

**ROLE PERFORMANCE OF TRIBAL WOMEN IN
AGRICULTURE**

THESIS

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**Submitted to
Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola
in partial fulfilment of the requirements
for the Degree of**

**MASTER OF SCIENCE
IN
AGRICULTURE
(EXTENSION EDUCATION)**

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Enrolment Number - JJ-2184

2013

DECLARATION OF STUDENT

I hereby declare that the experimental work and its interpretation of the thesis entitled "**ROLE PERFORMANCE OF TRIBAL WOMEN IN AGRICULTURE**" or part thereof has neither been submitted for any other degree or diploma of any University, nor the data have been derived from any thesis / publication of any University or Scientific Organization. The sources of material used and all assistance received during the course of investigation have been duly acknowledged.

Place : Akola.


(Miss. Pawar Pallavi Saindas)

Date : 28/05/2013


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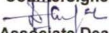
CERTIFICATE

This is to certify that the thesis entitled "**ROLE PERFORMANCE OF TRIBAL WOMEN IN AGRICULTURE**" submitted in partial fulfillment of the requirement for the degree of "**Master of Science in Agriculture (Extension Education)**" of Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola is a record of bonafide research work carried out by **Miss. Pawar Pallavi Saindas** under my guidance and supervision.



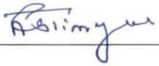

The subject of thesis has been approved by the Student's Advisory Committee.

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THESIS APPROVED BY THE STUDENT'S ADVISORY COMMITTEE
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Abbreviations

%	-	Per cent
Agri.	-	Agriculture
Agril.	-	Agricultural
Educ.	-	Education
<i>et al.</i>	-	Et alia (and others)
Extn.	-	Extension
Fig.	-	Figure
ha	-	Hectare
i.e.	-	that is
J.	-	Journal
Res.	-	Research
Rs./₹	-	Rupees
Std.	-	Standard
Univ.	-	University
viz.,	-	Namely

(F)

Thesis Abstract

- a) Title of the thesis : ROLE PERFORMANCE OF TRIBAL WOMEN IN AGRICULTURE
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- c) Name and address of Major Advisor : Prof. S. N. Rajput
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ABSTRACT

The present study entitled "Role performance of Tribal farm women in agriculture" was undertaken in 10 villages of Akot Panchayat Samiti of Akola district, with the following objectives.

1. To study the personal socio-economic and psychological characteristics of Tribal women.
2. To study the role performance of tribal women in farming.

3. To find the relationship between selected characteristics of tribal women with role performance.
4. To study the constraints faced by Tribal Farm women while performing role in agriculture.

The sample consisted of 120 farm women from 10 villages of Akot Panchayat Samiti. They were selected randomly and data collected personally with the help of structured interview schedule.

The characteristics of farm women studied under the set of independent variables were age, education, annual income, land holding, size of family, number of working family members, socio economic status and value orientation. The dependent variable was role performance.

Majority of Tribal farm women's in farming belonged to middle and old age category 36 to 50 years (53.33%) and above 50 years 25.00 per cent. In case of education relatively higher percent of Tribal farm women's (34.17%) were illiterate. Regarding their annual income majority (30.84%) of the Tribal farm women's had their yearly annual income in the range of 45001 to 60,000. In case of land holding (36.67%) of Tribal farm women's had small land holding, followed by (35.00%) of Tribal farm women's belonged to medium level of socio economic status, (58.33%) of Tribal farm women's had medium size of family, (48.33%) of Tribal farm women's had 3-4 number of working family members, (54.17%) of Tribal farm women's had medium value of orientation,(48.33%) of the Tribal farm women's had medium role performance in agriculture.

The major constraints faced by the farm women were reported, little or no rest period, exertion to body due to over work, working under the unfavorable condition, lack of technical knowledge about improved farming activities; being women it is difficult to perform certain operation, illiteracy percentage is high suffer from the health problems, problem of family burden and difficult to spent time for farm operation due to domestic work.

Among selected variable namely age found to be negatively significant correlated with the role performance. Annual income, Land holding, socio economic status, size of family, number of working family members found to be significant correlated with the role performance. Whereas, education, and value orientation non significant correlated with the role performance.

CHAPTER I

INTRODUCTION

1.1 Background Information

Agriculture is the main base of Indian economy. The agriculture development is depend on development of all sectors of farming community may be poor or rich, educated or illiterate, tribal or non tribal. The non-tribals are relatively more modernized with more sound contacts and all opportunity to use several information media. As tribal villages are located in the forest and hills, they remain more or less cut of from the main stream of national development.

The total population of tribes in India according to 2011 census is about 84,326,240 which constitute about 8.2 per cent of total population of India. The population of scheduled tribes in Maharashtra as per the 2001 census is about 59,25,296. The Akola district MADA Block having total tribal population about 1,00,000 and total population 16,30,000 which constitutes about 6.1 per cent of total population of Akola. The tribals are very backward from education point of view.

Tribal are generally regarded as primitive people and known by different names as Vanya jati, Adivasi, etc. Next to Africa, India has the highest tribal population. Tribal are constituent a large proportion of population. The scheduled area noticed by the Government of India consist of 5809 villages and 16 towns in 12 districts covering area of 46,531 sq. km. which is about 17.1 per cent of area in Maharashtra state. The tribes chiefly included in Maharashtra are Warli, Katkari, Gond, Bhill, Madia gond, RajGond, Thakar, MahadevKoli, Kokna, Gawit, Korku, Pardhan, MalharKoli, Thodia, Aandh Gowari, Halba, Kawar and Paradhi. In Vidarbha region the tribals are concentrated in Gadchiroli, Bhandara,

Chandrapur, Yeotmal, Amravati, Wardha and Nagpur districts. Main tribes in Gadchiroli district are Gond, Madia, Madia Gond, Raj Gond, Kawar, Pardhal and Gowari.

Tribal communities are considered to be the weakest segment of Indian population. Agriculture is the main occupation for most of the Tribes in India.

Historians believe that it was women who first started cultivation of crop and initiated the art and science of farming. In the recent times also the women is playing a pivotal role in agricultural occupation as a manager, decision maker and skilled farm worker.

Every woman is an entrepreneur as she manages, organizes and assures responsibility for running her house. It has been increasingly realized that women possess talent that can be harnessed for the productive purposes. It is estimated that women are responsible for 70 per cent of actual farm work and constitute up to 60 per cent of the farming population. It is therefore, not an exaggeration, that women in developing countries are the back bone of food security. It is most unfortunate that the role of women in agriculture has not been highlighted.

It is evident that women played considerable role in various activities such as of pre-sowing, sowing operation, and transplanting. Women's role was also reported in preparation of compost and raising of vegetable nursery. On the other hand the role of women in ploughing, application of manure and fertilizer and green manuring was found to be much less. The roles of women in light operation with less drudgery have been reported with regard to inter cultural operations women's role was reported maximum in hoeing and weeding practices. Harvesting and post harvesting operations were reportedly more suited to the physical health of women.

The agricultural operation like reaping of crops, storage of food grains, storage of seed and processing of grains were reported to be mostly done by woman. Winnowing and threshing being hard works where least preferred by the woman, hence their contribution was reported to be negligible. Since time immemorial, rural women have been working along with men in every sphere of life including agriculture.

According to FAO (1991). "Most of the farmer in India are women" and they spend more hours in agriculture rather than men. Today 44 per cent of world's food is produced by women which indicates how important is their role in farming. Rural women in general and farm women in particular are engaged in different activities. Agriculture without women means the trees without flowers and fruits. There is a tendency among most administrators and policy makers to see 'men as Farmers' and women as 'Farmers' wives' and highlight their 'Supportive role' rather than 'productive role'.

The Tribal economy is predominantly agro pastoral based which is quite primitive in organization. Like other areas of country, agriculture is mainstay of a tribal people also. The tribal women outperform men in both quality and quantity of farm work they work harder than men and not only the home makers but also good providers to the family. Tribal women were found to be playing an important role in agricultural activities but their participation in decision making was very poor. Most of the women were not having any knowledge about developmental programs related to agriculture. Women played a very major role in making agriculture decision.

Tribe – concept and meaning

Tribe population in India is generally designated as Adivasi/Adibasis, implying original inhabitants. The ancient and medieval source of information including the Vedic and Epic literature mentions various tribes

namely the Bharat, the Bhills, the Kolas, the Niasdas and the Banars. Prior to introduction of the caste system during Brahmanic age, people were divided into various tribes. A tribe was a homogenous and self contained unit without any hierarchical discrimination.

Tribes are identified as indigenous people. Dhebar commission in an attempt to define the word tribe ultimately said that International Labour Organization has called such people indigenous. Even World Bank has recognized that the scheduled tribes (in India context) is their connotation of the indigenous people (Bhange and Gaikwad, 1992). A tribe however occupies a definite geographical area and exercise, effective control over its permanent settlement in a particular area give geographical identify to a tribe.

Tradition of Korku Tribe

In Vidarbha Korku Tribals are concentrated mainly in dense forest area of Dharni and Chikhaldara tehsil of Amravati district and Akot tehsil in Akola district.

Main residents of this area are Korkus- a scheduled tribe community. They are honest, hardy and skillful mainly in forest and farm work. Their dialect is Korku, however, they also speak Hindi with non tribals and strangers. Their villages are built in two rows flanking and straight street and are placed half a kilometer away from the water source.

Primarily they have a custom to do independent work. Based on hunting and cutting of trees made them suffer severely for livelihood. Subsequently Government provided land to landless tribals for cultivation and thus presently agriculture has become the main occupation of Korku tribals. Their agriculture land is not so productive therefore, they are also occupied in other work such as collection of forest produces, fishing, labour work in agriculture, forest and in developmental schemes of Government and some in home stead vocations such as baskets making etc.

Most of the Korcu households depend on wages labour for subsidiary income. Dependence on wage labour is much higher when lands become non productive and crop fail. Within the village, work is mostly in agriculture and forest whereas outside the village they work in brick kilns and as unskilled construction labour. Women participation in contingency work is same as that of men

1.2 Need and Importance of Study

The Tribal women contribution in Agriculture operations will help the developmental workers to plan in a right direction for Tribal development.

The present study will be an effort to know the role performed by Tribal Farm women in agriculture and allied operations and to find out the socio-economic, psychological characteristics influencing their role performance in agriculture and allied operations.

Tribal women already play crucial and important role in agricultural operation and could even play major important role for in agricultural production. It was therefore, though essential to recognize the current position of Tribal women in agricultural fields roles played by them and different problem faced by them and suggestion given by them for their improvement. With this background a study on "Role performance of Tribal Women in Agriculture" will be undertaken.

1.3 Objectives of Study

- 1) To study the personal socio-economic and psychological characteristics of Tribal women.
- 2) To study the role performance of tribal women in farming.
- 3) To find the relationship between selected characteristics of tribal women with role performance.
- 4) To study the constraints faced by Tribal Farm women while performing role in agriculture.

1.4 Scope and Limitation of Study

There are many agriculture jobs or operation in which Tribal women are involved directly or indirectly. They contribute in various jobs from pre-sowing to harvesting and post harvesting.

The study reveals the role actually played by Tribal Farm Women in agricultural operations. The study also brought in light the difficulties faced by them in performing agricultural operations.

The findings of the present study will provide guidelines to researcher and extension workers to work out and extension workers to farm work.

The present investigation suffers from following limitations:-

- 1) The findings of the study are based on the opinion expressed by the Tribal Farm women hence the objectivity or data could be limited to their real and objective opinion.
- 2) Tribals in Akola district are generally pro-culture in nature. They are educationally The study being a student research project, time, money and other resources has not permit the researchers to cover longer area.
- 3) The generalizations drawn are based on the responses collected from 120 Tribal Farm women. It would therefore limit its applicability for a wider population.
- 4) The conclusion has been drawn based on the response of only 120 sample.
- 5) The generalization based on findings therefore only be applicable to those area having similar condition.

1.5 Organization of the Thesis

The report of the present study has been presented in five major chapters. In the first chapter, has introduced. The objective of the study, need and importance, scope and limitations of the study has been described.

In second chapter the theoretical framework is given. It comprises related literature and finding of various research studied conducted at different location and in varied type of situation.

The methodology of the study has been discussed in third chapter. It includes study location, population and sample of the study, tools and techniques use for data collection. Procedure used for measurement of variables and analysis of data.

The fourth chapter is socio-economic status of the district. This chapter gives information about location, topography and soil, climate and rainfall, land use pattern, cropping pattern, crop season and crop rotation, input supply and lastly the market facilities available in Akola district.

The fifth chapter is devoted to the findings of the study along with the discussion thereon.

The sixth chapter "Summery and Conclusions" which included not only the study result but also other details has been summarized in brief and suitable conclusion drawn based on the obtained findings.

The seventh chapter Implications emanated from the present findings have been presented in to two parts i.e. Action implication and Research implications. The action implications are connected with the guidelines and suggestion for extension personals, policy makers and other related individuals. The implications with regards to research included suitable guideline and suggestion for further research base on the experiences during the course of conducting study and conclusion.

Lastly the literature cited followed by vita, appendix (Research Questionnaire) at the end.

