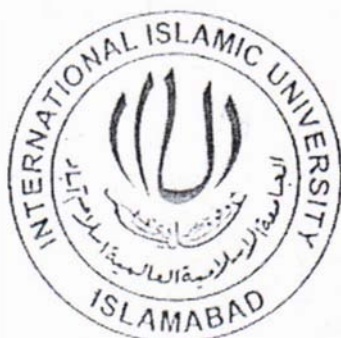


ROLE OF WOMEN IN CROP PRODUCTION AND LIVESTOCK FARMING IN DISTRICT JEHLUM



Submitted By:

Hina Kanwal

89-FSS/MSCSOC/FO9

Supervised By:

Mr. Akhlaq Ahmad

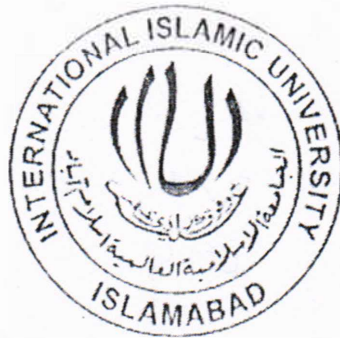
81A

**DEPARTMENT OF SOCIOLOGY
FACULTY OF SOCIAL SCIENCES
INTERNATIONAL ISLAMIC UNIVERSITY
ISLAMABAD, PAKISTAN**

2011



**ROLE OF WOMEN IN CROP PRODUCTION AND
LIVESTOCK FARMING IN DISTRICT JEHLUM**



BY:

Hina Kanwal

89-FSS/MSCSOC/FO9

**A thesis submitted in partial fulfillment
Of the requirement of the degree of**

Master of Science

In

Sociology

**DEPARTMENT OF SOCIOLOGY
FACULTY OF SOCIAL SCIENCES
INTERNATIONAL ISLAMIC UNIVERSITY
ISLAMABAD, PAKISTAN**

2011

TH-8709

Accession No.

MS

301

HIR

1. Sociology

2. Social systems

DATA ENTERED

Amz 05/07/13

INTERNATIONAL ISLAMIC UNIVERSITY, ISLAMABAD
FACULTY OF SOCIAL SCIENCES
DEPARTMENT OF SOCIOLOGY

It is certified that thesis submitted by Ms. Hina kanwal Reg. No. 89-FSS/MSCOG/F09 titled "Role of women in crop production and livestock farming in district Jhelum" has been evaluated by the following viva voce committee and found that thesis has sufficient material and meets the prescribed standard for the award of Degree of "Master in Science" in the discipline of Sociology.

Viva Voce Committee

Supervisor:

Mr. Akhlaq Ahmad



External Examiner:

Dr. Zahid Javed




Internal Examiner:

Dr. Amber Ferdoos



Head Department of Sociology:

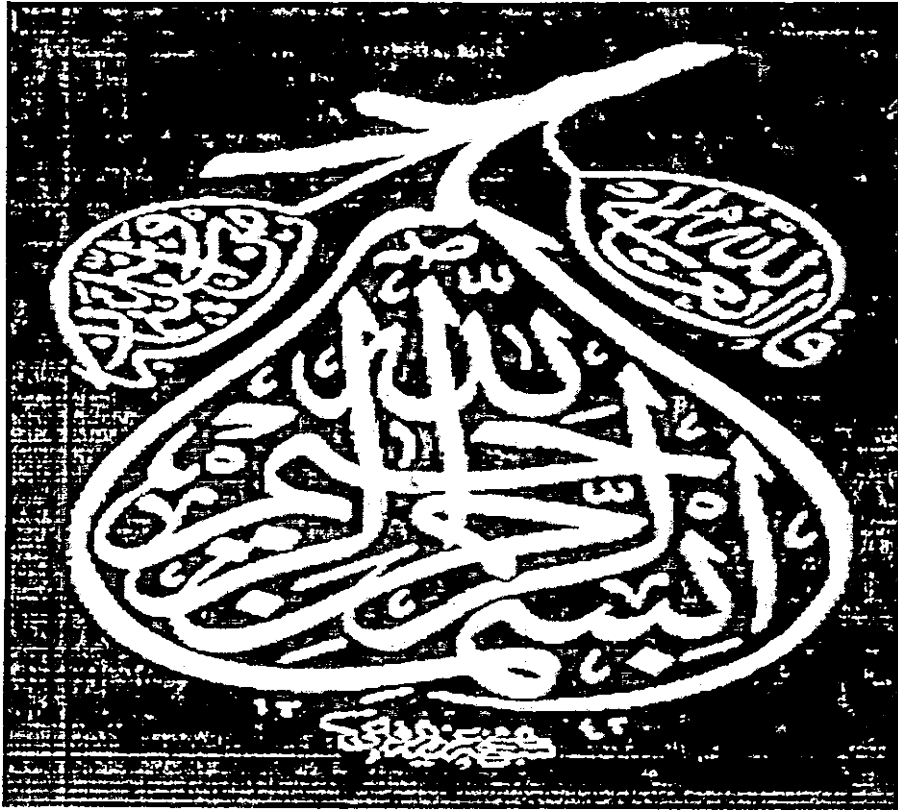
Mr. Akhlaq Ahmad



Dean Faculty of Social Sciences:

Professor Dr. Nabi Bux Jumani





*“IN THE NAME OF ALLAH, most Gracious, most
compassionate”*

DEDICATION

Dedicated to my beloved parents, my elder brothers Muhammad Adnan Anjum and Asad Jahangir and also my supervisor Mr. Akhlaq Ahmad whose prayers and guidance has been more than an asset for me

Abstract

The study highlights the role of women in crop production and livestock in tehsil Pind Dadan Khan District Jhelum. The research is based on quantitative research. The main objective of the study is to assess the contribution of women in cultivation of major crops and growing vegetables, livestock farming and household activities. There were 260 respondents who were randomly selected from tehsil Pind Dadan Khan District Jhelum for getting relevant data. Interview schedule was employed as a tool of data collection. It is argued that rural women in Pakistan have been actively involved in agriculture and livestock. Rural women's work ranges from crop production to harvesting operation, from livestock rearing to raising babies. Mostly respondents had primary education who were involved in crop production activities consisting of preparation of land, sowing of crops, cutting and chopping of fodder, harvesting, grain storage and milling of grain. Wheat, rice and bajra were common crops in the study area. Respondents were also involved in livestock care such as cleaning of animal and animal room, preparation of feed, housing the animals for milking, feeding, milking and making of dung cake. Their daily routine consisting of cooking, cleaning and other domestic chores. From crop production to livestock rearing, rural women are expected to regularly engaged. The study shows that rural women had less power to make decision about crop production and livestock. Despite such huge contribution, their role has yet not been recognized. The study suggested a fair treatment to the rural women and calls for social upliftment by enhancing education, employment, training and health care facilities to improve their better involvement in these activities.

Acknowledgement

All acclamation and appreciations are for almighty Allah, the most beneficent the merciful the gracious and the compassionate whole bounteous and exaltation flourished my thoughts and thrived my ambition to have cherish fruit of my modest offer in form of this manuscript from the blooming spring of blossoming knowledge. My special praise is for the Holy Prophet Hazrat Muhammad (PBUH) the most perfect and exalted among and of ever born on the surface of earth that is forever, a torch of guide and knowledge for humanity as a whole.

I am thankful to my supervisor **Mr. Akhlaq Ahmad**, who helped me and provided me guidance in completing my thesis I offer my special and sincere thanks to the department of sociology, my all teachers and faculty members for their help and facilitation during the conduct of this research and preparation of thesis. Thanks to my friend who helped me in completing thesis. I feel my proud privilege to mention the feelings of obligations towards my affectionate family and especially my elder brothers **Mr. Muhammad Adnan Anjum** and **Asad Jahangir** who encouraged and inspired me for higher education and supported me financially and morally through out of my studies.

Hina kanwal

TABLE OF CONTENTS

Chap. #	Titles	Page. #
	Dedication	
	Abstract	
	Acknowledgement	
1.	INTRODUCTION	1
1.1	Statement of the problem	10
1.2	Objectives of the study	10
1.3	Sociological significance	11-12
2.	Literature Review	13
3.	Methodology	27
3.1	Topic	27
3.2	Population of study	27
3.3	Criteria for respondents	28
3.4	Study design	28
3.5	Sampling procedure	28
3.6	Sampling technique	29
3.7	Sample size	29
3.8	Data collection	29
3.9	Tools for data collection	29
3.10	Pre-testing	30
3.11	Data analysis	30
3.12	Univariate data	31
3.13	Percentage	31
4.	RESULTS AND DISCUSSION	32
5.	SUMMARY, FINDINGS, CONCLUSION & SUGGESTIONS	74-81
6.	REFERENCES	82
7.	APPENDIX	89

LIST OF TABLES

Table. #	Titles	Page. #
4.1	Age of the respondents	32
4.2	Marital status of the respondents	33
4.3	Education of the respondents	34
4.4	Type of family of the respondents	35
4.5	Husbands' age of the respondents	36
4.6	Husbands' education of the respondents	37
4.7	Family size of the respondents	38
4.8	Children of the respondents	39
4.9	Husbands' occupation of the respondents	40
4.10	Getting up time of the respondents	41
4.11	Land own by respondents or respondents' husbands	42
4.12	Fertility of land of the respondents	43
4.13	Irrigation of land available to the respondents	44
4.14	Cultivation of land	45
4.15	Size of land holding in (acres) of the respondents	46
4.16	Under cultivation land of the respondents	47
4.17	Barren land of the respondents	48
4.18	Modes of tenancy of land of the respondents	49
4.19	Types of crops in Rabi and Kharif season	50
4.20	Time spend in the field by the respondents	51
4.21	Annual income from crop production of the respondents	52
4.22	Involvement of respondent in crop production activities	53-54
4.23	Decision making of the respondents in crop production activities	55-56
4.24	Types and No of animals in the house of the respondents	57
4.25	Keeping animals owned by the respondents	58
4.26	Time spend in taking care of livestock	59
4.27	Daily involvement of the respondents in livestock care	60-61
4.28	Monthly income of the respondents from livestock	62
4.29	Consultation with respondents about livestock activities	63-64
4.30	Involvement of the respondents in household activities	65-66
4.31	Involvement of the respondents in child related activities	67
4.32	Respondents' spending of time with family	68
4.33	Amount taken by the respondents for household expenditure from husbands	69

4.34	Handling family matters of the respondents by whom	70
4.35	Involvement of the respondents in decision making about family matters	71
4.36	Time of rest in a day	72
4.37	Sleeping time of the respondents	73

Abbreviations

EIU	Economist Intelligence Unit
ESCAP	Economic and Social Commission for Asia and the Pacific
PARC	Pakistan Agriculture Research Council
GoP	Government of Pakistan
PFI	Pakistan Forest Institute
GDP	Gross Domestic Product
FAO	Food and Agriculture Organization
SOFA	Status of Forces Agreement
NTFPs	Non Timber Forest Products
RDA	Recommended Dietary Allowance
WTO	World Trade Organization
IFAD	International Fund for Agricultural Development

CHAPTER # 1

INTRODUCTION

INTRODUCTION

Agriculture is the deliberate effort to modify a portion of Earth's surface through the cultivation of crops and the raising of livestock for sustenance or economic gain (Rubenstein, 2003).

It is also an art and science of crop and livestock production. In its broadest sense, agriculture comprises the entire range of technologies associated with the production of useful products from plants and animals including soil cultivation, crop and livestock management, and the activities of processing and marketing (Berry, 1986).

