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Rural Women in Pakistan Farming Systems Research

Pakistan Agricultural Research Council
Islamabad

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**Proceedings of the Workshop on Role of Rural Women
in Farming Systems Research, Islamabad
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FOREWORD

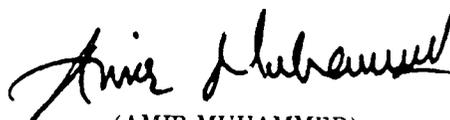
The marked progress in agricultural productivity that has occurred in Pakistan following the Green Revolution, however, did not bring about a commensurate improvement in the status of rural women. Published accounts of ignorance and impoverishment among rural women indicate that their welfare has at best remained backward and at worst retrogressed. Poverty, poor nutrition, inadequate facilities and lack of opportunities prevail. Yet women continue to work in the fields and tend to market livestock and farm products. Rewards for their long hours of toil and drudgery in terms of income or decision making are often absent.

Related efforts to improve the circumstances and opportunities for women in Pakistan have been recognized by the Government. Internationally, there is renewed emphasis to programs which aim to improve health, nutrition, income, and welfare of women in the developing countries. Opportunities to provide training, employment and improved facilities are being addressed.

The importance of this Workshop on the Role of Rural Women in Farming Systems Research cannot be over-emphasized. It is the first occasion in Pakistan where the role of women as partners in carrying out farm operations is being analyzed and strategies developed to improve their welfare through Farming Systems Research (FSR) activities. As a result of the Workshop FSR Projects are planned in each of the provinces. These will include Provincial and Federal Government agencies and the private sector. FSR will provide a new thrust to improve the circumstances of rural women.

Ideas and recommendations which emerge from the Workshop need to be carefully scrutinized. With objectives established, goals set, target areas and resources defined, an Action Plan for the improvement of women through FSR activities will emerge.

I take the opportunity to thank all the participants whose contributions have been significant in making the Workshop a success. Thanks are also due to FSR Advisor and colleagues for their cooperation in the accomplishment of the proceedings. I would also like to commend the efforts of PARC Directorate of Publications in editing and overseeing the printing of the proceedings.



(AMIR MUHAMMED)

Chairman, PARC

December, 1988.

CONTENTS

FOREWORD

INTRODUCTION

INAUGURAL ADDRESS 1

Mr. Muhammad Ibrahim Baluch

Federal Minister for Food, Agriculture and Cooperatives

OPPORTUNITIES TO IMPROVE THE LIFE OF RURAL WOMEN
THROUGH FARMING SYSTEMS RESEARCH 4

Dr. Amir Muhammed

Chairman, Pakistan Agricultural Research Council

THE ROLE OF RURAL WOMEN IN AGRICULTURE 7

Dr. Z.A. Hashmi

Former Federal Education Secretary

PROVINCIAL REPORTS (CONDENSED)
Women in Livestock Management in Punjab. 13

Begum Sajida Nayyar Abidi

Role of Rural Women in Farming Systems of Sind. 15

Muhammad Ali Baluch

Women in Agriculture in NWFP. 19

Syed Mahfooz Ali Shah and Miss Talat Jabeen

Growing Awareness among Women in Baluchistan Agriculture 21

Begum Balqees Shahbaz

An Agent of Change — The Farm Guide Movement 23

Dr. A. Rahim Chaudhry

ABSTRACTS 25

ACTION PLAN

Action Plan Based on Women in FSR Workshop Proceedings 29

Ms Farzana Masood

Role of Women in Social and Economic Development with Special
Reference to Rural Development 35

Dr. Sabeeha Hafeez

SELECTED PAPERS

Training Program of Rural Women at Allama Iqbal Open University 3

Dr. Iftikhar N. Hassan

d

Local Participation in Development Planning — A Strategy for Improving Situation of Pakistan Rural Women.	46
<i>Dr. M. Anwar-ul-Haq</i>	
Role of Women in Poultry Farming.	51
<i>Dr. Muhammad Saleem Qureshi</i>	
Women in Traditional Irrigated Farming Systems	55
<i>Ms Fatima Masood</i>	
Training Needs of Rural Women in Agriculture	68
<i>Dr. M.S. Khan Rana and Zafar Sultan</i>	
Program for the Uplift of Rural Women in Baluchistan	70
<i>Dr. Faqir Muhammad</i>	
Role of Rural Women in Agriculture in NWFP	71
<i>G.S. Barg</i>	
WORK PLAN	
National Workshop on the Role of Rural Women in Farming Systems	73
<i>Dr. Mian Hidayatullah</i>	
ANNEXURES	81
URDU POEMS	93

2

INTRODUCTION

The National Workshop on Role of Rural Women in Farming Systems is planned to assist in achieving the FSR project objectives.

Rural Women constitute about 50% of the total of 72% of the rural population of Pakistan. This means that rural women constitute about 36 million persons out of Pakistan 100 million population.

It is alarming and sad that 93% of the rural women are illiterate, and only 7% of them are able to read and write. A comparative literacy level of Pakistan and provinces has been shown in Figure I. In fact, they are, by and large, ignorant, tradition-bound, unskilled and use time-old, inefficient technology and tools. But a rural women in Pakistan works for 12 to 16 hours a day in farm and home activities throughout the year. An average family farm women becomes extremely busy during the two farming seasons i.e., sowing and harvesting. In some rural sub-cultures and ethnic groups, especially in the southern regions of Pakistan, a husband may marry more than one wife, simply with the objective of making available additional labour on the farm.

As such, there is an urgent need to improve the skills and efficiency of rural women by providing problem-oriented and site specific training programs and appropriate improved technologies. Therefore, it is obviously emphasized that there is a need for making systematic and in-depth study of their level and extent of participation, especially, in the mix farming work.

Supplemented from the above statements of lowest literacy rate and the prevailing cultural social and economic conditions in the rural communities of Pakistan, it is generalized that rural women are ignored and neglected from all the agricultural development programs in Pakistan. Out of every 11 persons, 4 are rural women, who have unfortunately been excluded from the farming systems improvement program.

The National Workshop examines the potential role of rural women in FSR as well as integrated training programs. The objective is to improve the level of skills and efficiency of rural women which could lead to increased crop and livestock yields with higher income for the farm family. The general guideline and policy statement of the Chairman, Pakistan Agricultural Research Council needs to be noted. He has placed high priority to essentially incorporate a rural women component in the farming systems research project (MART).

Indeed FSR offers the promise of being able to overcome many of the gender biases inherent in most other agricultural development strategies, and offers hope that all farmers, male and female, will be considered in the generation of modern technology. The goal of FSR with a significant women participation is to *first* more precisely understand the various roles, women contribute to farming operations, *second* define where interventions can be made to increase productivity and improve their circumstances.

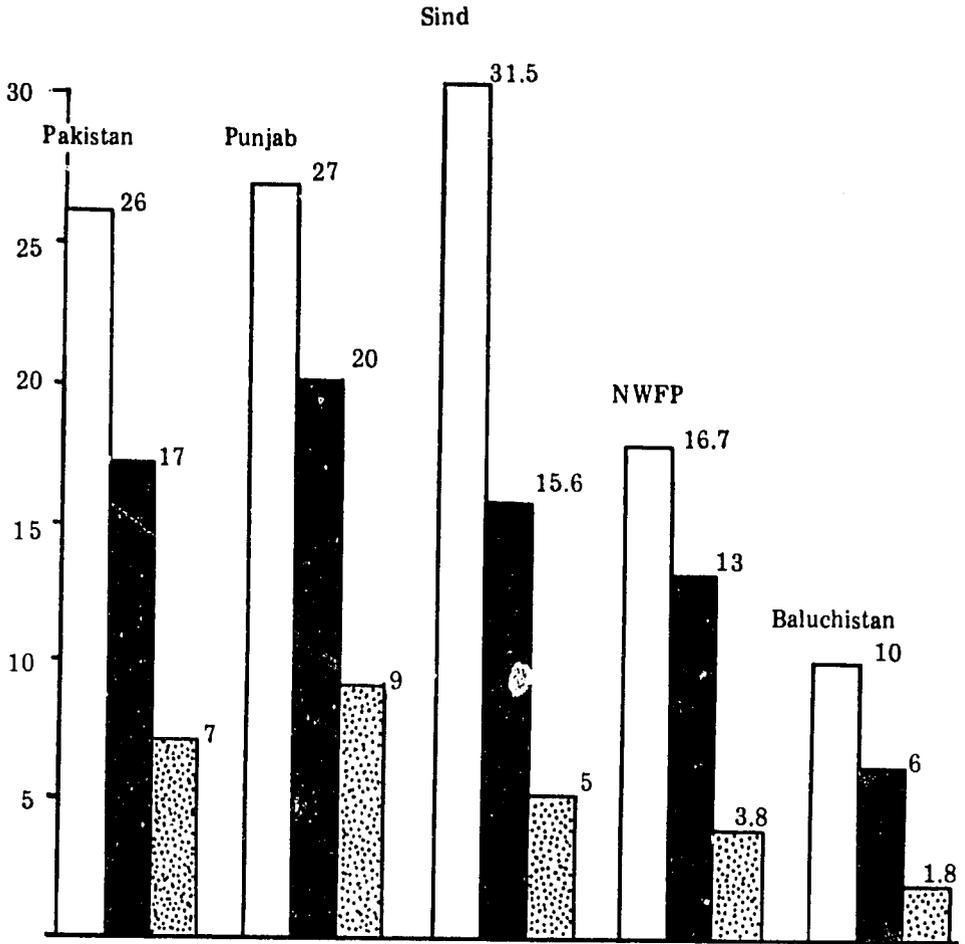
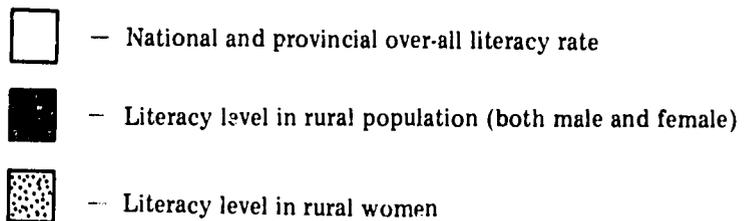


Figure I. Comparative literacy level in Pakistan



WORKSHOP OBJECTIVES

1. To identify the role of rural women in farming systems particularly relative to their socio-cultural circumstances.
2. To analyse skills/technology in use by the rural women in mixed crop livestock farming systems.
3. To describe resources and diagnose constraints of rural women/youth experience in farm crops and livestock work, then develop improved interventions for rural women.
4. To develop a strategy which strengthens the role of women in FSR and encourages an integrated resource utilization of the concerned collaborating agencies.

INAUGURAL ADDRESS

Mr. Muhammad Ibrahim Baluch
Minister for Food, Agriculture and Cooperatives

Dr. Amir Muhammed, Chairman, Pakistan Agricultural Research Council, Members of the Organizing Committee, distinguished participants, scientists, ladies and gentlemen.

Assalaam-o-Alaikum

It is a great pleasure for me to be amongst you in the First National Workshop on the Role of Rural Women in Farming Systems, organized by Pakistan Agricultural Research Council (PARC) and the USAID funded Management of Agricultural Research Technology (MART) Project.

As we know, agriculture is the mainstay and backbone of Pakistan's economy. The immense importance of crops and livestock integrated farming is well recognized by the Pakistan Government. Farming is managed and operated by the farm families largely on small farms, with joint participation by men, women and youth.

In Pakistan, rural women and youth constitute over 50 per cent of the total 72 per cent of the rural population. This means that rural women and youth form nearly 36 per cent of the total population or out of 100 million, 36 million are rural women.

It is an alarming fact that 93 per cent of the rural women are illiterate. This is the lowest literacy level, and is one-fifth of the literacy rate among the urban women at the national level which at 35 per cent remains too low.

At this point, I would like to present comparative statement for the four provinces. Baluchistan has only 1.77 per cent literate rural women; next in ascending order is NWFP 3.8 per cent, Sind 5 percent and Punjab 9.4 per cent. Literacy does not mean functional literacy, therefore, rural women, by and large, use folk knowledge and old traditions.

It can be generalized that the rural women are ignorant, unskilled, tradition-bound and are dependent upon simple tools and time-old technology for performance of daily farm and home activities. An average women belonging to small farm is obliged to overtax her muscles, thus becoming main supplier of human energy and labour. As a result, her productivity efficiency in farming is extremely low.

Based on several studies, an average woman in Pakistan works for 16 to 18 hours daily with no break for rest and recreation nor any holiday.

It needs to be realized that the agricultural production process will remain incomplete, ineffective, rather meaningless, without active involvement and functional training of rural women and youth in the farming systems work. The training program has to be based on rural needs and be problem-oriented.

Training and management in the farming activities of the farm family as a production unit will surely lead to higher agricultural productivity and the socio-economic progress of the rural population.

The workshop program looks objective and action-oriented with a functional strategy. A special mention of the group discussion methodology on the significant subject is commendable.

I am confident that by joint deliberations of the professionals and senior scientists, especially by utilizing the expertise and experience of talented women participants a viable action plan will be jointly formulated and implemented by PARC and MART Project.

It is really delightful that the workshop has been organized in line with the Five-Point Programme of the Prime Minister of Pakistan.

In fact, incorporation of rural women in the integrated Farming Systems approach is in right direction and in harmony with the definition of Agriculture Extension and Education by the Food and Agriculture Organization of the United Nations. It is an informal out of school educational service for training and influencing farmers and their families. Adoption of improved practices and agricultural technology in crop and livestock production management, conservation and marketing should be a product of this Workshop.

I have a few suggestions for consideration by the Workshop participants:

- Deliberations may be directed at micro-level studies of problems, constraints as well as local resources of rural farm families.
- Workshop should help in better understanding of participation and valuable contribution of rural women in farming operations in different regions, sub-cultures, ethnic groups and socio-economic systems.
- Plan for functional literacy and skill-oriented educational programs relevant to the life and supporting the farming activities of rural women and youth.
- Propose applied research studies on the technology choices and tools in use by rural women. The Workshop participants may deliberate to determine more efficient and adaptable technology for easy adoption by the rural women and youth.
- Consider organizing similar workshops on the Role of Rural Women in the Farming Systems at the provincial levels.

- Consider developing effective linkages and coordination of on-going women's uplift programs with PARC and MART Project.
- Formulate plan for incorporating rural women as an integral component of the Farming Systems Research under the MART Project. The objective is to make rural women component a continuing and built-in program in PARC.

Now, I take pleasure in inaugurating the Workshop and pray that you will have successful deliberations and enjoyable stay at National Agricultural Research Centre, Islamabad.

Pakistan Zindabad

4

OPPORTUNITIES TO IMPROVE THE LIFE OF RURAL WOMEN THROUGH FARMING SYSTEMS RESEARCH

Dr. Amir Muhammed
Chairman, Pakistan Agricultural Research Council, Islamabad

Farming Systems Research (FSR) provides an excellent means to improve the life of poor rural women through increasing farm productivity. There is an intense world-wide interest in the role of rural women expressed by international agencies, including the World Bank. The Prime Minister has stressed the importance of programmes which will effect improvement in the lot of rural women.

This Workshop is of tremendous importance in seeking ways to solve problems being faced by the rural women. Through proper implementation of recommendations which emerge from this Workshop, the life of rural women could be improved. A tangible action program prepared by interdisciplinary scientists which could be easily implemented to help in solving the problems of the rural women is an urgent research and development agenda. There is need to conduct basic surveys that identify the problems of different agro-ecologies and socio-economic circumstances and define what interventions can have an effective impact on the life of the rural women. Poultry and livestock are the areas where there is a scope for proper improvement by the rural women.

The training in specific technologies and in management, processing and marketing should receive high priority. Rural Women need added income and employment alternatives. Village women volunteers may be trained in vaccination and management of rural poultry. Extension kit may be provided free of cost, so that when trained, women too can provide useful services to agriculture.

The FSR project should ensure that selected rural women have ready access to livestock research and production institutes, for information on the type and number of animals as well as improved husbandry that is site specific. Modern livestock technology to optimize utilization of available resources for profitable livestock production on a progressively sustained basis should be understood. Women should also be trained in the knowledge of animal diseases, animal hygiene, preventive vaccination, treatment of parasitic infections and treatment of simple ailments. To improve the skill and efficiency of farm women, any diffusion and adoption process for new innovations must consider the socio-cultural conditions of women in the concerned village communities.

Rural women can take part in preservation of fruits and vegetables in areas where fruits and vegetables are produced in surplus and can be utilized for preservation on a small scale. The use of movies in the village to demonstrate immediate economic impact from improved poultry, milk, vegetable, fruit and seed production should be encouraged. The establishment of rural cooperative societies for marketing their produce such as eggs, milk and crop products should also be developed. To encourage

educated ladies to work in the rural areas, four increments are recommended as desirable incentives for the graduates and six increments for post-graduates. May each province develop within the FSR framework useful and readily implemented projects which advance the welfare of rural women.

I think the first research priority in a year or couple of years is to find out what the rural women do in different agro-ecological zones of Pakistan. It should not be a long, 10 years project. This phase can be completed fairly quickly. We can identify constraints and define sociologically and anthropologically the rural family circumstances. The cultural traditions may be such that they won't let any change agent enter. They might not really even encourage women scientists to enter and tell other women how to do things better. We need to know the attitudes of society and I think the first intervention should be made in societies where a change agent is going to be welcomed. Of course, you should have practical changes which can be brought about and which will not require the permanent presence of the change agent in that community.

Innovations should be demonstrated. Let them work with their hands but with the help of the video media. This should not be a movie brought from America, Canada or elsewhere which shows everything beautifully streamlined. I think scientists with media specialists should not delay in presenting to rural women videos on rural poverty projecting the milking of cattle, keeping the milk hygienic, or storing grain, seeds, etc. Take these movies along with vans, concentrate in a FSR Project area, then assess the impact. We may have the beginning of a revolution, because if we can improve the productivity with slightly less work the rural women can add to the family income. Her life would be made more pleasant and that of the family too. You can also educate her. I think we should make a start at the Open House in April at National Agricultural Research Centre (NARC). Let us keep one morning for women. Let us have a morning for rural women, collect them from the villages, let them go to our livestock, machines and seed processing. Let them imbibe some of the excitements so that their life could be made better. Similarly, other stations in the country research centres should also have field days for rural women.

Let us identify the project areas carefully, define the characteristics of those project areas and identify appropriate packages of improved technology for rural women. Simple non-controversial technologies should be emphasized. Then, let us try these improved packages in a selected number of villages from each FSR project area. We should assess the impact. Is the package acceptable? Does it really start working for the rural women? Does it alleviate hardship and improve their welfare? If the answers to all these questions are in the affirmative in these FSR villages in all provinces, then I assure you that getting another 50 million dollars for improving the lot of rural women will not be difficult.

This workshop may really start a pleasant revolution on a problem against which many people have wrestled during the last 100 years. But it will require a proper analysis by researchers and social workers. Before you actually march into

the field with something which can be adopted to improve the life of rural women, interview surveys will need to be carried out.

The task will not be easy. It has to be done by very genuine people. But I assure you that it is worth doing either on humanitarian or on professional grounds, and is perhaps, more significant than anything else that you can do. I certainly wish those of you who are going to be working in this area, all the very best. I think if this workshop helps to alleviate the misery and poverty of rural women to any extent, we will all feel very pleased about it. Good-luck and thank you.

