3.	Better irrigation facilities	19	12.67
4.	Technical guidance to tribal women	19	12.67
5.	Better price for farm produces	16	10.67

		192
		192
6. Soil and water conservation measures	8	5.33
7. Supply of good quality seeds	8	5.33
8. Higher labour wages	8	5.33
9. Better credit facilities	7	4.67
10. Set up of hiring centre for agricultural implements	5	3.33
11. More number of Govt. schemes on livestock	6	4.00
12. More number of Govt. schemes on plantation crops	3	2.00
	150	100

It could be observed from the table that 17.33 per cent of the tribal women desired to have a realistic land reform programme for the betterment of the lot of tribals. Measures for preventing tribal land alienation could put a check on the conversion of peasant women into agricultural labourers.

Next important measures that tribal women (16.67%) wanted to get was proper transport and marketing facilities under which Milk Co-operative Society could be set up with governments initiative. This would prevent dairy women selling milk to middle man in lower price.

Better irrigation facilities was expressed by 12.67 per cent of the respondents. Two-third of the total area was under rainfed condition and only 12.50 of the total area was under irrigation. Most of the crops were grown during Kharif season only. So, if irrigation schemes like deep tube wells and over flows were established farmers could go for double crops.

More than 12 per cent of respondents reported to have technical guidance in agriculture and allied activities. 10.67 per cent of the tribal women wanted to have proper policy so that their price falling at the time of harvesting their produce could be checked. Reclamation of waste land and construction of gully control structure required immediate attention to save lands. These were desired by 5.33 per cent of the tribal farm women. Lack of good quality seeds was the important factor for low return from Jhum cultivation which require to be replaced by good quality seeds (HYV) as expressed by 5.33 per cent of the respondents. 96.65 per cent of the tribal worker was agricultural labourers (1991 Census) among them majority were female labours. The age old practice of paying lower wages to the women workers were being continued. One of the reason why land owners prefer female to make agricultural labourers was that their wages were lower. Poor landless female agricultural labourers had to accept this existing discriminatory wage system because their preference for a wage-based job was strong as the alternative meant 'no work' for these women. So, 5.33 per cent of the tribal women desired for higher labour wages.

There was no lead bank existed in any one of the surveyed villages. Only PACS were functioning where one being located in far-flung area. Most of the times loans were disbursed when season was over which would be of no use. Henceforth, 4.67 per cent of the tribal women felt necessary credit facilities by the authorities.

Most of the marginal tribal families did not have bullocks for tilling their lands. They required to hire bullocks at higher rate for ploughing. So, 3.33 per cent of respondents felt that Government should set hiring centres for agriculture equipment. More number of Govt. schemes on livestock and plantation crop like rubber and coconut were desired by 4 per cent and 2 per cent of the respondents respectively.

SECTION - H

Sources of farm information and their perceived credibility by tribal women

Farm information sources available to the tribal farm women were grouped under three major headings viz., institutional, non-institutional and mass media sources. Frequency of the use of different sources and their perceived credibility of sources were assessed.

4.8.1 Institutional sources of farm information and their perceived credibility by tribal women

Under institutional sources AAO, AO, ADO and scientists were considered. Sources of farm information and perceived credibility is presented in table 73.

Table.73. Institutional sources of farm information and their perceived credibility by tribal women

(n=150)

Sources	Frequency %			Credibility %		
	Regularly	Frequently	Rarely	Most	More	Less
AAO	0.66	8.00	20.00	18.00	10.66	-
AO	-	0.66	6.00	6.66	-	-
ADO	-	-	0.66	0.66	-	-
Scientist	-	-	-	-	-	-

(multiple response)

Under institutional sources, Assistant Agricultural Officers (AAO), Agricultural Officers (AO) and Agricultural Development Officers (ADO) were considered as sources of farm information for tribal farm women. The scientist was not utilised as source of farm information. AAO was considered as a regular source of information by 0.66 per cent of the respondents followed by AAO as a frequent source of information by 8 per cent . Twenty per cent of the respondents used AAO as rare source of farm information. Regarding perceived credibility of sources, 18 per cent of tribal women ranked the AAO as most credible source and 10.66 per cent ranked them as more credible source. None of them ranked AAO, AO, and ADO as less credible source of information. 6.66 per cent and 0.66 per cent of the respondents ranked AO and ADO as most credible sources of information respectively.

Though agricultural officers were considered as a credible source of information, majority of farm women not utilised them either regularly or frequently. Only few tribal farm women used them frequently (66%) and rarely (6%). Under the T & V system as the AAO visits the villages at regular intervals, he will naturally have familiarity with the practicing tribal farm women. Thus the AAO, has emerged as an important source of information.

The above finding indicates that AO and ADO's are not easily accessible and they are mostly involved in administrative work than extension activities. Since scientists are stationed in the research stations, most of the tribal farm women had not known them.

4.8.2 Non-institutional sources of farm information and their perceived credibility by tribal women

To study the non-institutional sources, family members of the tribal farm women, their neighbours, friends and relatives were considered, whom the tribal farm women usually would had depended for acquiring information. Farm women's frequency of sources and their perceived credibility of non-institutional sources are presented in the table 74.

Table.74. Non-institutional sources of farm information and perceived credibility by tribal women

(n=150)

Sources	Frequency %			Credibility %		
	Regularly	Frequently	Rarely	Most	More	Less
Family members	8.00	33.34	58.66	22.66	73.34	4.00
Neighbours	6.00	22.00	72.00	18.00	77.33	4.67
Friends	5.35	18.65	76.00	16.66	63.33	20.00
Relatives	2.66	20.67	76.67	17.34	64.66	18.00

(multiple response)

Among the non-institutional sources, family members were regularly utilised by 8 per cent of tribal farm women. Followed by neighbours (6%), friends (5.35%) and relatives also (2.66%) were the farm women's regular source of farm information.

Among the frequently used sources, family members topped the list followed by neighbours, relatives and friends. The percentages of tribal farm women reporting the same were 33.34, 22, 20.67 and 18.65 respectively. For 76.67 per cent of tribal farm women relatives were the rarely sources of information followed by friends (76%), neighbours (72%) and family members (58.66%). The family members were ranked as the most credible and more credible source of information by 22.66 and 73.34 per cent of the

tribal farm women respectively. Neighbours, relatives and friends were ranked as the most credible source by 18, 17.34 and 16.66 per cent of the tribal farm women in the order of credibility. Friends were considered as the less credible source (20%) followed by relatives (18%), neighbours (4.67%) and family members (4%).

Among the non-institutional sources, family members emerged as the regular sources of farm information and most credible source of information (Fig.30). It is quite but natural that family members will have a greater interest in their family than neighbours, relatives and friends.

Next to the family members, neighbours ranked as a regular source of information and most credible source of information as neighbourhood sources are the members of their same social system and they are with them and they know all their practical problems.

4.8.3 Mass media sources of farm information and their perceived credibility by tribal women

To know about the mass media sources for tribal women, radio, television, newspaper, journals and magazines were considered. The details are presented in table 75.

Table.75. Mass media sources of farm information and their perceived credibility by tribal women

(n=150)

Sources	Frequency %			Credibility %		
	Regularly	Frequently	Rarely	Most	More	Less
Radio	•	8.00	70.66	37.33	41.33	-
T.V.	-	6.00	46.66	27.33	25.33	-
Newspapers	-	4.66	13.34	11.34	6.66	-
Journals	-	-	-	-	-	-
Magazines	-	-	-	-	-	-

(multiple response)

It can be observed from the table that radio, T.V. and newspaper were the three mass media utilized and ranked credible by the tribal farm women in that order. No tribal farm women were found to use journals and magazines. This may be due to low literacy level of tribal farm women.

None of the tribal farm women utilized the mass media in a regular basis. Radio was frequently utilised by 8 per cent of the tribal farm women followed by 37.33 per cent utilising the same rarely. T.V. was frequently utilized by 6 per cent and rare users were 46.66 per cent.. Newspaper was frequently utilised by 4.66 per cent of tribal farm women and there were 13.34 per cent respondents utilised the same rarely.

Radio was ranked as the most credible source of mass medium by 37.33 per cent of the tribal farm women whereas 42.33 per cent ranked the same as a more credible source. Television was most credible by 27.33 per cent and more credible by 25.83 per cent of the tribal farm women. Newspaper was ranked as the most credible source by 11.34 per cent of the respondents and 6.66 per cent as more credible source of information (Fig.31).

From the above findings, it could be inferred that radio was the frequently used medium which was also ranked as the most credible source. Radio was possessed invariably by majority of the respondents.

It can also be inferred that if the knowledge and participation of tribal farm women in agriculture and allied activities are to be increased the same can be achieved by disseminating the technologies through AAO, family members and radio, since these were considered as important information sources by the tribal farm women.

The findings are in line with that of Rexlin (1984). Bhuyan and Tripathy (1988) and Devi (1989).