CHAPTER II

REVIEW OF LITERATURE

Review of literature is an important aspect of scientific research. Review of literature is essential before and even actual start of research. It help the researcher to get acquainted with the subject mater and get insight into the research problem. Efforts have been mate to review the research studies and literature having direct relation on having its derived application with the aspect of present study. The review of research has been presented in this chapter

1) Age

Ingle and Dharmadhikari (1987) in the study of participation of tribal women in agriculture observed that tribal women were heavily engaged in the farm labor work in addition to all house-hold activities.

Agriculture is main occupation of tribal without any other prospects, from early age they have been engaged in the farming. The average age of tribal in fact is relatively less due to hard life. Dhanorkar (1988) and Patil *et al.* (2000) reported that most of the tribals farmers were in age group of 25-45 and 35-50 years respectively.

Sandhya (2000) revealed in impact of non severe training on in service tribal women that overall gain in knowledge after the training was quite encouraging among working tribal women with age group 20-30 years.

Ananthan *et al.* (2004) obtained from the analysis of the profile characteristics of tribal honey hunter revealed that majority of them possesses medium level innovative belonging to middle age category with agriculture as their primary occupation and honey hunting as their sideline occupation.

Rathod (2006) observed that majority of women included middle age group i.e. 36 to 50 years age group.

Urmila Devi Verma (2009) revealed that most of the respondents were in age group between (below 28 years), belonged to general category cast, illiterate.

Raja Hire (2009) observed that one third i.e. 33.33 per cent women in younger age group had low level of role in economic management whereas 30 per cent and 40 per cent women from middle age group respectively had high medium and low medium level of role. Similarly, 26.92 per cent women from older age group had high medium level of group.

Nita Divekar (2010) conducted that 96.67 per cent women respondents were belonged to young to middle age group.

Kanwant *et al.* (2012) revealed that majority of the respondent were of medium age group.

2) Education

Dhanorkar (1998) in case of Madia tribals in Bhamragad area found that the majority of respondents (93.52%) were illiterate. Only 2.78 per cent of respondents were from the primary and the middle school level in each category. It is clear that majority of tribal farmers are illiterate.

Alka Patki *et al.* (2000) observed negative and significant correlation between education and role performance of rural women.

Patil *et al.* (2000) reported that most of the Kokni tribal from Dhule district were illiterate.

Shravani Sarkar (2000) reported that majority of tribal population have been found to be illiterate.

Gupta and Bhaghel (2001) reported in status of women that majority of tribal women of Chhatisgarh were illiterate, i.e. 57.60 per cent.

Bimala et al., (2004) reported in drudgery in home activity that majority of respondent (86.5%) were illiterate.

Vidya Gunjkar (2005) found that nearly one third of the respondent farm women (32.00%) were illiterate.

Rathod V.S. (2006) observed that majority of women found to be negatively significant with role performance.

3) Annual Income

Dhanorkar (1998) reported that majorities of the tribal respondents (55.55%) were found in the income group of Rs. 5,000/- to Rs. 10,000/- per annum and more than 85 per cent of the respondents were below poverty line. From the above review it is inferred that majority of the tribal farmers are below poverty line.

Saikia and Das (1998) observed that the majority of the respondents were from the poor income and were marginal farmers.

Saw Sakde (1998) concluded that annual family income of majority of the tribal farmers (64.67%) range from Rs. 5001 to Rs. 10,000/-.

Tikhile (2001) showed a negative but significant relationship between annual income of farm women and their level of role performance in farm operations.

Kinjuick *et al.* (2003) concluded that majority of the rural women (51.81%) had annual income up to Rs. 20,000/- followed by 33.63 per cent who had a range of above 50,000/- annual income.

Parshuramkar (2003) indicated that the level of participation in farming activities had significant relation with the family income. Majority of rural women from lower income group had low to medium level of participation in farm activities, while majority of rural women from medium and high annual income category reported medium and high degree of participation in the farming activities.

Varsha Rathod (2006) concluded that majority of the farm women (40.67%) had their yearly annual income up to Rs. 25,000/- only from agricultural and allied activities.

Komal kashid (2008) observed that slightly above two third of respondents (67.50%) had annual income above Rs. 60,000/- where as 20.85 per cent of them had income between Rs. 40,000 to Rs.60,000/-.

Vidya Gunjkar (2005) observed that more half (52.67%) respondents were having family income between Rs.20,001 to Rs.40,000/-. Whereas, 25.33 per cent respondents were having family income above Rs. 60,000.

Nita Divekar (2010) concluded that majority of women respondents had annual income between Rs. 23,001 to Rs. 66,000/-.

4) Land holding

Dhanorkar (1998) found that relatively higher proportion of respondents i.e. 45.83 per cent had one to two hectares of land, followed by 14.82 per cent each below one hectare and three to four hectares of land respectively.

Patil *et al.* (2000) reported that majority of tribal farmers had small size land holding i.e. up to 2 ha.

Reddy and Reddy (2000) while examining the problem of land attention among the chenchus to a primitive tribe group of Nallamalai region in Andhra Pradesh noted that among land holders, about 66 per cent of the families possess less than 4 acres and remaining have land ranging from 4 to 15 ha.

Binita Rani and Rakesh Kumar (2003) observed that only landless women worked on farms but all the women of the group were involved in storage of grains.

Parshuramkar (2003) reported that the level of participation of rural women in agricultural operations and their correlation was significant with family farm size.

Shubhangi *et al.* (2008) the study revealed that most of the farm women belong to low land holding.

Urmila Devi Verma (2009) revealed that most of the respondents having land holding between 2.51 to 5 acre.

5) Socio-economic status

Pant and Baghal (1989) stated that tribal are victims of development. Tribal peoples are having low socio-economic status and they are economically, socially and politically backward. Therefore they should be given all types of privileges.

Dhanorkar (1998) reported that in case of socio-economic status of tribals, 53.22 per cent was of medium level of socio-economic status and 40 per cent respondent had low socio-economic status.

Patil *et al.* (2000) during his study in Sakri Taluka at Dhule district, Maharashtra state, which is predominantly a tribal are revealed that more than half proportion of farmers were having medium level of socio-economic status, which was followed by those having low status, only 7.50 per cent of them found in high socio-economic status group.

Rathod (2001) found that socio-economic status of Korku tribal respondents at medium level.

Kalyani *et al.* (2011) revealed that lower the economic status of family.

Bankey Bihari *et al.* (2012) the study revealed that knowledge and adoption level were considerably low among almost all the tribes. Reasons might be attributed to the low knowledge level. Poor socio-economic status and land tenure system.

6) Size of family

Bhangey (1999) found no significant relationship between family size of farm women and their role in agricultural operations.

Alka Patki *et.al.* (2000) reported that size of family was not significantly correlated with the role performance of rural women.

Hossain and Mishra (2002) found that 66.7 per cent of the respondents were belonged to big family and 41.9 per cent of them to small family.

Parshuramkar (2003) found no significant relationship between size of family and level of participation among rural people.

Rekha Gotmare (2006) found that the size of family does not affect the interest and needs of rural women in farming activities.

Nita Divekar (2010) observed that near about three fourth (68.23%) of the women respondent were from medium size of family having maximum 5 members in the family.

Yesankar J.M. (2010) found that 68.89 per cent rural women respondents belonged to medium size family and 30.37 per cent belonged to large size family and 0.74 per cent belonged to small size family.

7) Number of working family member

Abdul Halim (1984) reported that bigger families had more number of female labourers than small families.

Dakhore *et al.* (1988) noted a non significant relationship between number of working family members with the role performance of farm women.

Alka Patki (1991) found non significant relationship between number of working members with role performance of farm women labour.

8) Value orientation

Patil et al., (1995) observed that majority of the tribal farmers and their families were highly traditional and belief oriented towards agriculture and general walk of life.

Gare (1999) found that among the tribals the social and cultural values were found to be rigid and strong than the economics factors and hence the influence of modernization was slow.

Dudhe (2002) observed that majority of Madia tribe farmers (83.33%) were found in medium level of value orientation.

Dependent Variable

1) Role performance

Alka Patki *et al.* (2000) found that the rural women performed most of the animal husbandry practices but were comparatively less involved in breeding and animal health practices which required more skill and scientific knowledge about practices.

Sinha and Singh (2000) reported that there was absolutely no involvement of farm women in ploughing which is relatively less skilled operation. The involvement of farm women in spading was 67.00 per cent. The work beating clods was done by farm women mainly. The operation of collecting weeds was done almost by entirely 85.00 per cent of farm women.

Tikhile (2001) indicated that 80.00 per cent of the tribal women had medium level of role performance in farm operations while 3.34 and 16.66 per cent of tribal women had low and high level of role performance in farm operations, respectively. i.e. sowing, transplanting, weeding, harvesting, threshing, cleaning, storing, cattle management, poultry management and so on.

Hossain and Mishra (2002) concluded that women participation in livestock enterprises was also encouraging. Almost all the women were engaged in goat rearing (85.3%), cattle management (81.5%), milking (80.00%), feeding (72.00%), cleaning the shed (67.3%) and poultry keeping (60%). However, engagement of land less and marginal farm women was much higher than those of the SF and BF in all the operations where as only 27.3. per cent women were involved in marketing.

Chaudhari and Singh (2003) concluded that the women participated in agriculture and supported the activities at varying degree, their participation was maximum in hoeing, weeding, transplanting operations, where as, the participation in ploughing, pesticide and weeding application was minimum.

Parshuramkar (2003) found that majority of rural women had high degree of interest in physical working on own farm and taking decision regarding farming.

Goswami *et al.* (2004) observed that females were found to have taken independent decision on allocation of areas under different crops, selection of crop activities and varieties, manures and fertilizers to be used time of transplanting, time of harvesting, animal care, feeds and fodder for animal respectively.

Praveena *et al.* (2005) concluded that majority of rural women relied on joint decision by consulting their spouse, where some respondents were self reliant in deciding few aspects like gap filling, storage, drying. She also concluded that farm women did not prefer to take self decisions especially in all the market related activities.

Singh *et al.* (2005) found that 15.1 per cent households were engaged in taking land on lease for farming, farm women utilized 44.8 to 47.5% time in agriculture, maximum (76.1%) farm women were involved in

post harvest activities followed by 68.7 per cent in post sowing and 47.9 per cent in pre-sowing operation.

Varsha (2006) revealed that majority of the respondent women (81.33%) have medium level of role performance in farm operations and allied activities. Further it is revealed that more than 50% of Banjara farm women always perform agricultural and allied activities.

Karthikeyan and Swathilaxmi (2007) concluded that the majority of the women labours were engaged in detrashing weed management, self planting and other activities in sugarcane.

Kalyani *et al.* (2011) revealed that the work participation rate and role performance of tribal women in agriculture and allied sectors is high as compared to their male counterparts and contribute lion's share to the family income.

Bankey *et al.* (2012) the study revealed that role and contribution of women human resource in agriculture has been very crucial input not only in enhancing the crop production but also in overall agricultural diversification.

2.2 Constraints faced with respect to role performed

Constraints are the major factors that effect role performance of farm women in agriculture. The reviews related to it have been presented as below.

Hossain *et al.* (2002) concluded that illiteracy and lack of knowledge about various technologies on agriculture and allied activities was the number one constraint faced by highest (87.3%) number of respondents followed by other constraints like weak financial condition of women (82.4%) and conservative attitude of our society towards women (81.3%). Similarly high input cost and cheap price of produce resulting into low profit margin was another constraint faced by 65.3 per cent of women

and lastly the problem caused by their liquor addict male counter parts was felt by inherited constraints by 34.7% of respondents.

Veena Ughade (2006) concluded that the farm women were difficult to perform certain agricultural operation (56.00%), little or no rest period (54.67%), exertion due to body work (49.33%), lack of labour saving devices (46.47%), no little time for child care (35.33%), working under unfavourable condition (34.00%), no fix hours for working (26.67%) and difficulties to spare time for farm operation due to household work (25.32%).

Shipa Rupanavare (2008) observed 48.15 per cent women agriculture labour had lack of situational support inadequate educational opportunities and negative impact of farm technology

Deshpande and Raut (2011) The study revealed that majority of farm women are illiterate, local and married in extension programmes. Majority of farm women have not participated due to cultural/social taboos, financial problems etc. Majority of farm women suggested need of training, reward of good work and moral support from men.