THE ROLE OF RURAL WOMEN IN AGRICULTURE

DR. Z. A. Hashmi

Former Education Secretary, Government of Pakistan

The popular view about the role of rural women in agriculture is more imaginary than real. The phrase 'Rural Women' conjures an idyllic vision of an unspoiled countryside wherein sturdy women are enthusiastically and joyfully working in green fields and lush pastures. You may get a glimpse of such a romantic vision in Ustad Allah Bakhsh's paintings but alas this picture vanished long ago from real life. Prolonged misuse has denuded and degraded the land, forests and pastures. The rich soils of the Indus Basin show extensive ravages of water-logging and salinity, wind and water erosion and rapidly spreading desertification. Due to an iniquitous social dispensation, the mass of rural women in Pakistan are a dispossessed and deprived lot, illiterate, malnourished and poverty stricken. One representative study reports that the rural woman in Pakistan works 15.50 hours a day, getting only 50 minutes for the care of her own children, but spends 5.50 hours on the care and feeding of livestock. Most of this work, during 15-16 hours every day is sheer unrelieved drudgery, such as, making dung cakes and gathering fuel, carrying water, doing chores around the house or working in the fields. Except in occasional wage-work outside home and farm, her labour is all unpaid. She suffers from physical exhaustion due to overwork, too many pregnancies and malnourishment.

When agricultural specialists, planners and economic experts kindly recommend that rural women should be persuaded to undertake more innovative and improved agricultural activities requiring additional work and learning, these are perceived by the rural women as only recipes for additional unpaid work, as if sixteen hours a day was not enough misery for these tired exhausted women. Obviously, it is futile to talk to rural women about clever new techniques and systems of farming. The Workshop must first discover the means to provide the rural woman with workable alternative options to change her present unbearable situation, to lessen her workload, and to increase her personal income. Only thus would she be motivated to think of more productive technologies and systems.

When the agricultural experts discuss the role of rural women in agricultural modernization and development for increasing production, for example improvements and changes in Farming Systems which is the theme of this Workshop, it would be more realistic to pause here and look back into what modernization and development of agriculture has done to rural women in Pakistan during the past one century or so. The areas comprising Pakistan have, during this period, gone through a number of revolutionary developments : (1) permanent settlement of land (the conferment of permanent title of land), (2) creation of world's largest irrigation system in the Indus Basin and (3) industrialization and introduction of industrial, capitalistic agriculture (Green Revolution) based on high capital and energy inputs,

HYV seeds, mechanization and tubewells, application of chemical fertilizers, pesticides, etc.

Land settlement, aimed at the creation of a feudal structure was patterned on the legal rights to land in Great Britain. It disinherited women totally and deprived them of the basic resource for agriculture i.e. land.

The construction of the mammoth canal irrigation system involved huge loans by the British to India. The repayment of capital and interest in the form of produce-food grains, cotton, etc., constituted an unbearable drain on resources. The creation of a comprado feudal class reduced the cultivators to the status of share croppers. Furthermore, all future development investments were made in 16 percent of land which was irrigated, the remaining 84 percent of Pakistan's land (the barani tracts) were neglected, leading to their progressive impoverishment. The residents of these areas suffered from neglect of education, technological progress and economic development. Women, being the weakest, suffered the most, from under development.

The Green Revolution totally bypassed women. Only men were trained and involved in the numerous and varied skills of modernized, industrial agriculture, on the assumption that women do not possess the attributes required for these tasks. This assumption is totally baseless, as in all countries where women have been given the opportunity, they have performed as well as men e.g., in Germany where 51 percent of farmers are women. In almost all East European countries, women constitute a significant proportion of farmers and have proved fully as competent in handling farm machinery as men.

In Pakistan, the impact of the Green Revolution and industrialization on women has been entirely negative. Almost all sources of personal income for women have dried up, pauperizing them and reducing their status on one of utter dependency. As textile industry has developed, rural women have lost personal incomes from the sale of the produce of home spinning, weaving, etc. Their income from sale of *ghee*, has also vanished, as liquid milk sales have expanded with urbanization. Liquid milk sale proceeds are pocketed by men who transport it to cities. The expansion of organized poultry industry has meant the extinction of village level egg and poultry trade and loss of income to rural women. The widespread use of harvesters, threshers, etc. have drastically reduced wage-work for women. The impact of the three major modernizations has thus been most unfavourable for rural women. In the last analysis: (i) They are dispossessed of the basic resources for agriculture, namely land. (ii) They have greatly reduced access to income-generating activities and have little personal income. (iii) They have about the highest level of illiteracy in the world (94 percent). (iv) Women's share in all paid work is infinitesimal and is further declining, for example their participation in the labour force has declined from 8 percent in 1977 to 5 percent in 1983. (v) Green Revolution and mechanization of agriculture has increased the size of holdings of the richer farmers, and forced millions of smaller and less efficient farmers to abandon farming and sell their land. The number of landless in rural areas have increased from around 25 to 50 percent, resulting in great distress for the women of such households. (vi) Machines have

reduced wage work and forced the poor resourceless classes in villages to migrate. Millions of labourers who have moved out have left their women-folk behind to live in very difficult conditions. (vii) The health status of rural women has declined. Seventy percent of rural women do not get enough calories in their diet; 90 percent of pregnant women suffer from anemias; 40 percent of their newborns are below normal weight. (viii) From 1/3rd to 1/2 of rural population lives below absolute poverty line. The women bear the brunt of unequal development. (ix) They also lack organization and suffer from lack of leadership in the field of agriculture. For example, only 0.5 percent of agricultural scientists are women. Even in Egypt, which is a country with socio-economic and cultural similarities, 60 percent of agricultural research scientists are women.

EFFECTIVE ROLE OF RURAL WOMEN

This non-role situation for the rural woman, which is tantamount to denial of her humanity, is obviously crippling the national economy needs to be reversed. Woman should be an effective and equal partner and given a proper role so that instead of increasing the national dependency burden, she is able to contribute as a skilled, technologically competent and motivated workers. Basic pre-requisites for achieving this aim are National commitment and resolve i.e., the exercise of political will and authority, to restore to women (as also other deprived sectors of population) basic rights to inherit and possess land, income and possessions, access to education, skills, employment and income-generating work and to function as self-directing self-reliant human beings. On paper women legally have these rights. The socio-cultural situation, however, is highly discriminatory, and the mass of women are deprived of these rights. Projects and programs specifically targeted at uplift of women should be launched. A pervasive socio-cultural change is a pre-requisite. (ii) An abiding concern for : (a) distributive justice (b) the quality of life of people (all people and not just the favoured few) and (c) resources and environmental conservation, should henceforth constitute an integral part of all development planning and project formulation. The trickle down approach has not worked. Development has invariably left the weak weaker, unless deliberate planning is undertaken to protect them from exploitation. The following suggestions are offered for consideration:

SMALL SCALE RURAL INDUSTRY

If the aim is to provide income generating paid work to the 15 million or so of rural women of working age, (and their number is increasing at more than 3 percent per annum), then it should be realized that farming alone would not be able to accommodate such huge numbers, even allowing for migration which is becoming insupportable in urban areas. Thirty to fifty percent of working age women would have to be accommodated in the rural small-scale industry. At present, 90 percent of national investment in industry is in large-scale urban-centred industry which offers employment to only about 3 to 5 percent of our labour force. A major shift in policy would be required for any significant change, but it is clear that there ought to be no delay in making a substantial beginning with high employment small-scale agro-based industries and industries which would supply inputs for agriculture and rural

need. A much greater level of local self-sufficiency should be aimed at. Much benefit could be derived from an in-depth study of the Chinese experience in the promotion of rural industry.

AGRICULTURAL OCCUPATIONS

Very drastic changes would have to be accomplished in our farming systems to provide opportunities for steady gainful work and employment. There is no way we can continue with the present model of agricultural production which is reducing the number of workers engaged in farming, is destructive of natural resources and lowers the quality of life of the majority of population. The nation faces today horrendous ecological challenges in terms of near extinction of forests (only 4 per cent instead of 25 percent), denudation of rangelands, water-logging, salinity, soil erosion and desertification. The iniquitous distribution of benefits is resulting in regional disparities and landlessness for the majority of rural dwellers, creating political and social tensions. It is necessary to search for alternative systems which meet both the biological and social imperatives of our situation. These are briefly discussed below:

Biological Imperatives: The biological system plants and animals maintain a continuous flow of energy and network of interlocking cycles. Man utilizes the energy and nutrients through four biological sub-systems-crops, livestock, forests and fisheries. Their efficiency and stability determine in a large measure not only economic productivity but also ecological balance, the stability of the resource base and the quality of a people's food, water and air. Our agricultural development has been imbalanced; three subsystems out of four namely livestock, forestry and fisheries, are marginalized and even in the crops sub-sector only four crops -- wheat, rice, cotton and sugarcane, have received attention and requisite investment. Crops critical for people's food and soil fertility, such as, oilseeds and grain legumes and forages, have received scant attention. A five years study by an expert group, based on the Aird Zones Research Centre, Arizona State University, USA, arrived at the conclusion that dryland areas (like Pakistan) are more than exclusively cereal producing regions. Dryland farmers grow both cereals and forages for livestock and relatively abundant labour supply in the less developed countries tilts the balance in favour of livestock production. It is observed that little evidence exists for the profitability of monocrop cereal production packages. The study report has suggested that in future work in developing dryland farming, efforts should concentrate on strategies which provide an explicit role for interrelated forage and livestock production, as well as, on strategies designed to mitigate weather-related risks.

A highly successful model illustrative of the above approach is provided by the ley Farming System in Australia, which deserves an in-depth evaluation, by a Pakistani team comprising both plant and animal science specialists, and experimentation to develop workable farming systems in different ecological zones in Pakistan. The Australian system is based on an integration of crop and livestock production, involving the cultivation of self-regenerating fodder legumes alternatively with wheat, thereby providing year round cover for land against soil erosion, increasing soil fertility, enabling livestock production, utilizing labour and producing foods

of high biological value like milk and meat, for consumption and export. The Australians described this farming system as their 'Green Revolution'. The growing of fodder legumes has also drastically reduced their requirement of nitrogenous chemical fertilizers and enhanced soil quality. By adopting a similar system, the development of livestock and poultry industries would enable Pakistan to diversify agriculture, export value added products and economically integrate the rainfed areas (which are predominantly livestock areas) with the irrigated hinterland.

Care must be taken, however, to ensure that the new development in dairy, poultry and meat industries is not based on affluent country models wherein only 3 to 5 percent of population is engaged in farming. It would be disastrous to forget even for a moment that 70 percent of our population lives in villages and is dependent on farming for its livelihood and survival.

Social Imperatives: It is thus of paramount importance that besides innovations in farming systems and improved technologies for farming and livestock/poultry production, carefully planned social engineering be undertaken for introducing appropriate models of socio-economic organizations. The Anand model of Dairy Cooperatives, started in 1942 and currently functioning in 198 districts of India, including neighbouring East Punjab, provides perhaps the most viable pattern which could be replicated with minor variations in Pakistan. A brief description of the model is given below:

Anand Model Dairy Cooperatives

An eminently successful model of effective socio-economic organization, which has greatly benefited rural women, is the Milk Producers' Cooperatives in India. Started in 1943 around Anand, these cooperative Societies have multiplied and proliferated throughout the country. Their apex organization today is the 'Indian Dairy Corporation', which besides other projects, operates a country-wide program, the 'Operation Flood', for the production, collection, processing and marketing of milk. The spectacular results achieved have been described appropriately, as the 'White Revolution' in India to match the 'Green Revolution' in crop production. The program covers today some 36 lakh farm families in 198 districts. In 1984-85, 'Operation Flood' dairies were marketing milk in over 290 cities, the average procurement of milk being 58 lakh kg/day. The annual production of milk products was 71,000 metric tons of milk powder, 32,000 m.t. of butter and 22,000 m.t. of ghee.

The cooperative societies were started to improve the earnings of milk producers who were stuck against the exploitative prices they received for their milk. The village cooperatives affiliated themselves to form a Milk Producers Union at Anand which owned and operated a dairy plant. The Union prospered and enlarged its processing facilities as well as services, such as veterinary care, provision of balanced cattle feed concentrates, artificial insemination facilities, etc. The services provided are manned by some 6,000 professional in the fields of veterinary and agricultural sciences, dairy technology engineering, etc. engaged in the institutions operated by the Corporation, the unions and milk plants.

An outstanding and distinctive feature of the program is that the organizers

and beneficiaries of the program are small-time village milk producers themselves. A survey conducted during 1984 covering 20 lakh members of milk cooperatives showed that 72 percent of the members belonged to the economically backward classes, who had no other gainful occupation the landless labourers 21 percent, marginal farmers 29 percent and small farmers 22 percent. About 51 percent of members belonged to scheduled castes and other lower classes. A revolutionary development was the active participation of women, who traditionally are responsible for the care of milch animals, have emerged not only as active participant in livestock improvement work, but also as agents of change in all other programs of modernization affecting their families education, family planning, health care, etc.

It is not possible to describe fully in a brief presentation that is being accomplished in building the infrastructure for the collection, processing and marketing of milk, in the provision inputs and services to the livestock owners, in developing ancillary industries such as the manufacture of livestock feed equipment, vaccines, in manpower training and research, etc. The magnitude of the contribution may be gathered from the fact that in 1984-85, the total amount paid out to livestock owners, most of whom kept only 1 to 5 milch animals was over Rs. 7,000 million, in addition to the provision of a variety of services. An integral feature of the 'Operation Flood' is the milk production enhancement program, through the provision by the cooperatives of cattle feed, improved fodder seeds, veterinary cover, artificial insemination, etc. As a result, there has been a rise of 25 percent in the yield of milk per animal as between 1977-84.

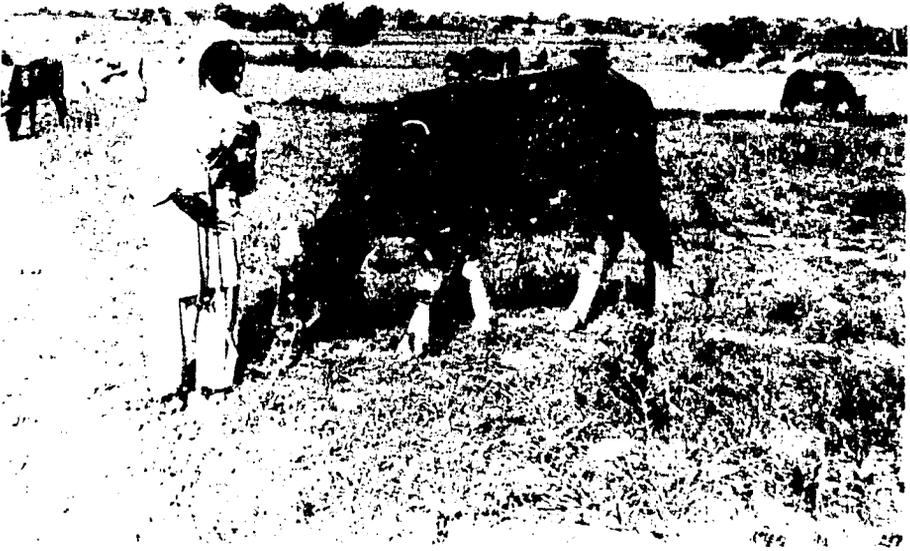
CONCLUSION

There is no lack of options available to a people in terms of alternative models, if clear aim and priorities are established. What is inescapable is the need of undertaking farming system research under different ecological conditions to discover the system most appropriate to each ecological zone. The need is emphasized to create simultaneously appropriate social and economic institutions for organizing women to benefit from development and increased production, as such benefits do not automatically accrue to all sectors of a population. They are generally appropriated by the more resourceful and the powerful. Cooperatives offer the best option for without arrangements for efficient marketing of produce, increased production becomes futile and cannot be sustained. Cooperative groups of resource-poor rural women can also undertake the numerous learning, development and income generating tasks on a participatory, self help basis.

120

**PROVINCIAL REPORTS
(CONDENSED)**

RURAL WOMEN IN LIVESTOCK MANAGEMENT



Grazing the animals constitutes an important activity of the daily life of a rural woman



Milking of a cow by a woman, a common rural scene

WOMEN IN LIVESTOCK MANAGEMENT IN PUNJAB

Begum Sajida Nayyar Abidi
Former Minister of Livestock, Punjab

INTRODUCTION

From the four provincial reports, it emerges that farming is the main occupation of majority of the people living in rural Pakistan where males and females are busy from dawn to dusk for the subsistence of their families, but there appears to be no significant improvement in farmers' socio-economic conditions. This situation demands an immediate action by the planners, policy-makers and researchers. Females constitute 50 percent of the rural population which is the back-bone of Pakistan's economy. In agriculture, the role of an average rural women is very much obvious; she contributes a tremendous labour in various socio-economic activities and in certain cases her contribution is very high. They play a significant role in crop production, livestock management and poultry farming in spite of many religious and social barriers and constraints. These are in addition to their seasonal work, child rearing and household duties.

The role of women in small scale and family subsistence farming is featured. There is considerable participation of women in the very diversified farming systems of the Punjab. The emphasis has been given to the livestock in Punjab where animals account for almost 60% of Pakistan's animal wealth. Livestock rearing with suggestions about the introduction of appropriate interventions for women and by women in rural Punjab are given. Suggestions to improve the production-oriented development in livestock and poultry are also presented.

Opportunities for rural women to learn improved technologies in livestock nutrition, husbandry and management through farming systems research and training should receive emphasis. Other recommendations include:

1. Provincial Livestock and Dairy Development Department should organize short paraveterinary courses at Markaz level for 5th class village girls. Women Division should provide first aid veterinary kits to the trainees.
2. The Directorate of Poultry Production, Punjab, should provide units of high quality seeds of poultry, ducks, turkey birds and quails at concessional rates to rural women.
3. The Livestock Department may expand and accelerate artificial insemination facility in areas where Sahiwal cows and Nili-Ravi buffaloes are in abundance.
4. Leasing out of State land to rural women on long term basis for commner-

cial livestock farms/green fodder production farms should be explored by appropriate agencies.

5. Women Division should arrange visits of rural women to develop livestock farms/dairy plants and experiment stations/institutes with specially planned field days.
6. Provision of Zakat funds to poor ladies in the shape of teddy goats, sheep heifers and poultry units may also be examined by appropriate agencies.

Editor's Note

In development of a Role of Women in FSR, these recommendations deserve earnest consideration.

ROLE OF RURAL WOMEN IN FARMING SYSTEMS OF SIND

Muhammad Ali Baluch

Director, Adaptive Research Agricultural Extension Department, Hyderabad

The province of Sind forms lower basin of the Indus and lies between 25° and 29° north latitude and 67° and 70° parallel east longitude, situated along the lower banks of the Indus. The province constitutes a major portion of great Indus plain except for the narrow coastal strip of about 240 km in the south-west along Arabian Sea. In the south is border of Runn of Kutch, the eastern boundary extends towards Rajhastan while the Punjab, and Baluchistan lie towards its north and west, respectively. The length of Sind from south to north is about 580 km and break is 375 km from east to west. The total area is about 137200 km.

Sind is the second populous province of Pakistan with about 18966 thousand people (1981 Census) i.e., 22.6% of Pakistan, 56.7% of whom live in rural areas. Some vital agriculture statistics of Sind are as under:

Total geographical area	14.09 million hectare
Total population (1981 Census)	18.966 million
Total cropped area	4.06 million hectare

CROP SECTOR

The role of the province of Sind in production of major crops has been quite significant as it contributes 30% in rice, 25% in cotton, 23% in sugarcane and 18% in wheat production of Pakistan. The land area is 35 million acres of which 13.5 million acres are potentially cultivable and about 8 million acres (59% of cultivable area) are irrigated each year. About 1.3 million acres are double cropped. Annual rainfall varies from 2.3 inches in the north to more than 6.5 inches in southern region. Soils are diverse with predominance of silt and sandy loam.