Agriculture includes farming in all its branches and among other things includes the cultivation and tillage of the soil, dairying, the production, cultivation, growing, and harvesting of any agriculture or horticulture commodities, the raising of livestock or poultry, and any practices performed by a farmer on a farm as a incident to or in conjunction with some farming operations, but does not include the manufacturing or processing of sugar, coconuts, abaca, tobacco, pineapples or other farm products (Rileco, 1968).

The agriculture sector is not only important at national level but also at international level. About fifty years back, the agriculture sector was neglected both in the developed and under developed countries of the world. It was regarded as residual reservoir

particularly of labor for employment in industries. In 1960's the importance of agriculture was realized and adequate attention was given to this sector. The importance of balanced growth of agriculture and industrial sectors was stressed by the development economists. In 1970's and since the beginning of 1980's, agriculture in the process of development, has gained increased significance (Bhatti, 2009).

The agriculture sector produces the bulk of raw material for country's manufacturing sector as well. Similarly, it generates around two-third of the total export earning both directly and indirectly. The agriculture sector is seen as a core indicator of socio-economic fabric of the society (Humayun, 2007).

Women are a vital human resource in the improvement of the quality of life in the developing world, it has been observed that in the home and land as producers of goods and services women contribute directly to national, social and economic progress. Women along with men are the main actors in feeding the world. Because in many, if not most, rural societies women are, in fact, farmers; often bear the major or sole responsibilities for crop production. A number of research studies had proved women's participation in various agricultural activities having complementary roles, sharing activities related to crop production (Javedi, 2006).

Rural women comprise more than one quarter of the world population and perform 30% of agriculture work in industrialized countries while this proportion is much higher in developing countries. In countries such as Egypt, Morocco, Somalia and Turkey women

vegetables. Women's participation is the highest in cotton production in Punjab. Picking cotton is exclusively a women's task. Their participation is the lowest in sugarcane production (PARC, 1988).

These women work longer than men do. Surveys have revealed that a woman works 12 to 15 hours a day on various economic activities (ESCAP, 1997).

Women from an average farm family remain extremely busy during the two farming seasons in sowing and harvesting. In some ethnic groups, especially in the southern regions of Pakistan, a husband may marry more than one woman to supply additional farm labour (PARC, 1988).

In the rural areas of Pakistan, agriculture land and any other type of property is owned by men and they use family labour including women for producing crops. Women are not paid but are fed, clothed and provided dowry by their fathers, brothers, and other male members within the family at the time of marriages ornaments from cradle to grave and they are not mourned as men are. In recent years some rural families have been educating their female members so that chances of their marriages in well to do families could be ensured (Junejo, 2007).

In Barani (rainfed) agriculture, where crop production is not sufficient to meet subsistence needs of the households, men have traditionally sought employment in the non-farm sector. As a result, women have to take over a substantial burden of the work in

agricultural production. Moreover, dramatic growth rates in cotton production have generated tremendous demand for female labour. Such production-labour interactions have led to the increasing feminization of agriculture (GoP, 1995).

The role of women in forest resources management is very important. Collection of forest products to meet subsistence requirements and also to augment family's income is generally the responsibility of women. Awareness about trees, shrubs and grasses is higher amongst women than in men because women devote more time than men to collect forest produce to meet family needs. About one-third of poor women are directly involved in forestry or forestry related works in the unorganized sector (Nanavaty, 1996).

Wood based resources are an important part of Pakistan's economy even though the country has only 4.26 million hectares under forest cover (PFI 1992).

Rural women in Pakistan use forests as a source of items essential for survival of their households. Fetching water and collecting fuel wood for cooking and fodder for domestic animals come in the daily routine work of rural Pakistani women grazing animals is a very important component of the daily work life of rural women (PARC, 1988).

Livestock is the collective term for farm animals. Livestock is the term used to refer (singularly or plurally) to a domesticated animal intentionally reared in an agricultural setting to make produce such as food or fiber, or for its labour (Lyson, Isaac, 1986).

Livestock farming plays an important role in the economy of the country and is at the heart of the rural socioeconomic system. It is a net source of foreign exchange earnings contributing significantly in this vital area. Most importantly, more than 8 million rural small and landless farmers raise livestock, making it an ideal sector for attacking rural poverty in the country. Furthermore, as livestock make s up almost 50 % of the agriculture value added, the future high growth in agriculture is expected to be led by the livestock sector (K.M, 1984).

Agriculture continues to be the largest sector of economy and is currently contributing 23.1 per cent to the gross domestic product (GDP). Livestock is the most important sub-sector of agriculture with national GDP contribution of 10.8 per cent and 46.8 per cent to the agriculture value added. Livestock also contributes significantly towards national exports and 8.5 - 9.0 per cent of total exports belong to this sector. This sector provides raw material for the industry and livestock creates market and capital. It serves as a social security for the rural poor as they can cash it at the time of their need. Livestock also provides security against crop failure particularly in Barani areas (Dr. M. Afzal, 2006)

Since the last decade or so the contribution of women in dairy production is getting due recognition. It is realised that women handle most of the critical jobs like feeding, milking, care of newborn and administration of medicine. However, there is variation in involvement of women between socioeconomic groups and regions, as indicated earlier. In tribal, low rainfall, semi-arid and arid areas much of the work with regard to animal management has to be looked after by women due to migration of males for work.

However in many cases the income from dairy animals does not remain in the hands of women and neither does the decision regarding sale and purchase (Rangnekar, 1996).

However, due to the move to develop women's dairy co-operatives in many states in India women have better control over sale of milk and use of income from it. Another positive development is recognition of women as members of dairy cooperative societies, so that the price of milk supplied to the society can be paid to the women directly. Till a few years ago women were not made registered members of the dairy co-operative society (the registration was in the name of the husband and thus he collected the money for milk produced and supplied by the women). While the contribution of women to the animals' management is recognized, the experiences of women regarding animal production and diseases and their perceptions are ignored (Rangnekar, 1996).

In Pakistan, women are responsible for 60% to 80% of the feeding and milking of cattle. Women in Sindh and Punjab spend from one-fifth to a quarter of their daily working hours in livestock related activities. Dairy production is very important for women in most provinces except Baluchistan where the climate is not favorable to dairy cattle raising. With the exception of few large cities, all fresh milk consumed in Pakistan is based on small domestic production run and managed by women (ESCAP, 1996).

Studies indicate that goat keeping and backyard poultry production are inversely related to socioeconomic status and are largely women's domains. The majority of poor,

underprivileged and landless families in rain fed and underdeveloped areas own goats and or backyard poultry. These are again good examples of low external input production systems and recycling of material. Goat keeping is totally managed by women and children except for the pastoralists, who keep large flocks of goat (FAO, 1991).

However, the sale and purchase of animals is carried out by men in most cases, except in tribal communities where marketing is also handled by women. With the substantial increase in meat prices in India goats have become a good source of income, although marketing of goats is not properly organized and is totally in the hands of middlemen. Much of selling of goats in rural areas is to meet contingencies. Hence, goats are usually looked upon as an asset that is easy to convert into cash and an animal, which can be conveniently handled and managed at low cost (FAO, 1991).

Poultry farming is one of the major sources of rural economy. The rate of women in poultry farming at household level is the central in poultry industry. Even though rural women are not using modern management techniques, such as vaccination and improved feed, but their poultry enterprise is impressive. Every year, income from poultry farming has been rising. In order to generate more and more income, rural women often sell all eggs and poultry meat and left nothing for personal use. Due to poverty and lack of required level of proteins most of women have got a very poor health. Most of women suffer from malnutrition (Jamali, 2009)

Restructuring of the farm economy also has an effect on women's exposure to agriculture

tasks. During the time of economic crisis, farm women increased their participation in alternative agriculture enterprises, such as chicken and egg production to provide additional income. The "third-shift" phenomenon in which farm women attempt to balance home, employment away from the farm, and farm work. Women in rural communities are often sandwiched between caring for elderly care (Delworth, 1993).

The role of women is multi-dimensional in rural agriculture settings. Besides looking after their children, they are immensely engaged in tasks like cooking, cleaning, fetching water, washing clothes, fuel gathering, feeding and cleaning the livestock and milking the cows and the buffaloes.

1.1 STATEMENT OF THE PROBLEM

Women are a vital human resource in the improvement of the quality of life in the developing world, it has been observed that in the home and land as producers of goods and services women contribute directly to national, social and economic progress. Women are the backbone agriculture workforce but worldwide their hard work have mostly been unpaid. They do not have the most tedious and back-breaking tasks in agriculture, animal husbandry and homes. There is need to develop an understanding of the role and activities of rural women in agriculture and livestock. There is need to educate rural women and give health facilities so that better result can be achieved. On the other hand rural women have less decision making power regarding agriculture, livestock and other household activities so there is need to be aware about their basic rights and give them opportunities to make decision like men.

1.2 OBJECTIVES OF THE STUDY

This research has following objectives.

- To study the socio-economic characteristics of the respondents
- To study the contribution of women in cultivation of major crops, growing vegetables and livestock farming
- To elaborate participation of women in decision making about cultivation of crops, livestock and household activities.

- To suggest appropriate measures for the better involvement of women in agricultural activities and livestock.

1.3 SOCIOLOGICAL SIGNIFICANCE

Women produce between 60 and 80 per cent of the food in most developing countries and are responsible for half of the world's food production, yet their key role as food producers and providers, and their critical contribution to household food security, is only recently becoming recognized. Women's limited access to resources and their insufficient purchasing power are products of a series of inter-related social, economic and cultural factors that force them into a subordinate role, to the detriment of their own development and that of society as a whole.

- The study indicates rural women are major contributors in agriculture. Her work ranges from crop production, livestock and household activities. From household and family maintenance activities, to transporting water, fuel and fodder. Despite such a huge involvement, her role and dignity has yet no been recognized.
- To women's literacy rates, and to improve the levels of female education ratio, other urgent measures required. A separate education policy for women may serve the purpose.
- Women are entirely absent from the state structures and decision-making bodies that have the potential to introduce structural changes.

- The level of women participation in decision-making process not only varies from region to region but also from one activity to another. Male dominance in decision making in the household, livestock and crop production have continued even in areas where women are the key providers of labour because the influence of women has not been recognized due to lack of education, less awareness of their civic/ human rights, traditional norms, lack of credit facilities from the Government.
- Keeping in view the contribution of rural women in livestock management, crop production and household activities the present study focuses on their share in decision making regarding these activities and also on identification and ranking of the factors affecting their contribution in decision making.

CHAPTER # 2

REVIEW OF LITERATURE

Review of Literature

A literature review is a body of text that aims to review the critical points of current knowledge including substantive findings as well as theoretical and methodological contributions to a particular topic. Literature reviews are secondary sources, and as such, do not report any new or original experimental work.

According to a study by Pesticide Action Network Asia and the Pacific (2005) more than half of the world's food is grown by women. Women's work is both wide-ranging and multifaceted throughout the year, and they perform multiple tasks in the sphere of agriculture. Women's indigenous knowledge and skills are vitally necessary for food production and sustainable agriculture. Women's intimate knowledge of seed preparation and soil management, plant protection and pest control, post-harvest processing and storage, animal husbandry, as well as food processing and meal preparation is crucial to ensure food security through sustainable agriculture.

