Rural Women in the Sahel and their Access to Agricultural Extension Sector Study
Overview of Five Country Studies
June 1995
Africa Region
Western Africa Department
Agriculture and Environment Division
ACRONYMS

ACU Agricultural Communications Unit in The Gambia
AIO Agricultural Inputs Office in The Gambia
ASVE Activité de Suivi et de Visite des Exploitations in Burkina Faso
AV Associations Villageoises in Mali
AVB Agent de Vulgarisation de Base
BPAF Offices for the Promotion of Women’s Activities in Burkina Faso
BNDA Banque National de Développement Agricole in Mali
CAC Centre d’Assistance Coopérative in MDRE in Mali
CAPEC La Caisse Populaire de l’Epargne et de Crédit in Senegal
CG Contact Group for extension
CMDT Compagnie Maliene pour le Developpement des Fibres Textiles
CNCAS Caisse Nationale de Credit Agricole du Senegal
CNCR National Committee for the Coordination of Rural Organizations in Senegal
CPEC Caisse Populaires d’Epargne et de Crédit in Mali
CRPA Centre Regional de Promotion Agro-Pastorale - the regional divisions of the Ministry of Agriculture and Animal Resources in Burkina Faso
CS Country Study - references to the background papers
DAS Department of Agricultural Services in The Gambia
DINACOOP Direction National d’Action Cooperative in MDRE, Mali
DIREL Direction d’Elevage in Senegal
DLS Department of Livestock Services in The Gambia
EA Extension agent
EM Electronic Mail
EPCV Enquête Permanente sur les Conditions de Vie, survey in Mauritania
FAO/CP Food and Agriculture Organization/Central Projects
FEFEGA Femmes et Formation en Gestion Appliquée
GDP Gross Domestic Product
GIE Groupements d’Intérêt Economique
GRAND Gender Resources Awareness for National Development Project in Senegal
IDA International Development Association
IFPRI International Food Policy Research Institute
ILO International Labor Organization
ISRA Institut Sénégalais de Recherche Agricole
MARA Ministère d’Agriculture et des Ressources Animales in Burkina Faso
M&E Monitoring and evaluation
MDRE Ministère du Développement Rural et de l’Environnement in Mali or Mauritania
MOA Ministry of Agriculture in The Gambia
NASS National Agricultural Statistical Survey, The Gambia
NGO Non-Governmental Organization
NRM Natural Resource Management
OP Organisations Pastorales
PNVA Projet National de Vulgarisation Agricole in Mali and Senegal
ROSCAs Rotating Savings and Credit Associations
RWS Rural Women in the Sahel: Developing Effective Agricultural Extension Services
SDA Social Dimensions of Adjustment
SEP Suivi Evaluation Permanent in Mali
SMS Subject Matter Specialists
SODEVA Agency for agricultural development in the groundnut basin in Senegal
SODEFITEX Agency for cotton development in eastern Senegal
SONADER Societe nationale de developpement rurale in Mauritania
SSA Sub-Saharan Africa
T&V Training and Visit extension approach
TMP Test en milieu paysan
TS Technicien supérieur - equivalent of SMS
TSA Technical sales agents in The Gambia
UNDP United Nations Development Program
UNICEF United Nations Children’s Emergency Fund
UNFPA United Nations Family Planning Agency
WAPIA Women’s Agricultural Productivity in Africa study
WID Women in Development
WMTOP Women’s Management Training Outreach Program
ZOPP Ziel Orientierte Projekt Planung or Planification de projets par objectifs

RATE OF EXCHANGE

All FCFA references are at the pre-devaluation exchange rate of 50 FCFA to 1 French franc.
# RURAL WOMEN IN THE SAHEL AND THEIR ACCESS TO AGRICULTURAL EXTENSION

## Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Summary</td>
<td>i</td>
</tr>
<tr>
<td><strong>CHAPTER 1 INTRODUCTION</strong></td>
<td>1</td>
</tr>
<tr>
<td>Background</td>
<td>1</td>
</tr>
<tr>
<td>Issues and Scope of the Study</td>
<td>2</td>
</tr>
<tr>
<td>Methodology</td>
<td>4</td>
</tr>
<tr>
<td>Outline of Report</td>
<td>6</td>
</tr>
<tr>
<td><strong>CHAPTER 2 THE ROLE OF WOMEN IN AGRICULTURE IN THE SAHEL</strong></td>
<td>7</td>
</tr>
<tr>
<td>Agriculture in the Sahel</td>
<td>7</td>
</tr>
<tr>
<td>Smallholder Agricultural Production Systems</td>
<td>8</td>
</tr>
<tr>
<td>Extent of Women's Participation in Agricultural Production</td>
<td>13</td>
</tr>
<tr>
<td>Female-headed Households and Female Chefs d'Exploitation</td>
<td>15</td>
</tr>
<tr>
<td>Women's Participation by Type of Crop, Livestock and Task</td>
<td>21</td>
</tr>
<tr>
<td>Women and Horticultural Production</td>
<td>31</td>
</tr>
<tr>
<td>Trends in Women's Roles in Agricultural Production in the Sahel</td>
<td>32</td>
</tr>
<tr>
<td><strong>CHAPTER 3 GENDER DIFFERENCES IN PRODUCTION CONSTRAINTS AND PRODUCTION SYSTEMS</strong></td>
<td>33</td>
</tr>
<tr>
<td>Introduction</td>
<td>33</td>
</tr>
<tr>
<td>Gender Differences in Access to Land</td>
<td>34</td>
</tr>
<tr>
<td>Gender Differences in Labor Input and Time Constraints</td>
<td>38</td>
</tr>
<tr>
<td>Women's Access to Credit and Inputs</td>
<td>41</td>
</tr>
<tr>
<td>Human Resources</td>
<td>44</td>
</tr>
<tr>
<td>Gender Differences in the Use of Technology and Inputs</td>
<td>47</td>
</tr>
<tr>
<td>The Implications for Extension of Gender Differences in Constraints and Levels of Technology</td>
<td>49</td>
</tr>
<tr>
<td>The Research Agenda and Women Farmers</td>
<td>49</td>
</tr>
</tbody>
</table>
### TEXT TABLES

<p>| Table 2.1 | The Importance of Agriculture in the Economy of the Five Countries Studied | 8 |
| Table 2.2 | Senegal: Rights and Duties of Family Members | 9 |
| Table 2.3 | Women's Participation in Agricultural Production | 14 |
| Table 2.4 | Percentage of Female-Headed Households or Chefs d'Exploitation | 16 |
| Table 2.5 | Mauritania: Proportion of Farming Households Headed by Women | 17 |
| Table 2.6 | Mauritania: Distribution of Household Types by Household Characteristics | 18 |
| Table 2.7 | Senegal: Total Annual Revenue in Rural Areas by Gender of Household Head | 20 |
| Table 2.8 | The Gambia: Gender Differences in the Area of Major Crops Owned and Tasks Performed | 22 |
| Table 2.9 | Senegal: Gender Division of Labor by Crop and Agro-Ecological Region | 24 |
| Table 2.10 | Livestock Ownership by gender | 25 |
| Table 2.11 | Senegal: Main Activities of Women's Groups | 28 |
| Table 3.1 | Burkina Faso: Constraints of Women Farmers | 34 |
| Table 3.2 | Women's Access to Personal Plots of Land | 36 |
| Table 3.3 | Time Allocation Studies | 38 |
| Table 3.4 | Mali: A Typical Women's Day during the Growing Season | 39 |
| Table 3.5 | Fuelwood Supply-Demand Balance | 40 |
| Table 3.6 | Human Resource Indicators | 45 |
| Table 3.7 | Mauritania and Senegal: Ownership of Tools and Equipment | 48 |
| Table 3.8 | Mauritania: Crop Input Purchases by Male- and Female-Headed Households | 48 |
| Table 5.1 | The Level of Women Farmers' Participation in Extension Activities | 53 |
| Table 5.2 | Agricultural Ministry Field Staff by Gender | 56 |
| Table 5.3 | Female Students in Agricultural Education | 58 |
| Table 5.4 | Projections of Medium-term Balance between Demand and Supply of Agricultural Trainees | 58 |</p>
<table>
<thead>
<tr>
<th>BOXES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Box 2.1</td>
</tr>
<tr>
<td>Box 2.2</td>
</tr>
<tr>
<td>Box 2.3</td>
</tr>
<tr>
<td>Box 2.4</td>
</tr>
<tr>
<td>Box 2.5</td>
</tr>
<tr>
<td>Box 2.6</td>
</tr>
<tr>
<td>Box 2.7</td>
</tr>
<tr>
<td>Box 2.8</td>
</tr>
<tr>
<td>Box 2.9</td>
</tr>
<tr>
<td>Box 3.1</td>
</tr>
<tr>
<td>Box 3.2</td>
</tr>
<tr>
<td>Box 4.1</td>
</tr>
<tr>
<td>Box 4.2</td>
</tr>
<tr>
<td>Box 5.1</td>
</tr>
<tr>
<td>Box 5.2</td>
</tr>
</tbody>
</table>
PREFACE