Crop	Sind	Pakistan
1. Wheat	22.21 mds	17.46
2. Rice	23.61 acres	18.88
3. Cotton	13.56	14.68
4. Sugarcane	464.79	425.23

The major constraints in agriculture development are as follows:

1. Waterlogging and salinity
2. Climate — Little rainfall generally at inappropriate time
3. Shortage of irrigation water — ground water being saline

According to 1987 Census, the total population of Pakistan stood at 83782 thousands of which 28.28% lived in urban area while the remaining 71.72% in rural

areas. The same Census puts the population of Sind province at 18966 thousand out of which 13.3% lived in urban areas and 56.7 in rural areas. The density of population km² of Pakistan and Sind is 106 and 135 persons, respectively.

Agriculture is the mainstay of the province of Sind with varying climatic conditions and very scanty rainfall. Agriculture is linked with the supply of water from the Indus. Prior to the building of barrages, the cultivation could be raised only with the help of inundation canal. At present, three barrages namely Gudu, Sukkur and Kotri command the irrigated area of Sind.

Kotri Barrage: It was completed in 1955, commands nearly three million acres. Salinity is the main problem of Kotri command area. The greater part of the command is non-perennial with paddy as main crop. By establishment of sugarmill in Kotri Barrage command areas, sugarcane has become an important crop.

Sukkur Barrage: It was the first to be completed in 1932 with a command area exceeding 7 million acres and is the largest barrage system in Pakistan. On the right bank of Sukkur Barrage, the paddy is main crop, on the left bank perennial pattern is followed i.e., wheat, cotton and sugarcane.

Gudu Barrage: It was completed in 1962 and commands nearly three million acres; paddy is the main crop.

The population of Sind province is 18966 thousands. By sex rural and urban position is reflected as below (figure are in thousands)

Rural			Urban			Grand total	
Male	Female	Total	Male	Female	Total	Male	Female
5537	5224	10761	4404	3801	8205	9941	9025

Literacy ratio of Pakistan and Sind by urban and rural-wise is given as below according to 1981 Census.

Pakistan			Sind		
Male	Female	Total	Male	Female	Total
35.05	1500	16.17	24.54	21.64	15.56

Sind (Urban)			Sind (Rural)		
Male	Female	Total	Male	Female	Total
57.77	42.23	56.77	24.54	5.21	15.56

WOMEN'S SHARE IN FARMING

The majority of rural population, directly or indirectly is engaged in agriculture farming and other related aspects. Despite educational handicaps and other social barriers, the women of Sind take active part and work shoulder to shoulder with male in farming. Out of 0.795 million farmers about 77% are small holders, having a farm size 12.5 acres or less. At present 0.75 million pairs of bullocks are the source of farmer power, but use of tractor is increasing day by day. The contribution of manual labour by women in agriculture sector is very vital. Almost all the field operations in fruits, vegetables and crop production are shared except heavy duty work viz., ploughing, spraying and spade work. Mostly traditional technology is used particularly on small farms. Women are equally efficient, in sowing, weeding, interculturing, transplanting and harvesting of all the crops grown in different areas of Sind. Besides the work in the field, they also take part in indigenous poultry raising, and animals for milk, draft and meat purposes. It is not out of way to mention that feeding, milking and managing of cattle, viz., buffaloes, bullocks, cows, goats, is entirely managed by the rural women not only this, but farm shed cleaning, making of dung cakes and carrying FYM to manure heaps is also performed by the women. The grazing of cattle is also shared by them. The cleaning of cereal grains and storage of the same is also carried out by making local mud bins where grain is stored for considerably long time. Making of dairy products viz ghee, butter, curd, butter milk, is also one of the major responsibilities of village women. Preparation of different pickles and drying of vegetables indigenously is in practice by rural ladies.

HOME MANAGEMENT

The rural woman is strictly religious minded and wholly responsible for house affairs and takes care of her family members. She works from dawn to dusk, every morning, starting with cleaning of house, preparation of food, fetching of drinking water from far off places, bringing the food to field, washing the clothes, etc. and also collection of fuel wood is the daily work routine of common rural women.

Due to poor socio-economic conditions, illiteracy and heavy work load, the general health of women in villages is not sound. This condition is also applicable to their children who are not being given the due care which results in high mortality in their early age.

Due to inadequate projection, the art of handicrafts and sewing work has not been popularized on scientific lines, yet the rural women are talented and produce hand-made bedsheets (Rilee), caps (Sindhi topce), etc. of export quality.

SUGGESTION FOR IMPROVING STATUS OF RURAL WOMEN

The rural community at large should be made education-minded. Particular emphasis should be laid on mass female education for which Television and Radio could effectively be utilized for wide publicity. Establishment of girl schools in village are of prime importance.

Present atmosphere particularly in rural areas is not favourable for female education, which should be improved by Education Department by launching a campaign by visiting villages. The cooperation of village head man will facilitate the campaign work in this regard. Besides, vocational institutes may also be helpful if these are extended to village level.

WOMEN IN AGRICULTURE IN NWFP

Syed Mahfooz Ali Shah and Miss Talat Jabeen
Director-General Extension and Agricultural Officer, Extension, NWFP

In NWFP, there is no strong industrial base and population residing in rural areas are engaged directly or indirectly in agriculture. The role of women is very significant in spite of many social barriers and constraints. According to a survey conducted by Pakistan Academy for Rural Development (PARAD) in the five districts of NWFP, 82% of women participate in agro-based activities. These women spend 45% of their time and are responsible for 25% of production of the major crops and with the increase of their participation income level was also increased. They help the farmers in field operations, manage the livestock production, dairy products and participate in poultry farming, kitchen gardening and food preservation. All their work enhance the family income. They produce 30% of the total food, which is quite rational to involve them actively in all the agricultural development programs. Though there is a growing awareness among rural women with regard to their potential contributions in socio-economic development, yet they face many problems. The top priority problem is the promotion of literacy rate which is only 5% for the women in NWFP. In the last 14 years, only six women got their graduation in agriculture in NWFP. At present, there are three major obstacles in the way of rural women participation in farm operation. Firstly, the women are bound to the household compounds and cannot seek employment outside the home. Secondly, literacy amongst the rural women is shockingly low and preference is given to male education, who is considered a better asset in terms of financial returns. Thirdly, the rural women have very low health standard as they are either under-nourished or malnourished.

RECOMMENDATIONS

- Agricultural education should be made compulsory for all girls in the country.
- A minimum of 20% quota should be fixed for girls wishing to secure admission in the NWFP Agriculture University, Peshawar.
- Employment quota for women should be fixed for women in Agriculture Department.
- Women should be given employment in all agro-based industries at par with the man workers.
- Female co-operative societies should be developed for industrial development. Such societies should be provided with the technical guidance and

liberal loaning facilities for establishing the rural industries such as food processing, dairy farming and bee keeping.

- 21 -

GROWING AWARENESS AMONG WOMEN IN BALUCHISTAN AGRICULTURE

Begum Balqees Shahbaz

Former Member, National Assembly of Pakistan

Pakistan has an agricultural economy, but it is still characterized by same oldage/traditional production system. Men and women work side by side from dawn to dusk on their farms, but there appears to be no significant improvement in farmer's socio-economic conditions. This situation demands the immediate consideration of our policy-makers and researchers, that the sector which is the backbone and supports almost 72% of the economy, be given highest priority.

Women work very hard not only on farms but also perform their domestic duties including child-care, kitchen chores and fetching water. On the farm, they have major responsibility for livestock management including, feeding, making concentrates and dung porcessing, etc. Long hours of toil affect their health as a result of which they become too weak to work. Development plans should be formulated for the province that must include efforts to improve the welfare of women.

SUGGESTIONS AND RECOMMENDATIONS

1. Since Village Aid program was found very effective in the recent past, it should be re-organized and extended to the village farm.
2. The rural women of selected area in Baluchistan should be given two years' training in the new technology relevant to the farming systems of these areas. They should become trainers so that they may further train other groups of rural women.
3. The subject-matter for such training should include health, family care and site specific improved technology with ample provision for demonstrations and visits to experlment stations.
4. A farming systems approach with component improved technology should be included in the syllabus at village level as well as high schools.
5. Agricultural unlversities for women should be established at provincial levels, where higher technical education should be imparted to women who can get jobs and help in rural development.
6. Funds should be provided to send the students abroad for higher education. In this conn tion, Women's Division and USAID should arrange programs and women delegatons should visit developed countries to learn from their experience.

7. Agricultural credit schemes should be initiated with interest-free loans once rural women acquire training to invest in agricultural related projects.

Editors Note:

FSR project development in Baluchistan should initiate strategies that incorporate at least some of the above recommendations in the FSR Action Plan.

23

AN AGENT OF CHANGE — THE FARM GUIDE MOVEMENT

Dr. A. Rahim Chaudhry
Chairman, National Farm Guide Council of Pakistan

INTRODUCTION

The Farm Guide Movement is a voluntary extension agency aiming at socio-economic development in the rural areas by inducing better living practices through voluntary efforts and group action programs. The membership of the movement is open for all sections of public including male and female, literate and illiterate. All sectors work in different ways in keeping with their requirements and the respective environment.

SPECIFIC OBJECTIVES

1. To train and mobilize rural youth
2. To spread literacy (each one teach one)
3. To activate the group action program to improve the socio-economic conditions, health and hygienic conditions of the rural society.
4. To provide guidance to children, youth and farming communities.

METHODOLOGY

Basic and elementary training is being given to all the volunteers in the subjects of agriculture, livestock development, poultry farming, plant protection, adult education, first-aid, etc. but women get extra training in kitchen gardening, poultry farming, floriculture and fruit and vegetables preservation.

The students work under a unit commander, with ten members in each unit. Every unit selects field practices of its own choice, including weeding operations, plant protection, cleaning of watercourses, tree planting, etc. The movement is self-financing and all its projects are managed by the students themselves under the guidance of institution head.

SPECIAL PROJECTS

The movement has started many projects i.e. farmer volunteers, women volunteers; Imam of mosques, soldiers and ex-soldiers. In these programs, the volunteers after training concentrate at their own farms and provide guidance in day-to-day operation to other members around. There are programs for Imam of mosques and soldiers and ex-soldiers in which they act as ordinary farmer Farm Guide. Under the program of economic rehabilitation of youth, about 1600 young men and women have set voluntary shops for the sale of seeds, fertilizers, pesticides, farm-machinery and other consumable articles in their respective rural areas. The entire program is run on *cash and carry basis*.

RURAL WOMEN FOCUS

Under this women volunteer do not hold field camps but each volunteer adopts five more girls around as sisters and start guiding them in the subject of her own choice. They also undertake to impact literacy on the basis of each-one teach-one.

The present position of rural women and their general activities based "on-farm and off-farm" operations is discussed. The farm guide movement is endeavouring to reinforce and strengthen the knowledge and technical skills related to rural trade and functions.

GUIDANCE LITERATURE

The movement has its own guidance material, for the help of volunteers, farmers and planners. Besides, it publishes fortnightly newspaper and an English quarterly, the "Farm Guide".

The Council has acquired substantial experience under contrasting agro-ecological and socio-economic circumstances. It can extend its assistance to FSR in conducting surveys, setting up of poultry units, fruits and vegetables preservation program, adult literacy, etc.

1. Surveys & Studies

The National Farm Guide of Pakistan can assist in conducting a detailed survey and study regarding the socio-economic conditions and the felt needs of the rural women in various ecological and sub-ecological regions in the country to form the basis of the MART project. The Council has already conducted a country wide survey of basic needs, income and expenditure of rural families in 23 districts of the country and have also made a detailed socio-economic base study in one village in each province under a UNDP project.

2. Setting up of Poultry Units

The Council can provide assistance for setting up poultry units in each girl school/college where a Farm Guide Unit exists. These units can serve as demonstration units. A part of the expenses can be met from the school funds under Farm Guide Movement Programs. The girls, as per movement programs are already participating in the inoculation of poultry birds through organised camps.

3. Fruit and Vegetable Preservation

Provide training for school and college girls in the rural areas in the subjects of Fruit and Vegetable preservation, kitchen gardening, bee keeping and floriculture.

4. Adult Education

Provide practical and meaningful primers in Urdu, Pushto and Sindhi based on a graded vocabulary.

200

ABSTRACTS

RURAL WOMEN IN CROP PRODUCTION



Harvesting forms a part of rural life in Pakistan. The picture shows members of a farm family, mostly women, engaged in reaping the fruit of their season-long toil



A rural woman placing the stacks of harvested wheat in a typical village store while the other is extending a helping hand to her

UPLIFT OF RURAL WOMEN IN BALUCHISTAN

Dr. Faqir Muhammad
Director Research, Livestock Department, Quetta

The role of rural women in livestock management in Baluchistan province is presented. The programs initiated by the Livestock Department to involve women in livestock extension service is discussed in detail. The training program for women in poultry farming is also under implementation but there also exist constraints/problems related to socio-economic and tribal system.

RURAL WOMEN IN NWFP AGRICULTURE

G. S. Barg
Principal, Agriculture Training Institute, Peshawar

Total population of NWFP is 7.0 million and 5.0 million are living in rural areas who are directly involved in agriculture. Rural women participate fully in all the farm operations. They directly contribute to livestock management and storage of foodgrains. The output of her exertion is less and of low quality due to the lack of awareness. It needs to develop a mechanism to avail the benefits of modern technology, and enhance family income. In NWFP, very few women have got the graduation in agriculture. Now, there is awakening among the rural women in technical jobs of agricultural department. Education problem leads the priority list.

A STRATEGY FOR IMPROVING SITUATION OF PAKISTAN RURAL WOMEN

Dr. Anwar-ul-Haq
Professor, Sociology Deptt. University of Agriculture, Faisalabad

The paper reviews the present role and on-farm technology of rural women under contrasting farming systems. Their socio-cultural problems/constraints and area of skills have been identified. An accelerated effort to strengthen women's role in farming will require careful consideration of the socio-cultural setting. This should be analyzed for defined target areas. Improving skills and providing problems oriented and site specific training program can then be effectively tailored to the specific circumstances. Strategies to introduce appropriate technology and innovations through active involvement of women within the socio-cultural context of the community are considered.

TRAINING PROGRAM OF RURAL WOMEN AT ALLAMA IQBAL OPEN UNIVERSITY

Dr. Iftikhar N. Hassan

Dean, Women Education, AIOU, Islamabad

The paper emphasizes the training needs of rural women in Pakistan. The contribution of Allama Iqbal Open University in training programs for the development of rural women is discussed. The objectives and methodology of three programs i.e. innovated education, women matric program and Functional Education Program for rural adults, are presented. The main thrust of these programs is to evolve a need based curriculum and a teaching model to train the adults. Skills and competencies taught are site-specific and income generating food crop, preservation, bio-gas plant installation and other household activities are discussed.

WOMEN IN FSR AND ADBP EXPERIENCE

Rao Abdul Rauf Khan

Director, Economic Research, ADBP, Islamabad

The role of Agricultural Development Bank of Pakistan (ADBP) is highlighted with special reference to women's development program. As a result of some of the case-studies it was found that women have high potential for income-generating activities. A loan of Rs. 0.760 million was advanced to 91 women in 1985-86 under Gujranwala Agricultural Development Project. In 1987-88, Rs. 1.92 million were advanced to 130 women for raising crops and other off-farm activities.

FRUITS AND VEGETABLES PRESERVATION TECHNIQUES

Wasim A. Farooqi

Principal Scientific Officer, NIAB, Faisalabad

Pakistan is one of the few countries of the world where almost all kinds of fruits and vegetables are grown. Due to the extreme climatic conditions, inadequate modern technology or harvesting facilities, storage and transport, more than 20-30% of the produce is wasted. There is much scope for the use of improved technology in the preservation of fruits. Concepts and methods of conserving fresh as well as processed fruit and vegetables are described. Improved techniques include anti-fungal treatment, wax coating, packing, refrigeration and controlled atmosphere storage. For fresh produce, thermal processing, freezing, dehydration, chemical preservation, salting and sugar preserves, are alternate technologies considered.

CROP PRODUCTION AND MANAGEMENT TECHNIQUES

Hafiz A. Qayyum

General Manager (Pests), PASSCO, Lahore

Basic needs and methods to improve the food and cash crops has been described. Storage losses due to insects and rodents are reviewed. Appropriate measures and techniques including physical, mechanical and chemical methods are discussed. A critical analysis of grain storage at the village level is needed. Limitations and constraints in the participation of rural women in agricultural activities has also been identified. Solutions to these problems have been suggested by the author.

WOMEN IN SOCIO-ECONOMIC DEVELOPMENT WITH SPECIAL REFERENCE TO RURAL DEVELOPMENT

Dr. Sabeeha Hafeez

Director Research, Women's Division, Islamabad

The author points out that rural women have a high rate of participation in diversified activities related to crops and livestock production. Women participate in management, processing and storage. Furthermore, the awareness of rural women about their problems is recognized. To increase the productivity, income, welfare and reduce the post-harvest losses, several proposals by the committee on women in agriculture have been suggested. Proposals about research programs, human resource training and dissemination of knowledge are given. Promotion of land ownership to poor and widows through various schemes are discussed. Reference to the Prime Minister's Five Points illustrates the need to accelerate the pace of rural development. Women Division's various programs for rural development i.e. adult literacy, technical training, agro-based training, small cooperatives, health homes for destitute women are explained. A list of topics of the research studies conducted by Women's Division is also given.

WOMEN IN POULTRY FARMING

Dr. M. Saleem Qureshi

Director, Poultry Research Institute, Rawalpindi

Despite their multifarious domestic responsibilities, 90% women folk are playing a pivotal role in rural poultry. This situation points out to the fact that extension of information and training facilities pertaining to rural poultry husbandry for women is very important. In Punjab, a project is under implementation. The execution of intensive training program has resulted in increase in the production of eggs and meat. Different plans to develop rural poultry with specific objectives are

presented. The efforts are being continued to strengthen poultry husbandry techniques, mass vaccination and treatment, supply of productive birds and establishment of small poultry unit. In addition training in different aspects of poultry farming, both at management and professional levels, will also be imparted.

WOMEN IN AGRICULTURE AND TRAINING NEEDS

M.S. Khan Rana and Zafar Sultan

Training Institute, NARC, Islamabad

Rural women are extensively involved in the farming system of all the developing countries. A systematic inquiry has been conducted to explain their visible and invisible activities along with the problems they have been facing. Literacy situation leads the problems list with special reference to Pakistan. Women also work on contract or on daily wages in agro-based industries. The identified areas for short term training at village level in Pakistan are, foodgrain storage, livestock rearing, rodent control, conservation and processing of food products, rural poultry, bee keeping and bio-gas plants.

WOMEN IN AGRICULTURE — CONSTRAINTS AND PROBLEMS

Muhammad Ali Baluch

Director, Adaptive Research Agricultural Extension Department, Hyderabad

Agriculture is the mainstay of Sind province with varying climatic conditions and very scanty rainfall. Agriculture is linked with supply of water from Indus. Majority of population in Sind is engaged with agriculture and other related aspects. The contribution of manual labour by women in agriculture is very vital. Almost all the field operations including crops, fruits and vegetables are shared by women except heavy duty work. Their contribution in poultry farming and livestock management is very high. Due to poor socio-economic conditions, illiteracy and heavy work load, their general health is not sound. In spite of inadequate projection of the art of handicrafts and sewing work on scientific lines, the rural women are talented. They produce hand made bed sheets, caps and other embroidery work of export quality. To raise their educational level is the immediate challenge.