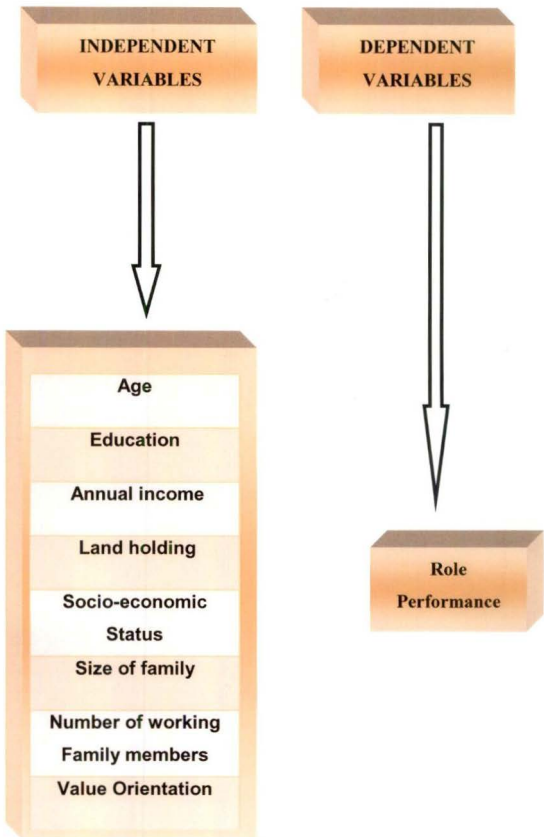


Fig. 1. Conceptual Model

CHAPTER III

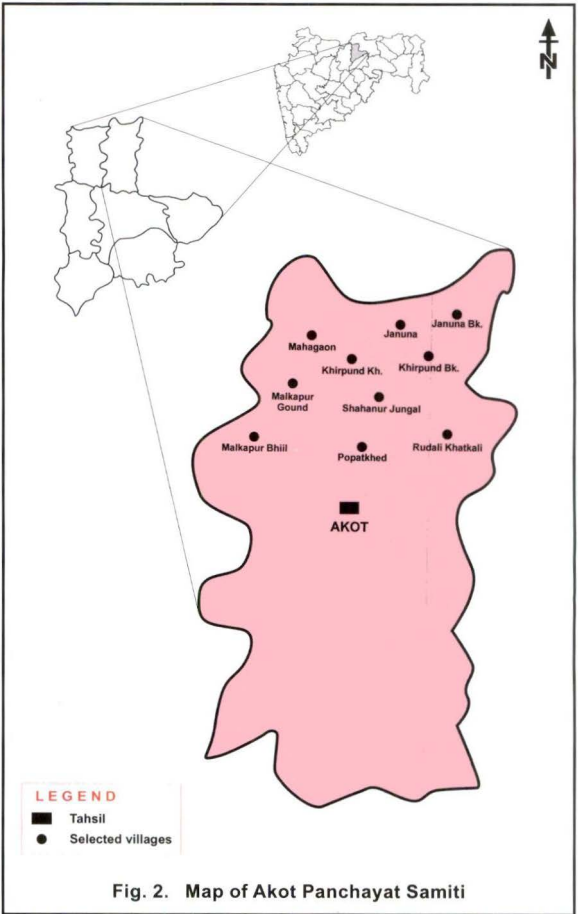
METHODOLOGY

Research methodology deals with description of research methods and techniques used as empirical measures for testing the hypothesis developed earlier.

To evaluate the role performance of tribal women in agriculture tribal, standard and detail methodology was developed and used considering the importance of accuracy of research methodology. The chapter has been divided as follows, to enable logical presentation of the definitions, concepts, methods, procedures and techniques used for the present investigation.

The subsections of the methodology include;

- 3.1 Locale of study
- 3.2 Demographic information of study
- 3.3 Research design
- 3.4 Sample and sampling technique
 - 3.4.1 Selection of village
 - 3.4.2 Selection of respondent
- 3.5 Development of data collection instrument
- 3.6 Operationalization, measurement, scoring and categorization of variables
- 3.7 Constraints
- 3.8 Tabulation and analysis of data



3.1 Locale of Study

The present study was conducted in MADA pocket of Akola district in Vidarbha region of Maharashtra state.

The MADA pocket consist of three tahsils of Akola district i.e. Akot, Telhara and Patur which having the geographical area Akot-78868 ha, Telhara-57055 ha and Patur-70104 ha.

Total geographical area of Akot panchayat samiti is 78868 ha. In all there are 187 villages in Akot panchayat samiti.

In this region major crops grown are cotton, tur, jowar, mung, soybean, wheat and groundnut are also grown in somewhat considerable acreage.

3.2 Demographic information of the study area

Selected demographic component of Akot tahsil

Total number of village	187
Number of household	45984
Population	232483
Male	119863
Female	112620
Proportion of the women to 1000 male	940
Schedule tribes (ST)	24524
Male	12607
Female	11917
Agricultural labourers	56082
Male	30777
Female	25305

Total geographical area (ha) : Akot-78868.

3.3 Research design

The present study emphasized on gaining of an understanding about the farm operations actually undertaken by tribal farm women hence an exploratory research design of social research was used for present investigation.

3.4 Sample and sampling technique

The present study was conducted in Akola district as Akot tahsil are mainly included in Korku tribe area pocket.

3.4.1 Selection of tehsil

Akot Tahsil was selected purposively based on more number of Korku community in Akola district.

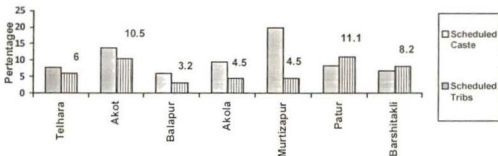
3.4.2 Selection of Village

The object of the present study was mainly to evaluate the role performance of Tribal women in agriculture. From Akot tehsil 10 villages was selected purposively based on Korku community.

3.4.3 Selection of respondent

The study was conducted on Farm women of Korku community. Farm women refers to those women of Korku community who was engaged in farming and carrying out various farm operations was selected. The sample study was comprising of 120 farm women belonging to Korku community, from 10 villages of the selected Panchayat Samiti.

Talukawise population percentage of Scheduled Caste and Scheduled Tribes in Akola District (According to Census 2001).



Selected Village from the study area as follows. Akot tehsil

Sr. No	Name of village	Respondent proportionately selected
1	Januna	12
2	Januna Bk.	12
3	Khirkund Bk.	12
4	Khirkund Kh.	12
5	Mahagaon	12
6	Malkapur Bhill	12
7	Malkapur Gond	12
8	Popatkhed	12
9	Rudali Pr.Khatkali	12
10	Shahanur Jangal	12
Total	10 villages	120

3.5 Development of data collection instrument

In order to seek information about role performance of tribal farm women in agriculture and other aspect of study, the development of an interview schedule was necessary. The interview schedule was designed with relevant questions in accordance with study objectives. The scheduled was divided in to three parts. The first part of schedule included preliminary information. The question related to personal, socio economic and psychological characteristics of Tribal farm women in agriculture, were framed and furnished in second part, The question regarding role performance were included in third part. For some variables, the standardized scale already available were used, where as for some other variables close /open ended questions where included in the interview schedule. This schedule was initially developed in English in then translated into local language "Marathi" or "Hindi". The pretesting of interview schedule was necessary on the part of researcher. It identifies

mistakes, ambiguities and shortfalls. It also help in achieving clarity, reliability and validity of interview schedule. The pretesting of interview schedule was done on ten farm women of Tribal community of non-sampled area belonging to Akot panchayat samiti. The data, collected from this Tribal farm women where thoroughly studied to detect unfamiliar words, vagueness and complexity of questions included in the interview schedule. Considering the experience of pretesting, language of few questions was appropriately modified to increase clarity of questions included in the interview schedule. The interview schedule was then finalized and required numbers of copies were got prepared for data collection.

3.6 Operationalization, measurement, scoring and categorization of variables

Important variables, their definition and measurement and categorization are as follows.

Variables and their measurements

Information on variables selected for the study and their measurement have been furnished in Table 1.

3.6.1 Independent variable

An independent variable is the presumed cause of dependent variables presumed effect. (Kerlinger, 1964)

Independent variables selected for the study were as follows.

3.6.1.1. Age

It is operationally defined as chorological age of the respondent in completed years at the time of interview.

It refers to chronological age of farm women in years was considered as age and taken as her score.

Table 1. Study of variables and their measurements

Sr. No.	Variables	Measurements
A Independent variables		
1	Age	Chronological age of Tribal farm women in years at the time of interview.
2	Education	It was taken as number of standard in formal schooling passed by the individual farm women's and standard passed by her.
3	Annual income	Income earned by respondents and her family members from all sources within a year are used for scoring.
4	Land holding	Total hectares of land possessed by an individual farm women's family.
5	Socio economic status	Measured with the help of scale developed by Dhanorkar and Ingle (1999)
6	Size of family	Measured with the help of scale developed by Thakare (2004)
7	Number of working family members	The number of family members engaged in farm and allied activities from the family of farm women.
8	Value orientation	A scale developed by Pareek and Chattopadhyay (1965)
B. Dependent Variable		
	Role performance	Physical performance of various farm operations by Tribal women in the agriculture.

The categorization was done as young, middle and old on the basis of actual age of farm women at the time of data collection.

Sr. No.	Category	Age range (years)
1	Young	Up to 35
2	Middle	36-50
3	Old	Above 50

3.6.1.2. Education

It was taken as number of standard in formal schooling passed by the individual Tribal farm women's and standard passed by respondent farm women was considered as educational score. They were categorized as follows.

Category	Education
Illiterates	Can not read / write
Functionally literate	Can read and write
Primary school	1 st – 4 th standard
Middle School	5 th – 7 th standard
High School	8 th – 10 th standard
College	11 th and above

3.6.1.3. Annual income

The gross income in rupees of Tribal farm women's family derived from all sources in a year was taken as annual income following categories of annual income were formulated. The categorization of the respondents on the basis of their annual income was done on the basis of their actual income by equal interval method.

Sr. No.	Annual income category (Rupees)
1	Up to 25000
2	25,001- 50,000
3	50,001- 75,000
4	75,001- 100000
5	Above 100000

3.6.1.4. Land holding

Number of hectares of land possessed by an individual Tribal farm women's family was treated as their land holding. The actual number

of hectares of land possessed was considered as land holding score. The categorization of the land holding was done as under.

Sr. No.	Category	Land holding (ha)
1	Marginal	Up to 1.00
2	Small	1.01 - 2.00
3	Semi-medium	2.01 - 4.00
4	Medium	4.01 – 10.00
5	Large	Above 10.00

3.6.1.5. Socio-economic status

It was defined as the position occupied by an individual Tribal farm women's on individual respondent occupied with reference to the source of production.

Sr. No.	Socio-economic status	Score
1	Very low	Upto 2.31
2	Low	2.32-3.44
3	Medium	3.45-4.57
4	Medium high	4.58-5.59
5	High	Above 5.70

It has been measured with the help of scale developed by Dhanorkar and Ingle (1999).

The raw score obtained did not discriminate very clearly the respondents on the socio-economic condition and hence it is advocated to convert raw score in weighted score. The raw score of each main item was converted into the weighted score (Dhanokar and Ingle, 1999) as follows.

$$\text{Weighted score of } i^{\text{th}} \text{ item} = S_i \times W_i$$

After converting the raw scores of all the items in the SES scale, finally SES weighted average score was calculated with the help of following formula.

$$\text{SES weighted average score} = \frac{\sum W_i S_i}{\sum W_i}$$

S_i = The raw score of the i^{th} item

W_i = Weight of the i^{th} item (As given in scale)

$\sum W_i = 47.33$ summation of the cumulative weight of the i^{th} item which is constant

The maximum obtainable weighted SES score is 5.70 and the minimum weighted SES is 2.31. Between maximum and minimum obtainable score, 3 categories were prepared by equal interval and it was found out as follows.

$$\begin{aligned} & \frac{\text{Maximum obtainable score} - \text{Minimum obtainable score}}{3} \\ & = \frac{5.7 - 2.31}{3} = 1.13 \end{aligned}$$

Thus, on the basis of the total weighted SES score, obtained by the respondents their categorization was made as follows.

Sr. No.	Category	Weighted score range
1	Low	2.32-3.45
2	Medium	3.46-4.59
3	High	5 and above

It was defined as the position occupied by individual Tribal farm women's family with reference to the prevailing average standard of cultural position, occupation, effective income, source of production

material possession and participation in group activities of community. It was measured with the scale developed by Dhanorkar and Ingle(1999).

The socio-economic status was categorized a very low, low, medium, medium high, high.

3.6.1.6 Size of family

It refers to the number of members in the family of Tribal farm women. It was measured by using scale developed by Thakare (2004). It was categorized as follows :

Sr. No.	Family Size	Score range
1	Small	Up to 3
2	Medium	4 to 6
3	Large	7 and above

3.6.1.7. Number of working family members

It refers to the number of family members engaged in farm and allied activities from the family of Tribal farm women. It was categorization done as follows

Sr. No.	Category
1	Up to 2
2	3 to 4
3	Above 4

3.6.1.8. Value orientation

It refers to the degree to which an individual farm women belonging to Tribal community was inclined towards traditional or modern means in farming enterprises. A scale developed by Pareek and

Chattopadhyay (1965) was used. On the basis of mean and standard deviation the respondents were categorized as low, medium and high.

Sr. No.	Category	Score range
1	Low	Up to 43
2	Medium	44 to 63
3	High	Above 63

Mean=53.7 SD=10.75

3.6.2. Dependent variables

The dependent variables in the present study was role performance of farm women. The operational definitions of this set of variables, procedure of measurement, scoring, and categorization used in the present study investigation described in this part.

Role performance

Role of women has been operationally defined as involvement of women labour performing various operation of agriculture and the time spent there of.

Ingle *et al.* (1990) reported that women were engaged in seed bed preparation, applying fertilizers, weeding, harvesting, threshing, sundrying the produce and cleaning of grains etc.