This sector study focusses on the provision of agricultural support services, and extension in particular, to women in the Sahel. Women in the Sahel, as elsewhere in Sub-Saharan Africa, have long played a pivotal role in agriculture and the rural economy. Yet, more than elsewhere in SSA, they have been comparatively neglected by publicly-funded services until recently. High levels of rural poverty in the Sahel coupled with the fragile agro-ecological environment make the contribution of women’s agricultural and rural activities to the household and community a crucial element in the survival of the rural population. Hence, it is essential that women benefit fully from the provision of agricultural support services.

Both the World Bank and governments of Sahelian countries have initiated innovative approaches to address this need. This Rural Women in the Sahel and their Access to Agricultural Extension (RWS) study looks in depth at five countries: Burkina Faso, The Gambia, Mali, Mauritania and Senegal. This overview paper is a synthesis of five country working papers which are based on in-country discussions, workshops and primary data collection, and a review of secondary data. The report reviews: (a) women’s participation in farming and other rural activities; (b) women’s contact with extension services; (c) the appropriateness of the extension system for women’s needs; (d) the gender of extension agents; (e) women’s need for other agricultural services; and (f) institutional issues. Cross-country recommendations and guidelines for the World Bank and governments complement specific actions for the five countries. Several recommendations have already been implemented.

The study was conducted by Daphne Spurling, consultant, under the task managership of Katrine Saito, AF5AE. The country studies were a collaborative endeavor with the Agricultural Service Officers: Ibrahim Nebie in Burkina Faso (who also refined and field tested the questionnaire), Agadiou Dama in Mali, Christian Leduc in Senegal, and also Kuje Manneh of the WID Project in The Gambia. They and many other people in the five countries - agricultural ministry staff and officials, NGOs and other agencies, and most of all, farmers and the coordinators who accompanied the missions - gave very generously of their time and made substantial contributions. Valuable comments were given by the peer reviewers, Venka Venkatesan and Willem Zijp, and by Franz Schorosch, Muneera Salem-Murdock and Monica Fong. Salah Darghouth and subsequently Randolph Harris, Division Chief (AF5AE) reviewed the report and Katherine Marshall and subsequently Jean-Louis Sarbib, Director (AF5), provided overall encouragement and support.
RURAL WOMEN IN THE SAHEL
AND THEIR ACCESS TO AGRICULTURAL EXTENSION

Executive Summary

Women are underestimated as de facto heads of households in the Sahel

The household structure of the Sahelian countries is male-dominated. Although women outnumber men in rural areas, particularly in Mauritania, men head rural households both culturally and numerically. Few women are formally recognized as household heads: less than 5% of rural households in Burkina Faso, The Gambia and Mali, 10% in Senegal, but over 20% in Mauritania. Tradition dictates that men are identified as household heads when possible and, consequently, the way surveys are designed and administered influences headship numbers. When questions are detailed, male-headed households may prove not to have an adult man present: they are de facto female-headed. For example, although 85% of 365 households studied in the Senegal River Valley were described as male-headed, 47% of all households did not have an adult male who was present. In addition to the 15% that were described as female-headed, another 26% of households had male heads who were absent, and 12% had male heads under 14 years (including 8% under 8 years).

The implications of this under-estimation are both psychological and practical.
* Officials, being generally unaware of the significant de facto percentages, do not consider female-headed households as important and ignore them.
* De facto female heads are deprived of resources and revenues that are earmarked for heads of households.

Therefore
* The targeting of extension and other services should be determined by the relative importance of the various social groups in agricultural production, and on their current access to extension, resources and benefits. De facto female-headed households, in particular, should not be neglected.

Rural women in the Sahel are having to increase their labor input in agricultural production without extra resources or compensation

Long working days are the norm for women in the Sahel. They work up to 16 hours per day in the growing season of which about half is spent farming. Time allocation studies show women working one to three hours per day more than men. The lack of basic services in rural areas -- reliable water supplies, health centers, stores, woodlots, transport, mills -- adds considerably to women’s work load. Shortage of time constrains women’s attendance at activities which can benefit them, and limits the time and attention they can pay to productive activities. Obligations to work on husband’s and family plots and to care for children limit women’s ability to prioritize their time.