WOMEN IN TRADITIONAL IRRIGATED FARMING SYSTEMS

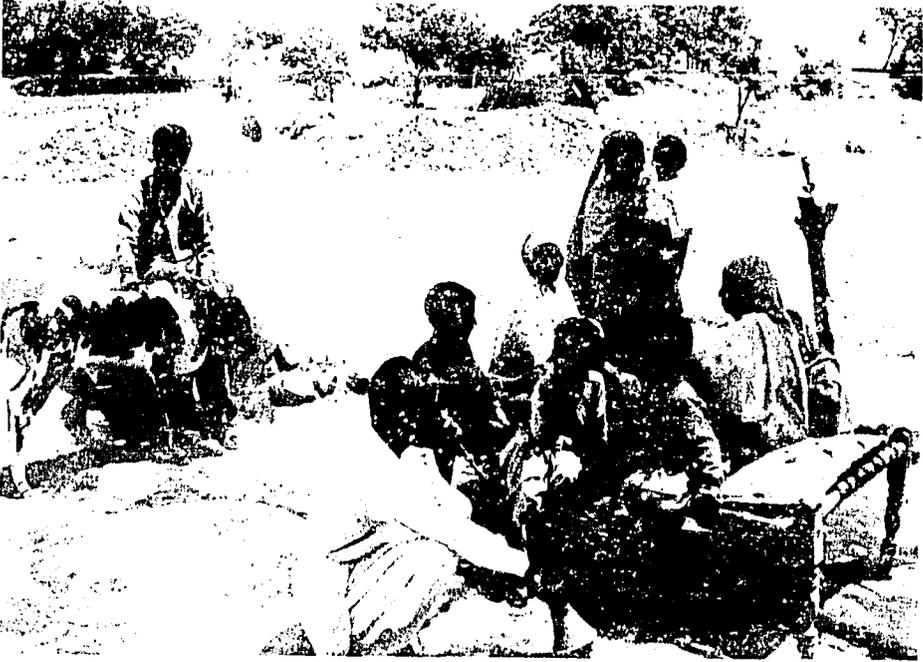
Ms Farzana Masood

Consultant FSR/MART Project NARC

This paper attempts to examine the different aspects of women's roles in irrigated farming systems. Using data gathered through case study the paper analyses the nature and extent of female participation in different farm operations in traditional irrigated farming systems.

280

ACTION PLAN



A typical farm family manages to succeed in stealing some moments of rest in between a busy day-long working schedule



Mechanised farming is being gradually introduced to rural areas of Pakistan

29

ACTION PLAN BASED ON WOMEN IN FSR WORKSHOP PROCEEDINGS

Ms Farzana Masood,
Consultant, FSR/MART, NARC, Islamabad

INTRODUCTION

Farming constitutes the main occupation of rural women, who perform key roles in the production and management of cash and food crops, supplementing the income and labour demands of the households. They are also skilled livestock raisers and heavily involved in dairy production systems. They not only care for the small animals but also herd the large animals. But rural women in Pakistan are working in an atmosphere of sheer ignorance, neglect and who utilize age-old traditional production systems. Their constraints to participate in farm operations are deep rooted, in cultural values, normative patterns and customs, most of which are without any religious and ethical sanctions.

Based on the experiences shared at the FSR Workshop, these proceedings would be incomplete without follow up in terms of follow up. An action plan defines, what has to be done and by whom to initiate a FSR project for women in a target area. The methodology is also presented in a timeframe, which aims to keep the project on schedule. To study strategies for effective participation of women in groups and individuals families, in planning and implementation program at farm level will concern FSR. The goal is to increase farm productivity and farm family welfare by providing opportunities for rural women to benefit from modern agricultural technology.

Based on information provided at the Workshop and the Fateh Jang FSR field trip, the working groups developed an action plan, which provides the basis of women program in FSR.

OBJECTIVES

1. To establish a resource base and identify constraints and opportunities of rural women relative to crop, livestock and poultry production and marketing.
2. To identify rural youth and training needs to improve female skills and knowledge in selected farm technology and farming operations.
3. To define functional on-site training to rural women in crop production, processing, livestock management and poultry farming to upgrade productivity, income and improve socio-economic status of farm families.

METHODOLOGY

Four FSR working groups representing crops, livestock, poultry and horticulture were formed. A series of prepared questions were considered by each work group, which enabled a systematic analysis of the present status of women. Secondly, from many micro level studies and from all the papers presented in the Workshop, the extent and nature of female participation in farming operations were identified. A summary of the working group recommendations emerged from the workshop on Role of Rural Women in Farming Research System. These are presented in Table 1. Baseline surveys, training of women for FSR activities, skills training for rural women and possible priority technical interventions to improve rural women welfare were identified. But there were many questions relative to the subject which remained unanswered in the Workshop, relative to:

- a) Technology being used by women at present;
- b) their exact technological needs;
- c) agro-based income generating activities;
- d) mechanisms for the transfer of recommended technology.

To acquire needed information, the follow up enquiry was suggested:

Recommended Actions

- A comprehensive study of the target areas with special reference to the issues raised. Table 2 shows the organization of multi-disciplinary team with guidelines for conducting basic diagnostic surveys.
- Women play a predominant role in livestock management and processing of dairy products but in spite of all that they are deprived of modern technology. Priority problem areas are identified and possible areas for extending technologies include livestock feeding, vaccination, disease control and also marketing as shown in Table 3.
- The inflow of poultry production from the rural areas is mainly the outcome of female labour. Village women volunteers may be trained in feeding, health and disease prevention. Training needs and collaborating agencies are given in Table 4.
- Low productivity and traditional age-old methods of harvesting and processing of fruit and vegetable production seemed to be major problems faced by rural women. Training in improved methods of kitchen, gardening, harvesting, processing and preservation along with the collaborating agencies have been suggested in Table 5.
- Training rural women in production and processing of fruits and vegetables with concerned agencies is presented in Table 6, while strategies from extension for rural women are given in Table 7.
- Women saving groups will be encouraged to facilitate the financing of investment, presently, beyond the capability of individual women. Co-operative societies for marketing of the products may be established with assistance from agencies shown in Table 8.

**Table 1. Group recommendations from Role of Rural Women in FSR Workshop
January 12-14, 1988 — a summary**

Group I Crop Production/ Protection	Group II Livestock-Ruminants	Group III Poultry	Group IV Fruits and Vegetables
Conduct reconnaissance surveys to analyse socio-cultural patterns of target area. Establish interpreters and leaders. Train women community leaders in conducting interviews/diagnosis surveys in selected villages.	Conduct informal farm family team surveys and include social crop and livestock women scientists. Diagnose constraints women experience in livestock husbandry practices at the village and design interventions.	Institute training in Poultry, husbandry, feeding and disease control at different levels: * Rural village women * Lady college/university students * Post graduates	Carry out diagnostic informal surveys to identify FSR women participants and establish base line socio-economic inventory.
Establish contact with women agencies with mandate and activities directed to improve welfare of rural women for assistance in FSR projects.	Institutionalize specific technical and managerial training for rural women engaged in livestock operations i.e., feeding, marketing, disease control and health.	Establish incentives for female training (4-6 increments) and provide support services. Train village women at FSR sites in skills of poultry vaccination and management/feeding and egg marketing.	Establish kitchen, gardens at selected sites where village women produce and market fruits and vegetables. Provide training to village women (at institute/university in skills and knowledge of kitchen gardens.
*Women Division, National Farm Guide, Agric. Univ. and College of Home Economics.	Organize field days for women at Research Institutes/Livestock Experiment Stations.	Develop the use of audio-visual aids to train village women.	Establish rural co-operatives/societies of women for producing and especially marketing fruits and vegetables.
Provide technical training that is site specific to upgrade knowledge and skills in the harvest/storage/processing of foods. Include use of communication mass media.	Appoint and train female extension livestock workers in each province where livestock systems are important.	Establish model poultry farms of 50-500 birds low cost/effective management by women and provide support services.	Develop capability among rural women to improve low cost storage and preservation of fruits and vegetables. Include the establishment of pilot small rural industry.
Develop pilot small scale rural industry for the process/marketing of crop products as well as agricultural inputs.	Develop strategies which increase opportunities for women participation in decision making and sharing farm income.	Mobilize acceptable credit arrangements and develop cooperatives for women to produce and market poultry products and input support services. Introduce a poultry unit at selected schools.	

**All groups recommend each province develop an Action Plan which aims to initiate improved technological/management interventions to benefit rural women and cite needed resources in concert with Federal and Provincial Government Agencies for possible funding.*

Table 2. Organization of multidisciplinary team with guidelines for conducting basic diagnostic surveys

Priority problem areas	Subject for methodology	Action	Collaborating scientists/agencies
Basic survey diagnostic studies	All the FSR domain and especially, Fatehjang and Chakwal areas	To diagnose the constraints/problems women face in livestock and poultry production	i) Multidisciplinary Scientists consisting of AD (Women Program ABAD) ii) VO, Poultry Research Institute, Rawalpindi
References		To identify areas of skills and needed interventions or technologies in FSR with their socio-economic conditions	iii) Lady Social Scientist in PARC iv) Lady Biological Scientist NARC
Chairman, PARC Dr. Z. A. Hashmi Dr. Hafiz A. Qayyum Dr. A. Rahim Ch. Dr. Anwar-ul-Haq Dr. Mian Hidayat Ullah			

Table 3. Identification of priority problem in livestock management and possible areas for extending technologies

Priority problem areas	Subject for methodology	Action	Collaborating scientists/Agencies
Livestock management	Livestock management techniques	To find out ways to improve:	i) Biological scientists or ASI, NARC
References		–Livestock feeding –Animal hygiene –Disease control –Treatment of parasitic infections –Dairy products and –Organize Field days for women at Livestock Experiment Stations	ii) Livestock and Dairy Development Department
As Above in No. 1 and Madam Syeda Nayyar Abidi Dr. Faqir Muhammed Mr. Mumtaz Ali Baluch			

Table 4. Training needs of village women volunteers and collaborating agencies

Priority problem areas	Subject for methodology	Action	Collaborating scientists/agencies
Lack of modern techniques in poultry production	Poultry husbandry at Village level	Training of Rural women in:	i) Poultry Research Institute, Rawalpindi
		– Feeding – Vaccination – Disease control – Egg marketing	ii) ABAD, Rawalpindi
References		ii) Establish model low cost poultry farms	iii) Allama Iqbal Open University Islamabad
Chairman, PARC Dr. Saleem Qureshi Brig. Azam Mirza Dr. A. Rahim Ch.			

Table 5. Training in improved methods of processing and preservation of food products

Priority problem areas	Subject for methodology	Action	Collaborating scientists/agencies
Low productivity of fruit and vegetable	Production, processing and marketing methods	To train the rural women in:	i) NWFP Fruit and Vegetable Board, Peshawar (Training site at) (Dhodial Manshra)
		– Kitchen gardening – Skills & knowledge – Low cost storage and preservation of fruits and vegetables at FSR sites – Grading and packing for improved marketing	ii) Fruit and Vegetable Program, NARC, Islamabad
References Chairman, PARC Wasim A. Farooqi Gul Sed Borg			

Table 6. Site specific training for rural women

Priority problem area	Subject for methodology	Action	Collaborating scientists/agencies
Unskilled and untrained rural women	– Designing – Intervention	Site specific training in:	i) Multi-disciplinary team, NARC, Islamabad.
	– Training facilities for specific areas	– Livestock mgt. – Poultry farming – Storage techniques – Preservation methods – Processing	ii) Poultry Research Institute, Rawalpindi
Reference		– Harvesting	iii) Allama Iqbal Open University, Islamabad
	As in No. 1 and Begum Balqees Shahbaz	– Educational facilities	iv) Agriculture Universities in all the provinces
		Use of mass media for communication	

Table 7. Extension services for rural women

Priority problem areas	Subject for methodology	Action	Collaborating scientists/agencies
Lack of facilities and guidance	Extension service	- Village level poultry units at selected schools	i) Women Division ii) Agric. University iii) National Farm Guide
		- Appointment of female extension workers in livestock and where these are important	iv) Collage of Home Economics
		4-6 increments for female field workers	

Table 8. Co-operative societies and rural women

Priority problem areas	Subject for methodology	Action	Collaborating scientists/agencies
Financial constraints/limitations	Co-operatives and small credit schemes	- Acceptable credit schemes - Small women cooperatives to produce and market, crop output and poultry product i.e. egg, milk fruit and vegetables, dairy products, etc.	i) Agricultural Development Bank of Pakistan (ADBP) ii) Federal Bank for Cooperatives (if possible)
References			
Chairman, PARC Dr. Z. A. Hashmi Dr. Anwar-ul-Haq A. Rauf Khan Syed Mehfooz Ali Shah			

Training Courses

Training courses are suggested in the following subjects.

Training Course	Relevant Agencies
1. Rural Poultry Farming	Poultry Research Institute, Rawalpindi
2. Goat Husbandry	Livestock and Dairy Development Department, Rawalpindi
3. Fruit and Vegetable Preservation	Fruit and Vegetable Program, NARC

The target group will consist of potentially interested rural women to actively participate and collaborate in the training demonstration activities of the FSR/Rural Women component.

35

ROLE OF WOMEN IN SOCIAL AND ECONOMIC DEVELOPMENT WITH SPECIAL REFERENCE TO RURAL DEVELOPMENT

Dr. Sabeeha Itafeez

Director Research, Women's Division, Islamabad

Rural women - the most impoverished section of our society - are now striving for change and showing a growing awareness of their problems: lack of opportunities, lack of basic facilities, want of recognition and understanding and inability to live a life which is fulfilling and meaningful.

Micro studies indicate that women in rural areas have a considerably high rate of participation in diversified activities related to crop and livestock production, management, processing and storage of produce. Women as supporting farmers exert influence in the sphere of resource allocation for agricultural production besides controlling inputs, managing production, process and disposition of output.

Rural women have a much higher rate of participation in almost all spheres of agriculture than is officially reported. This sort of situation exists because development planners draw a dividing line between activities pursued for women and those pursued as volunteers. Statistics only depict those activities which exist in the monetary economy.

To meet the increase target in agricultural production during the current Five-Year Plan, the Ministry of Food, Agriculture and Cooperatives has introduced appointment of women supervisors in the wildlife sector and women veterinary officers. Schools are being trained in poultry keeping. A special program in agriculture education for women is also to be initiated.

Keeping in view the basic strategies for rapid agricultural development: increased productivity, greater income producing activities to enhance farmers income and reduction of post-harvest losses, the Committee on Women in Agriculture proposes the following:

RESEARCH

Establishment of women's studies program in each agriculture university of the country and Women Research Wing at Pakistan Agricultural Research Council to conduct in-house research on gender issues as related to agricultural production and management and coordinate gender research conducted at various provincial institutes, creation of data base about rural women by computerizing the women related data gathered by the above mentioned research wings through the data bank project already operating at PARC and publication of Women in Agriculture Journal by the Coordinating Units of PARC.

HUMAN RESOURCE TRAINING

Formation of a strong women extension crops in the Provincial Departments of Agriculture and Technology Transfer Units.

Training of women as agricultural field teachers in all agriculture training institutes. The areas for training women should be chosen in the light of the results obtained from gender research.

DISSEMINATION OF KNOWLEDGE

Advanced agricultural knowledge and technology should be imparted to women agriculturists in the area of their participation. This should be done through women cooperative established at the Union Council level.

In addition, the expert group of Women Development during the Seventh Five-Year Plan (1988-93) has proposed the following:

- Promotion of landownership by women through the allotment of State land to landless or poor families in the name of wife and husband.
- Allotment of land through special efforts to all deserving widows and single women.
- Provision for the experimental allotment of dwelling site plots to landless from labourers or share croppers with a view to improving the status of low income families, thereby indirectly helping the women in these families to become less dependent on the feudal system.
- The revival of continuation of federal funding for the training of rural women as female extension workers and livestock supervisors as the Sixth Plan experiment has shown that when such trained rural women apply their acquired knowledge and skills, there is a reduction in the disease and death rate of livestock bringing direct economic benefits to women and to their families. Each trained woman agriculture worker has an impact on at least 50 rural women/families.
- Provision for development in the non-conventional sectors of agriculture other than crop farming e.g. poultry, livestock, sericulture, horticulture directed towards increased female participation in these.
- Increase in the number of employed women in the Agricultural Development Bank of Pakistan to increase accessibility of rural women to credit. Separate windows are recommended for this purpose at the Agricultural Development Bank of Pakistan branches at village level.
- Active communication and coordination between the leaders and members of the Chambers of Agriculture in the provinces and the representatives of the Women's Division, Provincial Government officials and women's NGOs for developing mutual understanding and support for women programs in agriculture.

Prime Minister's Five-Point Program for accelerating the pace of socio economic development particularly the rural development

The Prime Minister of Pakistan, in his address to the nation on 31 December 1985, announced a Five-Point Program with a view to making Pakistan a modern welfare State and promoting the uplift and prosperity of its people. The five elements of the Program are as follows:

1. Establishment of strong Islamic democratic political system based on the ideology of Pakistan.
2. Promotion of an equitable economic order eradicating unemployment and ensuring the prosperity of the people.
3. Preparing the nation for the modern scientific age after removing illiteracy from the country.
4. Putting an end to bribery, injustice and other evils in society and giving a sense of security and justice to the people.
5. Consolidation of national integrity and prestige through strong defence and non-aligned and balanced foreign policy.

Under the Five-Point priority development program of the Prime Minister, women will be major beneficiaries in areas of education, housing, water supply, employment, rural roads and electrification.

WOMEN'S DIVISION AND RURAL DEVELOPMENT

Rural Programs

In the beginning, most of the programs were in the urban or semi-urban areas. However, as nearly 70% of the female population is in villages, and as they were comparatively completely neglected, emphasis appropriately shifted to the rural areas. During 1986-87, programs were designed and approved with the broad objective of improving the quality of life of the rural women. The important features of the new planning strategy is explained below:

Adult Literacy

Rural women lag far behind in this sector, their average literacy rate being moved to 6 percent. To ameliorate the situation, more than 2,053 exclusive adult literacy centres will make more than 82,120 women literate over a period of one year on an average of 40 per annum per centre. The course duration is six months. There are more than 1,123 centres where adult literacy classes are held along with skill training. These centres are expected to make more than 44,920 women literate every year. Estimated present rural female population is 32 million. At the current rate, not more than 2 million rural women (of more than 10 years of age) are literate. Women's programs in the national context may not appear significant. It may, therefore, be realized that women's programs are only supplemental and cater to areas of special needs.

Rural education finds first priority in the Prime Minister's Five Point Program. Under this Program, about 0.20 million rural females of more than 10 years of age

will be enrolled each year. These efforts are at the Federal level. The main thrust against illiteracy is under provincial development plan.

It is expected that by the end of Seventh Five-Year Plan, the literacy rate amongst rural female population would rise to a respectable level of 60 percent.

A network of libraries in rural areas is being established. The books will be in simple language on subjects of direct concern to the common women in the rural areas. It is hoped that in a matter of the time the common rural woman would not only gain useful knowledge to help her in her daily chores, but also make her aware of rights and social duties.

Training

The main reason for the backwardness of the rural women has been her economic dependence. She labours hard but earns nothing. In order to make her capable of making cash income, extensive facilities for training in income generating skills have been made accessible specially to rural women. More than 2,123 centres are functioning in the rural areas imparting training in various skills to more than 70,000 women every year. On an average, every trainee should be able to earn about Rs. 500 per month. This is more than the per capita income of Pakistan.