Verma and Sinha (1992) studied that transplanting and keeping parts of grains of consumption were performed were performed exclusively by women operation like carrying headload in wheat, weeding by khurpi in paddy were predominantly done by women.

The Oxford Advanced Learners Dictionary meaning of the word role in the actor's part in play or person's task or duty in an undertaking.

It was operationally defined as the activities actually undertaken by the workers in agriculture. [SudhaHaridaset.al. 1997]

Role performance is operationalized as the physical performance of various farm operations by farm women belonging to Tribal community in agriculture.

Almost all agricultural operations right from preparatory tillage to post harvest and allied activities were considered for this purpose.

The role performance of each operation was measured on three point continuum: - Always, Sometimes and Never. The score

assigned to these categories were 2, 1 and 0 respectively. Obtained role performance raw score was converted into role performance index by using following formula.

$$\text{Roleperformanceindex} = \frac{\text{sum of obtained score}}{\text{total of obtamable score}} \times 100$$

On the basis of role performance index score respondents were categorized with the help of equal interval method, as per their obtained role performance index score.

Sr. No.	Category	Score range
1	Low	Up to 33.33
2	Medium	33.34 to 66.66
3	High	66.67 and above

3.7 Constraints

The oxford English dictionary meaning of the term constraints is confinement, restriction of liberty or compulsion put on the behavior.

Constraints refers to difficulties faced by the respect in performing the role in agriculture.

In the present study, the constraint has been operationally defined as the problem, difficulty and the hindrance that respondents have faced in role performance in agriculture.

Constraints were, therefore the factors that limits the role performance and hence these cannot be avoided. Constraints found during as expressed by the respondents were classified into different categories.

The frequency and percentage of each constraints were worked out for the interpretation.

3.8 Tabulation and analysis of data

3.8.1 Tabulation of data

The data were carefully examined before tabulation all the entries in the schedule were checked for completeness and then it was tabulated.

3.8.2 Analysis of data

Besides frequency, percentage and means various descriptive statistical were used to analysis the data on the different aspect of the study. The data were analyzed with the help of computer of the Dr. PDKV, Akola.

The categorized low, medium and high were computed on the basis of mean and standard deviation.

Following important statistical methods have been used mean, percentage, standard deviation, coefficient of correlation, etc.

1. Arithmetic mean

Arithmetic mean was calculated by sum of all the individual score and dividing it by number of cases. The formula used was as follows.

$$\bar{X} = \frac{\Sigma x}{N}$$

Where, \bar{X} = Arithmetic mean
 Σx = Sum of respondents score
 N = Number of respondents

2. Standard deviation (S.D.)

The standard deviation is the most stable index of variability and is employed in research studies. It is measure of variability calculated around mean (\bar{X}). Standard deviation usually denoted by Greek letter σ i.e. sigma and was calculated as follows.

$$\sigma = \sqrt{\frac{N\Sigma x^2 - (\Sigma x)^2}{N}}$$

Where,
 σ = Standard deviation
 Σx^2 = Sum of square of X series
 $(\Sigma x)^2$ = Square of sum of X series
 N = Number of respondents

3. Coefficient of correlation

The relationship between independent and dependent variable is established by calculating the coefficient of correlation and it is denoted by 'r'. Coefficient of correlation was calculated as follows.

$$r = \frac{\Sigma xy - (\Sigma x)(\Sigma y)}{\sqrt{[N\Sigma x^2 - (\Sigma x)^2][N\Sigma y^2 - (\Sigma y)^2]}}$$

Where, r = Coefficient of correlation
 Σx = Sum of the score of variable x
 Σy = Sum of the score of variable y
 Σxy = Sum of the products of x and y variables
 Σx^2 = Sum of the square of x variables
 Σy^2 = Sum of the square of y variables
 N = Total number of respondents

CHAPTER IV

SOCIO-ECONOMIC STATUS OF AKOLA DISTRICT

This chapter specifies the brief survey of the important agro-economic features of Akola district and the selected tahsils which are taken for the present study with the objective of providing necessary background information for proper understanding of the district profile.

4.1 Location of Akola District

Akola district falls under Vidarbha region of Maharashtra. It comprises of seven tahsils. It lies between 20° 17' and 21° 18' North latitudes and 76° 17' and 77° 14' East longitudes. It covers area of 5417 sq. km. accounting for 1.76 per cent of the total area of Maharashtra. Akola district is surrounded by Amravati district in North, part of Amravati and Yavatmal district in East, Washim and Yavatmal district to the South and Buldhana district towards the West.

4.2 Administrative Set Up

Maharashtra State has six revenue divisions viz., Mumbai, Pune, Nasik, Aurangabad, Amravati and Nagpur. Vidarbha area includes Amravati and Nagpur revenue divisions comprising eleven districts viz., Buldhana, Akola, Washim, Amravati, Yavatmal, Wardha, Nagpur, Bhandara, Gondia, Chandrapur, and Gadchiroli. Washim and Gondia are newly formed districts bifurcating Akola and Bhandara districts respectively. The present study is confined to Akola district of Western Vidarbha.

4.3 Agro Climatic Conditions

4.3.1 Topography and soil

The northern part of the Akola district lies in Purna valley which itself is a part of Tapi river basin. River Purna has formed fertile basin in Akola, Balapur and Murtizapur tahsils of Akola. Akola district divided into seven tahsils for smooth administration. The district ranks fourth in respect of size and fifth in respect of population among the 11 districts of Vidarbha region of Maharashtra. The soil of the district is basically derived from volcanic trap rock and it is quite fertile. It is classified into categories as coarse soil found in south, medium black soil found in the plain and deep black soil found in river valley.

4.3.2 Climate and rainfall

Being away from the sea, the district experiences the extremities of climate. The weather during winter is too cool, while in summer it is too hot. The average minimum and maximum temperature extremities observed throughout the year were 10°C and 46.5°C, respectively. Akola district falls in assured rainfall zone of Maharashtra state having average rainfall between 750 to 1000 mm.

4.4 Demographic Features

4.4.1 Population

The important demographic features of the district as per official census 2011 in comparison with the 2001 census were presented in Table 2. The district population was 18,18,617 which constitute about 1.62 per cent of state population. Out of the total population 9,36,226 (51.48 %) were males and 8,82,391(48.52 %) were females. The sex ratio was 942 females for every 1000 males. The density of the population for the district was 321 persons per sq.km. The population growth was recorded at 11.60 per cent when compared to 2001 census which was 20.58 per cent.

Table 2. Demographic particulars of Akola district

Sr. No	Particulars	Census 2011	Census 2001
1.	Actual population	18,18,617	16,30,239
2.	Male	9,36,226	8,41,253
3.	Female	8,82,391	7,88,986
4.	Population growth	11.60%	20.58%
5.	Area Sq.Km	5673	5673
6.	Density/Km	321	287
7.	Proposition to state population	1.62%	1.68%
8.	Sex ratio (per 1000)	942	938
9.	Child sex ratio (0-6 age)	900	933
10.	Total child population (0-6 age)	2,06,053	2,35,835
11.	Male population (0-6 age)	1,08,425	1,22,004
12.	Female population (0-6 age)	97,628	1,13,831
13.	Average literacy	87.55	81.42
14.	Male literacy	92.89	88.91
15.	Female literacy	81.91	73.44

(Source: Directorate of census operations in Maharashtra, 2011)

Out of the total population 39.69 per cent of the population in the district i.e., 7, 21,849 were living in urban areas where as 60.31 per cent i.e., 10,96,768 in rural areas. In rural area male population constitute of 5,66,172 were as female population constitute of 5,30,596. Regarding population in urban areas 3,70,054 constitute male and 3,51,795 are female. Sex ratio was found to be 937 (for 1000) in rural areas and 951 in urban areas respectively. The features are presented in Table 3.

Table 3. Features of rural and urban areas in Akola District

Sr. No.	Particulars	Rural	Urban
1.	Population (%)	60.31%	39.69%
2.	Total population	10,96,768	7,21,849
3.	Male population	5,66,172	3,70,054
4.	Female population	5,30,596	3,51,795
5.	Sex ratio (per 1000)	937	951
6.	Child sex ratio (0-6 age)	907	890
7.	Total child population(0-6 age)	1,25,698	80,355
8.	Male child population	65,913	42,512
9.	Female child population	59,785	37,843

(Source: Directorate of census operations in Maharashtra, 2011)

4.4.2 Literacy status

Among the total population, 14,11,747 were literates of which 7,68,925 were male literates and 6,42,822 were female literates. The literacy rate was 92.89 per cent among males and 81.91 per cent among female population in the district. The average literacy rate was 87.55 per cent. The details of literacy pertaining to district are presented in Table 4.

Table 4. Literacy status in Akola district

Sr. No	Particulars	Actual population	No. of literates	% total Literature
1.	Male	9,36,226	7,68,925	42.28
2.	Female	8,82,391	6,42,822	35.34
	Total	18,18,617	14,11,747	77.62

(Source: Directorate of census operations in Maharashtra, 2011)

4.5 Land Holding

The details of land holding of Akola district are presented in Table 5.

Table 5. Land holding in Akola district

Sr. No.	Land holding (ha)	Land holders (%)	Area (%)
1.	0-2	52.93	22.12
2.	2-5	32.68	33.61
3.	5-10	11.28	27.23
4.	10-20	2.02	12.98
5.	20-50	0.20	2.06
6.	Above 50	-	-

(Source :District Socio-economic Review, 2008-09)

4.6 Land Utilization Pattern

The geographical area of the district was 5,40,481 ha . During the year 2009-10 the cultivable land (i.e., net area sown, current fallows and other fallow lands) was 4,47,331 ha and it is accounted for 82.76 per cent of the total geographical area of the district.

The forest area of the district was 36,414 ha accounting for 6.73 per cent and land put to non-agricultural uses occupied by buildings, roads and railways or under water i.e., rivers and other land put to uses other than agriculture area is 5,801 ha accounting for 1.07 per cent of the geographical area. Barren and uncultivable land like mountains, deserts, etc is 18,280 has accounting for 3.38 per cent. Under permanent pastures and other grazing lands covers 5,292 accounting for 0.97 per cent. Miscellaneous tree crops and groves not included in the net sown area sown is 8,098 ha accounted for 1.49 per cent, cultivable waste in 2009-10 is 5,958 ha accounting for 1.10 per cent, other fallow is 5,262 ha accounting for 0.97 per cent, current fallow lands is 7911 ha accounted for

1.46 per cent and the net sown area represents 4,47,332 ha accounting for 82.76 per cent. The gross cropped area accounts for 89.62 per cent and an area of 6.86 per cent was sown more than once during the year

The details of land use pattern of Akola district is presented in Table 6.

Table 6. Land utilization pattern in Akola district

Sr. No.	Particular	Area (ha)	Percent to total area
1.	Total geographical area	540481	100
2.	Area under forest	36414	6.73
3.	Barren and uncultivable land	18280	3.38
4.	Permanent pastures and other grazing land	5292	0.97
5.	Land under miscellaneous tree crops and grooves not included in net area sown	8098	1.49
6.	Cultivable waste land	5958	1.10
7.	Land put under non-agricultural use	5801	1.07
8.	Current fallow	7911	1.46
9.	Other Fallow	5262	0.97
10.	Net sown area	447331	82.76
11.	Area sown more than once	37086	6.86
12.	Gross cropped area	484417	89.62
13.	Cropping intensity (%)	108.29	-

(Source: District Socio-economic Review, 2009-10)

4.7 Cropping Pattern

Cotton, Kharif sorghum, soybean and mung are the four predominant crops grown in the district followed by tur, gram, wheat, udid, sunflower, maize, bajra and sugarcane. The area under different crops grown in district was furnished in the Table 7.

Table 7. Cropping pattern in Akola district

Sr. No.	Crop	Area (ha)	Percentage to total
1.	Wheat	18871	3.89
2.	Kharif jowar	84922	17.53
3.	Bajra	1210	0.24
4.	Maize	2451	0.50
5.	Other cereals.	21	0.004
	Total cereals.	107367	22.16
6.	Gram	20087	4.14
7.	Tur	25634	5.29
8.	Mung	43334	8.94
9.	Udid	14082	2.90
10.	Other Pulses	1038	0.21
	Total Pulses	104308	21.53
	Total food grains	211675	43.69
11.	Sugarcane	335	0.06
12.	Cotton	192994	39.84
	Total Fibre crops	194166	40.08
13.	Soyabean	40613	8.38
14.	Sunflower	3550	0.73
15.	Groundnut	1332	0.27
16.	Other oilseeds	8497	1.75
	Total oilseeds	55877	11.53
17.	Total fruits and Vegetables	6924	1.42
18.	Other crops	15598	3.22
	Gross cropped area	484417	100.00

(Source: District Socio-economic Review, 2009-10)

4.8 Crop Season and Crop Rotation

There are two important crop seasons i.e. kharif and Rabi where as in summer season land generally remains fallow and preparatory tillage operations are carried out.

The manner in which crop rotations are commonly followed is presented in Table 8.