Causes of women’s increased work load are:
* Environmental degradation which increases the time spent collecting wood and water, and producing crops to supplement production from family fields.
* Sedentarization. As pastoral societies become sedentarized, women become responsible for crop production (while men tend to remain herders), and building and cooking increases the demand for wood. Women’s authority is diminished by both isolation from the herd and the shift from milk - traditionally controlled by women, to meat products - traditionally controlled by men.
• Male migration. Up to 40% and 75%, respectively, of men from villages surveyed in Burkina Faso and Senegal had migrated. Wives left behind rarely have independent land rights and are unable to use their husband’s draft animals which normally remain under the control of another man. They spend dramatically more time farming family and compound land, but do not control output and most decisions are made by the head of the extended family under whose authority they remain.

• Intensification of farming. The extra labor demands of, for example, cotton and irrigated rice fall disproportionately on women.

• Social change. Throughout the Sahel, men are traditionally responsible for providing the family food, but women are ultimately responsible for managing situations of shortage. There are indications from Burkina Faso that men are withdrawing from their traditional household obligations.

The increasing time women must spend in family food production or helping with cash-crop or livestock production is rarely compensated for and, in fact, decreases the time available for their own personal or group activities.

The implications are:
• Governments and donors must think through the gender differentiated implications of proposed projects: the gender division of current and proposed tasks, the effect of any increase in labor requirements on various sections of the household, and the control of output and access to incentives.

• Women have less time than men to attend meetings. Moreover, because set weekdays are dedicated to specific activities, most women can only attend extension activities on a certain day which usually can only be changed by agreement with village elders. Extension activities must
  o match the weekday, time and place specified by the women, and
  o be sufficiently interesting and valuable to encourage women to continue attending.

• A priority of extension services should be facilitating women’s access to labor-saving technology.

• Technologies should be evaluated on the basis of labor as well as area productivity.

The activities of rural women in the Sahel are extremely diverse

In some areas men and women grow similar crops and do similar tasks, although a degree of gender-specificity is the norm. Gender differences are greatest in The Gambia where women grow 95% of the swamp rice but only 6% of coarse grains.

The activities of rural women are extremely diverse among and within ethnic groups, and even within villages and farming systems. Individual women and women’s groups in a single village may differ markedly in their crops, their livestock, their tasks on family fields, and their income-generating activities. This diversity reflects the wishes of the community or the group as well as differences in resources, skills, knowledge and opportunities.

The implications are:
• Diagnosis and planning must be conducted with both male and female clients

• The extension needs of men and women differ. Women need direct extension on
  o the crops and livestock they grow or have responsibility for
  o the specific activities that they carry out or want to learn
  o the skilled tasks they perform.
Extension activities must match the actual activities of the specific group.
Women need a wider range of information and training than men.
Agricultural extension services cannot supply the range of information and training that women require and, therefore, collaboration with other agencies is essential.

Many women's diversification activities in the Sahel are risky and financially marginal.

Studies in The Gambia, Mali and Senegal show that support and donations based on capital investments tend not to bring sustainable benefits to the recipient women's groups. In fact, higher vegetable yields and profit were obtained from hand extraction than motor pumps in The Gambia.

There are several reasons why women's activities tend to be risky.
- The demand for the products of their activities is weak on the local markets due to
  - poor marketing infrastructure and information, and
  - rural poverty.
- Vegetable marketing is a particular problem throughout the region because of dry season gluts of a narrow range of types. Oversupply on the local rural market is exacerbated by a lack of transport to markets in urban areas or technical knowledge to conserve the produce for later sale or consumption. Donors' encouragement and support of vegetable growing as the main development initiative for women has raised hopes and production beyond potential realization. In fact, vegetables produced under low technology levels have been shown to be more profitable than where donors have supported with irrigation equipment.
- Extension services and donors do not check the financial feasibility of their recommendations.
- Women's low levels of functional literacy, numeracy and related management skills limit both their ability to manage their economic activities and their status in the household and community.
- All smallholders have difficulty in obtaining credit, but women have more problems than men for reasons of collateral, the linking of credit to cash commodities, and social/educational constraints.
- Women's low labor productivity arises from, among other things, difficulties in obtaining the water and fuel necessary for many value-adding and income-generating activities, and from the lack of appropriate and affordable tools, equipment and technologies to save labor and conserve produce.
- Extension services do not identify and address the most limiting or underlying problem. When production is oversupplied, messages should concentrate on reducing costs, improving quality, increasing sales, and transforming output into a more marketable product.