Institutes for technical training are, as of necessity, concentrated in urban areas. However, nearly half of the clientele comprises girls from the rural areas. Ten polytechnics for women are running where girls are trained in a variety of technologies e.g. electronics, refrigeration, repair and maintenance of household appliances, readymade garments, etc. More than 400 girls qualify for diploma each year. Special attention is now focussed on secretarial training as there is great demand for girls conversant with modern secretarial methods. In addition, 26 vocational training centres, 1,743 industrial homes/multipurpose centres are also functioning in different parts of the country.

Special importance to the rural female is the training facility in agro-based industry. Facilities for training in fish breeding, poultry, livestock, kitchen gardening, fruit/vegetable preservation and sericulture are being made available. Extension workers are trained who in turn would educate rural women in these disciplines. Eighteen centres for training in poultry breeding, dairy development, fish breeding, sericulture, vegetable and fruit preservation are presently operating and producing more than 700 extension workers who in turn would spread out and train common village women.

Small cooperatives have also been established to inculcate the habit of thrift and self-reliance in the rural women. This is a pilot project and has successfully proved that tremendous potential is available for fruitful launching of small rural cooperatives. These cooperative societies have been a boon to enterprising rural women who wish to supplement their family income or earn their own livelihood.

Health

Special emphasis has been placed on health sector. Besides financing training

of a significant number of nurses, LHVs and traditional birth attendants, medical technicians, labour rooms, operation theatres, female wards in the existing rural hospitals and mothers and child health centres have also been established in rural areas. More than 47 mobile dispensaries have also been made available to local bodies and NGOs. This would provide medicare to a large segment of rural female population. In the rural area of Islamabad, service to poor female patients is also being provided. Two centres are being established where treatment and subsequent rehabilitation for female drug addicts will be provided.

Special homes for destitute women and women involved in criminal proceedings have been sanctioned. These are located as of necessity at district headquarters. However, majority of their inmates come from villages.

In Pakistani prisons, although women convicts are segregated, but no arrangements exist to meet their special requirements. Schemes numbering 77 for the welfare of female prisoners have been launched. These will benefit practically most of the female prisoners. Majority of these prisoners are from rural areas.

A large number of legal aid centres have been established which provide legal counselling and service to uneducated and oppressed women. Here again, majority of beneficiaries is rural women.

Research on Rural Women

From 42 studies, 12 studies have been conducted on rural women.
(Annex-I).

RESEARCH STUDIES

1. Content analysis of mass media appealing to women.
2. A study of female crime in rural and urban areas of Pakistan.
3. Images of male and female role in textbooks.
4. Invisible workers, piece work labour amongst women in Lahore.
5. Socio-economic characteristic of women in Sind.
6. Muslim family laws and their implementation in Pakistan.
7. Women in Pakistan: a statistical profile.
8. Development planning and women.
9. Portrayal of women in communication media.
10. Participation of women in cottage and small scale industries in N.W.F.P.
- *11. Women in agriculture sector in Sind.
- *12. An investigation into the problems of re-organizing the village school system.
- *13. An investigation into the patterns and problems of improving skills of rural women.
14. Performance of female teachers in Punjab.
- *15. Possibilities and prospects of agro-based industries for rural women in N.W.F.P.
- *16. Patterns of female employment in mining and construction industries.
- *17. Psychological profile of rural women.
18. Participation of women in rural economic activities in NWFP.
19. Socio-economic status of women labour force working in industrial homes.
20. Directory of social scientists of Pakistan.
- *21. Training of rural women in Daudzai.
22. Nutrition status of women and children.
23. Women in Islam.
24. Conditions and problems of Afghan refugee women and children.
25. Survey of enforcement of Shariah laws in selected Muslim countries.
26. Destitute women in Pakistan.
27. Abused women in Pakistan.
- *28. Socio-economic status of women in agrarian community in Punjab.
29. Feasibility study on national training and development centre for women, kind of training required and curriculum personnel.
- *30. Feasibility study on farm school.
- *31. Feasibility study on model villages.
32. An assessment of the impact of women's projects on women and their families in NWFP.
33. The Dai : her traditional role and the impact of training.
34. Profile of women voluntary organization.
35. Women in industry.

- *36. Data base on women in agriculture and rural households.
- 37. Directory of working women.
- 38. Impact of employment of women on their families.
- 39. A guide to career for women in Pakistan.
- 40. Problems of senior women in Pakistan.
- 41. Study on the profiles of the women's NGOs.
- *42. Male migration: absentee fathership and changing role in village community.

**Studies conducted on rural women*

42-

SELECTED PAPERS

43'

TRAINING PROGRAM OF RURAL WOMEN AT ALLAMA IQBAL OPEN UNIVERSITY

Dr. Iftikhar N. Hassan

Dean, Women Education Department, Allama Iqbal Open University, Islamabad

The training of rural women is not only a problem but also a challenge due to numerous handicaps associated with rural women in particular. Some of these include extremely low level of literacy, low status in the family hierarchy of rural house-hold and unfavourable division of labour which assigns relatively harder but menial and least prestigious chores to women. In addition, woman become victims of cultural discrimination from the day they are born, resulting in poor access to nutrition, care, clothes and education.

Allama Iqbal Open University has devoted attention to the development of rural women through its various programs for rural population. Today, I am going to talk about only three, specifically addressed to training of women.

INNOVATED FUNCTIONAL EDUCATION (IFE)

The Program was the University's initial effort to find a teaching model for the rural subject. The main thrust of the program was to evolve a need-based curriculum and a teaching model to train the adults. It has the following salient features:

1. The curriculum was need-based and locality specific.
2. The medium of instruction was the local language e.g. Punjabi, Pushto, Sindhi, etc.
3. The skill training was an integral part of literacy component. The literacy material was developed around the skills being imparted.
4. The skills and competencies taught were site-specific and income generating.
5. The stress was on teaching non-traditional skills like dates preservation, bio-gas plant installation, etc. along with embroidery and basketry, etc.

The IFE projects were run in clusters of 20 to 30 villages each, in Punjab, N.W.F.P., Sind and Azad Jammu Kashmir. Each project started with a need assessment survey, development of site-specific curriculum and literacy material as well as plan of skills training program. This phase of the program was followed by field testing of the materials and training of the locally hired staff and finally the actual training program was taken in hand.

Each project consisted of 40 centres, half for men and half for women. At the end of one year cycle, the successful candidates who had learned the skills as well as had become literate were given the completion certificates.

The Project was highly successful and each project trained a minimum of 1600

men and women. The ratio of successful candidates was in favour of women who proved to be better students and there were fewer drop-outs.

The University prepared the learning kits and presented them to the Provincial Governments and Literacy and Mass Education Commission for implementation.

WOMEN MATRIC

This is a project conceived to provide access to high school education for girls and women living in the rural areas. The distinguishing features of this program are its vocational subjects and job orientation. Unlike formal system, the graduates of this program would have learned at least one vocation along with the high school certificate to facilitate their prompt employment. These vocational areas includes:

1. Commercial office clerk.
2. Primary school junior teachers.
3. Agriculture extension workers.
4. Home economists.

As the program is still in its initial stages, I will go on to the last but not the least program of the education of the masses.

FUNCTIONAL EDUCATION PROGRAM OF RURAL ADULTS (FEPA)

The Program was started in 1981 with the help of ODA. Its main emphasis is to devise some appropriate method of training illiterate rural population for transfer of technology and specific information needs.

A cluster of 50 villages near Kharian was identified and a project office was established in D'inga. By drawing on our experience of IFE projects, the need assessment surveys was carried out and the list of possible skills was developed in consultation with the local population. Initially three subject areas i.e. Child Care, Poultry and Electricity at Home, were selected.

TRAINING STRATEGIES

As almost all of our clientele are illiterate, the University decided to use flip charts and the audio tapes for the purpose. However, the real problem was developing a teaching model which not only imparts instruction but is instrumental in behaviour modification.

A team of university teachers, field supervisors and trainer headed by a British Consultant worked for three years to develop what we now feel is a fairly effective model of skill training.

GROUP METHOD

Each skill training group consists of 8 to 12 individuals who meet on a mutually agreed time for three to five weeks. The instructor is a person from the

same locality who has acquired previous training in an earlier group by the University field staff. He/she is usually illiterate but knows the group method. The teacher uses the tape, (which is self-explanatory) and after showing a few charts, instructs the group leader to stop the tape and have a discussion. Some activities like making, drinking and feeding utensils for raising poultry, etc, are also included. Finally, the local functionaries of nation-building departments like Agricultural Extension worker, health worker, mobile team member of the Agriculture Development Bank etc. are called to meet in a group. A link is created between these functionaries and the villagers.

The program is very successful and cost-effective. Presently, we have added three more courses to the original five courses and many other agencies like UNICEF and Pak-German Society are using these materials in their projects.

LOCAL PARTICIPATION IN DEVELOPMENT PLANNING—A STRATEGY FOR IMPROVING SITUATION OF PAKISTAN RURAL WOMEN

Dr. M. Anwar-ul-Haq

Professor, Sociology Department, University of Agriculture, Faisalabad

The typical Pakistani woman lives in a small house in an isolated rural setting. She gives birth, on an average, to seven children and her life expectancy is short. She faces a constant threat of communicable and infectious diseases caused by poor environmental conditions. In reality, she is born in poverty, lives in poverty and eventually dies in poverty.

Rural women constitute about 50% of the total 72% of the rural population of Pakistan. Out of 100 million Pakistani's population, 36 million are rural women. According to 1981 population census about 94.5% of rural women are illiterate and only 5.5% of them are able to read and write. These figures present a worst demographic vision of the future.

Rural women by and large are ignorant, tradition-bound, unskilled and use out-dated practices of living. Despite social, cultural and political limitations, the women particularly the rural women play a very effective role in various sub-sectors of economy. In our rural areas it is the women who literally make the life go. She is the first to start the day and always the last to finish. Normally, an average rural woman in Pakistan works for 12 to 16 hours a day in on-farm, off-farm and home activities throughout the year. She performs a variety of arduous task like fetching water, in some cases from miles, cooking, fuel collecting, livestock management, product-making, washing/cleaning and caring for children. She assists her husband in various farm operations at the farm as well as off the farm. An inventory of operations in which she participates contains a long list, each of which has influence on economic returns of the farm and income of the family. In the conduct of such activities she does not receive cash payment. Thus, her contributions to the family, national economy, returns from the farm, and intensive labor input are not reflected in the national statistics. She, therefore, remains unrecognized and invisible from the perspective of economic plans. For example, most women in rural areas are classified as "housewives" and less than 4 percent are shown as working and looking for work. Only 17.6 percent females in the whole country are shown by official statistics to be engaged in agricultural activities.

At the time of independence in 1947, Pakistan was faced with enormous problems of reconstruction and development. Colossal development requirement of a newly independent nation committed to bring about a rapid social change required the women to bear the main brunt of sacrifice. The priorities for allocation of scarce resources resulted in a perpetual neglect. This neglect is more pronounced among rural women who suffered from ignorance, illiteracy, malnutrition, disease, and

socio-economic and political deprivation. The non-government organizations operating for emancipation of women's lot also concentrated in urban women. Also at the inception of Pakistan, no institutional arrangement existed in the rural areas, for either the common welfare or the uplift of the socially weak segments of rural society. For a long time, rural development and agricultural development were fancied as synonymous, for obvious reasons. Thus, no institution has, therefore, come up to raise the social and economic status of rural women. They are continuing to suffer from neglect.

Constraints on women in Pakistan are deep rooted in cultural values, normative patterns and customs, most of which are without religious and ethical sanctions. The cultural prescriptions coupled with long working hours, place women, particularly rural women, in a very silted position. They are procreating rapidly adding sub-normal or abnormal population. They are employing poor technologies with poor investment on low quality materials and they are ignorant of even minimum standard of personal hygiene. It is also difficult for a rural woman to travel away from her village home, to take advantage of existing training facilities or programs staffed primarily by men, to obtain information on the income generating activities such as poultry farming, dairy farming, vegetable farming, fish farming, household appliances such as grain stores, better design of manufacturing and marketing of products, to gain access to training and to obtain credit from financial institutions for running small enterprises. In general, existing living conditions and cultural restraints make it difficult for women to keep themselves informed of better ways to carry out their traditional responsibilities and to find out alternatives available for themselves and their families towards improving their existing poor living conditions.

The imperative need, therefore, is to strengthen the delivery mechanism for improving the skills and efficiency of the rural women by providing problem-oriented and site-specific training programs by introduction of appropriate technologies and adaptable innovations through active involvement and participation within the socio-cultural context of the community.

The community participation is an integral part of development is now a well recognized fact. Policy proclamations and program design specifically include community participation as an integral part of any development program. In countries like India, it has been a well accepted concept since 1952 when community development programs were launched as a means to bring about integrated and comprehensive rural development. Community participation is often equated with development and, therefore, besides a means to development, it is conceptualized as an end in itself. Participatory development is a self-sustained, self-reliant and indigenous process built on the previous experience and the cultural and institutional norms of a society. Ideally, it is generated and sustained on the innate capacities of individuals and the internal dynamics of the society rather than on the external props.

Concern for people's participation has especially grown in the last two decades in view of the growing population in the third world countries and the continued crisis of mass rural poverty coupled with the exploitation and oppression of marginalized groups. With the record of development under elite initiatives, an alternative

development strategy with initiatives more in the hands of the community is being advocated in most fields of development.

The theoretical framework of local level planning through local participation is based on the concept that all the steps of local level planning concerning with diagnosis of life conditions, selection of action priorities, ways to tackle them and implementation and management, are to be carried out by the community under the supervision of their local leaders (traditional and elected) who are to be trained during the training process before actual planning takes place. The locally based Government functionaries (change agents), provide necessary guidance and technical assistance to the local leaders and community volunteers to facilitate the process of local level planning but are not required, and do not interfere in decision-making.

In the context of participation, the question as to who are the participants is another important aspect. For any development project, the active involvement of several groups is necessary, namely, local people, field staff, planners, and the local policy. However, in terms of obtaining participation, except for the local population, all other groups are bound to participate in development activities as a part of their duty or responsibilities. That is, government servants or planners have to participate in these efforts in performing their duty, and politicians have to participate at least to show their interest in development activities, to establish good rapport with local people, and to gain popularity.

Though the local population constitute the target population, and they are supposed to be the beneficiaries (at least in principle) of development projects, the mobilization of this group is a delicate issue. This may be due to various reasons. First, such local groups are not homogenous; they may differ from each other, according to their economic, social or political standings, as also due to ethnic and native settings, or they may support different ideas, attitudes or interests. Secondly, there may be some external factors such as social, economic, political or environmental conditions. Finally, the physical attributes of a project itself might affect the level of participation of local people.

Another important aspect of participation is the processes invoked in enlisting the local participation. Usually the manners, ways and means of participation depend on the nature of the development project and the stages of planning (e.g. need identification, planning, implementation). They also depend on people's ability and willingness to participate as well as on the opportunities provided for their participation. Under such conditions, participation of the local people can be expected through material (e.g. labour, food, cash or other items) or non-material means (e.g. expertise, experience, or skills). Participation in sharing benefits will depend on the tangent objectives of the development project and its level of success.

Considering the above factors, it can be assumed that institutional background of given society is the most important aspect to be considered in dealing with people's participation in development. As mentioned above, physical attributes of any given project are not sufficient for the mobilization of people's participation. Unless the institutional background which consists of political, economic, and socio-

cultural factors as well as the historical background suit or allow people to participate in development, any development project would not be able to mobilize people to participate in it. Therefore, it is not possible to consider any development project as an entity separate from a given society; it will always remain part of society.

Many programs and strategies for uplifting the socio-economic conditions of Pakistan rural poor women have been followed by the official and non-official organizations during the last 10 years. These programs and strategies are certainly praiseworthy and, in the long run, may have positive effect on laying down a foundation for long-term and sustained economic growth, besides on the existing conditions of the rural women. However, it is widely claimed that these programs have been offered in a social vacuum and had failed to generate the support from among the masses of rural women to the extent one would like to hope.

The needs of the rural poor women are many and varied, and are the result of very complex traditions which must be respected, understood, and should constitute a part of the proposed strategy. No dramatic changes in local mores ought to be expected, but instead, if there is to be any hope of success, the implementation of programs must take local customs, cultural values and institutional norms of a society into account. Creating the social climate and attitudes which will produce a new positive outlook of Pakistani women must be the part of the program implementation. The most important thing to keep in mind in seeking to create a new outlook is that while the stimulus for change may be externally applied, the desire for change must come from within the minds of the people who are to be changed. More precisely, this means that the program planner must understand the channels of communication within the village. Channels of communication refer to the ways ideas reach all the people in the village. For our villages this means: *first*, discovering who the village leaders are? — both informal and institutional, and *second*, who the people are who follow the given leaders? These leaders are the guardians of the traditional ways of thinking and behaving. These same leaders, more than any other, can also be counted upon to be the interpreters for the new. It is true that since these leaders are the guardians of traditional ways of thinking and behaving, they will block change if they are not directly involved in its interpretation as being important for the people to accept.

In conclusion, it may be submitted that rural poor women are Pakistan's most important and significant human resources. Their production and consumption are the driving forces behind national development. A nation in which a large part of the population suffers due to poor socio-economic, cultural and political limitations cannot hope to reach its full potential. In Pakistan, where the rural women constitute 50 percent of the rural population, improving the living conditions of the under-privileged segment of the population is a key to the development goals. Beyond any doubt it is women who are responsible in any socio-economic set up with priorities placed by a household on hygiene, balanced diet and education. The government's Five-Point Program of social welfare has generated enthusiasm, but to ensure it a thoroughly adequate program, it is imperative to integrate it with a feasible plan by enlisting the emancipation of the rural women of the country.

It may be mentioned here, that the participatory approach for improving the

time old practices of living of rural women has been successfully used in India where the socio-economic conditions and traditional attitudes towards adoption of new innovation are similar to Pakistan.

ROLE OF WOMEN IN POULTRY FARMING

Dr. Muhammad Saleem Qureshi
Director, Poultry Research Institute, Rawalpindi

In Pakistan, female population is estimated to be 52.66 million out of which 36.8 million live in rural areas. Out of multifarious domestic responsibilities, women folks are playing a pivotal role in rural poultry farming. It is estimated that over 90% of the families in the villages keep on an average 12 adult birds each and hatch chicks under a brood hen. The women apply their own methods of rearing, brooding, breeding, management, gained from the experience of elderly women.

In 1987, Pakistan possessed 144.50 million *Desi* poultry out of which 53.40 million were in rural areas (36.9%). Improved hybrid strains for meat and eggs constituted 63.0% of the total poultry population. In 1987, Pakistan produced 4115 million eggs and 0.142 million metric tons of poultry meat. Some 1815 million eggs (44.1%) and 0.065 million metric tons of poultry meat (45.7%) came from rural poultry. These figures clearly show the important role which women are playing in the villages to produce eggs and poultry meat. The value of eggs and poultry meat so produced is estimated at Rs. 3785 million. Indeed, a sizeable contribution is made by the village women in the national economy.

POULTRY TRAINING

Training facilities in poultry production have been established in the provinces of Sind (Poultry Research Institute, Karachi) and Punjab (Poultry Development Centre-PRI, Rawalpindi). In these Institutes, facilities are provided to impart in-service training of field professional and technical staff. Training Stock Assistants/Poultry Supervisors in 6-month diploma courses in poultry husbandry, production and health is also conducted. Training courses of one to four-week duration are also held for the owners, managers, poultry keepers, poultry attendants, farmers and general public. In addition short-term training courses are held at Poultry Multiplication Centres and Poultry Demonstration Centres. During 1977-87, a total of 130,247 persons including 2804 ladies were imparted training on different aspects of poultry farming.