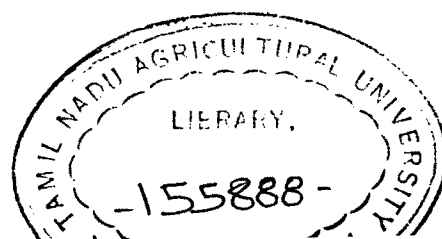
SECTION - I

Training needs of tribal women in agriculture and allied activities

The tribal women were found to participate in almost all the major farm operations connected in agriculture and allied farming either by self doing, assisting or supervising. In farming, modern technologies are frequently added to the existing ones. The farm tribal women can effectively participate only when they have adequate knowledge about such technologies and needed skills in doing the same. The knowledge and skill of any person can be increased by providing suitable training. Considering the importance of training tribal farm women were asked to indicate their training needs in various aspects of farming. In this study, the training needs were assessed in various farming activities in agriculture, dairy, poultry, piggery, goat rearing and farm forestry. The details are presented in table 76.

Table.76. Training needs of tribal women in agriculture and allied activities

Activities	(n=150)		
	Much needed %	Needed %	Not needed %
A. AGRICULTURE			
1. Seeds and Sowing			
Seed selection	1.33	5.33	93.34
Seed treatment	2.66	26.00	71.34



2. Manures and manuring

Optimum dose of fertilizer	21.33	30.33	48.67
Method of fertilizer application	21.33	30.00	48.67
Time of fertilizer application	21.33	30.00	48.67

3. Transplanting

Spacing	-	12.00	88.00
Age of seedling	-	12.00	88.00

4. Weeding

Time of weeding	0.66	10.66	88.68
Use of herbicides	2.00	20.66	77.34

5. Irrigation

Time of irrigation	1.33	12.00	86.67
Number of irrigations	1.33	11.33	87.34

6. Plant protection

Identification of pest and diseases	22.00	44.00	34.00
Preparing spray solution	22.00	44.00	34.00
Name and dose of plant protection chemicals	22.00	44.00	34.00

7. Harvest

Time of harvest	0.67	7.33	92.00
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8. Storage

Storage of farm produce and seed processing	6.00	14.66	79.34
Controll of stored grain pests	8.67	27.33	64.00

B. DAIRY

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Feed ratio for animal	-	31.81	68.19
Disease management	2.27	54.54	43.19

C. POULTRY

Feed ratio for broiler/layer	2.23	14.92	82.85
Disease management	9.70	38.05	52.25

D. GOAT REARING

Care and maintenance	2.17	26.08	71.75
Disease management	2.17	30.43	67.40

E. FARM FORESTRY

Selection of seedling	-	-	100.00
Age of seedling	-	-	100.00
Care/maintenance	-	-	100.00

F. PIGGERY

Feed ratio for pigs	7.07	17.17	75.76
Disease management	17.17	49.49	33.34

Under seed and sowing, training need on seed selection and seed treatment was assessed under three categories viz., much needed, needed and not needed. 1.33 per cent of tribal farm women much needed training on seed selection and 5.33 and 93.34 per cent needed and not needed respectively. For 2.66 per cent of tribal farm women training on seed treatment was much needed while for 26 per cent it was needed which was followed 71.34 per cent not needed. This indicates that the tribal farm women are not very much aware of the importance of quality seed needed for producing quality seedling.

Under manures and manuring, optimum doses of fertilizer, method of fertilizer application and time of fertilizer application were the three activities for which the training need was assessed. 21.33 per cent of the tribal farm women stated that they much needed training in the above three activities and 30 per cent tribal farm women needed training in the three activities. However almost half of the percentage (48.67%) of tribal farm women stated they did not need training in the three activities. The possible reason for only 51.33 per cent tribal women requiring training in manures and manuring, may be their limited participation in this activity.

Under transplanting activity, only 12 per cent of the respondents reported that they needed training in achieving correct spacing for crops. Though, the knowledge and skill about depth of planting and spacing to be adopted according to age of crop are necessary, the tribal farm women have not perceived the need for training.

Under weeding, training needs on time of weeding and use of herbicides were assessed. In the use of herbicides, 2.00 per cent of the respondents much needed training and 20 per cent needed it. Only 10.66 per cent of the respondents needed training on time of weeding. Weeding is a back-breaking job and nowadays the availability of agricultural labourers and their wages are posing problems to crop farming. But due to much knowledge and skill requirement they are not much willing to come forward to receive training on herbicide application.

Under plant protection, the training needs in identification of pests and diseases, preparing spray solution, name and dose of plant protection chemicals were assessed. For identifying pests and diseases, in knowing the names and doses of plant protection chemicals and for preparation of spray solution 22 per cent of the respondents much needed the training and 44 per cent of the respondents needed the same. It is interesting to note that majority of tribal farm women required training in the plant protection aspects in which they do not participate directly except assisting. Incidence of pests and diseases on crops is a regular phenomena and it is natural that tribal farm women are also interested in acquiring knowledge and skill about this important activity.

Regarding the time of harvest, only 0.67 per cent of the respondents most needed training and 7.33 per cent just needed it. The percentage about their concern about harvesting in time and thereby avoid the loss of the hard earned crop low, so it should be condemned.

Under storage, storage of farm produce and seeds processing and control of stored grain pests were the important activities in which the training needs of respondents were assessed. Training on storage of seeds and farm produce was much needed for 6 per cent of respondents and needed for 14.66 per cent.

Control of stored grain pests was the other activity in which 8.66 per cent much needed and 27.33 per cent needed the training. Farmers loose considerable quantity of grain and seed while in storage. Though modern are available for storing the grains and control of stored grain pests, such methods are not in practice among tribal farm families and tribal farm women in particular. There exists a little urge among the tribal farm women to get trained in these important activities.

With respect to animal husbandry activities the remedial measures for disease management on dairy, poultry, piggery and goat rearing was mostly needed by 2.27, 2.23, 7.07 and 2.17 per cent respectively, followed by 54.54, 38.05, 47.49 and 30.45 per cent of the respondents stated that they needed it.

More than thirty one per cent of the respondents stated that they needed training on feed ratio for dairy. The most training need for feed ratio of poultry and piggery were 2.23 and 7.07 per cent respectively. Similarly 38.05 and 30.43 per cent of the respondents stated that they just needed training on feed ratio of poultry and goat rearing respectively.

With regard to care and maintenance of piggery, 7.07 and 17.7 per cent of the respondents stated much needed and need respectively. In farm forestry cent per cent did not want training in any aspect of it. It may be concluded that the tribal farm women are more or less in need of training under agriculture, dairy, poultry, goat rearing and piggery. The remedial

measures for disease management perceived as their foremost training requirement. Therefore, it is essential on the extension personnel of the various departments to organise appropriate trainings for all the important activities of agriculture and allied enterprises to improve the knowledge and skill of tribal farm women and thereby increasing their efficiency of participation which in turn will reflect positively in our food production programmes.

SECTION - J

Participation of tribal farm women in development programmes

Various development programmes were introduced in the tribal areas for their upliftment in all directions. Various department of Central and State Government implement programmes in the tribal areas. Among the various programmes Integrated Rural Development Programme, Tribal Welfare Scheme and Agriculture development programmes, Animal husbandry and Fishery development programmes were considered for the study. The awareness and the extent of participation of the tribal farm women in the various development programmes were assessed.

Under the Tribal Welfare Scheme, the tribal farm families were given opportunity to establish orchard like banana, papaya and pineapple and for which the tribals were given inputs like seed material, fertilizer, chemicals of cost and labour cost. Other than this, they also provided with milch animals piggery and goats etc for generating stable income.

The Integrated Rural Development Programme had provided facilities for availing loans for piggery, purchase of milch animals, goats and establishment of petty shops. All the loans were given at a subsidized rate of interest. The loans were provided by the nationalised bank under the directives of DRDA

With regard to agricultural development programmes, the farmers were given demonstration programmes on different crops where quality seeds, fertilizer and plant protection chemical were distributed free of cost according to size of unit (unit 0.2 ha). Under animal husbandry programme ducklings, piglets, poultry birds and milch animals were supplied free of cost at the rate of ten ducklings, three piglets and twenty birds, one milch animal per unit respectively. From fishery department, digging of pond on the land of beneficiary and fingerlings were supplied free of cost to the fish farmers.

4.10.1. Awareness and extent of participation of tribal women in development programme

In the various development programmes tribal farm women had participated either as a member of beneficiary family or themselves as beneficiaries concerned.

Details of their awareness and participation in development programmes are presented in table 77.