Literature supported that women involvement in agriculture operation varies from country to country and region due to the change in social structure of every country (FAO, 2002). They are equally involved in pre-harvest agricultural activities like preparation of soil, planting, weeding, harvesting etc and post-harvest activities like storage of grains (Saini & Koppen, 2001).

While working shoulder to shoulder with men, they really supplement their efforts in cultivation of the crops right from the preparation of soil to the post-harvest operation.

They are equally efficient in seed bed preparation, tilling, sowing, fertilizer application, fodder cutting, weeding, interculturing, transplanting husking, threshing, drying, storing cereals and fodder, fruits and vegetables (Habibi, 1996).

Malik and Majid (2004) described that there was a wide range of discrimination in performing activities in agriculture sector, where women had to perform multi-dimensional roles that were neither recognized nor rewarded in kinds and coins.

According to Panhwar (1988), Women in Pakistan agriculture can perform the following functions as good as men:

- Transplanting of vegetables, rice, and bare root plants.
- Intercultivation of vegetable of removal of weeds and unwanted growth.
- Picking of cotton, small fruits, vegetables, berries of all types,
- Harvesting of wheat, rice and other crops.

SOFA (2011) indicates that women make essential contributions to the agricultural and rural economies in all developing countries. Their roles vary considerably between and within regions and are changing rapidly in many parts of the world, where economic and social forces are transforming the agricultural sector.

FAO (1995) stated that as paid or unpaid labour, women are heavily involved in subsistence crop production, and a few activities related to cash crop production. Although there are no clear-cut "women's" crops as might exist in some countries of the

world, a gender division of labour is observed in the farming systems of the region based on the nature of the agricultural enterprise itself, and on the operations used in the production process. Consequently, men are involved in capital-intensive mechanized crops and operations (mechanical land preparation, irrigation, spraying, mechanical harvesting, tractor-driving, etc.), while women are responsible for the more labor-intensive work that requires painstaking physical effort, patience and perseverance. Thus, women use their hands or simple tools to broadcast seeds and fertilizers, hand weed and harvest, pick fruits and vegetables manually, and carry produce on their backs. They likewise spend many long hours in post-harvest activities such as threshing, winnowing, cleaning, sorting, grading and bagging. With some exceptions notwithstanding, women in the region participate very little in land preparation, transportation and marketing of agricultural produce. Despite the above gender division of labour, it is also common for women and men to work side-by-side together in the field, and assist one another in various crop, livestock and other tasks when the need arises, especially during peak season.

According to Rao (2006) India has a predominantly agrarian economy 70% of her population is rural; of those households, 60% engage in agriculture as their main source of income. It has always been India's most important economic sector. In this important agricultural sector woman plays a vital role, because it is largely a household enterprise. Women in India are major producers of food in terms of value, volume and number of hours worked. Nearly 63% of all economically active men are engaged in agriculture as compared to 78% of women. Almost 50% of rural female workers are classified as

agricultural laborers and 37% as cultivators. About 70% of farm work was performed by women. It is observed that women play a significant and crucial role in agricultural development including, main crop production.

According to Shiva (1991) rural Indian women are extensively involved in agricultural activities. However the nature and extent of their involvement differs with the variations in agro production systems. In over all farm production, women's average contribution is estimated at 55% to 66% of the total labor with percentages, much higher in certain regions. In the Indian Himalayas a pair of bullocks works 1064 hours, a man 1212 hours and a woman 3485 hours in a year on a once hectare farm, a figure that illustrates women's significant contribution to agricultural production.

IFAD (2005) stated that in Bangladesh, agricultural officers said that nearly 20 to 50 percent of the women from poorer Muslim households regularly worked in transplanting, irrigation and related paddy production activities. The traditional gender roles 'women do post-harvest work' and 'men do field labor' have changed during the past 10-15 years, largely due to extreme poverty in some areas and change in social norms and traditions.

According to Jordans (1997) said that, "In some areas in north-west Bangladesh, women equally share all tasks in rice production, even the presumably male's task of irrigation".

Jahan (1990) cited in his study that FAO reported about 60-70 percent of women from landless and near landless households work as agricultural wage laborers.

According to Cockburn (1993) the most extensively used agricultural implements by women, both in wheat and groundnut harvesting, processing and in day-to-day farm tasks are wooden and metal tringles, krrai, sangle and datri. Datri is the most widely and extensively used implement in barani farming for daily livestock and crop chores by women. Men also use datri but much less often, as they do not do most of daily cutting of fodder or the maintenance of growing crops.

According to Chaney (1987) In the rain fed areas of Punjab, women contribute to almost all of 22 identified crop tasks with the major contribution to seed preparation, collection and application of farmyard manure, husking maize and storage.

Men's involvement is higher in the early stages of cultivation such as field preparation. Men also monopolize mechanical work. For example, they carry out mechanical threshing (with animal or fuel-powered machines), while hand-threshing is a women's domain of task. Driving tractors and watering the fields are also men's job. Food processing and storage is an area where women's participation is considerably higher than men's (FAO, 2009)

According to GoP. (1995) rural women of Pakistan have undertaken the following major farming activities:

- Provide substantial labour in farming practices like: plantation and harvesting, cleaning and storing of farm products.

- Extend help to the male family members on the farms to perform thinning and hoeing of maize and cotton, earthing up and digging of potatoes and peanuts, line planting of wheat, stripping and planting of sugarcane, cutting fodder etc.
- When agriculture produce is brought home from the farm, women are involved in post-harvest operation and for their safe storage and to protect the produce from fungal diseases, insect pests and rodents etc.

FAO (2009) stated that women in the developing world often assume the role of “care taker” – for their families as well as for the other people and things around them. In some parts of the world, women rely on forest-related resources for the well-being of all who fall under their care. This effort typically involves the gathering of forest products for such purposes as fuel, fencing, food for the family, and fodder for the livestock (FAO, 2009).

According to Singh (2001) the women have to spend major part of their time and have to walk long distances daily to collect fuel wood, fodder and other Non Timber Forest Products (NTFPs) from forests. While men are interested in commercial forestry, women are concerned with biodiversity conservation and multiple products-based management which ensures fuel wood, fodder, water and other NTFPs.

According to Government of Pakistan (GoP) marine fisheries in Pakistan engage some 90,000 people. They operate mainly from Karachi and the coast of Sindh. The export of fish and fishery products, particularly shrimp, is an important source of foreign currency.

Fisheries is an area of interest to women. It has been found that traditionally, women were involved in fishing business as entrepreneurs. But presently with the expansion of fishing business into an industry, women no longer manage the business as they did in the past. Rather they are involved in peeling shrimps, weaving nets, making fish baskets, etc. as labourers (GOP, 1995).

Livestock production is an important and integral component of farming systems in the Near East region. In nomadic and semi-nomadic societies, livestock rearing is the main production activity and the source of most, if not all, economic output. Livestock also contributes a large proportion of the income of farmers with small-landholdings, which are by far the most common type of farms in the region.

Women's work in animal husbandry is significant. In general, women are more involved in livestock production - especially small ruminants - than in crop production. According to the data provided in the country papers and other studies, women are heavily involved in almost all aspects of livestock production, with the exception of herding and marketing, since these tasks require absence from the home. Activities that women are reported to be active in are feeding and watering, fodder gathering, poultry and rabbit care, stable cleaning, collecting dung for fertilizer and fuel, care of sick, pregnant and lactating animals, milking, ghee/cheese and butter-making, in addition to breeding and selection. Cash income obtained from women's work in livestock production may be quite high, especially with regard to the sale of milk, cheese, butter and ghee. Equally notable is the nutritional value and protein contributions of these dairy products to the farm household diet (FAO, 1995).

According to Afzal (2006) role of public sector for increasing livestock productivity is limited. Therefore, the private sector is generally encouraged to invest in production, processing and marketing of livestock and livestock products. The demand for livestock products is rapidly increasing with rise in population, household income and change in food tastes and preferences. Although Pakistan ranks fifth in world milk production yet per capita consumption of milk is far below the recommended levels. The consumption of milk and meat in Pakistan is estimated at 68.6 liters and 14.5 kg per annum that do not match with the recommended dietary allowance (RDA) levels.

According to Afzal (2006) the national herd consists of 24.2 million cattle, 26.3 million buffaloes, 24.9 million sheep, 56.7 million goats and 0.8 million camel. In addition to these there is a vibrant poultry sector in the country with more than 530 million birds produced annually. These animals produce 29.472 million tons of milk, making Pakistan 5th largest producer of milk in the world, 1.115 million tons of beef, 0.740 million tons of mutton, 0.416 million tons of poultry meat, 8.528 billion eggs, 40.2 thousand tons of wool, 21.5 thousand tons of hair and 51.2 million skins and hides. The distribution of livestock is not even among different provinces. Buffaloes are main dairy animal and are mainly raised in Punjab (60.8 per cent) and Sindh (31.8 per cent). Buffaloes are now making inroads in other provinces, Azad Jammu & Kashmir and even Northern Areas. Cattle have traditionally been raised for draught and are distributed in approximately according to areas in different provinces except Balochistan where only 6.4 per cent cattle are present. Balochistan harbours majority of sheep as this province alone has 44.2 per cent of the sheep population of the country.

As compared to crop production the participation of rural women in livestock related activities is much higher. Majority of the females are engaged in fodder cutting, watering, cleaning of animals and their sheds etc. Manure collection, preparing dung cakes and the maintenance of animal sheds are also the exclusive activities of rural women. In a nutshell, except grazing women are involved in almost all livestock related activities starting from fodder cutting to milk processing. However, the level of involvement varies from one activity to the other (Akmal, 2004)

Martins (1994) reported that women were actively involved in livestock farming. They owned livestock and were responsible for animal care i.e milking, watering, cleaning animal sheds etc. Moreover sometimes they made the decision regarding purchase, sale and treatment to the animal.

Since the last decade or so the contribution of women in dairy production is getting due recognition. It is realized that women handle most of the critical jobs like feeding, milking, care of newborn and administration of medicine. However, there is variation in involvement of women between socioeconomic groups and regions, as indicated earlier. In tribal, low rainfall, semi-arid and arid areas much of the work with regard to animal management has to be looked after by women due to migration of males for work. However in many cases the income from dairy animals does not remain in the hands of women and neither does the decision regarding sale and purchase. However, due to the move to develop women's dairy co-operatives in many states in India women have better control over sale of milk and use of income from it. Another positive development is

recognition of women as members of dairy cooperative societies, so that the price of milk supplied to the society can be paid to the women directly. Till a few years ago women were not made registered members of the dairy co-operative society (the registration was in the name of the husband and thus he collected the money for milk produced and supplied by the women). While the contribution of women to the animals' management is recognized, the experiences of women regarding animal production and diseases and their perceptions are ignored (Rangnekar, 1996).

Although goats are mostly grazed the studies indicate that contrary to common belief the majority of the farmers provide some locally available, supplementary feed. Goat production has not received any support through various development schemes and was always considered detrimental to the environment. However, the livestock census indicates a sharp rise in the number of small ruminants, particularly goats. Goats are slaughtered in largest numbers and kid mortality is high, but still their population is increasing which is indicative of the small farmers' preferences for this animal. The experiences of a few goat development projects in India are encouraging and the outcome indicates there are possibilities for substantial increases in small farmer income and of changing feeding and management practices to make it more environmentally friendly. This has become possible mostly due to the rise in prices of goat meat and the practice of paying according to body weight and body condition. With better prices, the practice of semi-stall feeding and provision of supplementary feed is becoming feasible. In some

areas there is a market for goat milk although it is generally mixed with cow and buffalo milk and sold to dairies. Studies indicate that 40% to 50% of the income from goats is through milk in such areas and 30% to 35% from sale of animals. The manure from goats is also a significant source of income contributing 15% to 20% of the earnings. It was noticed that there is a difference in the perception of men and women regarding the usefulness of the goat and productivity constraints (FAO, 1995).