In the villages, women are mainly responsible for the poultry flocks. For this reason, it is necessary that they become more knowledgeable in the various aspects of poultry husbandry. Because of the tradition it is difficult for male extension workers to impart training to the village women. It is, therefore, essential that women extension workers are trained and employed. This is particularly true in view of the fact that an effective extension service is one where there is a smooth transfer of educational information passed on to interested recipients. Probably, the most effective method of transfer of information is face to face consultation, preferably on the home ground of recipients. As village poultry is looked after mainly by women, the need of extension information to them pertaining to poultry is very important.

In the province of Punjab, a project is under implementation with the financial assistance of Women Division of Pakistan. It aims to train 36 Women Stock Assistants and 110 Women Volunteers to carry out poultry extension services in the 1020 villages selected as project area. The Women Stock Assistant is to undergo six months' Diploma Course in Poultry Husbandry and will be employed whereas women Volunteers undergo two months' training course. They will be assigned to work in three villages for carrying out vaccination of birds, introduction of better poultry husbandry techniques and supply better productive birds. During the course of training each participant will receive a scholarship of Rs. 300 per month. On posting, each women volunteer will be provided an extension kit to carry out her work. The first batch of 10 Lady Stock Assistants completed Diploma Course in June, 1987, and are now employed. Another batch of 19 Lady Stock Assistants are scheduled to complete the course in January, 1988. Successful candidates will be posted.

IMPACT OF RURAL POULTRY DEVELOPMENT PROGRAM

The implementation of the program covering disease control through mass vaccination, introduction of basic poultry husbandry practices; supplementary feeding, introduction of improved breeds, strengthening of poultry extension services; and carrying out of intensive training program resulted in an increase in egg production by 70.5%. Poultry meat was increased by 7.21% per annum during 1978-87.

FUTURE DEVELOPMENT PLAN

To further increase production of eggs and poultry meat, both commercial poultry farming and rural poultry farming will be encouraged in the commercial poultry farming sector, more poultry farms (broiler, layer and breeding farms); hatcheries, feed mills, processing plants, other allied industries, etc. will be established. Expansion in the existing ones will continue. The rural poultry farming sector then will make efforts to strengthen the introduction of poultry husbandry techniques; mass vaccination and treatment of birds in the villages; supply of better productive birds; and establishment of small poultry units of varying sizes ranging from 100 to 500 birds. In the villages, efforts will also be made to establish small units with a capacity to raise 250 to 500 broiler or cockrels for poultry meat production.

Training in different aspects of poultry farming and in-service training of professional staff will be strengthened.

SEVENTH FIVE-YEAR PLAN (1988-93)

Production Targets

The targets planned for the production of eggs and poultry meat during the year 2000 will be as follows:

EGGS (Million)	1987-88	1992-93 (estimate)	Percent increase during plan	Percent increase per annum.	Projected production in year 2000
-- Farm Eggs	2300	3525	53.26	10.65	7400
-- Desi Eggs	1840	2655	44.30	8.86	4000
Total	4140	6180	49.25	9.85	11400

POULTRY MEAT (Metric Ton)	1987-88	1992-93 (estimate)	Percent increase during plan	Percent increase per annum.	Projected production in year 2000
-- Broiler/culled Birds	84000	166000	97.62	19.52	358000
-- Desi	65000	99000	52.31	10.46	172000
Total :	149000	265000	77.85	15.57	530000

It would be observed that production of eggs and poultry meat is planned to be increased at the rate of approximately 10% and 16% per annum, respectively.

Per Capita Availability

The per capita availability of eggs and poultry meat are estimated to be as under :

Year	Projected human population (million)	Per capita eggs (number)	Availability poultry meat (kg.)
1987-88 (Base)	105.32	39.30	1.42
1988-89	108.48	39.82	1.68
1989-90	111.73	41.88	1.74
1990-91	115.08	43.62	1.93
1991-92	118.53	46.32	2.04
1992-93	122.08	50.62	2.17

Poultry Population

To achieve the above mentioned targets of production, the poultry population required to be maintained/produced during Seventh Five-Year Plan period (1988-93) is as under:

Year	Poultry Population (Million)				Total (2 + 3 + 4 + 5)
	Rural poultry	Commercial Poultry Broiler	Layer	Breeding stock	
1	2	3	4	5	
1987-88 (Base)	53.85	80.00	10.00	1.55	145.40
1988-89	57.57	95.00	10.50	1.60	164.67
1989-90	61.02	110.00	11.25	1.80	184.07
1990-91	64.83	130.00	12.00	2.10	208.93
1991-92	59.05	145.00	13.25	2.35	229.65
1992-93	73.87	160.00	15.00	2.65	251.50

WOMEN IN TRADITIONAL IRRIGATED FARMING SYSTEMS

Ms Farzana Masood
Consultant FSR/MART Project NARC

Farming systems gradually evolve over time as a result of natural or human induced changes in the factors affecting the systems. Two most fundamental factors are the physical environment and the biological characteristics of the plants or animals. However, farming systems and their evolution are also affected by social norms and actual practices which determine the way in which production and consumption is organized at a household or village level. These norms and practices affect the sexual division of labour between crops or different farming operations (4).

Women have customarily played a major role in traditional irrigated farming systems where prevailing cultivation practices demand a heavy manual labour input. However, research programmes and development projects have repeatedly failed to take these roles into account, with consequences that are often detrimental not only to the economic security and social status of the women themselves and their families but also to the success of those programmes and projects in meeting national or regional development objectives.

Many studies of agricultural labour are concerned only with an analysis of the sexual division of labour between crops or farming operations (2,9). Data on actual hours contributed or the proportion of work performed by men and women are limited. As a consequence, national statistics tend to show low participation of women in economic activities, particularly of rural areas.

Actual participation of women in farm operations seems to be higher than that of the reported figures. Women work side by side their men folk during sowing and harvesting seasons. They help in cotton picking, fodder-cutting, wheat cutting, binding of sheaves, sugarcane processing etc. Women perform many duties contributing towards securing income or saving expenditures. In addition to their house-hold duties, they are active partners on farms. Unfortunately, the work done by the women at farms is not accounted for in any type of socio-economic analysis.

Women not only participate in farm-operations, but also play a significant role in farm decision-making and their attitudes and values greatly influence the adoption of improved agricultural technology, high yielding varieties, fertilizers, pesticides etc. But they have not been given considerable attention for their

contribution in the farm-work. Sociologically speaking, the role of women in the cultural context of Pakistan seems to be misconceived and misunderstood. The present study has been designed to identify the role, the women play in traditional irrigated farming systems.

Specific objectives of the study were:

- (a) To examine the role of women in farm decision making.
- (b) To measure the total hours contributed by the women in various farm activities.
- (c) To identify the factors influencing the role of women in farm operations.

SOCIO-ECONOMIC CONDITIONS

Sixty three percent of the respondents interviewed were wives of the male heads of families while remaining 37% were either sisters, daughters or other family members.

A significant proportion of the sample i.e. 60 percent, were Jat, Rajput, Arain and Dogar, in descending order. Fifty-two percent families were nuclear and 48% were joint. Sixty-four percent families were owner cultivators and 53 percent of these had size of holdings 5 to 12 acres while remaining 24 and 23 percent had land up to 5 and 12 acres and above, respectively. Forty-seven percent of the respondents were illiterate and from the literate category only 16 per cent had education up to matric level.

METHODOLOGY

The present case study was conducted in a village situated at about 16 miles from Faisalabad. Total population of the village was about 5,000 and it spread, over 1,600 acres of land. Main crops grown in this area are wheat, sugarcane, maize, cotton and fodders. Livestock were the other major activity.

Socio-economic conditions of the village seemed to be fairly representative of the population. Hundred households were selected at random and female head of each household was interviewed by using a well structured interviewing schedule. Informal discussions with women helped a lot to understand their role in crop and livestock production systems. It was assumed that education level, size of holding, caste and household income are the factors which affect the women participation in farm operations. Correlation and chi-square tests were applied for the statistical analysis of the data.

WOMEN IN CROP PRODUCTION

Females showed highest participation in some selected crop production

activities both in sowing and harvesting seasons i.e. sowing of sugarcane sets, picking of cotton and wheat cutting. Whereas the threshing, winnowing, thinning and interculturing were the least participated functions, ninety three per cent of the women participated in sowing of sets, from which 53.3 per cent worked for 1-4 hours daily. *Kera* was highly participated function i.e. 86.7 per cent from which 62.7 per cent women worked for 4 to 8 hours and remaining for 1-4 hours daily. (Table 1,2).

In wheat cutting, 79.5 per cent women participated and from this 62.2 and 17.3 per cent worked for 4 to 8 and 1-4 hours, respectively. Thirty-six per cent and 32 per cent of farm-wives contributed 100-500 hours and 501 to 1000 hours, respectively, which comes to 5 hours per day as shown in Table 3. These results reveal that women work on their farms together with their male partners in some selected operations. Women helped more in the operations which were not so tough or when the males were busy in rather more difficult agricultural operations.

FACTORS AFFECTING WOMEN PARTICIPATION

Analysis shows that family education and extent of women's participation in farm operations are significantly associated. An increase in education adversely affects the participation of women in agricultural operations, with the exception of working during leisure time (2,7,9,10). Those who have comparatively low participation (100-500) hours belong to literate category, while the females showing highest participation (1001-2000 hours) belonged to illiterate category which implies literacy adversely affects participation of women in the operations considered to be against the prestige in rural area (Table 4). Saeed (9) also presented some corroborative results in her study.

In rural areas, women of certain castes traditionally participated in farm operations while others did not (7). Arain women took the top position with regard to their involvement in the agricultural work, followed by the Gujar, Baluch, Jat and Rajput. Janghee women had shown the highest participation in farm operations followed by the settler and refugee (9). Statistical calculation showed that participation of women in farm-operations varied with caste. Minimum participation over the year was from, Rajput and Dogar. The Jat women also showed high percentage i.e. 50 per cent, in high participated category as shown in Table 5.

There was no correlation between size of holding and hours contributed by the women in farm-operations (Table 6). Percentage of both the categories, having the higher and lesser participation was the same. The computed value of correlation (0.00994) was also found to be non-significant. It can safely be extrapolated that social values and attitudes are more important in shaping the participation pattern of rural women in agricultural operations.

Table 1. Degree of participation by women in various operations during the sowing season

Crop	Operation	Hours devoted per day							
		F	None %	F	1-4 %	F	4-8 & above %	F	%
Sugarcane	Sowing of sets	5	6.7	40	53.3	30	40.0	75	100
	Hoeing	50	16.7	19	25.3	6	8.0	75	100
Cotton	Sowing	25	33.3	26	34.7	24	32.0	75	100
	Interculturing	58	77.3	14	18.7	3	4.0	75	100
	Hoeing	53	70.7	22	22.3	-	-	75	100
	Thinning	65	86.6	5	6.7	5	6.7	75	100
Jawar	Sowing	34	45.4	33	44.0	8	10.6	75	100
Maize	Sowing	25	33.3	30	40.0	24	32.7	75	100
	Interculturing	51	68.0	12	15.9	12	16.1	75	100
Vegetables	Seed bed	38	50.7	27	36.0	10	13.3	75	100
	Preparation								
	Planting	43	57.2	28	37.4	4	5.4	75	100
	Hoeing	49	65.3	21	28.0	5	6.7	75	100
Wheat	Kera	10	13.3	18	24.0	47	62.7	75	100
	Pora	59	78.7	11	14.6	5	6.7	75	100
	Chatta	64	85.2	7	9.4	4	5.4	75	100
	Hoeing	53	70.6	12	16.0	10	13.4	75	100
Fodders	Sowing	44	58.7	27	36.0	4	5.3	75	100

Table 2. Degree of participation by women in various operations during the harvesting season

Crops	Operation	Hours devoted per day							
		None		1-4		4-8 & above		Total	
		F	%	F	%	F	%	F	%
Sugarcane	Stripping	15	20.0	40	53.3	20	26.7	75	100
	Gur-making	26	34.7	25	33.3	24	32.0	75	100
Cotton	Picking	35	46.7	6	8.0	34	45.3	75	100
	Cutting of sticks	41	54.7	27	36.0	7	9.3	75	100
Jawar	Cutting	44	58.7	28	37.3	3	4.0	75	100
	Bundle making	49	65.3	26	34.7	—	—	75	100
	Loading	58	77.3	10	13.3	7	9.4	75	100
Maize	Harvesting	22	29.3	26	34.3	27	36.4	75	100
	Removal of sheath	12	16.0	48	64.0	15	20.0	75	100
	Drying of sticks	27	36.7	7	9.3	42	55.7	75	100
Vegetables	Harvesting	50	66.7	14	18.7	11	14.6	75	100
Wheat	Cutting	15	20.0	13	17.3	47	62.2	75	100
	Binding of sheaves	28	37.3	36	48.0	11	14.3	75	100
	Threshing	44	58.7	11	14.7	20	26.6	75	100
	Winnowing	59	78.7	8	10.7	18	24.0	75	100
Fodders	Cutting	58	77.3	17	22.7	—	—	75	100
	Bundle making	67	89.4	8	10.6	—	—	75	100
	Loading	70	93.3	5	6.7	—	—	75	100

Table 3. Time contributed by rural women in selected farm-operations during the year

Hours contributed	Frequency	Percentage
100 — 500	27	36.0
501 — 1000	24	32.0
1001 — 2000	24	32.0
Total:	75	100.0

Income of the families and labour hours contributed by family women are invariably related to each other. Those who have medium participation (501-1000 hours), 38.5 per cent and 27.0 per cent of women belonged to families with income less than Rs.1000 and 15000 and above, respectively. Similar is the case with high and low participation which shows that if income of farm families goes up, as a result, female participation in farm activities will go down. (Table 7). Women of the higher income families enjoy more freedom in the trade-off between income and leisure.

WOMEN IN LIVESTOCK PRODUCTION

Almost all the women were involved in livestock production. They mainly participated in activities like, feeding and bathing of power and milch animals, milking and cleaning of sheds. For the purpose of analysis, total hours contributed by women per day were calculated. In these operations, 95 per cent of the women were involved while in remaining cases operations were performed by the servants or by the male-members of the family.

Besides normal house-hold duties and participation in crop production activities, women were mainly responsible for animal care. Their contribution in livestock management helped the male members to contribute more labour hours in crop production. As shown in Table 8, 42.0 per cent of the women contributed 1-2 hours and 2 to 4 hours, respectively.

WOMEN IN FARM DECISION-MAKING

Thirty-three per cent of the women were never consulted by the members regarding the acreage under different crop/variety of seed to be sown, use of chemical fertilizers and use of permanent and casually hired labour (table 9). Sixty-seven per cent females were consulted by their male heads, of which 32.0 per cent were always consulted and 35.0 per cent were consulted occasionally.

Women have strong decision-making score and participation in the areas dominated by them. (2). A significant correlation between women's participa-

Table 4. Relationship between the educational attainment of the families and extent of participation by their women in farm-operations

Education of family	Extent of participation							
	Low (100—500) hours		Medium (501—1000) hours		High (1000—2000) hours		Total	
	F	%	F	%	F	%	F	%
Illiterate	15 (55.5)	37.5	12 (50.0)	30.0	13 (54.2)	32.5	40 (53.3)	100
Upto Primary	9 (33.4)	36.0	9 (37.5)	36.0	7 (29.2)	28.0	25 (33.3)	100
Upto Matric and above	3 (11.1)	30.0	3 (12.5)	30.0	4 (16.6)	40.0	10 (13.4)	100
Total:	27	36.0	24	32.0	24	32.0	75	100

$X^2 = 9.49$ d.f. = 4 0.05 (significant)

Table 5. Relationship between the caste of the families and extent of participation by their women in farm operations

Cast of family	Extent of participation							
	Low (100-500) hours		Medium (501-1000) hours		High (1000-2000) hours		Total	
	F	%	F	%	F	%	F	%
Jat	18 (66.7)	37.5	10 (74.9)	32.9	12 (50.0)	33.6	48 (64.2)	100
Arain	7 (25.9)	41.2	1 (4.2)	5.9	9 (37.4)	52.9	17 (22.6)	100
Rajput	1 (3.7)	20.0	2 (8.4)	40.0	2 (8.4)	40.0	5 (6.6)	100
Dogar	1 (3.7)	20.0	3 (12.5)	60.0	1 (4.2)	20.0	5 (6.6)	100
Total:	27 (100)	36.0	24 (100)	32.0	24 (100)	32.0	75 (100)	100

$X^2 - 12.66$ d.f. = 6 $P < 0.05$ (significant)

Table 6. Relationship between the size of holding of the families and hours contributed by their women in farm operations

Size of holding (Acres)	Hours contributed							
	Low (100-500)		Medium (501-1000)		High (1000-2000)		Total	
	F	%	F	%	F	%	F	%
Less than 5	4 (14.8)	18.2	14 (58.33)	65.6	4 (16.3)	18.2	22 (24.3)	100
5 - 12	18 (66.6)	45.2	7 (29.16)	17.5	15 (62.5)	37.5	40 (53.3)	100
12-25 and above	5 (18.6)	38.5	3 (12.51)	23.0	5 (21.2)	38.5	13 (17.4)	100
Total	27	36.0	24	32.0	24	32.0	75	100

r (Correlation) = 0.009994 (non-significant)

Table 7. Relationship between income of families and extent of participation by their women in farm operations

Income of the family (Rs.)	Extent of participation							
	Low (100—500) hours		Medium (501—1000) hours		High (1000—2000) hours		Total	
	F	%	F	%	F	%	F	%
Less than 10000	10 (37.0)	28.5	13 (50.1)	38.9	12 (50.0)	33.5	35 (46.7)	100
10001 — 15000	17 (63.0)	42.5	11 (59.9)	27.0	12 (50.0)	30.6	40 (63.3)	100
Total	27	36.0	24	32.0	24	32.0	75	1000

r (Correlation) = 0.9909 (significant)

Table 8. The hours contributed by women to animal care

Hours contributed (per day)	Animal care	
	Frequency	Percentage
None	5	5.0
1/2	42	42.0
3-4	53	53.0
Total:	100	100.0

Table 9. Involvement of women in decision-making

Involvement in decision-making regarding	Always %	Sometimes %	Never %	Total
Acreage to be sown	32.0	35.0	33.0	100
Variety of seed to be sown	32.0	35.0	33.0	100
Use of chemical fertilizer	32.0	35.0	33.0	100
Permanent hired labour	30.0	18.0	52.0	100
Casual hired labour	38.0	10.0	52.0	100

tion in farm operations and scores in decision-making was found as shown in Table 10. Females who have lesser participation (100-500 hours) 37.0 per cent of the females make 1-4 scores while 33.3 per cent and 29.7 per cent make 5-8 and 9-12 scores in decision-making, respectively. From those who had highest participation (1001-2000 hours), 70.8 per cent made 9-12 scores. It means that the women who had highest participation in agricultural work were also consulted by their male members in farm decision-making and vice versa.

CONCLUSION

In Pakistan, females constitute about half of the rural population but they contribute little to the economy as their energies are not gainfully utilized. But, if properly trained and motivated, they can play an important role in the development programmes in general and in the rural economy in particular.

Analysis of the data shows that majority of the rural women are engaged in crop production, and 95 per cent females actively participate in animal care. Analysis suggests that further detailed studies are needed to identify the constraints faced by the women engaged in farming and technologies be generated to solve their problems and ease their labour burden.

Higher participation of women in the decision-making demands strenuous extension efforts to be directed towards a fairly large proportion of the population, the rural women, to accelerate adoption of new recommended technology.