Table.77. Awareness and participation of tribal women in development programmes

			(n=150)	
Sl. No.	Programmes		No.	Per cent
1.	Awareness about the programmes	Yes	139	92.67
		No	11	7.33
2.	Extent of participation	Yes	116	77.33
		No	34	22.67
a) Tribal Welfare Schemes :				
i.	Piggery		13	8.67
ii.	Plantation/orchard crops		6	4.00
iii.	Milch animal		3	2.00
iv.	Bullock		3	2.00
v.	Goat rearing		3	2.00
vi.	Housing		2	1.33
b) IRDP :				
i.	Piggery		40	26.67
ii.	Milch animal		2	1.33
iii.	Bullock		2	1.33
iv.	Goat rearing		1	0.67

		210	210
v.	Poultry/duckery	1	0.67
vi.	Petty shop	2	1.33
c)	ADP :		
	Demonstrated programmes	28	18.67
d)	Animal Husbandry Development Programme		
	Milch animal	2	1.33
	Ducking/birds	5	3.33
e)	Fishery Development Programme		
	Pigging of ponds	1	0.67
	Supply of fingerlings	2	1.33

(multiple response)

It could be observed from the table that 92.67 per cent of the tribal women were aware of the existing developmental programmes and 77.33 per cent of the tribal women had participated in the various developmental programmes.

Further, it could be seen from the table that 97.33 per cent of the respondents participated in the various development programmes. Among the various programmes, 20.32, 28.67, 4.66 and 2.00 per cent of the tribal women participated in Tribal Welfare Scheme, IRDP, ADP, Animal Husbandry and Fishery development programme respectively either as member of the beneficiary family or themselves as beneficiary.

Only 22.67 per cent of the respondent could not participate though some of them were aware and interested in the programmes because of limitation of targets under the programmes.

4.10.2 The opinion and suggestions of the beneficiary respondents about the programmes

The opinion and suggestions of the beneficiary respondents about the programmes were taken and the details of the findings are discussed in the Table. 78.

Table.78. Opinion and suggestions of the beneficiary respondents about the development programmes

(n=116)

Opinion/Suggestions		No.	Percentage
1.	Opinion about the programmes		
	Good	96	82.76
	Fair	12	10.34
	Satisfactory	8	6.90
2.	Programmes improved standard of living	Yes - 112	96.55
		No-4	3.45
3.	Suggestions about the change in the programmes		
	a) Size of unit and amount of the progmmame should be increased	20	17.24

b) Better marketing and transport facilities should be provided	19	16.38
c) Incentive/Subsidy amount should be increased	15	12.93
d) Duration for repayment of IRDP Loan should be increased	14	12.06
e) Follow up action by the implementing agency should be enhanced	8	6.90
f) Training should be organised before implementation	5	4.31
g) Total sanctioned amount should be disbursed at a time	7	6.03
h) No. of schemes for plantation crops should be increased	3	2.59
i) Choice of enterprise should be given to the beneficiary	4	3.45
j) Quality seeds should be supplied in time	5	4.31
k) No suggestions	16	13.80
	116	100
4. Reasons for Not participating (n=34)		
Not given chance to participate	34	100

(multiple response)

Note: Percentage has been calculated out of total participants in the govt. development programmes (116).

34 out of 150 respondents did not participate in the govt. development programmes.

Majority of the respondents (87.76%) who participated in the govt. programme opined that the programmes were good. 10.34 and 6.90 per cent of the participants of Government programme ranked the governmental programmes as fair and satisfactory respectively.

Majority of the participants (96.55%) of the Government programmes agreed that their standard of living was improved after participation. 3.45 per cent of the participants did not agree with the above statement.

Above all the suggestions made by the participants, the unit and amount of the programme/scheme should be increased ranked first. Under Agricultural Developmental programme the unit area adopted by the department of Agriculture is 0.2 ha and under Tribal Welfare Scheme three piglets were supplied to each beneficiary which is meager for regeneration of income from these programmes. This was expressed by 17.24 per cent of participants of developmental programmes.

In IRDP schemes, out of total amount sanctioned only 25 per cent is considered as subsidy. Rest of the amount had to be paid by the beneficiary concerned. Hence 12.93 per cent of the participants suggested to increase amount of subsidy from 25% to 50%.

Tribal inhabitants are located in far flung distance and they have to cross hilly terrain to come to the markets. So 16.38 per cent of the

participants of the development programmes expressed their concern over the transport facilities for sending their farm products especially perishable farm produces like fish, vegetable and milk to the town for better price.

IRDP loans are medium term loans repayment has to be made before the stipulated period for getting for next loan. So, 12.06 per cent of the IRDP beneficiaries wanted to extent the time for loan repayment beyond the existed time.

Most of the tribals wanted to get cash, not kind under any scheme. It is fact that they can go either for cheap entertainment or unproductive with the cash amount. It was also stated that some of beneficiaries even go for selling the kinds distributed from the Government schemes. So, to stop that racket 6.90% of participants felt for a strict vigil on the side of implementing agency. Follow up of action by the implementing agencies was also felt necessary to solve the problems of the beneficiary during implementation of the programmes. Most of schemes under governments failed because of lack of skill and knowledge on the part of participants. So, 4.31 per cent of participants in government programmes suggested to conduct training before implementation of government schemes.

Only 6.03 per cent of the participants in Government schemes expressed that sanctioned amount which was disbursed to the beneficiaries in different instalment which could not be put to use for productive purpose.

So, all the sanctioned amount should be disbursed at a time to the beneficiaries. Choice of enterprise under any scheme should be left to the participants. So according to their convenience, they can select their own enterprise. This suggestion was given by 3.45 per cent of the respondent.

Only 2.59 per cent of the participants suggested to formulate more schemes on plantation crop like rubber which is geographically and economically suitable for the tribal people living in hill region. Only 4.31 per cent of the programme participants expressed that the seeds supplied from the Agricultural department under demonstration programmes were not to the desired quality and also supplied in late. So the participants suggested to supply the quality seeds in time for demonstration programmes. No Suggestion was commented by 13.80 per cent of the participants.

It is interested to point out that cent per cent of non-participants wanted to join, but due to limitation of the target of government schemes they had not been offered.

SUMMARY AND CONCLUSION

CHAPTER - V

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SUMMARY AND CONCLUSION

In Tripura State, 31 per cent of the total population is tribal. There are 19 tribes living in Tripura. Their Socio-economic condition is almost same. A large percentage of Tribals (45.85% of the district population) live in South Tripura district. Their main source of income depends on agriculture (91.65%) which is mostly at a subsistence level. Though settled cultivation has been introduced still some of the tribal farm families have retained jhum as subsidiary occupation.

The major crops grown by tribals are paddy, Jute, mesta, sesamum and hilly vegetables (Cucumber, Ash gourd, Bottlegourd and Red Pumpkin). The land holdings of tribal farm families are small and fragmented. The tribal women are mainly employed in the operations connected with crop cultivation and to certain extent in maintaining dairy and piggery. Occupational diversification has not taken place among tribal women. The tribals grow crops in one or two seasons and leave the land fallow for the rest of the year because of scarcity of water. The number of landless agriculture labourers is increasing because of alienation of land. Tribal women are engaged as casual labourers on other farms besides engaging themselves in many operations in their own land.

They also grow crops as share cropper. However, there will be more work during peak season and also leisure time in the rest of the seasons. During off-season, the tribal women concentrate on allied activities to get some income for their family. They also engage themselves in household activities including loom etc., for their own use. Liquor brewing has become the principal occupation for some of the women for earning income.

Crop cultivation involves various operations in different stages of crop growth. Some operations are complex in nature and exordus are men dominated while others are women dominated.

The tribal women are active and agile in different activities and give a good economic support for the family. But very few of them have been provided with new technologies and technologies to improve their performance.

Hence, to improve the standard of living of the tribal farm families their participation in agriculture and allied activities should be enhanced qualitatively.

Tribal women can be organised as a part of highly valuable human resource with appropriate training and education. With this end in view the present study was formulated with the following objectives:

- i. To assess the extent of participation of tribal women in agriculture and allied activities.
- ii. To study the extent of participation of tribal women in decision making in agriculture and allied activities.
- iii. To study the Socio-psychological and cultural characteristics of tribal women.
- iv. To study the relationship of socio-psychological with the participation of tribal women in agriculture and allied activities and their participation in decision making.
- v. To study their preference and nonpreference in differential participation in agriculture and allied activities and reasons accounted for the same.
- vi. To study their 'Hope of Success' and 'Fear of Failure' in agriculture and allied activities.
- vii. To study their sources of farm information and their perceived credibility by tribal women.
- viii. To assess the training needs of tribal women in agriculture and allied activities.
- ix. To study the extent of participation of tribal women in development programmes.

This study was conducted in three villages namely, Hadra, Raiyabari and Kalashi of South Tripura district. 150 respondents were selected from 3 villages equally. The required data on various aspects were collected personally to know about their individual participation in agriculture and

allied activities. the data collected was quantified and classified using cumulative frequency. The data was statistically analysed using percentage analysis, simple correlation, multiple regression and path analysis.