Table 8. Crop season and crop rotation in Akola district

Sr. No.	Kharif	Rabi
1.	Cotton	-
2.	Cotton + Tur + Jowar	-
3.	Jowar	Gram
4.	Cotton + Mung + Udid	Wheat
5.	Cotton + Tur + Mung	Gram
6.	Jowar	Safflower / wheat
7.	Cotton + Tur	Safflower
8.	Cotton + Tur + Jowar + Mung	Sunflower
9.	Mung	Safflower
10.	Cotton + Mung	-

(Source: District Socio-economic Review, 2008-09)

4.9 Agro economic features of selected tahsils

The important demographic features of the two tahsils are presented below.

4.9.1 Akot

Akot tahsil covers an area of 812.84 square kilometers in which 798.5 square kilometers is with in rural coverage area and 14.34 square kilometers with in urban area. As per 2001 census the total population of the tahsil was 2,32,493 of which 1,51,767 reside in rural

areas and 80,726 in urban areas. The population density was 190 per square kilometer in rural and 5629 in urban area of Akot tahsil. The female ratio for every thousand males was 944 in rural and 931 in urban area of the tahsil.

4.9.2 Akola

Akola tahsil covers an area of 1036.64 square kilometers in which 1013.2 square kilometers are with in rural coverage area and 23.44 square kilometers with in urban area. As per 2001 census the total population of the tahsil was 6,56,746 of which 2,27,475 reside in rural areas and 4,29,271 in urban areas. The population density was 225 per square kilometer in rural areas and 18314 in urban areas of Akola tahsil. The female ratio for every thousand males was 929 in rural and 938 in urban area of the tahsil.

Table 9. Demographic features of selected tahsils

Sr. No.	Particulars	Akot		Akola	
		Rural	Urban	Rural	Urban
1.	Area	798.5	14.34	1013.2	23.44
2.	Total population	151767	80726	227475	429271
3.	Male population	78057	41806	117919	221463
4.	Female population	73710	38920	109556	207808
5.	Population density	190	5629	225	18314
6.	Sex ratio (1000)	944	931	929	938

(Source : District Socio-economic review 2009-2010)

CHAPTER V

RESULTS AND DISCUSSION

The data collected by adopting the procedure presented earlier in the methodology were subjected to statistical analysis to accordance with study objectives. The results obtained from the analysis of data with the discussion on thereon have been presented in this chapter the following captions.

- 5.1 Characteristics of Tribal farm women
- 5.2 Role performance of Tribal farm women in farming
- 5.3 Relational analysis
- 5.4 Constraints faced by Tribal farm women with regard to role performance
- 5.5 Empirical model

5.1 Characteristics of Tribal farm women

The distributions of Tribal farm women according to their selected personal, socio economic and psychological characteristics have been presented in this section.

5.1.1 Age

It is expected that age is one of the factor which may influence the role performance of Tribal farm women in farming and they expressed while performing their task. Hence the respondent's age was studied and findings are given below.

The age wise distribution of respondents in Table 10 shows that more than half of the Tribal farm women (53.33 %) were included in the middle age group of 36 to 50 years. Followed by the farm women to the extent of one fourth (25.00%) appeared in old age category(above 50

years) and very little more than one fifth (21.67%) were observed in young age category ranging from 18-35 years.

Table 10. Distribution of respondents according to their age

Sr. No.	Age	Respondents(n=120)	
		Frequency	Percent
1	Young (upto 35 years)	26.00	21.67
2	Middle (36 to 50 years)	64.00	53.33
2	Old (above 50 years)	30.00	25.00
	Total	120	100.00

It could therefore be concluded that majority of the Tribal farm women were found to be middle age and old group category. The reason may be that the women above 35 years are capable of doing all type of farm activities with greater efficiency

The above findings are similar to the findings reported by Rathod (2006) that most of women worker respondents were observed in middle age category.

Dhanorkar (1998) also found average age of Gond tribals is 41 years. Patil *et al.* (2000) revealed that majority of Kokani tribals were found in 36 to 50 years age group plausibly the hard life of tribals has restricted their average age to such a low level.

5.1.2 Education

Education is one of the most important variable with the help of which social change can be achieved. In order to fulfill the constitutional guarantee for the ameliorating of down trodden, schedule tribes in general and the Korkus in particular various measures have been taken for the education of this section. It has been considered that the education is an important factor, which can influence the role performance expressed by the tribal farm women respondents while performing agriculture activities.

Hence respondent's education was studied and the findings pertaining to their education are presented in Table 11.

Table 11. Distribution of respondents according to their education

Sr. No.	Education	Respondents (n=120)	
		Frequency	Percent
1	Illiterate	41	34.17
2	Functionally literate	22	18.33
3	Primary education	13	10.83
4	Middle education	19	15.84
5	High school	15	12.50
6	Collage and above	10	8.33
	Total	120	100.00

It was observed that from Table 11 relatively higher proportion nearly (34.17%) tribal farm women were 'illiterate' followed by less than one fifth (18.33%) functionally literate and 15.84 per cent of them were middle school education. A less number of respondent i.e. (12.50%) high school education and (10.83%) had 'primary education' level. Very few (8.33%) tribal women were having collage and above education respectively.

It is seen from the Table 11 that only 34.17 per cent illiterate, But in the whole when the respondents were interviewed it was observed that majority of primary, middle school and high school educate tribal did not exhibit abilities to read and write or could not even write their names properly, it shows that poor quality of education imparted in study area.

Recently Dahnorkar (1998), Patil *et al.* (2000) and Shrivani Sarkar (2000) have reported the high percentage of illiteracy among the tribals relatively satisfactory educational status of tribals may be consequence of the government efforts to enroll more and more tribals for

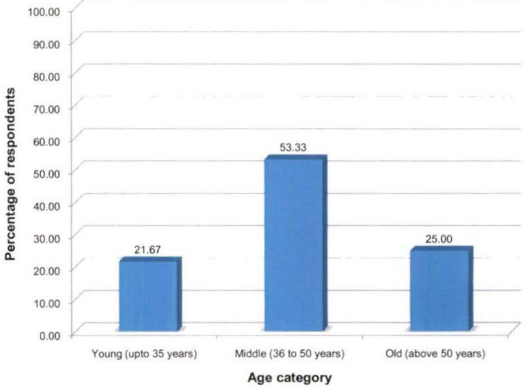


Fig. 3. Distribution of respondents according to their age

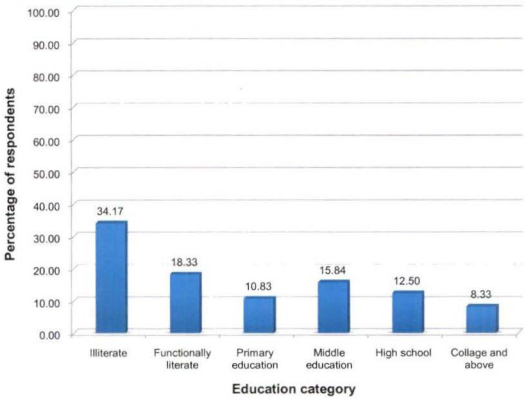


Fig. 4. Distribution of respondents according to their education

education, through incentives like free rice distribution to school going tribal children. This has probably motivated them to send their children to school. However, standard of education has always been debatable issue. These findings are corroborates with the observation of Patil et al., (2000) reported that most of the Kokni tribal from Dhule district were illiterate.

5.1.3 Annual income

The annual income obtained from all the sources by the Tribal farm women family may play a significant role in influencing the role performance. Hence, it was taken and studied. The result obtained are summarized and presented in Table 12.

Table 12. Distribution of respondents according to their annual income

Sr. No.	Annual income	Respondents (n=120)	
		Frequency	Percent
1	Upto Rs. 25000	12	10.00
2	Rs 25001 to 50000	27	22.50
3	Rs 50001 to 75000	37	30.84
4	Rs75001 to 100000	32	26.66
5	Above Rs. 100000	12	10.00
	Total	120	100.00

It is observed that (30.84%) respondent's family had their income ranging from Rs 50001 to 75000 followed by more than one fourth (26.66%) of them whose family earned Rs 75001 to 100000. However, 22.50 per cent families earned 25001 to 50000 and equal proportion of the tribal farm women (10.00%) were having annual income in the range of Rs. upto 25000 and above Rs. 100000 respectively.

From this finding, it could be inferred that majority of farm women had their annual income upto Rs 50001 to 75000 .

The above finding are similar to the finding reported by Komal Kashid (2008).

5.1.4 Land holding

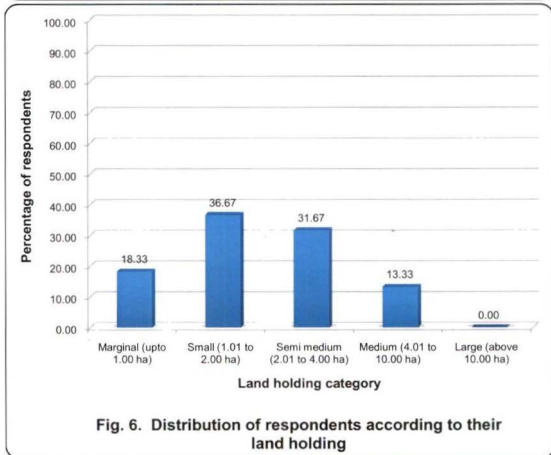
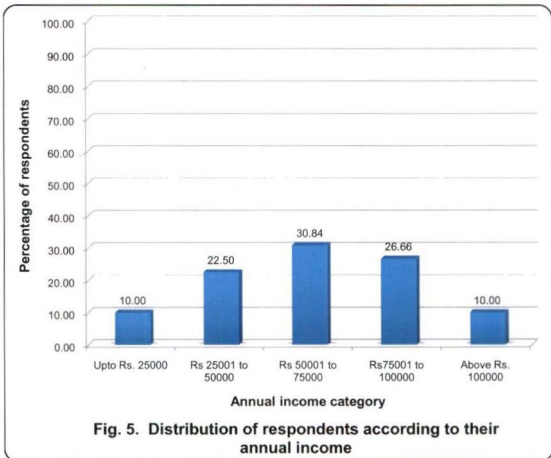
Land holding is the major key component of the farm occupation. The land holding was therefore, considered as an important factor and it was studied in relation with the role performance.

Table 13. Distribution of respondents according to their land holding

Sr. No.	Land holding	Respondents (n=120)	
		Frequency	Percent
1	Marginal (upto 1.00 ha)	22	18.33
2	Small (1.01 to 2.00 ha)	44	36.67
3	Semi medium (2.01 to 4.00 ha)	38	31.67
4	Medium (4.01 to 10.00 ha)	16	13.33
5	Large (above 10.00 ha)	0	0.00
Total		120	100.00

The data in Table 13, indicates that relatively higher proportion of farm women (36.67%) belonged to small category of land holding. It was followed by 31.67 per cent of them possessing land from 2.01 to 4 hectare. The farm women in marginal and medium categories were only 18.33 per cent and 13.33 per cent respectively. It is also worthwhile to note that non of the respondent belonged to large land holding category.

Thus, it could be inferred that majority of respondent family were possessing small size of land holding. The findings are similar to the finding reported by Patil et al. (2000) observed that majority of Tribal farmer were possessing small size land holding i.e. upto 2 hectare.



5.1.5 Socio economic status

The socio economic status may be one of the important determinants of tribal farm women and affect the role performance. The results pertaining to the same have been presented in Table 14.

Table 14. Distribution of respondents according to their socio-economic status

Sr. No.	Socio-economic status	Respondents (n=120)	
		Frequency	Percent
1	Very low	18	15.00
2	Low	26	21.67
3	Medium	42	35.00
4	Medium high	25	20.83
5	High	09	07.50
	Total	100	100.00

The socio economic status of tribal farm women family in Table 14 indicates that higher proportion of farm women (35.00%) belonged to medium level of socio economic status. Socio economic status of primitive tribals in Bhamragarh was studied by Dhanorkar (1998) and Patil *et al.* (2000) had found over half of the total respondents were found in medium category Socio economic status. About 21.67 per cent of the respondents were found in low socio-economic status followed by 20.83 per cent of tribal beneficiaries had medium high socio-economic status.

Approximately (15.00%) respondents were in very low SES and only 7.5 per cent of respondents was found to be high SES. It clearly indicate that government efforts to improve the socio-economic status through developmental schemes have succeeded to some extent. It is concluded that Tribal farm women engaged in farming mostly come from the medium level of socio economic status

5.1.6 Size of family

The members in the family may be directly affect the role performance of Tribal farm women while performing the farm activities. The size of family of respondents was studied and the results obtained are given in Table 15.

Table 15. Distribution of respondents according to their size of family

Sr. No.	Size of family	Respondents (n=120)	
		Frequency	Percent
1	Small (upto 3)	15	12.51
2	Medium (4 to 6)	70	58.33
3	Large (above 7)	35	29.16
Total		120	100.00

It was observed from Table 15, that the size of family of majority of respondents (58.33%) was medium i.e. 4 to 6 members. It was followed by 29.16 per cent who had large family size i.e. more than 7 members in the family. However, only 12.51 per cent of respondents were having small family size i.e. upto 3 member in the family.

The above finding are similar to the finding reported by Nita Divekar (2010) observed that near about three fourth of women respondents were from medium size of family having maximum numbers in the family.