Table 10. Relationship between scores in decision-making and hours contributed by women in farm-operations

Scores in Decision- making	Hours contributed per year									
	None		Low Up to 500		Medium 501--1000		High 1001--2000		Total	
	F	%	F	%	F	%	F	%		
1-4	9 (36.0)	31.3	10 (37.0)	34.5	8 (33.3)	27.5	2 (8.4)	6.7	29	100
5-8	9 (36.0)	29.0	9 (33.3)	29.0	8 (33.3)	25.8	5 (20.8)	16.2	31	100
9-12	7 (28.0)	17.5	8 (29.7)	20.0	8 (33.4)	20.0	17 (70.8)	42.5	40	100
Total	25	25.0	27	27.0	24	24.0	24	24.0	100	100

r (Correlation) = 0.99448 (significant)

Analysis argues that social norms and attitudes are the determining factors in sexual labour division and demands that considerable importance be given to the knowledge of caste structure and social norms of the target area while formulating the development programmes for rural women to make the programme more successful.

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TRAINING NEEDS OF RURAL WOMEN IN AGRICULTURE

Dr. M. S. Khan Rana and Zafar Sultan

Director, Training and Scientific Officer, Training Institute, NARC, Islamabad

INTRODUCTION

Many decades ago, the need of role of rural women to uplift farming sector was being felt. Prior to this workshop, a number of efforts had been made in developing countries through conferences-workshops-seminars, both at national and international levels, to encourage the role of rural women in implementing the recommended Agrarian Reforms in boosting production. Although it has been acknowledged that rural women play a significant role, a systematic inquiry to develop their role seems to have remained unanswered. A good proportion of rural women are working as an agricultural labour force and help make farming viable. These women perform agricultural operations with men in feeding cattle, poultry keeping, hoeing, harvesting, winnowing, etc.

SUGGESTIONS/RECOMMENDATIONS

Selected literate rural women and youth should be trained in various aspects of agriculture, who at a latter stage may be utilized as master trainers in their respective areas. The identified areas for short training include:

1. Foodgrain storage
2. Livestock rearing
3. Rodent control
4. Conservation and processing of food products
5. Rural poultry keeping
6. Beekeeping
7. Use of animal wastes for bio-gas production

There is an urgent need to establish a women-staffed institute to impart training to women without any inhibitions or social barriers.

- o Women training program should also be started at the village level to impart knowledge to them in use of locally available resources for cottage industry or handicraft manufacturing.
- o Women should be encouraged to participate in rural planning activities so that they may discuss problems and give suggestions.
- o Women should develop their local associations and organize special meetings to highlight problems of rural women
- o Training should be initiated for lady field assistants (like their male coun-

- terparts) who could train rural women in such operations where women can benefit from improved technology.
- o Training should be imparted to rural women in processing of vegetables and fruits.
 - o Efforts should be made to train rural women in raising the standard of management of poultry units, teddy goats and handlooms industry.
 - o Short courses for women should be in kitchen gardening, handling seed and fertilizer, preparation of seed-bed and plant protection measures.
 - o Opportunities for rural women in the demonstration/exhibition of crafts and other home-manufactured products that could be a source of income, in collaboration with Government of Pakistan.

PROGRAMS FOR THE UPLIFT OF RURAL WOMEN IN BALUCHISTAN

Dr. Faqir Muhammad
Director, Livestock Department, Quetta

A number of programs are being implemented in various social sectors like education, health and social welfare in Baluchistan with the assistance of Provincial as well as Federal Government in the Women Division. Although the major role is played by the rural women in the most important sectors, i.e. agriculture and livestock as in other parts of Pakistan, no projects have had significant impact in benefiting rural women.

The main constraints in this aspect are:

1. Socio-cultural patterns.
2. Tribal society customs
3. Nomadic nature of more than 50% population
4. Scattered and sparse population
5. Vast distances
6. Different living conditions in most areas for serving women.

A beginning has been made by the Provincial Livestock Department in involving women in the Livestock Extension Service specially in Poultry Farming. A scheme for training of women in poultry farming by Lady Poultry Supervisors has been implemented and completed with the financial assistance of Women Division, Government of Pakistan. Under this scheme, a provision of recruitment of 14 Lady Poultry Supervisors, distribution of Poultry Units comprising five pullets and 1 coilaral at 50% cost among rural families and provision of veterinary aid and vaccination of rural poultry flocks was made. However, due to social constraints not more than seven Lady Poultry Supervisors could be found available for employment despite the fact that relaxation in educational qualifications from matric to middle was also made. After the completion of the scheme, four Lady Poultry Supervisors were left only who have been absorbed in the regular service of the Livestock Department.

The following new schemes are on the anvil in Livestock Department with assistance from Women Division as well as Provincial Government for the benefit of women:

1. Distribution of 400 poultry units (10 pullets and one coilaral) on 50% subsidy to rural women along with a portable poultry house (drip and a feeder).
2. Provision of touring facility in the field in the form of a vehicle.
3. Distribution of 400 breeding rams and angora breeds for breed improvement and production of mohair.

ROLE OF RURAL WOMEN IN AGRICULTURE IN NWFP

G. S. Barg

Principal, Agriculture Training Institute, Peshawar

The female population in the North-West Frontier Province is about 7.0 million. Out of this, 5.0 million are living in rural areas, who are directly or indirectly involved in agriculture. The literacy level of these rural women is only 3.8%. The majority of the womenfolk are involved in agriculture but in an indirect manner. They are assisting the male family members to devote full time to their day-to-day farm activities. This assistance is in the form of cooking and supply of tea, meals and drinking water right to the fields. The women are also doing light field activities such as harvesting of fodders and carrying it to homes for feeding animals. They also collect and bring home fuel wood. Women also graze the animals. Picking of cotton, vegetables and stripping of canes are other areas where females contribute. The direct involvement of rural women is in storage of grains, feeding and milking of animals, processing milk products and managing poultry. But being illiterate, the output of their efforts are of low quality and contribute little income to the farm family. The new technology transfer in the field of agriculture is almost entirely directed and transferred to male farmers. The rural women due to their socio-cultural background are deprived from using modern agricultural technology. There is a great need to develop a mechanism to enable them to benefit from modern technology and to relieve them from traditional time consuming and cumbersome jobs. To facilitate improvement in the working conditions of the rural women will enhance farm income, productivity and quality of the products.

In NWFP, few educated women possess graduate/post-graduate qualifications. They work in various disciplines at NWFP Agricultural Research, Institute, Peshawar, Nuclear Institute of Food and Agriculture (NIFA), Tarnab (Peshawar), Agricultural Extension Department, NWFP, PCSIR Laboratories, Peshawar, Pakistan Forest Institute, Peshawar and Pakistan Academy for Rural Development, Peshawar. At lower level, the NWFP Fruits and Vegetables Development Board, Peshawar, has recently employed 23 girls. These girls are presently under training at the campus of Agricultural Training Institute, Peshawar.

There is an awakening interest among the females to be involved fully in technical jobs in the field of agriculture. The following recommendations are made to accelerate the participation of rural women in agricultural operation to equip them with knowledge and skill.

1. Establishment of a network of girl schools and colleges in rural areas with emphasis on agro-technical education.
2. Physical and functional facilities in the Agricultural Training Institute,

Peshawar, may be created where necessary training to women field assistants/stock assistants is imparted.

3. Mass media programs for females in agriculture should highlight the role of rural women in farming and related activities.
4. Congenial conditions should be created to establish women cooperative associations for running small-scale agricultural products and activities.
5. Women should be provided special concession and incentives in education/training and employment opportunities.

72a

WORK PLAN

NATIONAL WORKSHOP ON THE ROLE OF RURAL WOMEN IN FARMING SYSTEMS

**Dr. Mian Hidayatullah,
Consultant, Farming Systems Research/MART Project, Islamabad**

OBJECTIVES

The Work Plan has been designed to achieve the following specific objectives:

1. To characterize the FSR target areas of Chakwal, Fatehjang and Mansehra with special emphasis on the level of participation and involvement of rural women in crop and livestock work at the family-farm. Study is to be made at the micro-level, which will include diagnostic survey of the resources, problems and level of technology and tools in use by the rural women in livestock and crop operations.

During this study, training needs of the rural women and youth will also be determined.

2. To formulate functional training programmes for the selected rural women and youth in the target areas by following systematic procedures e.g. selection of multi-disciplinary training teams of women professional staff and to train them as master trainers.
3. To identify educated/literate rural youth especially in the same domain — villages and to train them in the priority areas of direct concern of economic benefit to the participant rural women.
4. To develop training materials comprising charts, visuals, and recorded audio cassettes in the same language/dialect of the FSR domain through the expertise of Allama Iqbal Open University, Islamabad.
5. To provide appropriate training/demonstration inputs to the participating trainees with the objectives of practical teaching/learning of skills on-site by the participating rural women/youth.
6. To organise, implement and monitor training/development programmes for enhancing the level of skills and adoption of efficient technology and tools with the objective of maximizing production-efficiency, improved marketing and higher income as a result of useful contributions of the rural women/youth.

This will help in raising the economic and social status of the rural women in the male-dominant society within the boundaries of local traditions and values of the basic social system i.e., farm-family.

STRATEGY AND PROCEDURE

For achieving the above objectives, Work Plan has been formulated by adopting viable strategy and procedure described as follows:

a. Diagnostic Study

1. Socio-economic survey/study is proposed with special reference to such important aspects as level and degree of participation of rural women/youth in important activities in livestock and farm-crop sectors in three to five selected villages each of Chakwal, Fatehjang and Mansehra FSR domains.
2. For making the above diagnostic study of the resources, constraints, and problems as well as social values of the selected farm-families, Multi-disciplinary collaborating teams are to be constituted i.e. Lady scientists of PARC, Islamabad; and Women Field Extension Staff of ABAD, Rawalpindi; Poultry Research Institute, Rawalpindi (for Chakwal and Fatehjang) and Fruit and Vegetable Development Board, Peshawar and Graduate students of Home Economics and Social Science, College, NWFP University, Peshawar, for Mansehra area.

Training Procedure

1. Selection of rural youth to act as master trainers belonging to the 3 to 5 villages each of Chakwal, Fateh-jang and Mansehra areas is to be made by utilizing the Services of Assistant Director, Technical Training (Women), ABAD, Rawalpindi, through the Lady Managers of Technical Training Centre at Bhaun (Chakwal) and Fatehjang. Similar action will be taken for Mansehra target area through the lady field staff of the Fruit and Vegetable Board stationed at Dhodial, Mansehra.
2. The relevant diagnostic data and first-hand information at micro-level on the social/economic situation regarding resources, constraints/problems, and potentials will be collected, analysed and interpreted for two major purposes, i.e., formulation of work plan and to serve as bench-mark/base-line for use in the monitoring/evaluation study at a later stage.
3. Training materials are to be developed through the experienced professional staff of Continuing Education Department, Allama Iqbal Open University, Islamabad. The training materials consist of standard sets of five recorded audio-cassettes, five spring-bound flip-charts and 125 handouts on suitable subjects of concern for the rural women of the specific agro-ecological zones. The training materials can be designed and

got tailor-made in the light of the basis of diagnostic survey/study. To start with, training materials on the following subject areas are suggested:-

Subject	To be utilized in target areas
(i) Rural poultry keeping (Training Kit is already available in the Univeristy)	Chakwal, Fatehjang, Mansehra.
(ii) Goat husbandry	Chakwal, Fatehjang, Mansehra
(iii) Fruit and Vegetable Preservation	Mansehra

Important Notes

1. The cost of one set of already available training materials on rural poultry keeping is Rs 1100 while the three Project areas will need 10 sets each, amounting to Rs. 33,000.
2. The cost of one set of new training materials e.g. on the subject of Goat husbandry will be Rs 2000 (with minimum number of 10 sets required to be purchased from the University). The total cost of 20 sets to be utilized in the three target areas (Chakwal, Fateh Jang and Mansehra) works out to be Rs 20,000.
3. Action will be taken to support the above training materials with colour-slides, and attractive educational visuals/films with the objective of enhancing the levels of interest, learning-motivation and adoption of viable innovations by the rural women/youth.
4. Continuing training support is to be organised through popular radio programmes in the specific local language/dialect to be broadcast from the respective radio stations. The services of Poultry/Livestock Department, Institute of Educational Technology, Allama Iqbal Open University, Islamabad and Deputy Director of Agricultural Information, Agricultural Extension Department, Peshawar, can be collaborated by special arrangements.
5. Special practical training courses are to be tailor-made and organised for the master trainees (rural youth) on specific subjects in accordance with the needs and requirements of the specific target area. Collaboration of training staff and facilities of the concerned organisations will be managed with examples as follows:

Training Course	Relevant Department/Agency	Period of Training
Rural poultry keeping	Poultry Research Institute, Rawalpindi	Six weeks
Goat husbandry	Livestock and Dairy Development, Rawalpindi	Two weeks
Fruit and vegetable preservation methods	NWFP Fruit and Vegetable Development Board, Peshawar, with Training site of Dhodial, Mansehra.	Two weeks

Note:- Similar special training courses on rural poultry keeping and goat husbandry for the master trainers of Mansehra area can be organised through cooperation of the Women staff of the Poultry and Livestock Department on-site at Dhodial, Mansehra.

6. The Director, Poultry Research Institute and Director Livestock and Dairy Development, Rawalpindi, have kindly shown willing cooperation to organise special combined training courses in the above subjects for 20 master trainers at a time. The Poultry Research Institute, Rawalpindi, has women hostel accommodation facility which was commissioned in early 1987. The Institute pays Rs 300 P.M. per lady trainee as scholarship for two months' training course. This works out to be Rs. 12000 for 20 master trainers for participation in the two-month combined training courses in Poultry and Goat husbandry.

POOLING AND INTEGRATED UTILIZATION OF RESOURCES

At this point, clarification is relevant that due emphasis will be placed on pooling and utilization of resources, expertise, experiences, training facilities, and Extension Services of the on-going/planned programmes of the directly concerned agencies, departments and programmes e.g. ABAD, Women Division, USAID (Programme of Women in Development), Poultry Research Institute and Allama Iqbal Open University.

It is highly encouraging that upon approach and discussion on personal level, following Agencies/Departments have shown keen interest and willingness to extend their cooperation for meeting the objectives of the Work Plan. A summary of their collaborative programmes is described as under:

1. Agency for Barani Areas Development (ABAD), Rawalpindi.

ABAD Administration has agreed to provide the facilities, resources and valuable experiences of the Technical Training Centres (Women) at Chakwal and Fatehjang. The Assistant Director, Technical Training (Women) is prepared to participate for diagnosis, planning and implementation of Rural

Women Programmes of Farming Systems Research and Extension (MART) Project.

2. Poultry Research Institute and Livestock/Dairy Development Department, Punjab, Rawalpindi

The two Directors of the above directly supporting Departments have indicated agreement for organising specially designed combined Training courses in poultry and goat husbandry for the 20 lady master trainers in line with the requirements of the domain-villages of Chakwal and Fatehjang. They are equally willing to supply packages of suitable technology, extension inputs and services, free of charge as a special privileged programme i.e., disease-monitoring, supply of vaccines and vaccination services, deworming, technical know-how on housing, feeding, management and marketing of poultry and goats.

In addition, they agree to make available improved inputs on subsidized rates i.e., adaptable poultry-breed units, and balanced poultry-feed-concentrate.

3. Allama Iqbal Open University, Islamabad

The Vice-Chancellor and Lady Director, Education Department, Allama Iqbal Open University, Islamabad, have agreed to design, produce and supply training materials on Poultry and Goat Husbandry on subsidized rates of Rs 1100 and Rs 2000 per set, respectively. Each training set comprises 5 audio-cassettes, 5 flip-charts and 125 handouts.

4. College of Home and Social Sciences, Peshawar University, Peshawar.

The Principal and the concerned senior staff of the college are keen to contribute in making systematic social and economic study in the selected villages of the Mansehra target area. The B. Sc. and M. Sc. students of the college can participate to make diagnostic study of the socio-economic situation in the selected villages as an integral part of their academic work. The FSR site Station at Dhodial, Mansehra, has suitable hostel facilities. However, some honorarium may be paid to the participating college students.

5. NWFP Fruit and Vegetable Development Board, Peshawar

The Managing Director, NWFP Fruit and Vegetable Development Board, Peshawar, plans to employ one Senior Horticultural Research/Extension Officer as well as 50 Lady Field Assistants in the province, who will have the responsibility of training and development of rural female population in production and preservation of fruits and vegetables at the village level.

The Managing Director of the Board has shown cooperation by posting one or two Lady Field Assistants in the FSR Domain-villages of Dhodial, Mansehra.

These Lady Field Assistants can be assigned the responsibility of diagnosis, and training of the rural women/youth as additional activities of Rural Poultry Keeping and Goat Keeping at home. By cultural constraints and traditions, rural women of Mansehra area do not work in the fields.

SUPERVISED TRAINING DEMONSTRATIONS/INTERVENTIONS AND SUPPLY OF INPUTS

The group of 10 lady master trainers belonging to each FSR Domain Villages of Chakwal, Fatehjang and Mansehra will be assigned main responsibilities as follows:

1. To participate in the diagnosis of socio-economic situation i.e. local resources, constraints and problems of the rural women/youth.
2. To identify and select 10 to 20 potentially interested rural women/youth to actively participate and collaborate in the training-demonstration activities of the FSR Project (Rural Women Component).
3. To organise training - demonstration programmes, for/with active involvement of the interested rural women/youth who are willing to maintain sustained and continuing participation in adopting improved interventions e.g., poultry keeping and goat husbandry.
4. To ensure that timely training, guidance, technical know-how and seasonal adaptable interventions are made available to the participant-rural women/youth.

SUMMARY OF WORK PLAN – SALIENT ACTIVITIES AND INTERVENTIONS

Summary -- items of the Work Plan are presented for reference and review of the document.

An optimum project time-period of two years is proposed for planning, implementation, and evaluation of the programmes and activities listed below:

1. Holding of National Workshop on the Role of Rural Women in Agricultural Development through FSR Project
2. Characterization and Diagnosis of Resources and Constraints of Rural Women Component
3. Formulation of Collaborating Multi-disciplinary Teams and Assigning Specific Responsibilities to the Members
4. Defining and Setting Objectives and Developing Functional Policy Guidelines, Strategy and Procedure
5. Identification and Selection of Group of Lady Master Trainers from the FSR Domain-villages

6. **Organisation of Training Courses at the Relevant Institutes and On-site for the Master Trainers**
7. **Pooling and Integrated Utilization of Resources, Personnel, Facilities and Services**
8. **Arranging Supply of Inputs/Adaptable Interventions to the Selected/Trained Master Trainers**
9. **Organisation of Supervised Training Demonstrations/Interventions by the Master Trainers On-site for the Selected Group of Participating Rural Women/Youth in the Farming Systems Research Domain-villages**
10. **Monitoring and Systematic Evaluation of the Action-Programmes, as Implemented in the FSR Target Areas**
11. **Reporting the Progress; Achievements and Constraints Brought out by Evaluation Study**

107

ANNEXURES

**A PROFILE OF
PARTICIPATION OF RURAL WOMEN OF PAKISTAN
IN PERFORMANCE OF IMPORTANT FARM AND HOME
JOBS AND ACTIVITIES**

(By Traditional Methods, Old Practices
and Inefficient Technology)

A. FRUITS AND VEGETABLE GROWING OPERATIONS

1. Sowing, hoeing and harvesting of almost all vegetable crops.
2. Inter-cultural operations, weeding and harvesting of fruit crops like citrus, guava, apples, stone fruits, falsa and berries, etc.
3. Sowing, hoeing and harvesting of ground crops like potato, sweet potato, onion, sugarbeet, garlic, turmeric and ginger etc.
4. Planting of fruit plants and other useful saplings in the home, courtyard and farm.