Salient findings of the study

Participation of tribal women in agriculture and allied activities

1. The extent of participation of tribal women in agriculture and allied activities were found to be medium level. (43.33%) followed by high level (29.37%).
2. The tribal women were found to participation in the activities like stubble collection, forming ridges and furrows, forming drainage and application of FYM, connected to main field preparation in various degrees self doing, assisting and supervising. Majority (94-100%) of the tribal women did not participate in ploughing and levelling of land and basal application of fertilizers.
3. Majority (82%) of the tribal women had participated in the sowing activities by self-doing where as in seed treatment 98.67 per cent of in respondents did not participate due to lack of awareness about seed treatment.
4. The tribal women's participation was found more in weeding activity than the other four activities. They participated in Hoeing and weeding, earthening up and irrigation by self doing, percentage being (23.33 to 79.33). Majority of the tribal

women (84-84.66%) reported non-participation in the activities like . plant protection measures and top dressing of fertilizer.

5. In the harvesting, the tribal women's participation was found by self-doing (84-85.33%) in all the three activities viz., reaping the crops, bundling the crops and transporting to the threshing yard.
6. The tribal women's participation was found more by self-doing (85.33-90.67) in all the 4 activities under post- harvest activities except winnowing activity, in which their participation by self-doing was found 16.00 per cent.
7. In marketing activities, the tribal women's participation was found to be low by self-doing (23.33-25.33%). 46.67% of the respondents reported non-participation in marketing activities.
8. In dairy, tribal women's participation by self-doing ranged from 9.09 to 70.45 per cent. Their main participation in dairy was assisting in nature in all the activities.
8. Under poultry keeping tribal womens was found to participate maximum as self-doers (50.00- 98.50 per cent) in all the four activities viz., feeding the birds, cleaning the shed, taking care of sick birds and selling the eggs / birds.
9. Feeding and bathing of pigs were mainly performed by tribal women alone (cent per cent). In case of taking care of sick pigs was found to be assisting in nature. Cent per cent reported non-participation in selling pork.

10. Majority of tribal women (82.60%) participated as self-doers for care and maintenance of goats in goat rearing. But cent per cent did not participate in marketing the same.
11. In farm forestry, tribal women participated to assist their family members. Non-participation was also reported by the respondents (16.67 - 66.67%).

Participation of tribal women in decision making in agriculture and allied activities

1. The extent of participation of tribal women in decision making in agriculture and allied activities were found to be medium level (44%) followed by high level (28.67%)
2. In seeds and sowing decisions the tribal farm women 4% had taken their own decision except in seed treatment activity in which cent per cent reported not to take self-decision. The tribal farm women ranging from 18.67 to 43.33% had consulted their spouse / elders to take decision regarding all the activities.
3. In inter-cultural activities, 4% of the tribal women had taken self-decision on thinning and gap filling and weeding operations. Only 1.33% of the respondents participated in decision making regarding type, dose and time of fertilizer to be applied. Almost cent per cent of the tribal farm women had not participated in using weedicide and pesticide.

4. On harvesting, almost half (50%) of the respondents had taken decision in consultation with spouse/elders. Only 4% of respondents took self decision on harvesting.
5. Four per cent of the tribal women decided themselves on the quantity to be stored while 48.67 per cent had consulted their spouse/elders.
6. In economic decision, joint decisions in consultation with spouse/elders in all the activities, the percentage being 40.67. In case of buying, selling of land, hiring in and leasing out land and getting loan or credit cent percent of the tribal farm women did not take self-decision whereas in case of purchasing, hiring equipment, engaging labour, purchasing agri. input, type of saving among to be saved and fixing of agri. labourers, tribal women (4%) took self-decision in absence of their spouse.
7. In marketing, self-decision makers were comparatively low, than decision making in consultation with spouse/elders. All the family members were also consulted by about 10.66% of the respondents.
8. More than half (54.55%) of the tribal women had consulted their spouse/elders in all the dairy animal related activities. Considerable percentage of tribal women (23.89%) had consulted all the family members for decision making in dairy management.

9. Almost ten per cent (9.70) of in respondents had taken decision by self in all four poultry related activities. Majority of the tribal women (66.41%) consulted their spouse/elders.
10. In piggery, 6.06 per cent of the tribal women had taken self decision regarding selection of piglets and majority (59.60%) consulted their spouse/elder for selection of piglets. More than half (51.52%) had taken decision in consultation with spouse/elders followed by 30.30 per cent respondents consulting all the family members for selection of piglets.
11. Majority (26.26%) of the respondent had taken self-decision regarding care and maintenance of goat rearing where as for marketing the majority (52.17) had taken decision in consultation with their spouse/elders, followed by 39.13 per cent taking decision by consulting all the family members.
12. In farm forestry, most of tribal women (83.34%) were reported to be non-participating in decision making except 16.66% of the tribal women had taken decision by consulting with spouse/elders.

Socio-psychological characteristics of tribal women of Tripura

1. Almost (44%) of tribal women belonged to Middle age group while 31.33 per cent were young in age.

2. ✓ More than half of the tribal women (57.33%) were illiterates followed by 13.33% of tribal women had primary education. None was found to have secondary and Colliate education among the respondents.
3. Half the tribal women (50.67%) possessed agriculture and allied activities as main occupation and 45.33 per cent of the tribal women possessed other subsidiary occupation like making ligour along with agriculture and allied acitivities. Equal percentage of the tribal women had business and service other than agriculture and allied activities (2%).
4. ✓ More than half (58.67%) of othe tribal families owned marginal size land holdings followed by small farm category (29.33%).
5. The annual income of the tribal farm women was medium for 53.33 per cent followed by low (30.67%) and high (16%).
6. The Social participation of the respondents indicated that 69.33 per cent of the tribal women had a low level of social participation whereas, 26% of the respondents had a medium level social participation.
7. The tribal women (40%) possessed a medium level farming experience (upto 25 years). Only 26.67% of the tribal women had a high level farming experience (above 25 years).
8. Half of the tribal women (50%) possessed a low level mass media participation followed by a medium level mass media participation by 30.67% of the respondents.

9. Majority of the Tribal women (72.67%) had poor contacts with extension agency.
10. They could neither be called as localites nor Cosmopolities.
11. Majority of the respondents possessed low to medium level of liberalistic value.
12. Still tribal women approached multi-sources for their credit needs in which the friends and relative stood first followed by private money-lender.
13. Almost half (46.67%) of the respondents had a low level of scientific orientation.
14. Their economic motivation was low to medium in nature.
15. Their innovationness was low to medium level.
16. Half (50%) of the respondents were at the high level of fatalism.
17. More than half (54%) of the respondents had a low level of self-reliance.
18. 40.67% of the respondents had a high religious belief followed by 34 per cent of them had a medium level religious belief.
19. Half (50%) of the respondents were low in their progressiveness followed by 30% in medium group.
20. 40.67 per cent of the respondents were having medium level of achievement motivation followed by 36% of them were having low level of achievement motivation.
21. Their intra-tribal communication was of low level. Agricultural matters were seldom discussed.
22. Their family norms were of medium order.
23. Tribal womens gregariousness was at low in order.

Cultural characteristics of tribal women

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1. Tribal women of Tripura are not polyandry eventhough they enjoy freedom to select their husbands.
2. Divorce and remarriage is allowed without any hindrence.
3. Their staple food is rice. Dried fish is mostly preferred by them. They also take vegetables collected from the jungle. They are very much found of their own brewed country liquour. 42.67% of the tribal women were found to consume brewed country liquour. Chewing betelving/betelnut and 'Hukkah' (Bamboo made for smooking tabocco) is common, percentage being 96.67 and 56.67 per cent respectively.
4. Still 24.67 per cent of tribal women wore their own hand woven cloth called 'Rignai' which is wrapped around the waist hanging down to knees. The breast garment is known as 'Riah'. 70% of tribal women put slightly improved traditional dress and 8% of tribal women of younger generation were found to wear sarees and blouses.
5. At the family level the decision is taken by both men and women. The tribals have their traditional village council and head man called 'Choudhury'. Simple disput of socio political matters of the village is settled with-inthe village itself by village 'Choundhury'. More then 81 per cent of the respondents were still in favour of traditional leader.

- 6. Generally Child marriage is not prevalent among the tribes of Tripura. Even the bridegroom is some times found to be Junior to the bride. Two types of dowry society system is prevalent tribal community. Bride price - customary payment is made by bridegrooms to the brides' parent which prevailed 29.33 per cent of the respondent families.
- 7. Dowry was prevalent among the 4% of the surveyed tribal farm families because of penetration of male dominated Hindu culture. Because of transition of tribal society majority (80.67%) of the respondents families were sending girls to the schools. But very often the femal child has to look after younger children and help mother, in work both inside and outside home. Educational priority is given to male child.

Relationship of the characteristics of tribal women with their extent of participation in agricultura and allied activities

Correlation coefficient of independent variables of tribal women with participation in agriculture and allied activities.

The variables occupational status, Fatalism- Scienticism, Religious belief and Gregariousness showed positive and significant association with participation of tribal women in agriculture and allied activities. Educational status, annual income, mass media participation, value orientation, conservatism - liberalism, credit orientation, economic motivation, progressivism-traditionalism and achievement motivation showed negative

and significant association with participation in agriculture and allied activities.

Linear multiple regression analysis of independent variables of tribal women towards participation in agriculture and allied activities.