The implications and recommendations are
- Rural women urgently need training in functional literacy and business skills.
  - Gender-disaggregated targets for participation in these components of the Agricultural Service Projects should be set and monitored.
  - The Grass-roots Management Training program developed by EDI in collaboration with local resource people and NGOs for rural women should be expanded in numbers and scope as feasible.
- Donors and governments should only advocate enterprises or technologies that market and economic research indicate are profitable.
- Market promotion of the products of rural women's activities should be supported.
- The collection (or development), testing and dissemination of tools and equipment to increase labor productivity, and of technologies particularly on agro-processing and storage are a priority.
• Extension services, particularly women's units, must move away from proposing actions for women based on capital investments and concentrate on integrating rural women into the mainstream processes of the Agricultural Support Service Projects: diagnosis, subject and relevance of extension activities, participation in adaptive research, etc.

The integration of gender into an extension service tends to follow a defined path.

The path followed is:
1. Extension is male-oriented and officials do not question whether this reflects the farming reality.
2. Gender awareness increases among policymakers and managers
3. Actions are taken to increase the numbers of women in contact with extension services
4. Actions are taken to improve the quality of extension (subjects covered, appropriateness of messages)
5. Impact is evaluated
6. Other support services are improved

Individuals and agencies within countries are not all at the same stage but some generalizations can be made. Most Mauritanian agricultural officials do not consider women as farmers in their own right despite women heading 35% of households in the main farming area. Officials in Mali and Senegal are aware of gender issues and are taking steps to reduce the skew against women as staff and clients. In Burkina Faso gender awareness is very high among extension staff at all levels, and special units for women's activities exist in all regional offices. The Gambia has made the numeric breakthrough: most participants in extension activities are women, and the departments of the Ministry of Agriculture cater for the needs of men and women.

Gender differences in participation in extension activities are being reduced, but still do not reflect men's and women's importance or roles in agricultural production.

Women are 15 to 20% of participants in extension activities in Burkina Faso, Mali and Senegal, and 60 to 70% in The Gambia. The comparative figure for Mauritania is possibly 10-15%. Although these levels do not yet reach gender equity, the doubling in 2 years in Mali and the four-fold increase since the mid-1980s in Burkina Faso are very commendable. The very high level in The Gambia represents a dramatic increase since 1989 when women comprised only 5% of contact farmers and is a direct result of the WID project.

Although quantitative data are generally lacking on gender differences in participation by subject matter, vegetable production and diversification activities remain the main focus of extension to rural women in all five countries. In Mauritania for example, field crop extension goes only to "men's" groups and "women's" groups only receive vegetable extension. Extension on field crops and livestock is increasing to women. The livestock department in The Gambia makes a special effort to encourage women's participation in small ruminant and poultry extension. Only Mali provided data on the important issue of participation by gender in the functional literacy components of the Agricultural Service Projects. In Mali, and probably elsewhere, women's low participation is increasing the literacy gap between rural men and women.
Implications and recommendations are:

- **Targets for women’s participation in extension should be**
  - for the main crops and livestock: proportional at least to the percentage of female-headed households or preferably to women as producers of the individual crop or livestock being discussed.
  - for income-generation or diversification activities: over 80% of participants
  - for functional literacy: over 50% of participants because of women’s lower starting base

- **Gender-disaggregated data must be collected, analyzed and reported whenever possible. Gender-related actions should be monitored and evaluated, and gender-specific barriers to increased production/productivity/income identified.**

Agricultural extension agents in the Sahel supply messages which are routine and global.

In general, they are not tailored to the varying needs of the different population groups, and do not reflect the integrated nature of the farming system. Moreover, themes concentrate on production methodologies and not on the underlying causes of the limiting constraints. In addition, because the extension services are not concerned with, and so cannot address, many priority needs of women -- time, inputs, credit, management skills, and marketing -- their value to women is limited. Male farmers are more likely to be members of groups with legal status which have access to credit and/or inputs.