B. FARM-CROP PRODUCTION – OPERATIONS

5. Storage and preparation of seeds of all crops, and vegetables and suitable fruits.
6. Sowing of sugarcane and transplanting rice-nursery, wheat, gram and maize.
7. Inter-cultural operations – weeding and hoeing of almost all crops.
8. Application of FYM and fertilizers on small land holdings and plots.
9. Harvesting of cotton, maize, oilseed crops, pulses, partly wheat, and tobacco (removal of off-shoots and flowers at the proper stages)
10. Threshing of maize, rice, cleaning of cotton, (raw or lint) and removal for cotton sticks etc.
11. Harvesting and preparation of fodder and grasses for domestic animals, (milk – cattle, sheep and goat etc.)
12. Preparation and packing of fruits and vegetables for marketing.

C. HOUSEHOLD JOBS AND ACTIVITIES RELATED TO FARMING

13. Rural poultry keeping at home.
14. Feeding, milking and managing of cattle, buffalo, sheep and goat.
15. Farm-shed cleaning, making of dung-cakes and carrying FYM to manure-storage pits.
16. Grazing of cattle, sheep and goat on-the-farm and village grazing area.
17. Storage and protection of cereals and grain-crops from pests and rats.
18. Protection of crops, fruits, and vegetables from harmful birds and rodents.

D. FOOD PROCESSING AND PRESERVATION

19. Preparation, processing and storage of dairy products like milk, ghee, butter, curd, and cheese.
20. Preparation of preserves and pickles, sun-drying of all types of locally grown fruits and vegetables.
21. Preparation of food-items like grinding of cereals, srat, oilseeds, pulses etc.

E. HOME MANAGEMENT – OPERATIONS

22. Rearing and health-care of children
23. Religious education of the young children at home.
24. Food preparation and carrying to the farm-fields.
25. Fetching of drinking water from wells, springs and streams.
26. Washing and care of clothes.
27. House and yard cleaning.
28. House - repairs, mud-thatching, mud-plastering of walls and roofs.

F. COTTAGE INDUSTRIES RELATED TO AGRICULTURE

29. Ginning and spinning of cotton yarn.
30. Making of baskets and mats from straw of wheat, rice and date-palm leaves.

31. Making of handicrafts, toys, dolls, decoration-pieces and embroidery work especially in Baluchistan, NWFP and Azad Kahmir.
32. Preparation of wool, rugs, durri and carpet-making on home-scale.
33. Designing, sewing and stitching of clothes and garment making.
34. Knitting and needle work.

G. MISCELLANEOUS JOBS AND SOCIO-ECONOMIC ACTIVITIES

35. Participation in the decision-making in farming-operations, e.g. rotation of crops and adoption of new cash or food-grain crops, improved varieties and agricultural technologies.
36. Collection of fuel-wood and other sources of energy for managing the house-affairs.
37. Marketing of farm produce at the local level-market by time-old, un-economic traditional practices.
38. Making purchases of house-hold items and decisions on consumption patterns in the farm- and home-management activities.
39. Matching income with expenditure in line with the family-resources.
40. Joint-decisions on securing and use of Supervised Agricultural Credit for improving the efficiency and economy of the family-farm, operations.
41. Decision-making in all important matters relating to family-farm and home-life e.g. organising and participating in social, cultural and religious functions, ceremonies and gatherings.

PROGRAM

January 12-14, 1988

Tuesday, January 12, 1988

Inaugural Session

- 0845- 0900 Registration at NARC Auditorium, Islamabad.
- 0900 Seating (NARC Auditorium)
- 0905 Arrival of the Chief Guest
Mr. Muhammad Ibrahim Baluch
Federal Minister of Food and Agriculture
- 0905-0910 Recitation from the Holy Quran
- 0910-0920 Welcome and Introductory Remarks
Dr. Amir Muhammed, Chairman, PARC
- 0920- 0925 Workshop Objectives and Expected Outputs
Dr. M.D. Dawson
- 0925- 0930 Poem on Highlights of Rural Women Involvement in Farm and
Home Activities
Syed Zamir Jaffery
- 0930-0945 Inaugural Address
Chief Guest
- 0945-0950 Vote of Thanks
Dr. M. Yousaf Qaudhri
- 0945-1015 Tea at NARC Cafeteria

FIRST SESSION

Moderator

Begum Kalsum Saif Ullah
Minister of State for Commerce

- 1015-1100 Keynote address on the Role of Rural Women in Agriculture
(Crops and Livestock Integrated Farming) by Dr. Z. A. Hashmi

- 1100-1130 Summary of highlights of the presentation by Dr. I.N. Hassan and discussion
- 1130-1150 Position paper highlights and proposed Work Plan by Dr. Mian Hidayat Ullah, Consultant, Farming Systems Research
- 1150-1230 Response and Discussion
- 1230- 1300 Formation of Work Groups with guidelines (interdisciplinary and interagency approach) by Dr. Dawson, Dr. Hidayat Ullah, Miss Farzana and Miss Shabnam Bahar
- 1300-1400 Lunch and Prayers

SECOND SESSION

Moderator
Begum Akhtar Rizz-ud-Din
Secretary, Women Division

- 1400-1600 Provincial and National Reports on the Role of Women in Agriculture -- 4 to 5 groups
- Discussion and Summary

Wednesday, January 13, 1988

THIRD SESSION

Moderator
Dr. A. Salam Akhtar
Director General, NARC

- 0900-1030 Farming Systems Approach and Program
Dr. A. Majid, National Coordinator in FSR
- 0930-1030 Response and Discussion
- 1000-1030 Tea break

FOURTH SESSION

Group Discussion
Moderator
Miss Tasneem Qadir Mian,
Chief, Planning/Development Division

- 1030-1130 Discussion on Important Subjects/Disciplines in four groups.

Group 1. Crops — production, protection, harvest, storage.

Dr. Hafiz A. Qayyum, PASSCO.

Group 2. Livestock and Dairy — large and small ruminants.

Dr. A. Wahid.

Group 3. Rural Poultry. Dr. M. Salim Qureshi

Group 4. Fruits and Vegetables. Dr. Mohammad Saeed.

- 1130—1200 Lunch
- 1200 Departure for Fatehjang
- 1200-1600 A Visit to Fatehjang FSR domain villages and return.
(Dr. Dawson, Dr. Majid and Miss Farzana to accompany
two representatives of four groups.)
- 1330—1500 B Visit to Faisal Mosque by group members

Thursday, January 14, 1988

FIFTH SESSION

Moderator

Mr. Manzur Ahmad

Consultant, Coordination, PARC

- 0900--1030 Addresses by:
1. Dr. Tariq Hussain
Deputy General Manager
Agha Khan Rural Support Program
 2. Chairman
National Farm Guide Council of Pakistan
 3. Director General
Agency for Barani Areas Development

Response and Discussion

- 1030--1100 Tea Break

SIXTH SESSION

Moderator

Dr. M. Yousaf Chaudhri

Member, Crop Sciences, PARC

- 1100-1230
- * Recommendations
 - * Presentation of Reports by Group Leaders
 - * General discussion

CLOSING SESSION

Chairman
Dr. Amir Muhammed,
Chairman, PARC

- 1230--1235** Introduction by Dr. M. Yousaf Chaudhri
- 1235--1300** Presentation of Group Recommendations
- 1300** Closing address by the Chairman and winding-up of the Workshop
- 1310--1315** Statement of thanks
- 1315--1400** i) Lunch and Prayers
ii) Interviews of selected women participants by PTV representative, Mr. Anwar Hussain
- 1400- 1500** Ad hoc Work Group for follow-up action by Dr. M.D. Dawson/Dr. Mian Hidayat Ullah

PARTICIPANTS

1. Dr. M.D Dawson Adviser F.S.R., MART, NARC, Islamabad.
 2. Mrs Sabeeha Syed Dy. Director, Women Youth Family Planning
 3. Mrs. Syeda Riaz Ahmad Dy. Director, NCRD, Islamabad.
 4. Ms Diane BARD, NARC, Islamabad.
 5. Mrs. Najma Rizvi Consultant, International Food Policy Institute
Blue Area, Islamabad.
 6. Ms. Shabnam Bahar S O., Social Sciences Div. PARC, Islamabad.
 7. Ms. A. N. Naqvi S O., ASI, NARC, Islamabad.
 8. Ms. Rukhsana Munir S O., (Fisheries) NARC, Islamabad.
 9. Dr. M Saeed (Horticulturist) Programme Specialist, USAID, Islamabad.
 10. Dr. M.S Khan Rana Director Training Institute, NARC, Islamabad.
 11. Mr. Mohammad Yousaf Khan S.S.O., NARC, Islamabad.
 12. Mr. M. J. Balk Secretary, Netherland Embassy, Islamabad.
 13. Dr. M. Yousaf Chaudhri Member Crop/Social Sciences PARC, Islamabad.
 14. Dr. Abdul Wahid ARD/USAID, Islamabad.
 15. Mrs. Nuzhat Perveen AD, Technical Training Program (women) ABAD,
Rawalpindi.
 16. Mrs. Dr. Shaheena Mashkooor V.O. Poultry Research Institute, Rawalpindi.
 17. Mrs. Dr. Nasim Fawad Poultry Research Centre, Rawalpindi.
 18. Mrs. Kishwar Ijaz Asstt. Professor, University of Agriculture,
Faisalabad.
 19. Ms Shahnaz Akhtar Lady Demonstrator, Agri. Institute, Sargodha.
 20. Mrs. Dr. Shahzada Perveen V.O.(H) Poultry Research Institute, Lahore.
 21. Mrs. Dr. Gazala Nawaz V.O(HO Poultry Research Institute, Lahore.
 22. Mrs. Dr. Waheeda Rana V.O(R) V E I Lahore.
 23. Dr. Takumi-Izuno MART/Winrock Advisor, 21 Davis Road,
Lahore
 24. Mr. Gulzar Ahmad Site Co-ordinator, F.S.R. Chakwal.
 25. Dr. S.M. Athar D.G. Poultry Research Institute, Karachi - 14.
 26. Mr. Gulfam Khan Jehangiri Site Co-ordinator/Agri. Research Station
Dhodial, Miansehra.
 27. Mr. Shafi-Ullah Khan Dy. Director, Agri-information Deptt.,
Agri. Extension, University Road, Peshawar.
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SPEAKERS/PARTICIPANTS

- | | | |
|-----|--------------------------------|---|
| 1. | Dr. Z A Hashmi | House No. 5, St. 18, F-7/2, Islamabad. |
| 2. | Dr. I.N. Hassan | Dean, Women Education AIOU, Islamabad. |
| 3. | Dr. Mian Hidayatullah | Consultant FSR, H. No. 2, St. 51, F-8/4, Islamabad. |
| 4. | Mr. Rao A. Rauf Khan | Dir, Economic Research, ADBP, Islamabad. |
| 5. | Syed Zamir Jaffery | LI No. 12, St-31, F7/1, Islamabad. |
| 6. | Dr. A Rahim Chaudhry | National Farm Guide Council of Pakistan
65-Babar Block, Near Garden Town, LHR. |
| 7. | Dr. A. Majid | National Co-ordinator, F.S R/MART Project,
NARC, Islamabad. |
| 8. | Ms. Farzana Masood | Consultant, FSR, NARC, Islamabad |
| 9. | Begum Sajida Nayyer Abidi | IL 261, Pak Block Allama Iqbal Town, LHR. |
| 10. | Dr. Faqir Mohammad | Director Research Livestock Deptt, Quetta |
| 11. | Dr. Hafiz A. Qayyum | General Manager (Pests) PASSCO McLead
Road, Lahore. |
| 12. | Dr Anwar-Ul-Haq | Professor, Sociology Deptt., University of Agric.
Faisalabad. |
| 13. | Dr. Mohammad Saleem
Qureshi | Dir. Poultry Research Centre, Murree Road,
Rawalpindi. |
| 14. | Brig. M Azam Mirza | D.G. ABAD, Murree Road, Rawalpindi. |
| 15. | Mr. Wasim Ahmad Farooqi | P.S O. NiAB, Faisalabad. |
| 16. | Mr. Ali Baluch | Director Adaptive Research, B. No. 178 Vi
Latifabad, Hyderabad. |
| 17. | Begum Mumtaz Rashadi | H. 66, St. 3, Khayaban-i-Momin, Phase 5
Defence Housing Society, Karachi. |
| 18. | Mr. Gul Sad Berg. | Principal, Agriculture Training Institute,
Peshawar. |
| 19. | Syed Mahfooz Ali Shah | D.C., Agriculture Extension, NWFP,
Peshawar |
| 20. | Mr. Shahid Sarfraz | Dir., Meteorology Deptt., Islamabad. |

GROUP MEMBERS**GROUP-1****CROP PRODUCTION/PROTECTION**

1.	Dr. Anwar-Ul-Haq	Group Leader
2.	Dr. Hafiz Abdul Qayyum	Member
3.	Dr. M S. Khan Rana	Member
4.	Mrs Kishwar Ijaz	Member
5.	Miss Shabnum Bahar	Member
6.	Mr. Gulfan Jehangiri	Member
7.	Mr. Mohammad Yousaf Khan	Member
8.	Mr. Gulzar Ahmad	Member
9.	Mis Farzana Masood	Member

GROUP-2**LIVESTOCK**

1.	Dr. Abdul Wahid	Group Leader
2.	Dr. Anwar Hussain	Member
3.	Begum Mumtaz Rashadi	Member
4.	Begum Tasnim Qadir Mian	Member
5.	Dr. Faqir Mohammad	Member
6.	Mr. Gulzar Ahmad	Member
7.	Dr. A Rahim Chaudhry	Member
8.	Mrs Sajjida Nayyer Abidi	Member
9.	Dr. Faqir Mohammad	Member
10.	Mr. Gul-Sad Berg	Member

GROUP-3**POULTRY**

1.	Dr. Saleem Qureshi	Group Leader
2.	Mrs Nuzhat Matloob	Member
3.	Dr. Mrs. Shaheena Mashkooor	Member
4.	Dr. Gazala Nawaz	Member
5.	Dr. Mrs. Waheeda Rana	Member
6.	Mrs. Najma Rizvi	Member
7.	Mrs. Syeda Riaz Ahmad	Member
8.	Dr. Sabeeha Syed	Member

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|-----|--------------------|--------|
| 9. | Mr. A. N. Naqvi | Member |
| 10. | Ms Rukhsanda Munir | Member |

GROUP-4

FRUITS AND VEGETABLES

- | | | |
|----|---------------------|--------------|
| 1. | Dr. Muhammad Saeed | Group Leader |
| 2. | Mrs. Shahnaz Akhtar | Member |
| 3. | Wasim Ahmad Farooqi | Member |
| 4. | Mr. Shaffi-Ullah | Member |
| 5. | Mr. Gul Sad Berg | Member |
| 6. | Dr. Takumi Izuno | Member |

10

URDU POEMS

سید نعیم حفیظی

دیہ دختر

رزق کی مشین ہے
 لیکن اپنی بے ہنر جہالت سے
 بے ثمر مشقت سے
 کم لباس ، وقف پاس
 نم لگاہ ، غم جبین رہتی ہے
 بہترین ہو کر بھی
 کاروبار بہتی میں کمترین رہتی ہے
 یہ بھی کوئی جینا ہے ؟
 یہ بھی کوئی رہنا ہے ؟
 خاک اس کا نمازہ ہے
 چھاج اس کا گناہ ہے
 گاتے آپ دوہتی ہے ، دودھ خود بلوتی ہے
 زندگی کے کانٹوں میں پھول بھی پروتی ہے
 اوڑھنی کے پلوں چیکے چیکے روتی ہے ۔
 بے اماں مشقت کی سنگدل صعوبت میں
 یہ غریب کیا جانے
 صبح کیوں چمکتی ہے
 شام کیسے ہوتی ہے
 جانے کب وہ اٹھتی ہے
 جانے کب وہ سوتی ہے

روٹیاں پکاتی ہے
 بکریاں چراتی ہے
 کھتیاں بواتی ہے
 چاہ سے ، رجباہ سے
 پانی بھر کے لاتی ہے
 دو گھڑے اٹھاتی ہے

فصل کاٹنے میں ہاتھ مرد کا بٹاتی ہے
 کھیل کھیل والوں کے "بول" کو چھڑاتی ہے
 درد کی درانتی سے کتنے زخم کھاتی ہے
 پھر بھی مسکراتی ہے ،

آٹا چھانتی دیکھو
 چارہ سانٹی دیکھو
 مانگھ ہو کہ بیسا کھی
 کھیت کی کرے راکھی
 گاؤں کی یہ چھاؤں ہے
 یہ زمین اس کے دم سے کشور حسین ہے

کتنی دل نواز ہے
 کتنی دل نشین ہے

سرفراز شاہد

دیہاتی عورت

یوں نظر آتی ہر اک عورت مجھے دیہات کی
 جیسے اک تصویر ہے وہ گردشِ ایام کی
 یہ بیچاری زیورِ تسلیم سے محروم ہے !
 مرد کی ساتھی ہے لیکن مرد کی محکوم ہے
 کام کرتی ہے وہ گھر میں، کھیت میں، کھلیان میں
 بتلا رہتی ہے پھر بھی جہل کے بحران میں
 گلہ بانی بھی کرے اور کھیتی باڑی بھی کرے
 بن میں مزدوری کرے اور خانہ داری بھی کرے
 وہ روایاتِ کهن کے سامنے بھجور ہے
 اس ترقی یافتہ دُنیا سے کوسوں دُور ہے
 وہ کرے محنت مگر اس کا ثمر کوئی نہیں
 نصف آبادی کے ہونے کی خبر کوئی نہیں
 اس کی خاطر ملک میں ایسا ادارہ چاہیے
 جو سنوارے اسکی حالت وہ سہارا چاہیے
 اس ادارے میں اسے علم اور تربیت ملے
 کچھ ٹریننگ بھی برائے صنعت و حرفت ملے

یہ ادارہ جو کہ ہو گاؤں کے کچھ نزدیک بھی
اس میں وہ سیکھے زراعت کی نئی تکنیک بھی

سبزیاں گھر میں اگاتے سائنسی بنیاد پر
دسترس حاصل اسے ہو کیمیائی کھاد پر

ہوں شجر پھلدار گھر میں، سیب، کینو اور آم
ان پھلوں سے وہ بنائے جوس چٹنی اور جام

ماڈرن تکنیک سے وہ جانور پالے یہاں
گھر کے اندر مرغیاں ہوں گھر کے باہر بکریاں

اپنے بچوں کو کرے علم و ہنر سے آشنا
گھر کے ہر اک فرد کو آجاتے جینے کا مزا

کام کرنے کی نئی تکنیک جب اپناتے گی
گاؤں کی ہر فیملی کی آمدن بڑھ جتے گی

سیکھ لے گی کچھ ہنر عورت اگر دیہات کی
اور ہی صورت نظر آتے گی پھر حالات کی

ہر طرف کھیتوں میں ہریالی کا دور آجاتے گا
گاؤں کے ہر گھر میں خوشحالی کا دور آجاتے گا

ایک دن اس پر بھی قدرت مہرباں ہو جائیگی
دختر دیہات عظمت کا نشاں ہو جاتے گی

وہ بھی دن آتے اسے مظلوم کہنا حبرم ہو
وہ برابر ہو اسے محکوم کہنا حبرم ہو