Occupational status had contributed much for participation in agriculture and allied activities. An increase in these variables had resulted in an increase of participation in agriculture and allied activities by tribal women.

Path analysis showing direct, indirect and substantial indirect effects of independent variables of tribal women on participation in agriculture and allied activities

The variables age, occupational status, farm size. Contact with extension agency, conservation-liberalism. innovativeness, fatalism-scintism and gregariousness have directly helped for participation and the variables, educational status, farming experimence, credit orientation, social participation, mass media participation, Value orientation, economic motivation. Progressivism-traditionalism, scientific-orientation, selfreilance, religious belief, intra-Tribal communication and family norms affected participation in agriculture and allied activities.

Correlation Coefficient of independent variables of tribal women with participation in decision making

Innovativeness showed positive and significant association with participation of tribal women in decision making.

Educational status and annual income showed negative and significant association with participation in decision making.

Linear multiple regression analysis of independent variables of tribal women towards participation in decision making

Innovativeness had contributed much for participation in decision making in agriculture and allied activities. An increase in these variables had resulted in an increase of participation in decision making by tribal women.

Path analysis showing direct, indirect and substantial indirect effect of independent variables of tribal women on participation in decision making activities.

Age, social participation, mass media participation, contact with extension agency, value orientation, conservation-liberalism, innovativeness, economics motivation, fatalism-scientism, self reliance & family norms variables have helped for participation in decision making. The variables educational status, farming experience, farm size, annual income, credit orientation, scientific orientation, achievement motivation, religious belief, gregariousness and intra tribal communication have affected participation in decision making in agriculture and allied activities by tribal women.

Preference and non-preference in different participation of tribal women in agriculture and allied activities and reasons accounted for the same

1. In agriculture, cent per cent of the respondents preferred to participate in transplanting, weeding, threshing and storing activities. But cent per cent of them reported non-preference in the activities like field preparation, application of FYM/fertilizer and Plant protection measures. Majority of the tribal women (74.67%) did not prefer to participate in irrigation. 88 and 68 per cent of the respondents preferred to participate in harvesting and marketing activities respectively.
2. Cent per cent of the tribal women preferred to be involved in activities like feeding of animals, cleaning the shed, milking and selling milk under dairy management. 75 per cent of the tribal women preferred to be involved in collection of animal feed and bathing the animals equally.
3. In poultry, cent per cent of the respondents preferred to be involved in all the three activities namely feeding the birds, cleaning the shed and selling the eggs/birds.
4. Cent per cent of the tribal women preferred to participate in feeding the pigs but did not prefer selling pork.
5. Care and maintenance was preferred by 100 per cent of the respondents but marketing was not preferred by the cent per cent of the respondents in goat keeping.

6. Cent per cent of the tribal women did not prefer to be involved in all the three activities of farm forestry namely digging pits and planting, fencing and maintenance.
7. Non-involvement of tools and machinery, non-requirement of technical knowledge and skills and physical suitability of the activities were reasons for preference of the activities like harvesting, storing and threshing by tribal women.
8. Non-preference of the activities like application of FYM/ fertilizers, plant protection measures, irrigation, ploughing and marketing was expressed by tribal women because of complexity involved in the practices, requirement of more physical strength and more outdoor involvement as reasons for it.

'Hope of Success' and 'Fear of Failure' of tribal women in agriculture and allied activities

1. 73.33 per cent of the tribal women had 'Hope of Success' in agriculture and 26.67 per cent of the respondents had 'Fear of Failure' in the same.
2. 'Hope of Success' in dairy was expressed by 88.63 per cent of the respondents having dairy as allied activity and 11.37 per cent of them expressed 'Fear of Failure'.
3. Majority of the respondents (94.94) who had piggery as subsidiary stated 'Hope of Success' on piggery and 5.06 per cent of them expressed 'fear of failure' on piggery.

4. Majority (76.87) of tribal women who had poultry expressed 'Hope of Success' in poultry, similarly 23.13 per cent of them expressed 'Fear of Failure' in poultry farming.
5. Reasons for 'Fear of Failure' stated by respondents were uneconomic holding of land, water scarcity for irrigation, limited opportunities for farm employment, degradation of soil fertility, pest and disease incidence, low price and fluctuation of the price for farm produces in ranked order in agriculture.
6. In dairy, high initial investment, high cost of maintenance and lack of marketing facilities were two stated reasons attributed for 'Fear of Failure' by tribal women.
7. Incidence of epidemic endemic diseases and high initial investment were the two reasons as expressed by tribal women in poultry and piggery respectively.
8. Certain measures suggested by tribal women for their better farming were - land reform programme, better transport and marketing facilities, better irrigation facilities, technical guidance to tribal women, better price for farm produces, soil and water conservation measures, supply of good quality seeds, better labour wages, better credit facilities, set up of hiring centre for agricultural implements more number of government schemes on plantations and live stocks.

Training needs of tribal farm women in agriculture and allied activities

Majority of the tribal women (66 per cent) expressed training need in pest and disease management in agriculture followed by 51.33 per cent of respondents in dose, method, and time of fertilizer application.

Majority of the respondents expressed training need in disease management in dairy, poultry, piggery and goat rearing.

Cent per cent of the tribal women perceived not need of training in farm forestry.

Tribal women's sources of farm information and their perceived credibility by tribal women

1. The AAO only can be termed as institutional sources of farm information for tribal farm women as 8% and 20% reported that AAO as frequently and rarely source of farm information respectively. 18% and 10.6% of tribal women categorised AAO as the most and more credible sources of farm information respectively. AO was also considered as a source of farm information, the percentage being 0.66 and 6 per cent as frequent and rare sources respectively for tribal women but ranked as the most credible sources of information by 6.66% of the respondents.
2. Among the four non-institutional sources, family members (8%), neighbours (6%) friends (5.25%) and relatives (2.66%)

were the regular sources of farm information and considered as the most credible source of farm information for the tribal women in the above ranked order. Most of the tribal women reported these non-institutional sources as rare sources of farm information.

3. Radio, Television and newspaper were the source of farm information among the mass media. Radio was frequently used by 8% of the respondents and ranked as the most credible mass media by the tribal women (37.33%). None of the tribal women regularly used any of the mass media for their sources of farm informations.

Participation of tribal farm women in the development programmes

1. Majority of the tribal women (92.67%) were aware of the development programmes implemented by the governments. More than 77 per cent of the tribal women participated in the government development programmes like tribal welfare Scheme, IRDP, ADP, Animal husbandry and fishery development programme either as a member of the beneficiary family or directly as a beneficiary concerned. 22.67 per cent of respondents stated that they did not get chance to participate.
2. The tribal women's participation in Tribal Welfare scheme was (20%). They received the benefits such as piggery (8.67%), orchards (4%) milch animal (2%), Bullock (2%), goat rearing (2%) and housing (1.33%).

3. In IRDP, loans were given for piggery 26.67% milch animal 1.33, Bullocks (1.33), goat rearing (0.67%), Poultry (0.67%) and petty shop (1.33%).
4. In Agriculture Development programmes, only demonstration programme was considered in which 18.67 per cent of the respondents had participated.
5. Under Animal husbandary development programme, milch animals and ducklings/birds were provided in subsidised cost including feeds. 1.33% and 3.33 per cent of the respondents participated in milch animal and duckling/ birds respectively.
6. Fishery department provided digging of ponds to (0.67) per cent of the respondents and supplied fingerlings to 1.33 per cent of the respondents.
7. 82.76% of the participants in Government programmes opined that the programmes were good, followed by 10.34 and 6.90 per cent of the participants ranked the programme as fair and satisfactory respectively.
8. Among 10 suggestions for the improvement of Government programmes, the first three suggestions were: Size of the unit and amount of the programme should be increased (17.24%), better marketing and transport facilities (16.38%) and incentive/subsidy amount should be increased (12.93%).

Implication of the study

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On the basis of the salient finding of the study, certain broad based implications are suggested, which might be of use to the policy makers and planners to formulate suitable strategy to enhance the participation of tribal women in agri cultural and allied activities.

1. Since majority of the tribal women had low level of social participation the extension of may encourage them to participate in more organisation available in the village. Separate motivating programmes for the tribal women can be arranged in the village periodically.
2. Research efforts should be initiated to develop women oriented, low cost and labour saving implements so as to enhance participation in all the activities in agriculture.
3. Extension efforts should be stepped in to create awarness and to impart knowledge and skills on production, processing and marketing technologieis through periodical training, campaign and interpersonal communication by women extension agents.
4. The tribal farm women can be motivated to take up farm related activities like mushroom cultivation, agro forestry, seri-culture, and also agro based and cottage industries for gainful employment of tribal women at home or nearby home. They can be advised to maintain more number of hybrid milch animals.

5. Infrastructure facilities can be strengthened to provide the required input, transport and communication facilities at the needed time and in adequate quantities.

Suggested area of future research

1. The study may be undertaken to compare the participation of tribal man and women in agriculture and allied activities in Tripura state.
2. Participation of Tribals in Agricultural Development programmes.
3. Tribal leadership and the communication patterns among the tribals of Tripura can be studied.
4. Studies can be done on the tribals inhabiting other 3 districts.