Although Pakistan ranks fifth in world milk production yet capita consumption of milk is far below the recommended levels. The consumption of milk and meat on Pakistan is estimated at 68.6 liters and 14.5 kg per annum that do not match with the recommended dietary allowance (RDA) levels. Malnutrition and protein deficiency are widespread and visible both in urban and rural areas. Because of this scenario, Pakistan along with 17 other developing countries has been declared by World Trade Organization (WTO) as a net food deficit country. The country is also not self sufficient in milk production and huge amount of valuable foreign exchange is spent to import milk and milk production in spite of the fact that Pakistan ranks fifth in world milk production. It is expected that with the present population growth rate of 2.6% and rising per capita income levels, the demand for milk and milk products is likely to further increase. Milking the animals and milk processing have also been attributed to the women folks (Akmal, 2004).

Women involved in caring and rearing of livestock and poultry, carry out wide range of tasks such as making feed concentrates, feeding, collecting fodder, grazing, cleaning

animals and their sheds, making dung cakes, collecting manure for organic fertilizer, as well as milking, processing and marketing of animal products (making ghee, selling eggs, etc). In Pakistan, women are responsible for 60% to 80% of the feeding and milking of cattle (ESCAP, 1996).

Musharraf (2007) argue that rural women could play a dynamic role in bringing about a white revolution in the country to help exploit the real potential of the milk and meat sector. Women in rural areas could play an active role in rearing livestock.

Women in Sindh and Punjab spend from one-fifth to a quarter of their daily working hours in livestock-related activities. Dairy production is very important for women in most provinces except Baluchistan where the climate is not favorable to dairy cattle raising. With the exception of a few large cities, all fresh milk consumed in Pakistan is based on small domestic production run and managed by women (PARC, 1988).

Mostly women are engaged in cleaning of animal, sheds, watering and milking the animals. Furthermore, rural women are also responsible for collection, preparing dung cakes an activity that also brings additional income to poor families. Evidently, rural women are involved in almost all livestock related activities. Except grazing, all other livestock management activities are predominantly performed by females. Labor Survey of Pakistan 2006-07 disclosed that stall feeding of animals is carried out by 31% of females, whereas, milking, milk processing carried out by 58% and preparing dung cakes

are carried out by 90% of females. 90% women are involved in shed cleaning and 85% in collection of farm yard manure. Watering is also performed by the 69% of females. Males, however, share the responsibility of taking care of sick animals. It is evident that the women are playing a dominant role in the livestock production and management activities (Chaney, 1987).

The activities of farming women in the household are: fix breakfast, cook dinner, cook super, set table, wash dishes, taking care of in-laws, grocery shopping, baking, canning and freezing, clothing care, child care, child transportation, dust furniture, floor care, wash windows, repair small appliances, plumbing work, tend vegetable garden, pay household bills and other household tasks. They spend a lot of time in the household and take care of their children and perform all tasks very effectively (Tara, 2011).

Very few studies on decision-making at the household level have been conducted in countries of the Near East region. Consequently, it is extremely difficult to make conclusive statements regarding who makes decisions and in which areas. However, since family structures for the majority of the households in the region are male-headed and patriarchal, one could infer that men generally control decision-making, although in many situations, decisions are often made jointly. Women may also have more say than is generally perceived, and exercise significant power in certain family matters relating to marriage, education and divorce, and in other aspects such as child-care and household purchases. Women likewise make important decisions when the household is female-headed (although male relatives may be consulted or make decisions themselves), or

when the enterprise is one in which women predominate, such as poultry, dairy products and kitchen garden produce (FAO, 1995).

CHAPTER # 3
RESEARCH METHODOLOGY

Methodology

Methodology tells the researcher how and what steps need to be followed to collect the relevant data. Lay man confused methodology and methods. Methodology is the complete framework of the whole research activity. Methods, on the other hand, are the definite tools of data collection.

This chapter highlights the methodology strategy under which present research had been carried out. The methodology to find out answers to questions depends upon the nature of question.

According to Bailey (1978), methodology means philosophy of research process. This includes the assumption and values that as rationale for research and the standards or criteria the researcher user for interpreting data and reaching conclusion.

The current research addresses the, role of women in agriculture and livestock farming in district Jehlum.

3.1 Topic

“Role of women in crop production and livestock farming in district Jehlum”

3.2 Population of study

In research, the target group to be studied is called population of study (Henlin, 1997).

A population also can be defined as individuals that meet the sample criteria for inclusion in a study. The population for the study under investigation consisted of all women who

were involved in agriculture and livestock residents in tehsil Pind Dadan Khan District Jehlum.

3.3 Criteria for Respondents

Respondents included in the sample were selected on the bases of specific criteria. The individual meeting the following criteria were included in sample.

They should

- They should be involved in agriculture and livestock farming.
- Be female.
- Be residing in district Jehlum tehsil PD khan.
- Be of any race, religion and sect.

3.4 Study Design

A quantitative approach was followed. Quantitative research is a formal, objective, systematic process to describe and test relationship and examine cause and effect interactions among variable (Neuman, 2007).

3.5 Sampling procedure

Sampling is a smaller case of researcher selects from lager pool and generalizes the findings to entire population (Henslin, 1997).

There are various kinds of sampling used in a social research such as, random sampling, stratified random sampling, accidental sampling, quota sampling purposive sampling, snowball sampling, theoretical sampling, etc. as per the requirement of present study, random sampling was used to select the respondents.

3.6 Sampling Technique

In the random sampling technique researcher draw a sampling from the population randomly so that every element in the population has equal chance to be selecting (Macionis, 2005).

A descriptive interview schedule will use. Interview schedule is used to collect original data for describing a population too large to observe directly. Interview schedule obtain informative from a sample of people by means of self report, that is, the people respond to a series of question posed by the investigator. Interview schedule was selected because it provides an accurate portrayal or account of the characteristics.

This design was chosen to meet the objective of the study, namely to determine the knowledge and views of people regarding the involvement of women in crop production and livestock faming.

3.7 Sample Size

A sample of 260 respondents will be selected from the study universe.

3.8 Data collection

The procedure a researcher follows together relevant data (Ferranti, 2006).

3.9 Tools for Data Collection

Research had used the technique of the semi structured interview schedule.

Interview schedule is a device usually applied to the set of questions, which are asked, and fulfilled in by interview in face-to-face situation with other person.

Interview schedule is preferred because of the following advantages.

Interview schedule is used because the respondents are of different educational level and it's not appropriate to use questionnaire, because it require considerable amount of education.

It has flexibility in the sense that if one thing is not understandable by the respondent the researcher could explain it in easier words.

In interviewing schedule the researcher has face-to-face interaction and is able to read the face expression of the respondent and could probe easily.

Another positive viewpoint of interviewing schedule is that is has guarantee of its return.

3.10 Pretesting

Special attention has given to the actual wording and layout of the proposed interviewing schedule, attempted to make it easy for the people to understand and respond. The proposed interviewing schedule was subjected to pilot test.

As pretesting allow one to high light the weak areas, the preliminary interviewing schedule comprising of 45 questions, was given to the sample of the 10 respondent to complete. Questions seemed ambiguous or different to the respondent ware rephrased.

3.11 Data Analysis

After the data was collected a systematic analysis was used for data analysis. The researcher used the widely statistical package for the social science (SPSS). The analysis data has been presented is tabular forms. For the analysis of the quantitative data,

computer was used which facilitate me more than any ways such as time saving, reduction of large amount of data to the basic pattern etc.

3.12 The Analysis of univariate Data

Univariate data analysis is the analysis of the single variable. Descriptive statistics organize and summaries the data to render it move comprehensible. Descriptive statistics enable the researcher top describe trends in the data and also to determine whether relationship exist between variables.

3.13 Percentage

The purpose of using percentage is to simplify quantitative characteristic in to numerical form. Second percentage reduces to frequency distribution to the common base.

Percentage is calculated with following formula.

$$P = F/N \times 100$$

Where

P = Percentage

N = Total Frequency

F = Frequency of Class

CHAPTER # 4

RESULTS AND DISCUSSIONS

DATA ANALYSIS AND PRESENTATION

TABLE # 4.1

Age of the respondents

Categories	Frequency	Percent
18-24	17	6.6
25-31	50	19.4
32-38	87	33.5
39-45	65	25
46-52	33	12.4
53-59	5	1.9
Above 59	3	1.2
Total	260	100

Table # 4.1 reveals the age of the respondents. (33.5%) of the respondents belonged to the age group of 32-38 years, (25%) of respondents were from 39-45 years, (19.4 %) respondents were from 25-31 years, (12.4%) of respondents were from 46-52 years, (6.6%) respondents belonged to the age group of 18-24, (1.9%) respondents were from 53- 59 years While (1.2%) respondents were above 59 years.

Table # 4.2

Marital status of the respondents

Categories	Frequency	Percent
Single	21	8.1
Married	184	70.1
Divorced	14	5.4
Separated	14	5.4
Widow	27	10.4
Total	260	100

Table # 4.2 shows the marital status of the respondents. (70.8%) respondents were married, (10.4%) respondents were widow, (8.1%) respondents were single, and (5.4%) respondents were divorced, while only (5.4%) respondents were separated.

Table # 4.3

Education of the respondents

Categories	Frequency	Percent
Illiterate	33	12.7
Primary	136	52.4
Middle	55	21.2
Matric	25	9.5
Intermediate	6	2.3
Graduation	5	1.9
Total	260	100

Table#4.3 depicts the education of the respondents. (12.7%) of the respondents were illiterate, (52.4%) were having primary education, (21.2%) were from middle , (9.5%) were educated up to matriculation, and (2.3%) were up to higher secondary school level, while only (1.9%) respondents were graduated.

Table#4.4

Type of family of the respondents

Categories	Frequency	Percent
Nuclear family	133	51.2
Joint family	103	39.6
Extended family	24	9.2
Total	260	100

Table # 4.4 shows the family type of the respondents. (51.2%) of the respondents were living nuclear family, (39.6%) were in joint family, while only (9.2%) of the respondents were belonged to extended family.

Table#4.5

Husbands' age of the respondents

Categories	Frequency	Percent
28-34	17	6.6
35-41	71	27.3
42-48	52	19.8
49-55	31	12
56-62	10	3.9
Above 62	3	1.2
Total	184	70.8

Table#4.5 reveals the husband's age of the respondents. (27.3%) of the respondents belonged to the age group of 35-41 years, (19.8%) of the respondents were from 42-48 years, (12%) were from 49-55 years, (6.6%) of the respondents were from 28-34 years, (3.9%) were from 56-62 years, while (1.2%) were above 62 years.

Table#4.6**Husbands' education of the respondents**

Categories	Frequency	Percent
Illiterate	14	5.4
Primary	66	25.4
Middle	57	21.9
Matric	31	11.9
Intermediate	8	3.1
Graduation	8	3.1
Total	184	70.8

Table#4.6 shows the husband education of the respondents, (5.4%) of the respondents were illiterate, (25.4%) of the respondents were having primary education, (21.9%) indicate the respondent's middle education, (11.9%) of the respondents were educated up to matriculation, (3.1%) of the respondents were educated up to higher secondary school level, while only (3.1%) were graduated.