It could thus be inferred that majority of Tribal women had medium family size comprising to 4 to 6 members.

5.1.7 Number of working family members

The number of working members in family plays a vital role in affecting the role performance by the Tribal farm women. Hence, this variable was selected studied and the result have been presented in Table 16.

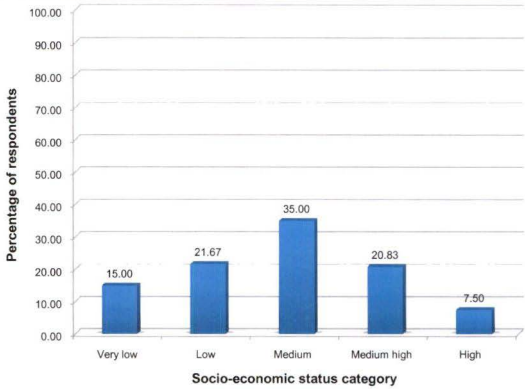


Fig. 7. Distribution of respondents according to their socio-economic status

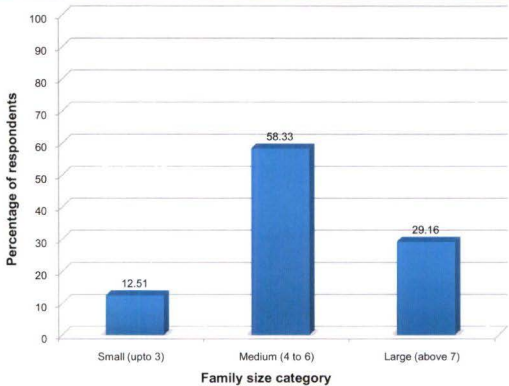


Fig. 8. Distribution of respondents according to their size of family

Table 16. Distribution of respondents according to their number of working family members

Sr. No.	Number of working family members	Respondents(n=120)	
		Frequency	Percent
1	Upto 2	13	10.83
2	3 to 4	58	48.33
3	Above 4	49	40.84
Total		120	100.00

The data in Table 16, with respect to number of working family members of tribal farm women show that nearly half (48.33%) of respondents families included in the category of 3 to 4 members followed by (40.33%) respondent's families above 4 them were included in above 4. While only 10.53 per cent of tribal farm women were found in the category up to 2 members in their family. from above findings it may be said that majority of respondent's families 3-4 members were working members.

5.1.8 Value orientation

Value orientation shows the inclined of the farm women towards traditional or modern means of farming hence it was studied and the results obtained have been presented in Table 17.

Table 17. Distribution of respondents according to their value orientation

Sr. No.	Value orientation	Respondents(n=120)	
		Frequency	Percent
1	Low	32	26.67
2	Medium	65	54.17
3	High	23	19.16
Total		120	100.00

Mean = 53.7

S.D. = 10.75

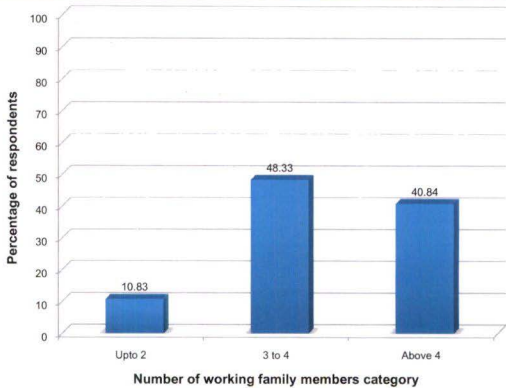


Fig. 9. Distribution of respondents according to their number of working family members

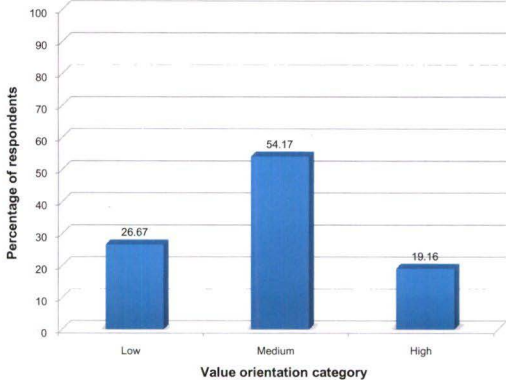


Fig. 10. Distribution of respondents according to their value orientation

The data from Table 17, Indicates that higher proportion of Tribal farm women (54.17%) belongs to medium category of value orientation, followed by 26.67 per cent of them in low category and the remaining 19.16 per cent of the respondents in high category of value orientation. From the above finding It could be concluded that majority of tribal farm women possessed medium value orientation. It may be because of majority of them had illiterate.

The above finding are similar to the finding reported by Dudhe (2002) .

5.2 Role performance of farm women in Agriculture

According to the study objectives attempts have been made to study the role performance in Agriculture by Tribal farm women. The activities for role performance in agriculture from preparatory tillage to post harvest and allied activities were considered for the present study.

5.2.1 Activity wise role performance of farm women in farming

The activity wise role performance of Tribal farm women in farming was studied on three point continuum i.e. always, sometimes and never and the results have been presented in Table 18.

From Table 18, it is apparent that more than 50 per cent of Tribal farm women always perform the operations connected with stubble collection and burning, preparation of FYM, application of FYM preparation of seed bed, transport of seed on head to field, sowing of seed with seed drill, dibbling of seeds, transplanting, thinning and gap filling, weeding of crops, carrying weeds out of field, irrigation of crops , top dressing of fertilizer, fetching water for preparation of insecticidal solution, cutting of cobs, picking cotton and pods, cutting of crops, collection of harvested crops, carrying farm produce on head load, winnowing, storage of seeds, feed and fodder, collection, feeding animals and poultry birds and care of livestock.

Table 18. Distribution of respondents according to their activity wise role performance in farming

Sr. No.	Farm activities	Role performance (N= 120)		
		Always (%)	Sometime (%)	Never (%)
A Preparatory Tillage				
1	Stubble collection and burning.	82 (68.34)	22(18.33)	16(13.33)
2	Preparation of FYM	67(55.83)	30(25.00)	23(19.17)
3	Application of FYM.	57(47.51)	40(33.33)	23(19.16)
4	Preparation of seed bed.	66(55.00)	28(23.33)	26(21.67)
B Pre-sowing and sowing operation				
1	Selection of seed	5(4.16)	80(66.67)	35(29.17)
2	Seed treatment with fungicide	2(1.66)	8(6.67)	110(91.67)
3	Treatment of seed with Cultures	2(1.67)	00(00.0)	118(98.33)
4	Transport of seed on head to field.	115(95.84)	4(3.33)	1(0.83)
5	Sowing of seed with seed drill.	60(50.00)	50(41.67)	10(8.33)
6	Dibbling of seeds.	60(50.00)	50(41.67)	10(8.33)
7	Transplanting	46(38.33)	48(40)	26(21.67)
C Intercultural operation				
1	Thinning and gap filling	75(62.50)	25(20.84)	20(16.66)
2	Hoeing with implements	5(4.16)	10(8.33)	105(87.51)
3	Weeding of crops	119(99.16)	1(0.84)	0(00.00)
4	Carrying weeds out of field	118(98.34)	1(0.83)	1(0.83)
5	Irrigation to crops	67(55.83)	30(25)	23(19.17)
6	Top dressing of fertilizers	82(68.34)	22(18.33)	16(13.33)
D Plant Protection				
1	Fetching water for preparation of insecticidal solution	77(64.16)	40(33.34)	3(2.5)
2	Scaring of birds in the field	35(29.17)	80(66.67)	5(4.16)
3	Field supervision	28(23.33)	22(18.33)	70(58.34)
4	Spraying/Dusting with sprayer / duster	5(4.16)	10(8.33)	105(87.51)

E		Harvest and post harvest		
1	Harvesting of crops			
a)	Cutting of cobs	118(98.34)	2(1.66)	00(00.00)
b)	Picking cotton and pods	118(98.34)	2(1.66)	00(00.00)
c)	Cutting of crops	118(98.34)	2(1.66)	00(00.00)
2	Collection of harvested crops	58(48.33)	52(43.34)	10(8.33)
3	Carrying farm produce on head load	55(45.83)	50(41.67)	15(12.5)
4	Threshing	10(8.33)	5(4.16)	105(87.51)
5	Winnowing	70(58.33)	30(25)	20(16.67)
6	Storage of seeds	53(44.17)	38(31.67)	29(24.16)
7	Grain processing	00(00.00)	3(2.50)	117(97.50)
8	Marketing of farm produce	8(6.67)	22(18.33)	90(75.00)
F		Allied activities		
1	Watching the farm	59(49.16)	34(28.33)	27(22.51)
2	Feed and fodder collection	57(47.5)	37(30.84)	26(21.66)
3	Feeding animal and poultry bird	20(16.67)	80(66.67)	20(16.66)
4	Care of livestock	50(41.66)	60(50)	10(8.34)
5	Milking and processing of milk	30(25.00)	50(41.67)	40(33.33)
6	Collection of mahua flowers and seeds	59(49.16)	34(28.33)	27(22.51)
7	Picking of Tendu leaves	35(29.17)	80(66.67)	5(4.16)
8	Collection of other forest products	70(58.33)	30(25.00)	20(16.67)
9	Marketing of milk and milk products	12(10.00)	00(00.00)	108(90.00)
10	Marketing of collected forest produce	40(33.34)	77(64.16)	3(2.50)





Plate 1. A Tribal woman



Plate 2. To study the personal and psychological characteristics of Tribal women



Plate 3. To study the socio-economic characteristics of Tribal Women



Plate 4. Role of Tribal Women in Agriculture

A) The preparatory tillage practices

Stubble collection and burning

The data in Table 19, revealed that majority of the respondents (68.34%) had always performed the work of stubble collection and burning followed by 18.33 per cent of respondents had performed sometimes. Further it was observed that 13.33 per cent farm women performed never this operation.

A considerable per cent of farm women were found worked in farm this operation. The possible reason might be due to this type of work easily done by female labors.

Preparation of FYM

From the finding it is observed that (55.83%) of farm women always perform this operation and 25.00 per cent of farm women sometime perform and 19.17 per cent never perform this operation.

A considerable per cent of farm women were found worked in farm this operation. The possible reason might be due to this type of work easily done by female labors.

Application of FYM

It is observed that Table 19, that (47.51%) always perform this operation, followed by 33.33 per cent farm women sometimes perform this operation and 19.16 per cent farm women never perform this operation.

Preparation of seed bed

The data of Table 18, showed that more than half of farm women (55%) always perform preparation of seed bed operation, followed by 23.33 per cent farm women sometime perform this operation and 21.67 per cent never perform the operation .

B) Presowing and sowing operations

Selection of seed

The data in Table 18, revealed that majority of respondents (66.67%) had perform this operation, sometimes followed by 29.17 per cent of farm women never perform this operation and 4.16 per cent farm women always perform this operation.

Seed treatment with fungicide

It is observed from Table 18, that (91.67%) farm women never performed this operation, only 6.67 per cent farm women performed this operation and 1.66 per cent farm women always performed this operation.

Treatment of seed with cultures

It is observed from Table 18, that large majority (98.33%) farm women never performed this operation merge of percent (1.67%) farm women always performed this operation.

Transport of seed on head to field

From data it is observed that 95.84 per cent farm women always perform this operation followed by 3.33 per cent of them were sometime perform this operation and negligible (0.83%) farm women never perform this operation.

Sowing of seed with seed drill

It is observed that half of the farm women (50%) always perform this operation followed by 41.67 per cent farm women sometime perform this operation and only 8.33 per cent farm women never perform this operation.

Dibbling of seed

It is observed that half of farm women (50%) always perform this operation followed by 41.67 per cent sometime and 8.33 per cent farm women never perform this operation

Transplanting

The data of Table 18, shows that more than one third of farm women (38.33%) perform this operation followed by 40.00 per cent sometimes perform this operation and 21.67 per cent farm women never perform this operation.

C) Intercultural operation

Thinning and gap filling

It is observed that (62.50%) farm women always perform this operation, followed by 20.84 per cent farm women sometimes perform this operation and 16.66 per cent never perform this operation.

It is important operation but not done at specific level due to lack of knowledge.

Hoeing with implement

It is observed from Table 18, that (87.51%) farm women never performed this operation, only 8.33 per cent farm women sometime performed this operation and very few 4.16 per cent farm women always performed this operation.

Weeding of crops

The data of Table 18, show that nearly cent percent of farm women (99.16%) always perform this operation, followed by only 0.84 per cent farm women sometime perform this operation and none of them never perform this operation.

Carrying of weeds out of field

It is observed that (98.34%) farm women always perform this operation followed by only one respondent i.e.(0.83%) sometimes and never performed the carrying of weeds out of field operation.

Irrigation of crops

From the data it is observed that more than half farm women always (55.83%) perform this operation, followed by 25.00 per cent farm women sometime perform this operation and 19.17 per cent farm women never perform this operation.

Top dressing of fertilizers

It is observed that (68.34%) farm women always perform this operation, followed by 18.33 per cent farm women sometime and 13.33 per cent farm women never perform this operation

D) Plant protection operations

Fetching water for preparation of insecticidal solution

From the data it is observed that majority (64.16%) of farm women always perform this operation, followed by 33.34 per cent of farm women sometime perform this operation and 2.50 per cent never perform this operation.