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APPENDIX

APPENDIX - I

Tamil Nadu Agricultural University
Department of Agricultural Extension and Rural Sociology
CARDS, Coimbatore - 641 003.

Name of the Researcher : **PHANI BHUSAN JAMATIA**

Chairman : **DR.R.VIJAYARAGHAVAN**
Professor and Head
Video Educational Technology Centre

Advisory Committee : **Dr.R.ANNAMALAI**

Mr.M.SURESH

PARTICIPATION OF TRIBAL WOMEN IN AGRICULTURE AND ALLIED ACTIVITIES IN TRIPURA STATE

INTERVIEW SCHEDULE

PART - I

Date of interview : Respondent No. :
Village : Total time taken :
for the interview

1. Name and full address :
of the respondent

2. Father's or husband's Name :

3. Age :

4. Educational Status :
- i. Illiterate :
- ii. Primary education :
- iii. Middle school education :
- iv. Secondary School education :
- v. Higher Secondary education :
- vi. Collegiate education :
5. Marital Status : Married / Unmarried / Widow
6. Family type : Nuclear / Joint
7. Family size : Adult male :
Adult female :
Minor :
Total :
8. Occupation : Primary :
Secondary :
9. Farming experience : Years
10. Farm size :

Sl. No.	Particulars	Wetland	Gardenland	Dryland
a.	Area owned (Acre)			
b.	Area leased in (Acre)			
c.	Area leased out (Acre)			
d.	Area operated (Acre)			

11. Crops cultivated :

Sl. No.	Crops	Season	Area

12. Irrigation facilities :

Sl. No.	Source of irrigation	Area irrigated (acre)	Availability of water	
			Whole year	Seasonal
i.	Canal			
ii.	Well			
iii.	Tank			
iv.	Other if any			

13. Livestock possession :

Sl. No.	Item	Number	Present value (Rs.)
i.	Cows (a) Local breed (b) Cross breed		
ii.	Buffaloes (a) Local breed (b) Cross breed		
iii.	Pigs (a) Local breed (b) Cross breed		
iv.	Goat		
v.	Birds		
vi.	Others		

14. Farm power

Sl. No.	Item	No.	Value (Rs.)
i.	Power tiller		
ii.	Pumpset		
iii.	Tractor		
iv.	Sprayer		
v.	Spade		
vi.	Country plough		
vii.	Weeder		

15. Farm forestry :

- a. Do you have farm forestry? Yes / No
- b. If yes, what is the area under farm forestry?

16. Total annual income

- | | | | |
|------------------|---------------|-----------------|---------------------|
| On farm income : | | Off farm income | |
| i. | Agriculture | i. | Agricultural labour |
| ii. | Livestock | ii. | Others if any |
| iii. | Farm forestry | | |

Total

17. Social participation

Sl. No.	Organisation	Present		Past	
		Member	Office bearer	Member	Office bearer

18. Mass media participation :

Sl. No.	Listening	Frequency			
		Daily	Occasio- nally	Rarely	Never
i.	Reading newspaper				
ii.	Listening radio about agricultural programme				
iii.	Viewing farm programmes in T.V.				
iv.	Reading farm magazine and other literature relating to agriculture				

19. Contact with extension agency :

Are you aware about extension agency : Yes / No.

If yes

Frequency			Purpose				
Rarely	Some time	Often	I	II	III	IV	V

Purpose : (i) Casual, (ii) Non-agri., (iii) To avail agricultural input (iv) Subsidies and agricultural implement (v) Technical guidance

20. Value orientation :
(Cosmopoliteness - Localiteness)

It is the psychological tendency of an individual to maintain contacts external to his/her social system. Kindly state your agreement and disagreement on the statement.

Sl. No.	Statement	SA	A	DA	SDA
i.	A tribal woman can learn many things from the happening and experience of her village stay				
ii.	A tribal woman who has been something worked in her village, need not take any additional information from source outside her village				
iii.	One can satisfy all her requirements out of her local resource available to her				
iv.	Many things a tribal woman ought to know what happening may be of great advantages to a tribal woman. She therefore ought to know				
v.	At present, when transport and other communication facilities are developing a tribal woman should know more about things happening outside her village				

21. Conservatism - Liberalism

Please state degree of agreement with each of the following statements which I am reading to you.

Sl. No.	Statement	SA	A	UD	DA	SDA
i.	Traditional agriculture practices are good					
ii.	Olden days are good					
iii.	Caste system is good					
iv.	All kinds of relationship and joint family systems are to be maintained					
v.	Tradition bound socio-political leadership is good					
vi.	Improved agricultural practices are good					
vii.	The present education system is better than older system					
viii.	Men and women should be given equal status					
ix.	Inter-caste marriages are to be appreciated					
x.	Modern political leadership through panchayat and election is good					

22. Credit orientation :

Mention the source in which you used to borrow money ?

- i. Village money lender
- ii. Co-operatives / Nationalized bank
- iii. Other banks
- iv. Friends / Relatives

23. Innovativeness :

When would you prefer to adopt an improved technology ?

- i. As soon as it is brought to your knowledge
- ii. After you have seen other farmers have treated successfully in their farms
- iii. You prefer to wait and take your own time

24. Scientific orientation

The individual orientation of this tool is characterised by a belief in the development of scientific approaches to solve farming problem. Kindly state your agreement and disagreement or undecidedness on the statement.

Sl. No.	Statement	SA	A	UD	DA	SDA
1.	New method of farming give better result to a farmer than the old methods					
2.	The way the farmer fore-father farmed is still the best way of farming					
3.	Even a farmer with a lot of experience should use new method farming					
4.	A good farmer experiments with new ideas in farming					
5.	Traditional method of farming have to be changed in order to raise the level of living					
6.	Though it takes time for a farmer to learn new method of farming it is within their efforts					

25. Economic motivation :

Please state your agreement, disagreement and undecidedness on the following statement.

Sl. No.	Statement	SA	A	UD	DA	SDA
1.	Money alone does not give entire satisfaction in tribal women's life					
2.	A tribal women should adopt an innovation to get more money					
3.	The community give due importance to the rich tribal women					
4.	A tribal woman should give importance to social recognition rather than monetary recognition					
5.	Standard of living is more important than profit for the success of farm					
6.	To meet the goal of life money plans an important sale					

26. Fatalism - Scienticism

There is a belief that events are determined by fate. Please state your agreement / disagreement / undecidedness with each of the following statements.

A = Agree; UD = Undecided; DA = Disagree.

Sl. No.	Statement	A	UD	DA
1.	Higher yields depends purely on nature's will			
2.	Change to new farming pattern often involves greater risk and so puts the farmers in loss			
3.	Traditional ways of living and farming are age proven, therefore they should not be disturbed			

27. Self reliance

How much your future depends on yourself ?

Fully - 100 per cent	5
75 to 99 per cent	4
50 to 74 per cent	3
25 to 49 per cent	2
1 to 25 per cent	1
None	0

28. Progressivism - Traditionalism

Please state your agreement / disagreement / undecidedness with each of the following statement.

A = Agree; UD = Undecided; DA = Disagree.

Sl. No.	Statement	A	UD	DA
1.	Girls should be educated			
2.	Caste system of no more utility in our country under present condition and therefore its related barrier and restriction should be done away with			
3.	Child birth is a human affair not God given, so birth control should be practiced to check increasing population and family strain			

29. Achievement motivation

Please state your response to the following statements.

- a. Success bring belief or further determination and not just pleasant feelings.

SA / A / UD / DA / SD

- b. How true is to say that our efforts are directed towards avoiding failure ?

OF / PF / UD / PT / OT

O = Often; P=Probably; T=True; F=False.

c. How often do you seek opportunity to excel ?

Nearly always / Frequently / Half the time / Seldom / Hardly ever

d. Would you hesitate to undertake something ?

Hardly ever / Seldom / Half the time / Frequently / Nearly always

e. How many spheres lead you to failure ?

Very few / Few / Some / Many / Most

f. How many situations do you think you will succeed in doing as well as you can?

Most / Many / Some / Few / Very few

30. Intra tribal communication :

a. Who takes decision on common matters in your village ?

Village leader / religious leader / school teacher / elderly persons not necessarily a leader / others

b. How is the decision taken ?

by village meeting / by group discussion / by village people.

c. How the decision taken is made known to others ?

d. What message have been communicated regarding agriculture during last year ?

Name any 3

e. How it was communicated ?

Did you accept the message fully ?

Yes / No

If yes, why?

If no, why not?