Table#4.7

Family size of the respondents

Categories	Male	Female
	F (%)	F (%)
Less than 5	129(52.8)	142(54.5)
6-10	64(20.4)	70(26.9)
11-15	63(25.2)	34(13.1)
16-20	4(1.6)	14(5.5)
Total	260(100)	260(100)

Table#4.7 demonstrates the family size of the respondents. Majority of the male respondents were (52.8%) fall in less than 5, (25.2%) male were from 11-15, category of 6-10 were (20.4%) and only (1.6%) were fall in the category of 16-20.

Further table shows the family size of the female respondents. Majority of the female respondents were (54.5%), 26.9 percent were in 6-10, (13.1%) were fall in the category of 11-15 and only (5.5%) were fall in the category of 16-20.

Table#4.8

Children of the respondents

Categories	Male	Female
	F (%)	F (%)
1-2	120(46.2)	137(52.7)
3-4	58(22.3)	45(17.3)
5-6	11(4.3)	3(1.2)
Total	189(72.8)	185(71.2)

Table#4.8 shows children of the respondents. Majority (46.2%) male children were fall in 1-2 categories. (22.3%) were fall in 3-4 and only (4.3%) were in categories of 5-6.

Further table indicates that majority of the female were (52.7%) fall in the categories of 1-2. (17.3%) were fall in 3-4 and only 1.2 percent was fall in the category of 5-6.

Table#4.9

Husbands' Occupations of the respondents

Categories	Frequency	Percent
Government servant	25	9.5
Private services	20	7.6
Labour	22	8.4
Self- employed	18	6.9
Un employed	17	6.4
Farmer	80	30.3
Total	184	70.8

Table#4.9 reveals the occupation of the respondents' husbands. Above data shows that (30.3%) of the respondents' husbands were farmers, (9.5%) were public employees, (8.4%) were labour, (7.6%) were private employees, (6.9%) were self-employed, while only 6.4 percent of the respondents' husbands were unemployed.

Table#4.10

Getting up time of the respondents

Categories	Frequency	Percent
4-4.30 am	185	70.1
5-5.30 am	75	29.9
Total	260	100

Table#4.10 shows rising time of the respondents. (70.1%) of the respondents were awoke up at 4-4.30 am, while (29.9%) woke up between 5-5.30 am.

Table#4.11**Land own by respondent or respondents' husbands**

Categories	Frequency	Percent
Yes	162	62.5
No	98	37.5
Total	260	100

Table # 4.11 reveals land own by respondent or respondents' husbands. (62.5%) of the respondents were having land, while (37.5%) didn't had any land.

Table#4.12

Fertility of land of the respondents

Categories	Frequency	Percent
Yes	162	62.5
Total	162	62.5

Table#4.12 illustrates the fertility of land of the respondents. (62.5%) of the respondents' land was fertile.

Table#4.13

Irrigation of land available to the respondents

Categories	Frequency	Percent
Tube well	5	1.9
Rain fed	4	1.6
Rain & tube well	153	59.0
Total	162	62.5

Table#4.13 shows irrigation land available of the respondents. (59%) of the land's irrigation depended on rain & tube well, (1.9%) of the land's irrigation depended on tube well, while only (1.6%) depended on rain.

Table # 4.14

Cultivation of land

Categories	Frequency	Percent
Yourself	26	9.9
Tenants	14	5.4
Family	81	31.7
Any other	41	15.5
Total	162	62.5

Table#4.14 demonstrates cultivate land of the respondents. Majority (31.7%) were fall in the category of family. (15.5%) were fall in any other (husband and yourself), (9.9%) said in yourself and only 5.4 Percent per fall in tenants.

Table#4.15

Size of land holding in (acres) of the respondents

Categories	Frequency	Percent
1-5 acres	86	34.6
6-10 acres	53	21.9
11-15 acres	21	5.2
16-20 acres	2	0.8
Total	162	62.5

Table#4.15 shows size of the land holding in (acres) of the respondents. (34.6%) of the respondents per land holder 1-5 acres, (21.9%) said they have 6-10 acres, 5.2% were having the land of 11-15 acres, while only 0.8% of the land holder fall in the category of 16-20 acres.

Table#4.16

Under cultivation land by the respondents

Categories	Frequency	Percent
1-5 acres	92	38.5
6-10 acres	50	19.2
11-15 acres	18	4.4
16-20 acres	2	0.8
Total	162	62.5

Table#4.16 depicts land under cultivation of the respondents. (38.5%) of the land was under cultivated in 1-5 acres, (19.2%) were fall in 6-10 acres, (4.4%) were in 11-15 acres, while only (0.8%) of the land was under cultivated between 16-20 acres.

Table#4.17

Barren land of the respondents

Categories	Frequency	Percent
0.1-1 acres	24	9.6
2-3 acres	14	4.5
4-5 acres	6	2.3
Total	44	16.4

Table#4.17 shows barren land own by respondents. (9.6%) of the land was barren between 0.1-1 acres, 4.5% of the land in 2-3 acres, while 2.3% of the land between 4-5 acres was barren.

Table#4.18

Modes of the tenancy of the land by the respondents

Categories	Frequency	Percent
Tenant	12	4.8
On rent	20	7.6
Lease out	23	8.6
Share cropper	20	7.6
Labour	23	8.9
Total	98	37.5

Table#4.18 shows modes of tenancy of the land by those respondents who didn't had any land. (8.9%) of the respondents were labour, (8.6%) were worked on lease, (7.6%) were worked on rent, (7.6%) were share croppers, while only (4.8%) of the respondents were tenants.

Table#4.19

Types of crops in Rabi and Kharif season

Rabi season		
Categories	Frequency	Percent
Wheat	220	84.6
Barley	86	33.1
Peas	70	26.9
Seasame	20	7.7
vegetables	93	35.8
Total	260	100
Kharif season		
Categories	Frequency	Percent
Bajra	91	35.0
Jowar	93	35.8
Rice	105	40.4
Maize	47	18.1
Cotton	33	12.7
Sugarcane	69	26.5
vegetables	92	35.4
Total	260	100

Table#4.19 demonstrates types of crops in Rabi and Kharif season. In Rabi season reason Majority (84.6%) respondents reap wheat. (35.8%) said that they harvest vegetables, (33.1%) barley, (26.9%) peas and only (7.7%) harvest seasame in the season of Rabi.

Further table shows Kharif season crop of the respondents. In Kharif season majority (40%) yield rice, (35.8%) jowar, (35.4%) vegetables, bajra (35%).26.5 percent respondents yield sugarcane, (18.1%) maize and only 12.7 percent respondents were harvest cotton in the season of Kharif.

Table#4.20

Time spend in the field by the respondents

Categories	Frequency	Percent
1-4 hours	126	48.3
5-8 hours	124	47.4
Above 8 hours	10	4.3
Total	260	100

Table#4.20 reveals respondents' time spend in the field. (48.3%) of the respondents spend time 1-4 hours, (47.4%) were 5-8 hours, while 4.3% of the respondents spend time above 8 hours in the field.

Table#4.21**Annual income of the respondents from crop production**

Categories	Frequency	Percent
Less than 50,000	32	12.3
50001-100,000	143	54.7
100,001-150,000	41	15.8
150,001-200,000	22	8.8
200,001-250,000	11	4.2
More than 250,000	11	4.2
Total	260	100

Table#4.21 shows the annual income of the respondents from agriculture. (54.7%) of the respondents were earning 50001-100,000 in a year, (15.8%) of the respondents were earning 100,001-150,000 in a year, (12.3%) of the respondents were earning less than 50,000 in a year, (8.8%) of the respondents were earning 150,001-200,000 in a year, (4.2%) of the respondents were earning 200,001-250,000 in a year, while (4.2%) of the respondents were earning more than 250,000 rupees in a year.

Table#4.22

Involvement of the respondents in crop production activities

Categories	Preparation of land	Sowing of crops	Cutting & chopping of fodder	Harvesting	Grain Storage	Milling of grain
	F (%)	F (%)	F (%)	F (%)	F (%)	F (%)
None	124(47.7)	141(54.2)	32(12.3)	14(5.4)	18(6.9)	21(8.1)
1-2 hours	92(35.4)	72(27.7)	132(53.1)	110(42.3)	181(69.6)	57(60.4)
3-4 hours	31(11.9)	28(10.8)	81(31.2)	28(10.8)	50(19.2)	74(28.5)
5 hours & above	13(5.0)	19(7.3)	9(3.5)	108(41.5)	11(4.2)	8(3.1)
Total	260(100)	260(100)	260(100)	260(100)	260(100)	260(100)

Table # 4.22 shows involvement of the respondents in agricultural activities. (1) 47.7% of the respondents were not involved in preparation of land, (35.4%) were worked 1-2 hours in preparing the land, (11.9%) were worked 3-4 hours, while only (4.7%) of the respondents were worked 5 hours & above in preparing the land, (2) (54.2%) of the respondents were not involved in sowing of crops, (27.7%) were worked 1-2 hours in sowing of crops, (10.8%) were worked 3-4 hours, while only (7.3%) of the respondents were worked 5 hours & above in sowing of crops, (3) (53.1%) of the respondents were worked 1-2 hours in cutting & chopping of fodder, (31.2%) of the respondents were worked 3-4 hours, (12.3%) of the respondents were not involved in cutting & chopping of fodder, while (3.5%) of the respondents were worked 5 hours & above in cutting & chopping of fodder, (4) (42.3%) of the respondents were involved 1-2 hours in harvesting activities, (41.5%) of the respondents were worked 5 hours & above in

harvesting, (10.8%) of the respondents were worked 3-4 hours in harvesting, while only (5.4%) of the respondents were not involved in harvesting, (5) (69.6%) of the respondents were worked 1-2 hours in grain of storage, (19.2%) were worked 3-4 hours, (69.6%) were not involved in grain of storage, while only (4.2%) of the respondents were worked 5 hours & above in grain of storage, (60.4%) of the respondents

Table#4.23

Decision making of the respondents in crop production activities

Categories	Cultivation of crops	Purchase of seeds	Purchase of fertilizer	Irrigation	Harvesting	Sale of product
	F (%)	F (%)	F (%)	F (%)	F (%)	F (%)
Frequently	20(7.7)	9(3.5)	20(7.7)	73(28.1)	34(13.1)	19(7.3)
Rarely	41(15.8)	13(5.0)	42(16.2)	148(56.9)	151(58.1)	38(14.6)
Never	199(76.5)	238(91.5)	198(76.2)	39(15.0)	75(28.8)	203(78.1)
Total	260(100)	260(100)	260(100)	260(100)	260(100)	260(100)

Table#4.23 reveals involvement of the respondents in decision making about agricultural activities. (1) (76.1%) of the respondents were not involved in decision making about cultivation of crops, (15.5%) of the respondents were rarely involved in decision making about cultivation of crops, while only (8.4%) of the respondents were frequently involved in decision making about cultivation of crops. (2) (75.7%) of the respondents were not involved in decision making about purchasing of seeds, (16.8%) were rarely involved, while only (7.5%) were frequently involved in decision making about purchasing of seeds. (3) (89.8%) of the respondents were not involved in decision making about hiring of fertilizers, (5.3%) were frequently involved, while (4.9%) of the respondents were rarely involved in decision making about purchase of fertilizers. (4) (56.9%) of the respondents were rarely involved in decision making about irrigation, (28.1%) were frequently involved in irrigation, while only (15 %) of the respondents were not involved in taking decision about irrigation activities. (5) (58.1%) of the respondents were rarely

taking decision of harvesting activities, (28.8%) were not involved in decision making about harvesting, while (13.1%) were frequently take decision about harvesting activities. (6) (78.1%) of the respondents were not involved to take decision about sale of produce, (14.6%) were rarely take decision to sale the produce, while only (7.3%) of the respondents were frequently involved to take decision about selling of product