Implications and recommendations

- **Extension activities and messages should be based on a diagnosis which includes gender differences in activities, resources, opportunities and benefits.**
- **Individual groups should be able to choose their extension activities from a menu of a la carte extension modules. These modules should be supported by a manual of fiches techniques covering the range of women’s activities.**
- **Extension agents (or Gender Coordinators) should facilitate women’s access to agricultural support services that are not available from the extension service. Possible sources are NGOs**
- **Leaders of rural women’s groups should be trained in financial, production and human resource management of group activities. Functional literacy training should be tied to the interests and skills needed by women.**
- **Women’s access to inputs and indirectly to credit can be improved by encouraging village boutiques run by women to stock agricultural inputs and tools (as with the private retailers in The Gambia).**

Male dominance of the AVB grades constrains extension with female farmers. More female agents are needed.

More female extension staff are needed in the Sahel because each country has ethnic groups which, to varying degrees, discourage contact between male agents and rural women. These restrictions are least evident in The Gambia. Very few women hold technical positions in the agricultural ministries either at field or at higher grades. About 5% of field staff are female in Mali, Mauritania and Senegal. The situation was better in the crop department in Burkina Faso (11% women), the non-ministry agencies affiliated with PNVA in Senegal (14%) and, particularly in the livestock department in The Gambia (33% of agents). Extremely few women are employed as Subject Matter Specialists. The number of women at graduate level in coordinatrice roles for women’s activities nationally or regionally has recently increased. Burkina Faso has the best coverage with a female graduate responsible for promoting women’s activities in all 12 regional offices (CRPAs) of the agricultural ministry.
Few women apply for posts in the extension services. Very few have the required technical training, cultural norms make them reluctant to be posted to villages away from parents of husbands and, except for Burkina Faso, some are reluctant to ride mobylettes. About 15% of students are women in agricultural training institutions in all five countries. The impressive experience of The Gambia’s livestock department in the Ministry of Agriculture has demonstrated that female agents can be recruited and retained. Some selected short-term initiatives are needed to increase numbers and retain female staff.

**Implications and recommendations**

- Because men will form the bulk of the extension staff for the foreseeable future, they must be taught how to work with women as well as men. In addition to technical training in women’s activities, they must be trained, for example, to approach the rural community in a culturally-acceptable manner when initiating extension contacts with women, and to support women’s groups.

- A statut feminin would give women more flexibility of employment without increasing numbers of established posts. One suggestion is long-term job-sharing of a number of positions among a larger number of women. Within defined limits, a woman could take a break in employment and, if a “job-sharing” vacancy were available, could then return without loss of seniority when family circumstances allowed.

- The number and status of female staff should be increased by, for example:
  - recruiting (special criteria may be needed in the short-term) and inservice training
  - giving rural female agents in other ministries (monitrices rurales or sociales) extra training in agriculture and integrating them into the extension service
  - not restricting recruitment to 25 to 45 years of age

- Female enrollment in agricultural training colleges should be encouraged by various means, for example, by providing remedial teaching or targetted scholarships

- A relais formatrice cadre could be established. The relais formatrice would be selected by their groups, trained by the extension service, and then teach fellow members.

- Experienced female field extension staff should be selected for in-service training and upgrading to SMSs.

**The Sector Study was a tool for change**

This Sector Study was the first occasion that the agricultural division of the Bank’s Western Africa (previously Sahel) Department had been substantively involved in gender issues. The past two years has witnessed strong progress in actions to equalize gender staffing and gender participation in extension activities. In some countries this is a continuation of an effort that had already started; in others, it represents a new initiative. The Sector Study proved to be a successful tool for encouraging actions to increase gender equality by providing the impetus for

- developing a dialogue on the subject which raised awareness in the countries under study.
- developing close cooperation between HQ and RM staff concerned with on-going projects which enabled this initiative to be mainstreamed into on-going and new Agricultural Service projects.
- promoting cross country exchange of experiences and spread the initiative to other countries.

**Several reasons explain the positive impact of the study**

- The Sector Study has been **persuasive rather than prescriptive**.
- The process allowed for a **long time frame within on-going activities**.
• The Task Managers helped to mainstream gender into most Bank activities connected with the projects: (for example, supervision, workshops, meetings, dialogues).
• New and on-going projects provided the operational means of obtaining these results/improvements.
• The use of IDA-funded projects enabled gender actions to have national coverage.