31. Family norms

Sl. No.	Statement	SA	A	DA	SDA
a.	A farmer can improve his / her power and status by investing all the money that he / she has on hand				
b.	The experience of aged persons of the family must be relied. We should not have contact with outsiders because aged persons say that they will exploit us by utilising our ignorance				
c.	Youth have the power of taking good decisions as the old				
d.	Single family has the advantages of high satisfaction, freedom and individual development than joint family				
e.	One must not hesitate to get loans from others from the purpose and maximising the profit from the land				
f.	One must not buy a new practice in which farmer has no confidence				
g.	The practices accepted by the farmers are definitely better than those which are not accepted when released				

- h. Though the new recommended practices are not tested in village farmer trust the recommendation of agricultural scientist.

32. Religious Belief :

	Agree	Undecided	Disagree
a. Neglect of religious practices makes supernatural powers angry and revengeful by reducing income & production			
b. Blessing of Gods/Goddess are responsible for higher crop production			
c. One would not go for eating any new produce unless some religious practices are performed			
d. To avoid pest / disease attack one has to follow advice of local religious priest			
e. Before taking up agricultural activity it is necessary to seek guidance of god			

33. Gregariousness

Please state the degree of your agreement or disagreement with each of the following :

Statement	More frequent	Fre-quent	Less frequent	Never
1. I stay at home during the social affairs in my village				
2. I enjoy social gathering just to be with the people				

- 3. I work with many people around one
 - 4. I have great deal of confidence in others
-

PART - II

A. Cultural norms

a. Polyandry : Do you have the habit of marrying more than one man?

If yes, Why?

- i) Not to loose the family wealth
- ii) For farm labour
- iii) Just permitted in our society
- iv) Others

b) Habit :

Food habits :

- i) Eating thrice / twice / once a day
- ii) Eating along with family members / all / others
- iii) Rice eating / Jowar / Ragi / others
- iv) Drinking arrack / toddy / others
- v) Chewing tobacco / arecanue / others
- vi) Smoking beedi / Cigarette / others

Dress habit :

Premitive dress / modern dress / middle / others

Recreation :

Exacting drama / Singing in single / Group singing / Playing instruments / Dancing / others

B. Norms :

- i. All the family matters are decided by head of the family ?

Husband / Father / Grand father / Others

ii. Ladies should rear children and assist in farm operations.

Yes / No

iii. Ladies can go to temple

Yes / No

C. Mores :

i. You fix engagement for the female child at the date of birth ?

Yes / No

ii. Do you get the opinion of the girl for marriage ?

Yes / No

iii. Do you permit divorce ?

Yes / No

If yes, how?

iv. Do you prefer a joint family ?

Yes / No

If yes, what type?

If no, why?

D. Taboos :

i. Is the intercaste marriage permitted ?

Yes / No

ii. Are you permitting love marriage ?

Yes / No

iii. Are you allowed to wear sari and blouse ?

Yes / No

iv. Are the men permitted to have illegal wife?

Yes / No

v. Are the girls permitted to go to farm work after puberty ?

Yes / No

vi. Are the girls allowed to go to school after puberty ?

Yes / No

If yes, name indigenous practices

- 1.
- 2.
- 3.

IV. What are the traditional beliefs held by you towards agriculture and allied activities?

- 1.

PART - III

Please furnish the details of your participants in the following agriculture and allied activities.

Sl. No.	Activities	Self doing	Assis-ting	Super-ving	Non parci-pation
A) AGRICULTURE					
FIELD PREPARATION					
i.	Stubble collection				
ii.	Land ploughing and levelling				
iii.	Forming ridges and furrows				
iv.	Forming drainage channel				
v.	Basal application of FYM				
vi.	Basal application of fertilizers				
SOWING ACTIVITIES					
i.	Seed treatment				
ii.	Sowing/transplanting				

INTERCULTIVATION

- i. Hoeing and weeding
- ii. Earthing up
- iii. Irrigation
- iv. Plant protection measures
- v. Top dressing of fertilizer

HARVESTING

- i. Reaping the crops
- ii. Bundling
- iii. Transporting to threshing yard

POST HARVEST

- i. Threshing
- ii. Winnowing
- iii. Drying / Cleaning
- iv. Storing

MARKETING

- i. Grading
- ii. Loading
- iii. Marketing

ALLIED ACTIVITIES

B) DAIRY

- i. Grazing the animal
- ii. Collectoin of animal feed
- iii. Feeding the animal
- iv. Bathing the animal
- v. Cleaning the shed
- vi. Taking care of sick animals
- vii. Milking
- viii. Selling the milk

C. POULTRY

- i. Feeding the birds
- ii. Cleaning the shed
- iii. Taking care of sick birds
- iv. Selling the eggs/birds

D. PIGGERY

- i. Feeding the pigs
- ii. Bathing
- iii. Taking care of sick animal
- iv. Selling the pork

E. FARM FORESTRY

- i. Collection of seedling
- ii. Digging of pits
- iii. Planting

- iv. Fencing
- v. Maintenance

F. GOAT REARING

- i. Care and Maintenance
- ii. Marketing

PART - IV

Furnish the details of your participation in decision in decision making in the following agricultural and allied activities

Decision making areas	By self with- out consul- ting others	Consul ting the spouse or elders	Consul ting all the family mem- bers	Help others in deci- sion making	Not partici- pating
-----------------------	--	---	---	--	---------------------------

A. SEEDS & SOWING

- i. Seeds purchase
- ii. Variety and Selection of seeds
- iii. Seed rate
- iv. Seed treatment with fungicide / biofertilizer
- v. Sowing season and time
- vi. Method of sowing

B. INTERCULTIVATION

- i. Thinning and gap filling
- ii. Weeding

- iii. Type of fertilizer
- iv. Fertilizer dose
- v. Time of fertilizer application
- vi. Using weedicide
- vii. Using pesticide

C. HARVESTING

- i. Time of harvest
- ii. Method of harvest
 - a) Contract
 - b) Casual labour

D. STORAGE

Quantity to be stored

E. MARKETING

- i. Quantity to be sold
- ii. Selling time
- iii. Selection of market price
- iv. Payment - ready cash

F. INVESTMENT DECISION

- i. Buying
- ii. Selling the Land
- iii. Leasing in land
- iv. Leasing out land
- v. Purchasing equipment
- vi. Hiring equipment
- vii. Engaging labourer

H. GETTING LOANS AND CREDIT

- I. Purchase of agricultural input
- J. Type of saving
 - a) Post office
 - b) Bank
- K. Amount to be saved
- L. Fixation of Wages for agricultural labour

DAIRY

- i. Selection of milch animal
- ii. Purchasing of animal
- iii. No. of animals to be kept
- iv. Purchasing the fodder
- v. Type of feed and feeding
- vi. Treatment of sick animals
- vii. Selling price for milk

POULTRY

- i. Selection of birds
- ii. Purchasing of birds
- iii. No. of birds to be kept
- iv. Construction of poultry shed

PIGGERY

- i. Selection of piglets
- ii. Selling of pork

GOAT REARING

- i. Care & Maintenance
- ii. Marketing of Goats

FARM FORESTRY

- i. Collection of seedlings
- ii. Digging of pits
- iii. Planting
- iv. Fencing
- v. Maintenance

PART - V

Please state your preference and non-preference in differential participation in agriculture and allied activities and reasons accounted for the same.

Sl. No.	Activities	Preferred	Non-preferred	Reasons
1.	AGRICULTURE			
i.	Field preparation			
ii.	Sowing or Transplanting			
iii.	Weeding			
iv.	Application of FYM/ fertilizer			
v.	Irrigation			
vi.	Plant protection measures			
vii.	Harvesting			
viii.	Threshing			
ix.	Storing			

x. Marketing

2. DAIRY

- i. Grazing the animals
- ii. Collection of animal feeds
- iii. Feeding the animals
- iv. Bathing the animals
- v. Cleaning the shed
- vi. Milking
- vii. Selling the milk

3. POULTRY

- i. Feeding the birds
- ii. Cleaning the shed
- iii. Selling the eggs / birds

4. PIGGERY

- i. Feeding the pigs
- ii. Selling the pork

5. FARM FORESTRY

- i. Digging pits and planting
- ii. Fencing
- iii. Maintenance

6. GOAT REARING

- i. Care & maintenance
- ii. Marketing

PART - VI

‘Hope of Success’ and ‘Fear and Failure’ in agriculture and allied activities

Please state your responses :

- i. Are you hopeful about your success in agriculture and allied activities, after 10 years ? Yes / No

If so, in which field(s) 1.
2.
3.

- ii. Are you fearful about your failure in agriculture and allied activities after 10 years ? Yes / No

Reason (s)

- iii. What measures do you suggest for going ahead with farming better ?