Scaring of birds in the field

It is observed that more two third of the (66.67%) farm women sometimes perform this operation, followed by 29.17 per cent of farm women always perform this operation and 4.16 per cent of farm women never perform this operation.

Field supervision

From the data in Table 18, it is observed that (58.34) farm women never perform this operation, followed by 23.33 per cent of farm

women always perform and 18.33 per cent of the respondent sometime perform this operation.

Spraying or dusting with sprayer or duster

It is observed that (87.51%) of farm women never perform this operation, followed by 8.33 per cent farm women sometime perform this operation and only 4.16 per cent of the respondents always perform this operation.

E) Harvest and post harvest

Harvesting of crops

a) Cutting of cobs

From data it is show that, majority (98.34%) of farm women always perform and only 1.66 per cent sometimes perform this operation.

b) Picking of cotton and pods

It is observed that (98.34%) of farm women always perform this operation followed by 1.66 per cent farm women sometime perform this operation.

c) Cutting of crops

From data it is show that a large numbers of (98.34%) of farm women always perform and only 1.66 per cent sometimes perform this operation.

Collection of harvested crops

Data showed that (48.33%) of farm women always perform this operation, followed by 43.34 per cent of farm women sometime perform this operation and 8.33 per cent never perform this operation.

Carrying farm produce on head load

From the data it is observed that (45.83%) of farm women always perform this operation, followed by the 41.67 per cent of farm

women sometime perform this operation and 12.50 per cent never perform this operation.

Threshing

It is observed that (87.51%) of farm women never perform this operation, followed by 8.33 per cent of farm women always perform this operation and 4.16 per cent sometime perform this operation.

Winnowing

A glance of data showed that more than half of the respondent (58.33%) always perform this operation, followed by 25.00 per cent of farm women sometime perform this operation and 16.67 per cent never perform this operation.

Storage of seeds

Data showed that the majority of farm women (44.17%) always perform this operation followed by 31.67 per cent farm women sometime perform this operation and 24.16 per cent never perform this operation.

Grain processing

The data showed that (97.50 %) of farm women never perform this operation followed only 2.50 per cent of farm women sometime perform this operation. No any respondents always performed this operation.

Marketing of farm produce

From the data it showed that majority of the farm women (75.00%) never perform this operation, followed by 18.33 per cent of farm women sometime perform the operation and only 6.67 per cent of farm women always perform this operation.

F) Allied activities

Watching the farm

From the data it is observed that (49.16%) of farm women always perform this operation followed by 28.33 per cent of farm women sometime perform this operation and 21.51 per cent never perform this operation.

Feed and fodder collection

Data showed that (47.50%) of farm women always perform this operation, followed by 30.84 per cent farm women sometime perform this operation and 21.66 per cent never perform this operation.

Feeding animal and poultry birds

Data showed that (66.67%) farm women sometime perform this operation, followed by equal proportion of farm women (16.66%) always and never performance of this operation.

Care of livestock

Data showed that half (50.00%) of farm women sometime perform this operation, followed by 41.66 per cent of farm women always performs this operation and 8.34 per cent never perform.

Milking and processing of milk

From the finding it is observed that (41.67%) of farm women sometime perform this operation and 33.33 per cent of farm women never perform and 25.00 per cent always perform this operation.

Collection of mahua flowers and seeds

Data showed that (49.16%) of farm women always perform this operation followed by 28.33 per cent farm women sometime perform this operation and 22.51 per cent never perform this operation.

Picking of Tendu leaves

From the finding it is observed that (66.67%) of farm women sometime perform this operation and 29.17 per cent of farm women always perform and 4.16 per cent never perform this operation.

Collection of other forest products

From the data it is observed that (58.33%) of farm women always perform this operation followed by 25.00 per cent of farm women sometime perform this operation and 16.67 per cent never perform this operation.

Marketing of milk and milk products

From the data it showed that most of the farm women (90.00%) never perform this operation only 10.00 per cent of farm women always perform this operation.

Marketing of collected forest produce

From the finding it is observed that (64.16%) of farm women sometime perform this operation and 33.34 per cent of farm women always perform and only 2.50 per cent never perform this operation.

From the above findings it may be said that the Tribal farm women always perform most of the farm operation.

It may be therefore be said that the Tribal women are indispensable in farming and no farm activity is carried out without their involvement. Women is real worker and males are mostly the supervisors.

5.2.2 Extent of role performance by farm women in farming

The categorization of farm women according to their extent of role performance is presented in Table 19.

The extent of role performance of farm women revealed that majority of them (48.33%) have medium level of role performance followed by 32.51 per cent of them who found in high level of role performance category and only 19.16 per cent of them who were found in low level of role performance category.

Table 19. Distribution of respondents according to their role performance

Sr. No.	Role performance	Frequency	Percent
1	Low	23	19.16
2	Medium	58	48.33
3	High	39	32.51
Total		120	100.00

Thus, it could be inferred that majority of the respondents included in medium level of role performance category. The above finding goes with the finding of Tikhile (2001).

5.3 Relational Analysis

Efforts have been made to find out the relationship of selected personal, socio economic and psychological characteristics of farm women with their role performance in agriculture. The correlation of independent variables with the dependent variable worked out and tested for its significance.

Table 20. Coefficient of correlation of selected characteristics of respondents with their role performance

Sr. No.	Variables	'r' value
1	Age	-0.1986*
2	Education	0.0442 ^{NS}
3	Annual income	0.2028*
4	Land holding	0.2939**
5	Socio economic status	0.2013*
6	Size of family	0.2041*
7	Number of working family members	0.1925*
8	Value orientation	-0.0243 ^{NS}

*Significant at 0.05 level of probability

** Significant at 0.01 level of probability.

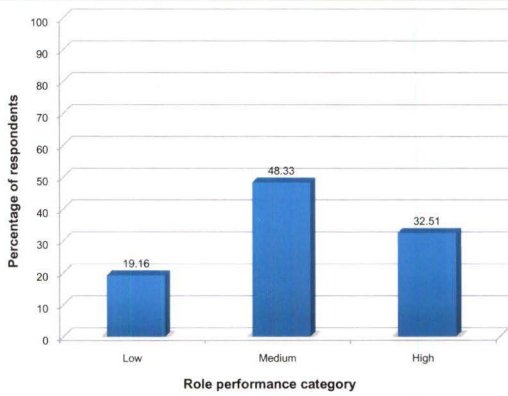


Fig. 11. Distribution of respondents according to their role performance

Relationship of selected characteristics of respondents with role performance

From the Table 20, it is found that the variable age was at negative and significant correlated with the role performance at 0.05 level of probability, but Land holding was significant at 0.01 level of probability with role performance of farm women. Annual income, Socio economic status, Size of family, Number of working family members positive and significant at 0.05% probability. The remaining independent variables namely education and value orientation did not show significant correlation with the role performance by farm women in agriculture therefore null hypothesis for these characteristics has been accepted.

5.4 Constraints faced by farm women with regards to role performance

The constraints faced by farm women with regards to, role performance were summed under the technical, communication, financial constraints. These constraints were tabulated and revealed in Table 21.

Tribal farm women have expressed some difficulties and constraints while performed in Agriculture and allied activities. Table 21 shows that major constraints recorded by tribal farm women were Little or no rest period (68.33%), Exertion to body due to over work (61.66%), Being women it is difficult to perform certain agriculture operation (55.83%), Lack of technical knowledge about improved farming activities (54.16%), Working under unfavorable condition (46.66%), Burden of family work (45.00%), No time for child care (43.33%), Health problem (37.50%), No fix hours of working (33.33%), Illiteracy percentage is high (33.33%), Marketing location at long distance (30.00%), Difficult to spent time for farm operation due to house hold work (27.50%)

Table 21. Constraints faced by farm women with regards to role performance

Sr. No.	Constraints	Frequency	Percentage
1	Burden of family work	54	45.00
2	Lack of technical knowledge about improved farming activities	65	54.16
3	Health problems	45	37.50
4	Working under unfavorable condition	56	46.66
5	Being women it is difficult to perform certain agriculture operations	67	55.83
6	Difficult to spent time for farm operations due to domestic work	33	27.50
7	No fix hours of working	40	33.33
8	Exertion to body due to over work	74	61.66
9	Little or no rest period	82	68.33
10	No time for child care	52	43.33
11	Illiteracy percentage is high	40	33.33
12	Marketing location at long distance	36	30.00

5.5 Empirical Model

An empirical model showing the anticipated relation was prepared and relation has been depicted in Fig. 13.

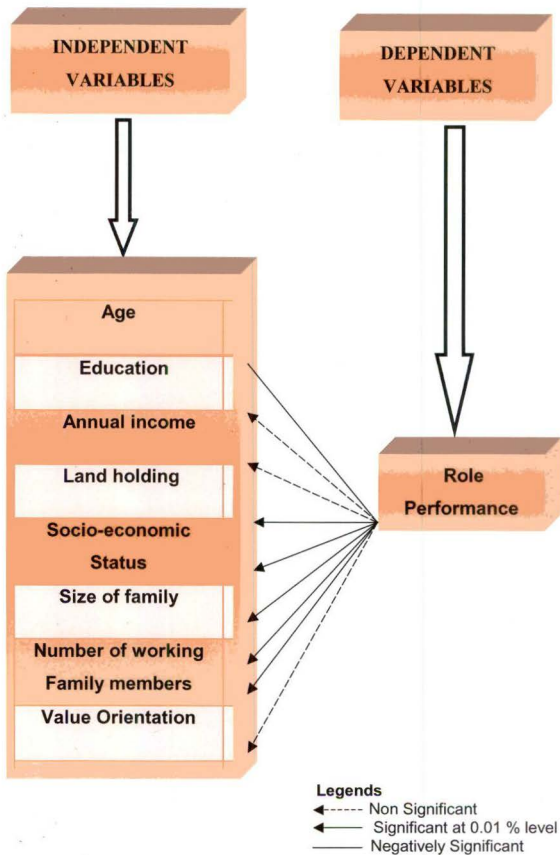


Fig. 12. Empirical model of study showing relationship between the independent and dependent variables

CHAPTER VI

SUMMARY AND CONCLUSIONS

As the life partner of man a women in India play the major role in maintaining the home and settlement of economic condition of the family. In addition to household activities women shoulder various activities of the farm. According to FAO (1991). "Most of the farmers in India are women" and they spend more hours in agriculture rather than men. Today 44 per cent of world's food is produced by women which indicates how important is their role in farming. Rural women in general and farm women in particular are engaged in different activities. Agriculture without women means the trees without flowers and fruits. There is a tendency among most administrators and policy makers to see 'men as Farmers' and women as 'Farmers' wives' and highlight their 'Supportive role' rather than 'productive role' (Samanta, 1994). The present study entitled "Role performance of Tribal farm women in agriculture" was conducted in Akot Panchayat Samiti of Akola district.

6.1 Objectives of the study

- 1) To study the personal socio-economic and psychological characteristics of Tribal women.
- 2) To study the role performance of tribal women in farming.
- 3) To find the relationship between selected characteristics of tribal women with role performance.
- 4) To study the constraints faced by Tribal Farm women while performing role in agriculture.

The sample consisted of 120 farm women from 10 villages of Akot Panchayat Samiti. They were selected randomly and data collected personally with the help of structured interview schedule.

The characteristics of farm women studied under the set of independent variables were age, education, annual income, land holding, size of family, number of working family members, socio economic status and value orientation.

The dependent variable was role performance. The findings of present study are summarized below

6.2 Distribution analysis

6.2.1 Characteristics of farm women's

- 1) Majority of respondents in farming belonged to middle and old age category 36 to 50 years (53.33%) and above 50 years 25.00 per cent.
- 2) In case of education relatively higher percent of respondents (34.17%) were illiterate and 18.33 per cent functionally literate .
- 3) Regarding their annual income majority (30.84%) of the respondents had their yearly annual income in the range of Rs. 15,001 to 30,000.
- 4) In case of land holding (36.67%) of respondents had small land holding.
- 5) Relatively majority (35.00%) of respondents belonged to medium level of socio economic status.
- 6) Majority of respondents (58.33%) had medium size of family
- 7) Majority of respondents (48.33%) had 3-4 number of working family members
- 8) Majority of respondents (54.17%) had medium value of orientation.
- 9) Majority of the respondents had (48.33%) medium role performance in agriculture.

6.2.2 Relational analysis

The findings of the relational analysis of the selected characteristics of respondents with role performance have been summarized as below.

Role performance

a) Correlation coefficients

Independent variables namely age found to be negatively significant with the role performance, annual income, land holding, socio economic status, size of family, number of working family members found to be significant with the role performance whereas education and value orientation did not show significant correlation.

CHAPTER VII

IMPLICATIONS

Implications emerging from this investigation are reported in this section in two parts. In first part the implication for action is concerned and in second part implications for future research is given.

The findings of this study may be useful to the administrators, researchers, extension workers and social workers.

7.1 Implications for Action

1) Implication for tribal farm women

It is suggested that farm women should attend Krishi Melawa, Agriculture exhibition, educational tours, crop demonstrations and other agricultural programme to require scientific farm information.