Table#4.24

Type and no of animals in the house of the respondents

Categories (No. of animals)	Buffalo	Sheep	Goat	Cow	Bull	Donkey	Horse	Poultry
	F (%)	F (%)	F (%)	F (%)	F (%)	F (%)	F (%)	F (%)
1-5	113(42.7)	53(20.1)	77(29.2)	89(33.7)	21(8.1)	55(20.7)	9(3.6)	76(28.8)
6-10	24(9.1)	--	--	--	--	--	--	69(26.0)
11-15	5(2.0)	--	--	--	--	--	--	27(10.2)
16-20	--	--	--	1(.4)	--	--	--	7(2.7)
Total	142(53.8)	53(20.1)	77(29.2)	90(34.1)	21(8.1)	55(20.7)	9(3.6)	179(67.7)

Table#4.24 demonstrates type and number of animals in the house of respondents. (1) (42.7%) of the respondents were having 1-5 buffalos. (9.1%) were having 6-10 buffalos, while only (2%) of the respondent 11-15 buffalos. (2) (20.1%) of the respondents were having 1-5 sheeps, (3) (29.2%) of the respondents were having 1-5 goats. (4) (33.7%) were having 1-5 cows, while only (0.4%) was having 16-20 cows. (5) (8.1%) of the respondents were having 1-5 bulls. (6) (20.7%) of the respondents were having 1-5 donkeys. (7) (3.6%) were having 1-5 horses. (8) (28.8%) of the respondents were having 1-5 poultry, (26%) were having 6-10 poultry, (10.2%) were having 11-15 poultry, while only (2.7%) of the respondents were having 16-20 poultry.

Table#4.25**Keeping animals owned by the respondents**

Categories	Frequency	Percent
On farm	18	6.9
In courtyard	182	70.0
On farm & courtyard	1	0.4
Separate place	59	22.7
Total	260	100

Table#4.25 shows the animals owned by the respondents. Majority (70%) animals were in courtyard. (22.7%) were kept in separate places, (6.9%) were on farm and only 0.4percent animals of the respondents were on farm & courtyard.

Table#4.26

Time spend in taking care of livestock

Categories	Frequency	Percent
1-4 hours	136	52.4
5-8 hours	124	47.6
Total	260	100

Table#4.26 demonstrates time spend in taking care of livestock of the respondents. Majority (52.4%) spends time round about 1-4 hours and only (47.6%) were spend 5-8 hours in taking care of livestock.

Table # 4.27

Daily involvement of the respondents in livestock care

Categories	Cleaning of animals & animal room	Preparation of feed	Housing the animals for milking	Milking	Feeding	Dung cake making
	F (%)	F (%)	F (%)	F (%)	F (%)	F (%)
None	56(21.5)	31(11.9)	166(63.8)	36(13.8)	74(28.5)	40(15.4)
1-2 hours	187(71.9)	161(61.9)	79(30.4)	182(70.0)	172(66.2)	169(65.0)
3-4 hours	17(6.5)	68(26.2)	15(5.8)	42(16.2)	14(5.4)	51(19.6)
Total	260(100)	260(100)	260(100)	260(100)	260(100)	260(100)

Table#4.27 shows daily involvement if the respondents are in livestock activities.

(1) (71.9%) of the respondents were involved in cleaning of animals & animals' room 1-2 hours, (21.5%) were not involved in cleaning of animals & animals' room, while only (6.5%) were working 3-4 hours in cleaning of animals & animals' room. (2) (61.9%) of the respondents were working 1-2 hours in preparing of feed, (26.2%) were working 3-4 hours in preparing of feed, while only (11.9%) of the respondents were not involved in preparation on feed. (3) (63.8%) of the respondents were working in housing the animals for milking, (30.4%) were involved 1-2 hours in housing the animals for milking, while only (5.8%) of the respondents worked 3-4 hours in housing the animals for milking. (4) (70%) of the respondents worked 1-2 hours in milking, (16.2%) worked 3-4 hours, while

only (13.8%) of the respondents were not involved in milking activities. (5) (66.2%) of the respondents were doing feeding of animals 1-2 hours, (28.5%) were not involved in feeding of animals, while only (5.4%) of the respondents worked 3-4 hours in feeding of animals. (6) (65%) of respondents worked 1-2 hours in making of dung cakes, (19.6%) worked 3-4 hours in making of dung cakes, while only (15.4%) were not involved in making of dung cakes.

Table # 4.28

Monthly income of the respondents from livestock

Categories	Frequency	Percent
Less than 5000	236	87.3
5001-10,000	12	8.2
10,001-15,000	3	1.1
15001-20,000	5	1.9
More than 20,000	4	1.5
Total	260	100

Table#4.28 illustrates monthly income of the respondents from livestock. (87.3%) of the respondents were having less than 5000 income from livestock, (8.2%) were earn 5001-10,000 rupees, (1.9%) were earn 15001-20,000 rupees, (1.5%) were earn more than 20,000 rupees, while only (1.1%) of the respondents were having 10,001-15,000 income each month.

Table # 4.29

Consultation with the respondents about livestock activities

Categories	Purchase of new animals	Sale of animals	Spending money from animal sale	Slaughtering Of animals	Treatment Of animals	Feeding
	F (%)	F (%)	F (%)	F (%)	F (%)	F (%)
Always	77(29.6)	55(21.2)	37(14.2)	--	2(0.8)	38(14.6)
Sometimes	140(53.8)	205(78.8)	65(25.0)	52(20.0)	127(48.8)	131(50.4)
Never	43(16.5)	--	158(60.8)	208(80.0)	131(50.4)	91(35.0)
Total	260(100)	260(100)	260(100)	260(100)	260(100)	260(100)

Table#4.29 shows consultation from the respondents about livestock activities. (1)

(53.8%) of the respondents often involved in consultation about purchase of new land, (29.6%) were always involved in this matter, while (16.5%) of the respondents were not involved. (2) (78.8%) of the respondents often involved in selling of animals, while (21.2%) were always involved in consultation about selling of animals. (3) (60.8%) of the respondents were not consulted about spending money from animal sale, (25%) were often consulted about this matter, while (14.2%) of the respondents were always consulted about spending money from animal sale. (4) (80%) of the respondents were not consulted about slaughtering of animals, while only (20%) were often consulted about this matter. (5) (50.4%) of the respondents were not consulted about treatment of animals, (48.8%) were often consulted, while only (0.8%) of the respondents were always

involved in consultation about treatment of animals. (6) (50.4%) of the respondents were often consulted in feeding of animals, (35%) were not be consulted, while (14.6%) of the respondents were always be consulted about feeding of animals.

Table # 4.30

Involvement of the respondents in household activities

Categories	Cooking & house cleaning	Washing of clothes	Dusting of furniture	White Wash	Growing vegetables & Tend Vegetable garden	Elderly care	Sewing/weaving/knitting
	F (%)	F (%)	F (%)	F (%)	F (%)	F (%)	F (%)
None	11(4.2)	30(11.5)	21(8.1)	90(34.6)	110(42.3)	172 (66.2)	45(17.3)
1-2 hours	249(95.8)	187(71.9)	229(88.1)	—	150(57.7)	88(33.8)	129(49.6)
3-4 hours	—	43(16.5)	10(3.8)	19(7.3)	—	—	86(33.1)
5 hours & above	—	—	—	151(58.1)	—	—	—
Total	260(100)	260(100)	260(100)	260(100)	260(100)	260(100)	260(100)

Table#4.30 reveals involvement of respondents in household activities. (1) (95.8%) of the respondents were involved in cooking & house cleaning in 1-2 hours, while rest of (4.2%) of the respondents were not involved in cooking and house cleaning. (2) (71.9%) of the respondents worked 1-2 hours in washing of clothes, (16.5%) worked 3-4 hours in washing of clothes, while (11.5%) were not involved in washing of clothes. (3) (88.1%) of the respondents worked 1-2 hours in dusting of furniture, (8.1%) were not involved in dusting of furniture, while only (3.8%) of the respondents worked 3-4 hours in dusting of furniture. (4) (58.1%) of the respondents worked 5 hours & above in white wash activities, (34.6%) were not doing white wash, while 7.3% were doing white wash in 3-4 hours. (5) (57.7%) of the respondent were involved in growing vegetables & tend vegetable garden 1-2 hours, while rest of (42.3%) were not involved in these activities.

(6) (66.2%) of the respondents were not participate in elderly care activities, while (33.8%) were doing elderly care activities in 1-2 hours. (7) (49.6%) of the respondents worked 1-2 hours for sewing/ weaving/knitting activities, (33.1%) worked 3-4 hours, while (17.3%) were not involved in these activities.

Table # 4.31**Involvement of the respondents in child related activities**

Categories	Feeding	Washing of clothes	Giving food	Education
	F (%)	F (%)	F (%)	F (%)
None	117(45.0)	109(41.9)	76(29.2)	182(70.0)
1-2 hours	143(55.0)	134(51.5)	40(15.4)	59(22.7)
3-4 hours	—	17(6.5)	144(55.4)	19(7.3)
Total	260(100)	260(100)	260(100)	260(100)

Table#4.31 reveals involvements of the respondents about child related activities. (1) (55%) of the respondents were involved 1-2 hours in feeding of children, while rest of (45%) were not involved in feeding of children (2) (51.5%) of the respondents were involved 1-2 hours for washing of clothes, (41.9%) were not involved in this activity, while only (6.5%) of the respondents were involved 3-4 hours in washing of clothes. (3) (55.4%) of the respondents worked 3-4 hours in giving food to their children, (29.2%) were not involved, while (15.4%) of the respondents worked 1-2 hours in giving food to their children. (4) (70%) of the respondents were not involved in giving education to their children, (22.7%) were giving education 1-2 hours, while (7.3%) of the respondents spent 3-4 hours in giving education their children.

Table # 4.32

Respondents' spending of time with family

Categories	Frequency	Percent
2-4 hours	169	65.1
5-8 hours	91	35.0
Total	260	100

Table#4.32 demonstrates respondent's spending time with family. Majority (65.1%) were spend time 2-4 hours and only 35 percent spend 5-8 hours with family.

Table # 4.33

**Amount taken by the respondents for household
expenditure from husbands**

Categories	Frequency	Percent
Yes	171	65.8
No	89	34.2
Total	260	100
If yes how much?		
Categories	Frequency	Percent
Less than 5000	118	45.5
5001-10,000	36	14.0
10,001-15,000	9	3.2
15,001-20,000	5	1.9
20,001-25,000	3	1.2
Total	171	65.8

Table#4.33 shows amount taken for household expenditures to the respondents from their husbands. (65.8%) of the respondents took specific amount for household expenditures from their husbands, while (34.2%) of the respondents were not took money from their husbands.