PART - VII

Sources of farm information and their perceived credibility

1. Institutional source and their perceived credibility :

Sources	Frequency			Credibility		
	Regularly	Frequently	Rarely	Most	More	Less
AAO						
AO						
ADO						
Scientists						

2. Non-institutional source and their perceived credibility

Sources	Frequency			Credibility		
	Regularly	Frequently	Rarely	Most	More	Less
Family members						
Neighbours						
Friends						
Relatives						

3. Mass media sources and their perceived credibility

Sources	Frequency			Credibility		
	Regularly	Frequently	Rarely	Most	More	Less
Radio						
TV						
Newspaper						
Journal / magazine						

PART - VIII

Training needs of tribal women in agriculture and allied activities

Activities	Much needed	Needed	Not needed
AGRICULTURE			
1. Seed and Sowing			
Seed selection			
Seed treatment			
2. Manures and manuring			
Optimum dose of fertiliser			

	Method of fertilizer application
	Time of fertilizer application
3. Transplanting	Spacing
	Age of seedling
4. Weeding	Time of weeding
	Use of herbicides
5. Irrigation	Time of irrigation
	Number of irrigation
6. Plant protection	Identification of pest and diseases
	Preparing spray solution
	Name and dose of plant protection chemicals
7. Harvest	Time of harvest
8. Storage	Storage of farm produce and seed processing
	Control of stored grain pests
DAIRY	i) Seed ratio for animals
	ii) Disease management
POULTRY	i) Feed ratio for broiler / layer
	ii) Disease management

PIGGERY

- i) Feed ratio for pigs
- ii) Disease management

FARM

FORESTRY

- i) Selection of seedling
- ii) Age of seedling
- iii) Care/maintenance

GOAT

REARING

- i) Care & maintenance
- ii) Disease management

PART - IX

Participation of tribal women in government development programmes

- A) i. Are you aware of these programmes? Yes / No
 ii) Did you participate in development Programme? Yes / No
 If yes, what they are ?
- a. Agriculture Development Programme
 - b. IRDP
 - c. Tribal Welfare Scheme
 - d. Animal Husbandry development programmes
 - e. Fishery development programmes
- B) What is your opinion about the programme ?
 i) Good ii) Fair iii) Satisfactory
- C) Have these programmes improved your standard of living? Yes / No
- D) Suggest any change you would like in the programme? Yes / No

If no, reasons for not participating :

Appendix No.2**TO WHOM SO EVER IT MAY CONCERN**Coimbatore
30.07.98

Dear Sir,

Sub: Education-post Graduate Course M.Sc. (Agricultural Extension). Thesis work conducting survey - Topic on "Participation of Tribal Women in Agriculture and Allied Activities in Tripura State"

Greetings.

The thesis work research study entitled "Participation of Tribal Women in Agriculture and Allied Activities in Tripura State" has been undertaken by Sri Phani Bhusan Jamatia, a student of M.Sc. (Agricultural Extention) under my guidance and supervision.

Hence, I request that the researcher may kindly be permitted to collect data, information, suggestion regarding his research.

Requesting for your kind co-operation and valuable suggestion.

Thanking you,

Yours sincerely,

Dr.R.VIJAYARAGHVAN, Ph.D.,
Professor and Head,
Video Education Technology centre,
Tamil Nadu Agricultural University,
Coimbatore - 3.

Appendix - 3

TAMIL NADU AGRICULTURAL UNIVERISTY

DR.R.VIJAYARAGHAVAN
Professor & Head

Video Educational Technology
Centre,
Agricultural College and
Research Institute,
Coimbatore - 641 003.

Date: 28th September, 1998,

Dear Sir/Madam,

Mr.Phani Bhusan, J., P.G. Scholar of this department has taken up a research study on "Participation of Tribal Women in Agriculture and Allied Activities in Tripura State" under my guidance. Some of the objectives are to study the socio-psychological characteristics of tribal women and their relationship with the participation in agriculture and allied activities, to study their preferences and differential participation in agriculture and allied activities and to assess the training needs in agriculture and allied activities.

The independent and dependent variables related to the objectives have been identified based on review of literature and discussion with experts. These are listed in the Annexure along with their operational definitions.

Considering your vast experience, I request you to offer your valuable rating of the relevancy of the variables in the five point continuum ranging 'Most relevant' to 'Least relevant'. Please put a tick mark () against each of the items to indicate your judgement on the degree of relevancy of the items.

Further, you are welcome to add additional variables, if any, relevant to the study. Kindly rate all the variables and return the proforma in the stamped envelop to the researcher at the earliest.

Thanking you,

Yours sincerely

(R.VIJAYARAGHAVAN)

A. INDEPENDENT VARIABLES

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Sl. No.	Variables	Most rele- vant	More rele- vant	Unde- cided	Less rele- vant	Least rele- vant
1.	Age					
2.	Educational status					
3.	Marital status - Married or not					
4.	Farm size - refers to the extent of area possessed by the respondent					
5.	Occupational status - refers to the extent to which the respondent involve herself in agriculture and non-agricultural activities					
6.	Farming experience - refers to the total number of years the respondent has been engaged in farming					
7.	Livestock possession - refers to the livestock possessed and used by the respondent					
8.	Farm material possession - refers to the farm material possessed and used by the respondent					
9.	Annual income					
10.	Social participation - refers to the degree of involvement of the respondent in formal organisation					
11.	Mass media participation - refers to the degree in which respondent sought to the agricultural information in mass media					
12.	Contact with extension agency - refers to awareness, frequency and purpose of contacting different change agent by the respondent					

Sl. No.	Variables	Most relevant	More relevant	Undecided	Less relevant	Least relevant
13.	Cosmopolitaness - refers to the psychological tendency of an individual to maintain contacts external to his/her social system					
14.	Innovativeness - refers to the behavioural pattern of the farmer who has interest and desire to seek changes in farming technique and to introduce such changes into his/her farming operation when practical and feasible					
15.	Credit orientation - refers to the orientation to avail credit by the respondent					
16.	Economic motivation - refers to the extent to which a farmer is oriented towards profit maximisation and relative value she places on monetary gains					
17.	Risk orientation - refers to the degree to which the farmer is oriented towards encountering risk and uncertainty in adopting new ideas in farming					
18.	Achievement motivation - refers to the striving of farmers to do good work and attain a sense of accomplishment					
19.	Scientific orientation - refers to the degree to which the farmer is oriented to use scientific methods in decision making in farming					
20.	Self reliance - refers to the extent to which a person relies on self for his future					

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Sl. No.	Variables	Most relevant	More relevant	Undecided	Less relevant	Least relevant
21.	Attitude towards group approach - refers to the degree of favourableness on unfavourableness of the farmers towards group approach					
22.	Entrepreneurial behaviour - refers to the ability of the farmer to exploit opportunities and initiate activities to increase income from farming					



Plate 1. A tribal woman smoking 'hukkah'.



late 2. A tribal woman brewing country liquor in indigenous process.



A tribal woman engaged in transplanting paddy seedlings.



Plate 4. Tribal woman engaged in weeding activity.



Plate 5. A tribal woman engaged in winnowing paddy grain .



Plate 6. A tribal woman engaged in drying paddy grains.



Plate 7. A tribal woman engaged in dehusking paddy grain with the help of indigenous implement, called 'Dingi'.



Plate 8. A tribal woman engaged in feeding dairy animal.



Plate 9. A tribal woman engaged in milking.

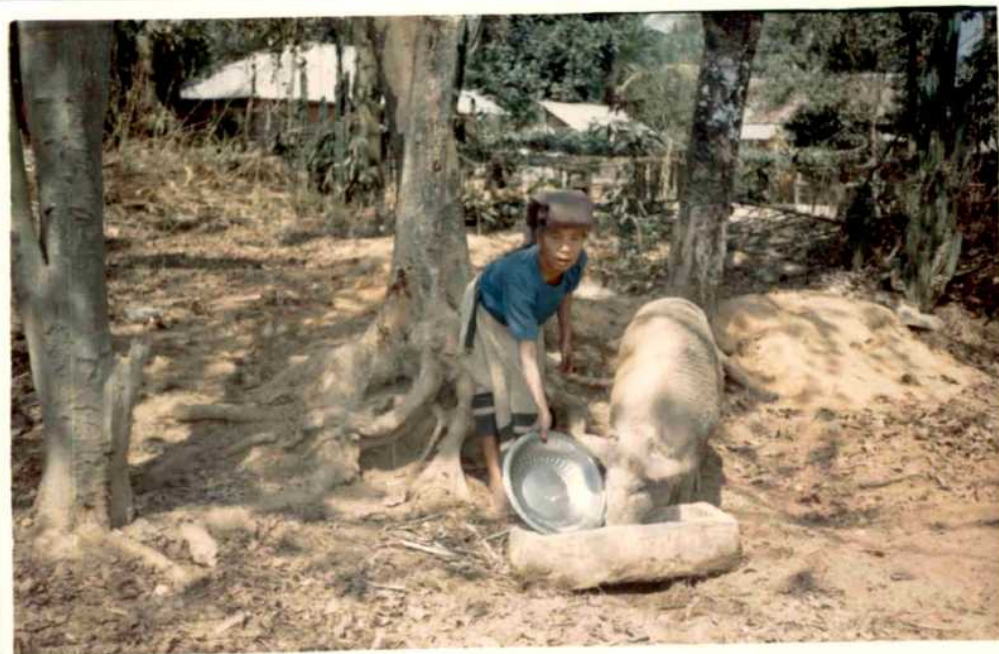


Plate 10. A tribal woman engaged in feeding pig.