2) Implication for extension worker

It is observed that Korku tribals are very bashful in nature and hesitate to meet the strangers. In such a situation it is very difficult to execute extension activities in tribal areas. Therefore, it is necessary for extension workers to develop more and more support with tribals by extravagant use of honesty and willingness towards tribals, it will be helpful for extension workers to come closer with the gratefulness of Korku tribals. That will make the agricultural developments easy.

3) It is suggested that the latest agriculture information should be given to farm women through women extension worker for its effective implementation among them.

4) It is also suggested that the farm women contacted with the extension agencies and concerned departments so that the farm women can

perform their role more effectively and thus can increase their agricultural production.

- 5) As regards to role performance it is seen that most of the farm women were engaged in jobs like weeding, sowing, harvesting, cleaning of fields, storing of grains etc. These operations involve low of physical strain. There is need to develop and introduce appropriate tools and technologies to minimize the physical strain involved in these operations.
- 6) It was clear from analysis that land holding, annual income, socio economic status, value orientation were important factors which showed non significant correlated with role performance in agriculture operations.

It is therefore suggested that these variables should be taken care off while working with farm women so as to accelerate both the transfer of technology and speed up the use adoptions. These variables are more important for programme executives supervisors and extension workers at operational levels. These are the indicators in assessing the role performance level of farm women.

7.2 Implications for future research

- 1) The findings of the study indicate that Tribal farm women are more involved in less mechanical jobs. The jobs requiring use of sophisticate tools, appliances and machineries are dominated by men. It may be implied that research will be worth while to develop appropriate technology and tools are operations like weeding and harvesting. Such research should be situation specific and need based.
- 2) Research efforts are also needed to develop tools appliances and machineries that could be easily operated by Tribal farm women. The

use of such tools, appliances and machineries will improve the effectiveness of work.

- 3) As mentioned earlier, the present study has been confined to small numbers of respondents i.e. 120 of Akot *Panchayat Samiti*. To be more realistic and in its true sense, it should encompass wider area with larger sample. Another study at different location may be planned with longer sample.
- 4) In the present study emphasis on role performance in farm activities. A comprehensive and micro study to assess various factor related with role performance be undertaken.

CHAPTER VIII

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1.	B.Sc. (Agri.)	2007	Second Class	MPKV, Rahuri	Agriculture and allied subjects

6. Research papers published (if any) : NIL
7. Field of Interest (in which you desire to work) : Teaching and Research in the Field of Agriculture

Place : Akola
Date : 28/05/2013


Signature of Student

APPENDIX-I
INTERVIEW SCHEDULE

Title : “Role performance of Tribal Women in Agriculture”

Name of the Researcher -**Miss. PAWAR PALLAVI SAINDAS**

PART- A

1) Name of the respondent:
.....

2) Village :
.....

a) Taluka:.....**b) District :**

3) Age : years

4) Education :

5)Annual income :.....:

a) Main occupation: :Rs

b) Subsidiary occupation :Rs

c)Total :Rs

6) Land holding:

a)Irrigated land Hectares

b)Rainfed land: :Hectares

c)Total :Hectares

7)Socio economic status:

Sr. No	Status	Item
I)	Education	1. Illiterate
		2. Can read only
		3. Can read and write
		4. Primary education
		5. Middle school
		6. High school and above
II)	Occupation	1.Unskilled labour
		2.Hunting/fishing
		3.Forest work
		4.Farm labour
		5.Skilled labour
		6 Industrial labour
		7. Farming
		8. Service
		9. Self employed
III)	Income(Rs)	1.Below poverty line
		2. 25,001-50,000
		3.50,001-1,00,000
		4.Above 1,00,000

IV)	Land(ha)	1. Below 1
		2. 1.1 to 2
		3 2.1 to 3.0
		4.3.1 to 4.0
		5.Above 4
V)	Source of production	1.Farm produce
		2.Vegetable and fruits
		3.Number of Trees(Mango/Tadi,geoge etc.)
		4.Fish ponds
		5.Bamboo works
VI)	Family types	1.Polygamous(more than 1 wife)
		2.Traditional family with other relatives as members
		3.Joined family
		4.Nucleus family
VII)	Material possession	A) Cost
		Table
		Chairs
		Utensil-earthen
		Carved dried fruits
		Aluminum
		Bronze
		Stainless still
		B) Cloths: Traditional
		Modern
		C)Other materials.
		Cycle
		Watch
		Torch
		Transistors
		Gun
		Musicalinstruments
		D) Instrumental Wooden
		Plough iron
		Harrow
		Hoe
		Sprayer
Duster		
Power sprayer		
Seed drill		
Bullock cart		

VIII)	House	1.Mud wall with hatched roof
		2.Mud wall with tills
		3.Mangalore tiles
		4.Pucca house with bricks and mud
		5.Cement house
		6.Well inside house
		7.Electric connection
		8.Biogas connection
IX)	Types of cultivation	1.Shifting
		2.Settled
X)	Livestock possession	1.Goats/Pigs/Poultry
		2.Cows/buffaloes/bullock
		3. Cross bred animals
XI)	Social and cultural participation	1.Post in Panchayat
		2. Opinion leader
		3. Local leader
		4.Priest

8)Size of family:

- a. Male : No
 b. Female : No
 c. Children : No
 d. Total : No

9) Number of working family members:

- a.Male : No
 b.Female : No
 C.Total : No

10. Value orientation:

Sr. No.	Items	SA	A	UDA	DA	SDA
1	'Mantras' have far reaching effects .if one can chant and recite accurately right "Mantras" on right occasion, he can produce miraculous effects.					
2	If one belies in anything as truly good, he is justified if he ruthlessly imposes it on others.					
3	Every event in a man's life has already been settled and determined by his fate.					

4	The good old days were golden.					
5	The caste system has been more virtues than vice.					
6	One should not have any faith in meetings, committees or corporate bodies' sines their members indulge in wrangling only and no effective work is ever done.					
7	Their cannot be any real relationship between massive Chinese attack and congregation of eight planets in the same year through some astrologers claim it to be so.					
8	All kinship relation should be maintain as they have been so far.					
9	In any organization, the decision of the head should be final as too many cooks spoil the broth.					
10	The present pattern of the education is better than farmer.					
11	A basic human tragedy is that man proposes but god disposes.					
12	People should be forced to contribute to national defense fund.					
13	It is better to disbelieve in what is not proved or tested but when proved it is to be relied on.					
14	To deny our past and break with it is to uproot the people and sapless dry up.					
15	It is better to rule in hell than to serve in heaven.					
16	Marriage within one's own caste should not be strictly pursued intercaste marriage should be favored.					
17	The judgement of tribunal of judges is better than that of a single judge.					
18	Those who say that they have been ghosts either distort the truth or tell a lie.					

- SA** :Strongly Agree
A : Agree
UDA :Un-disagree
DA :Disagree
SDA :Strongly disagree

PART –B

1)Role performance:

Sr. No	Items	Always	Some time	Never
A	Preparatory tillage			
1	Stubble collection and burning.			
2	Preparation of FYM.			
3	Application of FYM.			
4	Preparation of seedbed.			
B	Presowing and sowing operation.			
1	Selection of seed.			
2	Seed treatment with fungicide.			
3	Treatment of seed with cultures.			
4	Transport of seed load on head to field.			
5	Sowing of seed with seed drill.			
6	Dibbling of seeds.			
7	Transplanting.			
C	Intercultural operations.			
1	Thinning and gap filling.			
2	Hoeing with implements.			
3	Weeding of crops.			
4	Carrying weeds out of field.			
5	Irrigation to crops.			
6	Top dressing of fertilizers .			
D	Plant protection.			
1	Fetching water for preparation of insecticidal solution.			
2	Scaring of birds in fields.			
3	Field supervision.			
4	Spraying/dusting with sprayers/dusters.			
E	Harvest and post harvest.			
1	Harvesting of crops.			
a	Cutting cobs.			
b	Picking cotton and pods.			

c	Cutting of crops.			
2	Collection of harvested crops.			
3	Carrying farm produce on head load.			
4	Threshing.			
5	Winnowing.			
6	Storage of seeds.			
7	Grain processing .			
8	Marketing of farm produce.			
F	Allied activities.			
1	Watching the farm.			
2	Feed and fodder collection .			
3	Feeding animals and poultry birds.			
4	Care of livestock.			
5	Milking and processing of milk.			
6	Collection for Mahua flowers and seeds.			
7	Picking of Tendu leaves.			
8	Collection of other forest products.			
9	Marketing of milk and milk products.			
10	Marketing of collected forest produce.			

Problems or constrains in role performance

a) Technical

b) Communication:

c) Financial

APPENDIX-II

Scale for measurement of socio-economic status of the tribals

(Dhanokar and Ingle, 1999)

Sr. No.	Status	Item	Score	Weightage
1	2	3	4	5
1	Education	1. Illiterate 2. Can read only 3. Can read and write 4. Primary education 5. Middle school 6. High school and above	0 1 2 3 4 5	7.57
2	Occupation	1. Unskilled labour 2. Hunting, fishing 3. Forest work 4. Farm labour 5. Skilled labour 6. Industrial labour 7. Farming 8. Service 9. Self employed	2 2 3 4 4 6 6 8 9	7.21
3	Income (Rs.)	1. Upto 2000 2. 2001 to 4000 3. 4001 to 6000 4. Above 6000	1 2 3 4	6.50
4	Land (ha)	1. Below 1.00 2. 1.10 to 2.00 3. 2.10 to 3.00 4. 3.10 to 4.00 5. Above 4.00	1 2 3 4 5	6.21
5	Source of production	1. Farm produce 2. Vegetable and fruits 3. Number of trees (Mango/tadi/gorga etc.) 4. Fish ponds 5. Bamboo works	5 4 3 2 1	4.78
6	Family type	1. Polygamous (more than wife) 2. Traditional family with other relatives as members 3. Joint family 4. Nuclear family	4 3 1 1	4.50
7	Material possession	1. Household i. Cot ii. Tables iii. Chairs	1 1 1	3.07

		iv. Utensils, carved of dried fruits	1	
		v. Earthen pots	1	
		vi. Bronze	2	
		vii. Aluminum	2	
		viii. Stainless steel	2	
		2. Clothes		
		i. Traditional	1	
		ii. Modern	2	
		3. Other materials		
		i. Cycle	1	
		ii. Watch	1	
		iii. Torch	1	
		iv. Transistor	1	
		v. Gun	1	
		vi. Musical instrument	1	
		4. Implements		
		i. Wooden plough	1	
		ii. Iron plough		
		iii. Harrow	1	
		iv. Hoe	1	
		v. Sprayer	1	
		vi. Duster	1	
		vii. Power sprayer	1	
		viii. Seed drill	1	
		ix. Bullock cart	1	
			1	
8	House	1. Mud walls with thatched roof	1	
		2. Mud wall with tilth roof	2	
		3. Mangalore tiles	3	
		4. Pucca house with bricks and mud	4	2.71
		5. Cement house	5	
		6. Well inside the house	1	
		7. Electric connection	1	
		8. Bio-gas connection	2	
9	Type of Cultivation	1. Shifting	1	1.21
		2. Settled	2	
10	Livestock possession	1. Goats/ pigs/ poultry	1	
		2. Cows/ buffaloes/ bullocks	2	
		3. Crossbred animals	2	
11	Social and cultural participation	1. Post in panchayat	1	1.00
		2. Opinion leader	2	
		3. Local leader (Mukhia)	3	
		4. Priest	4	

(Source: Tribal Res. Bull, 1999).

Pareek and Chattopadhyay (1965) made value orientation scale

Sr. No.	Items	SA	A	UDA	DA	SDA
1	'Mantras' have far reaching effects .if one can chant and recite accurately right "Mantras" on right occasion, he can produce miraculous effects.					
2	If one belies in anything as truly good, he is justified if he ruthlessly imposes it on others.					
3	Every event in a man's life has already been settled and determined by his fate.					
4	The good old days were golden.					
5	The caste system has been more virtues than vice.					
6	One should not have any faith in meetings, committees or corporate bodies' sines their members indulge in wrangling only and no effective work is ever done.					
7	Their cannot be any real relationship between massive Chinese attack and congregation of eight planets in the same year through some astrologers claim it to be so.					
8	All kinship relation should be maintain as they have been so far.					
9	In any organization, the decision of the head should be final as too many cooks spoil the broth.					
10	The present pattern of the education is better than farmer.					
11	A basic human tragedy is that man proposes but god disposes.					
12	People should be forced to contribute to national defense fund.					
13	It is better to disbelieve in what is not proved or tested but when proved it is to be relied on.					
14	To deny our past and break with it is to uproot the people and sapless dry up.					
15	It is better to rule in hell than to serve in heaven.					
16	Marriage within one's own caste should not be strictly pursued intercaste marriage should be favored.					
17	The judgement of tribunal of judges is better than that of a single judge.					
18	Those who say that they have been ghosts either distort the truth or tell a lie.					

SA :Strongly Agree
 A : Agree
 UDA :Un-disagree
 DA :Disagree
 SDA :Strongly disagree