Further table indicates about the respondents who took money from their husbands for household expenditures, (45.5%) of the respondents were take a less than 5000 rupees from their husbands, (14%) took 5001-10,000 rupees, (3.2%) took 10,001-15,000 rupees, (1.9%) took 15,001-20,000 rupees, while only (1.2%) of the respondents were take 20,001-25,000 rupees from their husbands for household expenditures.

Table # 4.34

Handling family matters of the respondents by whom

Categories	Frequency	Percent
Father	34	13.1
Brother	17	6.5
Husband	82	31.5
Sons	13	5.0
Father-in-law	88	33.8
Yourself	22	8.5
Any other	4	1.5
Total	260	100

Table#4.35 shows handle family matters of the respondents. Majority (33.8%) father-in-law handle family matters, (31.5%) were husband, (13.1%) were father. Further respondents said that (8.5%) were yourself, (6.5%) were brother, 5percent were sons and only 1.5 percent was any other (mother-in-law & husband's brother) who handled family matters.

Table # 4.35

Involvement of the respondents in decision making about family matters

Categories	Education of children	Marriages of children	Disputes in family	Buying and selling of land	Buying and selling of animals
	F (%)	F (%)	F (%)	F (%)	F (%)
Always	194(74.6)	198(76.2)	34(13.1)	22(8.5)	49(18.8)
Sometimes	8(3.1)	8(3.1)	129(49.6)	55(21.2)	128(49.2)
Never	58(22.3)	54(20.8)	97(37.3)	183(70.4)	83(31.9)
Total	260(100)	260(100)	260(100)	260(100)	260(100)

Table#4.36 shows involvement of respondents in decision making about family matters.

(1) (74.6%) of the respondents were always taking decision about education of children, (22.3%) were not involved in making decision, while only (3.1%) of the respondents sometimes made decision about education of children. (2) (76.2%) of the respondents always took decision about marriages of children, (20.8%) were not involved in this matter, while (3.1%) were often in decision making about the marriages of children. (3) (49.6%) of the respondents were often involved in the disputes of family, (37.3%) were not involved, while only (13.1%) were always involved in decision making about disputes of family. (4) (70.4%) of the respondents were not involved in buying & selling of land, (21.2%) were often involved in this matter, while only (8.5%) of the respondents always involved in making decision about buying & selling of land. (5) (49.2%) of the respondents were often involved in decision making about buying & selling of animals, (31.9%) were not involved, while 18.8% of the respondents were always take decision about buying & selling of animals.

Table # 4.36

Time of rest in a day

Categories	Frequency	Percent
0.5-2 hours	258	99.2
Above 2 hours	2	0.8
Total	260	100

Table#4.37 shows time of rest in a day of respondents. Majority (99.2%) fall in 0.5-2 hours while (0.8%) were taking rest at above 2 hours.

Table # 4.37

Sleeping time of the respondents.

Categories	Frequency	Percent
7-9 pm	242	93.1
9.30-11.30 pm	18	6.9
Total	260	100

Table#4.38 demonstrates sleeping time of the respondents. (93.1%) slept at 7-9pm while (6.9%) were slept at 9:30pm-11:30pm.

CHAPTER # 5
SUMMARY, FINDINGS, CONCLUSION
AND SUGGESTIONS

SUMMARY:

Approximately half of the population of Pakistan consists of female who are dynamically participating in social and economic activities. Along with the involvement in industrial activities, they are playing role in agricultural sector too. In Pakistan, rural women encompass about half of the total population and an enormous proportion of agricultural labour force in the rural parts. About 70% of the female labour force is engaged in agricultural sector their role being toughest of all the women folk of our culture and yet their contribution goes disregarded and undocumented. Pakistani women play a vital role in agriculture and contribute in all operations related to crop production such as sowing, transplantation, weeding, harvesting and livestock works like handling milk production, animal care, fodder cutting. Along the normal domestic chores of cooking, taking care of children and elder people, cleaning and maintaining the house. The present study focuses of women's participation in crop production, livestock and household activities in Tehsil Pind Dadan District Jehlum was selected as a universe of study during the study. Random sampling was used to get the information of respondents. The present study was consisted of 260 respondents in which females were included from the population the interview schedule was constructed to get accurate research objectives. Mostly respondents have a lack of access to input supplies, extension advice, credit and the most important agricultural recourse-land. They don't have ownership on land and due to this they can't take independent decision on various agricultural aspects. They had less power to make decision about livestock and household matters. It is suggested that a strategy can be

developed for the empowerment of women which would strengthen their participation social, economic and agricultural like crop production activities.

Key Findings:

In the light of result main findings of present were as following:

- 33.5% of our respondents belonged to the age group of 32-38 years.
- 70.1% of our respondents were married.
- 52.4% of our respondents were having primary education.
- 51.2% of our respondents were having nuclear family system.
- 27.3% of the respondents' husbands belonged to the age group of 35-41 years.
- 25.8% of the respondents' husbands were having primary education.
- 52.8% male members in the family of the respondents fall in less than 5 while 54.5% female members in the family of the respondents fall in less than 5.
- 46.2% male children of the respondents fall in 1-2 categories while 52.7% female children of the respondents fall in 1-2 categories.
- 30.3% of our respondents' husbands were farmers.
- 70.1% of our respondents were getting up 4-4.30 am.
- 62.5% of our respondents were having land.
- 62.5% of the respondents' land was fertile.
- 59% of the respondents' land irrigation depended on rain & tube well.
- 31.7% of the respondents' family cultivated the land.
- 34.6% of the respondents were holding 1-5 acres land.
- 9.6% of the respondents' land was barren between 0.1-1 acres.
- 8.9% of the respondents' modes of tenancy were labour.

- 84.6% of the respondents reap wheat in rabi season while 40% of the respondents yield rice in kharif season.
- 48.3% of the respondents were spending 1-4 hours in the field.
- 54.7% of the respondents were earning 50001-100,00 rupees in a year.
- 47.7% of the respondents were not involved in preparation of land, 54.2% were not doing sowing of crops, 53.1% of the respondents worked 1-2 hours in cutting & chopping of fodder, 42.3% of the respondents worked 1-2 hours in harvesting, 69.6% of the respondents were working 1-2 hours in graining of storage, while 60.4% of the respondents worked 1-2 hours in milling of grain.
- 76.5% of the respondents were not involved in decision making about cultivation of land, 91.5% of the respondents were not involved in decision making about purchase of seeds, 76.2% of the respondents were not involved in decision making about purchasing of fertilizers, 56.9% of the respondents were rarely involved in decision making about irrigation, 58.1% of the respondents were rarely involved in making decision about harvesting, while 78.1% of the respondent were not making decision about selling of product.
- 42.7% of the respondents were having 1-5 buffalos, 20.1% of the respondents were having 1-5 sheeps, 29.2% were having 1-5 goats, 33.7% were having 1-5 cows, 8.1% were having 1-5 bull, and 20.7% were having 1-5 donkeys. 3.6% were having 1-5 horse, while 28.8% of the respondents were having 1-5 poultry.
- 70% of the respondents' animals were in courtyard.

- 52.4% of the respondents were spending round about 1-4 hours in taking care of livestock.
- 71.9% of the respondents worked 1-2 hours in cleaning of animals & animals' room, 61.9% worked 1-2 hours in preparation of feed, 63.8% were not involved in housing the animals for milking, 70% worked 1-2 hours in milking of animals, 66.2% worked 1-2 hours in feeding of animals, while 65% of the respondents worked 1-2 hours in making of dung cake making.
- 87.3% of the respondents were having less than 5000 income from livestock.
- 53.8% of the respondents were often be consulted in purchase of new animals, 78.8% were often be consulted in selling of animals, 60.8% were not be consulted in spending money from animal sale, 80% were not be consulted in slaughtering of animals, 50.4% were not be consulted in treatment of animals, 50.4% of the respondents were often be consulted in feeding of animals.
- 95.8% of the respondents worked 1-2 hours in cooking & house cleaning, 71.9% worked 1-2 hours in washing of clothes, 88.1% of the respondents were doing dusting of furniture in 1-2 hours, 58.1% of the respondents were doing white wash in 5 hours & above, 57.7% worked 1-2 hours in growing vegetables & tend vegetable garden, 66.2% of the respondents were not involved in elderly care, while 49.6% of the respondents were involved in sewing/weaving/knitting 1-2 hours.
- 55% of our respondents were involved in feeding of their children in 1-2 hours, 51.5% were doing washing of children clothes in 1-2 hours, 55.4% of the

respondents were involved in giving food to their children 3-4 hours, while 70% of our respondents were not involved in giving education to their children.

- 65.1% of the respondents were spending 2-4 hours with family.
- 65.8% of the respondents were taken money for household expenditure from their husbands and 45.5% of our respondents were taken less than 5000 rupees from their husbands for household expenditure.
- 33.8% of the respondents said that their family matters were handled by father-in-laws.
- 74.6% of the respondents were always involved in decision making about education of children, 76.2% were involved in making decision about marriages of children, 49.6% were often be consulted about disputes in family, 70.4% were not involved in making decision about buying and selling of land, while 49.2% of our respondents were often involved in making decision about buying and selling of animals.
- 99.2% of the respondents taking rest 0.5-2 hours in day time.
- 93.1% of the respondents slept at 7-9pm.

Conclusion

This study was designed to identify participation level of rural women in decision making process regarding a number of household, livestock and crop production affairs. The study found that respondents had lower level of education as they have to share work at farm. Female labour remains busy all the year because wheat and rice are two major crops of the District. Almost all respondent reported that they had less decision making power about crop production, livestock as well as household matters. They remain busy 4 am to 10 pm and mostly respondents took rest only one hour in day time.

Suggestions/Recommendations

- The policy makers should strengthen the role of private sector and NGOs to provide extension services to rural women.
- There should be input supplies, extension advice, credit and the most important agricultural recourse land.
- Allocation of more funds and shifting of resource for village-based training can improve women skills in crop production.
- The real empowerment of women lies in her dignity, regard and respect she deserves. Man should have involvement with women in sharing responsibilities, promoting gender equity in the family and to create positive environment for the effective participation of women in these activities.

CHAPTER # 6

REFERENCES

References

- Afzal, Aneela, Tanvir Ali, Munir Ahmad, Humera Amin and Samina Saki, 2010. Women in agriculture: results from a survey of Okara district of Pakistan Punjab, vol 23, No. 1-2
- Akmal. Nadeem and Sajida Taj, 2004. Women and Livestock Management in Sindh PARC Pakistan Agriculture research council
- Berry, Wendell. The unsettling of America: culture and Agriculture, San Francisco: Sierra Club Books, 1986.
- Bhatti, Faizan, 2009. Importance of Agriculture, Notes for Pakistan <http://notesforpakistan.blogspot.com/2009/08/importance-of-agriculture.html>
- C. Tara. Satyavanthi, 2011. Senior Scientist Division of Genetics, Indian Agriculture Research Institute (ICAR), Pusa, New Delhi, India.
- Chaney, Elesa M, 1987 Woman's Components in Integrated Rural Development Project, Rural Woman, and State Policy: Feminist Perspectives on Latin American Agriculture Development.
- Cockburn, Cynthia and Susan Ormrod. 1993. Gender and Technology in the Making. SAGE Publications: London, Thousand Oaks, New Delhi.
- Delworth. U and Gallagher. E, 1993. The third shift: Juggling employment, family, the farm. J. Rur. Comm. Psy; 12(1):21-36

Dr.M.Afzal, 2006. Investment Opportunities in Livestock Sector in Pakistan. Published in "The News" Rawalpindi / Islamabad, Lahore and Karachi.

E. Krishna Rao (2006). Role of Women in Agriculture: A Micro Level Study.
<http://ideas.repec.org/a/jge/journal/224.html#provider>

EIU, 1997. Pakistan Afghanistan: country profile, The Economist Intelligence Unit, London.

ESCAP, 1996. Rural Poverty Alleviation and Sustainable Development in Asia and the Pacific, United Nations, New York.

FAO, 1991. Most farmers in India are Women. New Delhi:

FAO, 1995. Gender Issues in Agricultural and Rural Development Policy in Asia and the Pacific, FAO Regional Office for Asia and the Pacific, Bangkok.

FAO, 1995. women, agriculture and rural development: a synthesis report of the near east; and; Economic and Social Development Department

FAO, 2002. Fact Sheet: women in agriculture, environment and rural production.

FAO, 2009, Women in Agriculture, environment and rural production. Fact Sheet-

Pakistan Food and Agriculture Organization of the United Nations Regional Office
for Asia and Pacific, Bangkok, Thailand.

GoP, 1995 Fourth World Conference on Women, Beijing, September, 1995: Pakistan,
National Report, Ministry of Women Development and Youth Affairs,
Government of Pakistan, Pakistan.

Habib. N, 1996, A study on the Role of Women in Agriculture and Impact of Pesticides
on Them, pp. 4-5, Pesticides Action Network Asia and Pacific (PANAP), Khoj
Research and Publication Center, Lahore, Pakistan.

Humayun, J, 2007. Impact of Trade Liberalization on Agriculture. ActionAid Pakistan
Report. SAARC Human Resource Development Center, Pakistan. 2pp.

Ifrikhar. Naveed, Javir.Ali, Munir. Ahmad, Maan.AA, Qamar-ul-Haq, 2009. Training
needs of rural women in agriculture, a case study of District Bahawalpur
Pakistan, Journal of Agriculture Science, vol.46. No 3, pp, 200-208
<http://www.pak-jas.com>

IFAD, 2005. Gender Assessment Report: Impact of IFAD's Commitment to Women in
China and Insights for Gender Mainstreaming, (Report No. 1640), International
Fund for Agricultural Development, Rome.

Jahan, Rownok 1990. 'Country Paper-Bangladesh' in Gender Issues in Agriculture: Papers and Proceedings of the Regional Conference on Gender Issues in Agriculture.

Javedi, Asif, Saima Sadaf and Muhammad Luqman, 2006. rural women's participation in crops and livestock production Activities in Faisalabad. Pakistan, Journal of Agriculture and Social Sciences, Department of Agriculture Extension, University of Agriculture Faisalabad, Pakistan.

Jordans, E. and Zwarteveen, M, 1997 A Well of One's Own: Gender Analysis of Irrigation Program in Bangladesh, International Irrigation Management Institute, Colombo.

Junejo, B.M, 2007. The Agriculture Sector: Rural Dairy Farming and Alleviation of Poverty. Skyscraper City, Lahore. 14pp.

K.M.Siddiq. Akbar, 1984. Livestock and Dairy Development Board (LDDDB). Government of Pakistan, Pakistan.

karamali, 2010. Importance of agriculture for Pakistan Sukkur : Pakistan 2010
<http://www.allvoices.com/contributed-news/7698063-importance-of-agriculture-for-pakistan>

Khalida Jamali, 2009. The Role of Rural Women in Agriculture and it's Allied Fileds: A Case Study of Pakitan. Department of Economics and Director Pakistan Study Centre European Journal of Social Sciences – Volume 7, Number 3. University of Sindh, Jamshoro, Pakistan

Lyson, Isaac, 1986. Energy Science Network.
<http://esnet.oneworld.net/section/livestock>

Malik, S and A. Majid, 2004. Gender bias in mechanized farm technology in the barani areas of Punjab: A case study of wheat and groundnut.pak.J.Arid Agric, 7(2): 49- 56.

Martines, 1994. Gender, Livestock and Household Peasant Production.
www.ssu.missouri.edu

Mrs.Farzan Panhwar, 1988.Women and Organic Agriculture in Pakistan.Sindh Rural Women's Uplift Group, Latifabad, Hyderabad (Sindh), Pakistan.

Musharaf, P, 2007. Rural Women can Bring About White Revolution. Associated Press of Pakistan, Kasoor.

Nanavaty, Reena. 1996. Feminise our forests. Consultation World Commission on Forests and Sustainable Development, New Delhi. SEWA, Ahmedabad. 9 pp.

PARC, 1988. Rural Women in Pakistan Farming System Research. Proceedings of the workshop on "Role of Rural Women in Farming System Research", Pakistan Agriculture Research Council, Islamabad.

PFI. 1992. Forestry Statistics of Pakistan. Pakistan Forest Institute, Peshawar. 17 p.

Pesticide Action Network Asia and the Pacific, 2005.

<http://www.panap.net/14.0.html>

Rangnekar, S.D. (1996). "Role of women in traditional poultry production system in India". World's Poultry Congress, New Delhi.

Rangnekar, S.D. (1997). "Participatory studies with women on Ethnoveterinary practices for livestock health management", Proc. Of International Conference on Ethnoveterinary Medicine, held at Pune, India.

Rebenstein, J.M., 2003, The cultural landscape. An Introduction to Human Geography. 7th ed. Upper saddle River, NJ: Pearson Education, Inc. 496

Rileco, Inc. v. Mindanao, congress of labour Ramie United Workers' Assn, 26 SCRA 224, 1968

Saini, H and B. van Koppen, 2001, Gender in Lift Irrigation Schemes in East Gujrat, India. Working paper II. International Water Mnagement Institute, Colombo, Sri Lanka.

Shiva Vandana, 1991 .Most Farmers in India are Women. Food and Agriculture Organization (FAO), New Delhi,

Singh, R. V, 2001. Contribution of participatory forest management in the livelihoods of rural communities in India. Forest Trees and Livelihoods.

SOFA, 2011. Agricultural Development Economics Division. SOFA Team and Cheryl Doss ESA Working Paper No. 11-02. The Food and Agriculture Organization of the United Nations.
www.fao.org/economic/esa

CHAPTER # 7
APPENDIX

INTERVIEW SCHEDULE **ROLE OF WOMEN IN CROP PRODUCTION AND LIVESTOCK** **FARMING IN DISTRICT JEHLUM**

Tehsil : _____

Name of locality/village _____

1. What is your current age? (in completed years) _____
2. What is your marital status? i. Single ii. Married iii. Divorced
iv. Separated v. Widow
3. What is your education? (Number of classes passed)

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	16+
---	---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	-----

4. In which type of family you are living in? i. Nuclear family ii. Joint family
iii. Extended family
5. What is the current age of your husband? (in completed years) _____
6. What is your husband's education? (Number of classes passed)

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	16+
---	---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	-----

7. How many total members of your family? i. Male _____ ii. Female _____
8. How many children do you have? i. Male _____ ii. Female _____
9. In which of the following profession your husband is engaged?
i. Govt. servious ii. Private servious iii. Businessman iv. Labourer
v. Self-employed vi. Unemployed vii. Farmer viii. Other (specify) _____
10. At what time you get up in the morning? _____
11. Do you or your husband own any land? i. Yes ii. No (if no, go to question no.18)
12. Is your land fertile? i. Yes ii. No
13. What type of irrigation is available to your land?
i. Tube well ii. Rain fed iii. Canal iv. Tubé well + canal v. Rain + tube well
vi. Rain + canal vi. Any other (specify) _____
14. Who cultivate land? i. Yourself ii. Tenants iii. Family iv. Others (specify)
15. What is the size of that land holding in (acres)? _____
16. How much land is under cultivation? _____

17. How much land is barren? _____

18. What are the modes of cultivation/ownership?

- i. Tenant ii. On rent iii. Lease out iv. Share cropper v. Labour
vii. Any other (specify) _____

19. What types of crops are you growing on your land during Rabi and Kharif season?

Sr.No	Rabi Season	Sr.No	Kharif Season
i.		i.	
ii.		ii.	
iii.		iii.	
iv.		iv.	
v.		v.	
vi.		vi.	
vii.			

20. How much time you spend in the field? _____

21. What is your annual income from agriculture? Rs _____

22. What extend of your daily involvement is in agriculture? (Tick relevant)

Sr.	Agricultural Activities	None	1-2 hours	3-4 hours	5+ hours
i.	Preparation of land				
ii.	Sowing of crops				
iii.	Cutting & chopping of fodder				
iv.	Harvesting				
v.	Grain storage				
vi.	Milling of grains				
vii.	Any other				

23. What extend of your involvement in decision making about agricultural activities?

Sr.	Activities	Frequently	Rarely	Never
i.	Cultivation of crops			
ii.	Purchase of seeds			
iii.	Purchase of fertilizer			
iv.	Fertilizer application			
v.	Irrigation			
vi.	Harvesting			
vii.	Sale of produce			
viii.	Any other			

24. What type of animals do you have in your house?

Sr.	Type of animals	No. of animals
i.	Buffalo	
ii.	Sheep	
iii.	Goat	
iv.	Cow	
v.	Bull	
vi.	Donkey	
vii.	Horse	
viii.	poultry	
ix.	Any other	

25. Where do you keep these animals? i.On farm ii.In courtyard iii.On farm + courtyard
iv.Separate place

26. How much time you spend in taking care of livestock? _____

27. What extend of your daily involvement is in livestock care? (Tick relevant)?

Sr.	Activities	None	1-2 hours	3-4 hours	5+ hours
i.	Cleaning of animals & animal room				
ii.	Preparation of feed				
iii.	Housing the animals for milking				
iv.	Milking				
v.	Feeding				
vi.	Dung cake making				
vii.	Any other				

28. How much monthly income do you/your family earn from livestock? Rs _____

29. What extend to which you are consulted in the following activities?

Sr.	Activities	Always	Sometimes	Never
i.	Purchase of new animals			
ii.	Sale of animals			
iii.	Spending money from animal sale			
iv.	Slaughtering of animal			
v.	Treatment of animal			
vi.	Feeding			
vii.	Any other			

30. To what extend of your involvement regarding following household activities? (Tick relavent)

Sr.	Activities	None	1-2 hours	3-4 hours	5+ hours
i.	Cooking & house cleaning				
ii.	Washing of clothes				
iii.	Dusting of furniture				
iv.	White wash				
v.	Growing vegetables & tend vegetable garden				
vi.	Elderly care				
vii.	Sewing/weaving/knitting				
viii.	Any other				

31. What are the activities related to child care?

Sr.	Activities	None	1-2 hours	3-4 hours	5+ hours
i.	Feeding				
ii.	Washing of clothes				
iii.	Giving food				
iv.	Education				
v.	Any other				

32. How much time you spend in the home with your family? _____

33. Does your husband give you a specific amount each month for household expenditure?

i. Yes ~ ii. No (If yes, how much? _____)

34. Who handled your family matters?

i. Father ii. Mother iii. Brother iv. Husband v. Sons vi. Father-in-law
vii. Yourself viii. Any other (specify) _____

35. To what extend is your involvement in decision making regarding the following family matters?

Sr.	Family matters.	Always	Sometimes	Never
i.	Education of children			
ii.	Marriages of children			
iii.	Disputes in family			
iv.	Buying and selling of land			
v.	Buying and selling of animals			
vi.	Any other			

36. How much you take rest in day time? _____

37. At what time you go to sleep at night? _____