Several strategies have been successfully used to improve gender equity

Gambia's free-standing, multi-sectoral Women in Development Project (WIDP) increased women's participation in extension activities from 5% of contact farmers and 29% of participants in village-based farmer training in 1989 to women being a minimum of 60 - 70% of participants in all extension activities by 1994. As a result of WIDP financial support, the crop, livestock, horticulture, communications, and agricultural input units increased their output to and focus on women farmers or activities in the women's domain. Horticulture and small livestock were particular targets. Whether women's increased knowledge will be translated into adoption and ultimately into increased production, productivity, income or social benefits remains to be seen. But women are still comparatively disadvantaged in their other resources (such as inputs, animal traction, time and land). The agricultural component of the WIDP is now mainstreamed and the cooperation and enthusiasm of MOA staff is notable. The Agricultural Services Project continues this special effort, for example, by increasing the number of VEWs specializing in women's agricultural activities (such as swamp rice, horticulture, and short-cycle livestock species).

WID coordinators and women's units National coordinators for promotion feminine are in post in Burkina Faso, Mali and The Gambia, and are planned for Mauritania and Senegal. Burkina Faso has 12 regional women's units of 2-3 staff. The coordinator strategy has been very successful in The Gambia and Nigeria. Both women have strong personalities, appropriate degrees and much field experience as well as a fair amount of authority and financial control. The Gambian coordinates the WID Project's agricultural component in the ministry; in Nigeria, she is a member of the World Bank's Resident Mission staff and supervises gender in all agricultural projects. In the other countries studied, the strategies of coordinators and women's units have focused attention on an area that has been neglected in the past - rural women who farm, keep livestock and carry out other productive activities. Two main problems have been the difficulty in finding women with the necessary characteristics (strong personality, and both academic qualifications and field experience) to be regarded as equals by male staff who have worked their way up the ladder, and their concentration on women's capital needs such as mills, irrigation works, and oil presses rather than on integrating gender-related actions into the framework of the IDA-funded Agricultural Service Projects. Moreover, the extension services have made limited efforts to integrate female agents as Gender Subject Matter Specialists or into the bimonthly technical meetings.

Training and redeployment of rural agents This highly successful strategy was used in Nigeria to alleviate the shortage of female agents. Home Economists, who had all received some agricultural training as part of their basic course, were small farmers in their own right and had much experience with rural women, were given extra agricultural training and redeployed firstly as Women in Agriculture agents and within 2 years as agricultural agents. Senegal is embarking on a similar strategy using the Monitrices who are employed in rural areas by a number of ministries and agencies. A survey of these rural agents and a training needs assessment are now being carried out.

Changing extension client criteria Mali increased women's participation in extension activities by making two changes. The first targeted an increased proportion of mixed and female groups used for extension. The second changed group membership from chefs d'exploitation to active farmers permitting more
women to be members of these groups. The Gambia increased focus on activities that were traditionally in the women’s domain, and agents were given target numbers of women clients and "WID" villages.

**Lessons learnt**

- Government and ministry officials must be convinced of the need to address gender issues before actions are attempted at field level
- Services must be integrated, monitored and have built-in safeguards
- The extension and research services can increase their gender balance
- Project conditionalities must be used with care
- Targeting women can remove common biases
- Time constraints can be alleviated without resort to expensive and sophisticated equipment
- Numbers of female agents can be increased with minimal increase in fiscal expenditure
- Fast and substantial improvements can be made when the Bank commits significant human and financial resources.
- The most effective coordinators in charge of the women’s initiative have the personality and the academic and field experience to be regarded as equals by male colleagues. In addition, they had the authority to use the funds. The institutional location of the person was less important: the Gambian was in the Ministry of Agriculture and the Nigerian was in the Bank’s Resident Mission.
CHAPTER 1: INTRODUCTION

Summary Throughout the Sahel, women have long played a pivotal role in agriculture. Moreover this role is growing as men migrate to seek work. Agricultural services remain generally geared towards male farmers. This study seeks to develop a better understanding of women's role and the constraints they face as farmers, and to identify ways to provide better extension and other agricultural support services for them. This report is an overview of country studies prepared for Burkina Faso, The Gambia, Mali, Mauritania and Senegal. The studies are based on desk reviews, field data collection, discussions with extension staff and farmers, and in-country workshops.

BACKGROUND

1.1 Throughout the Sahel, as indeed throughout Sub-Saharan Africa, women have long played a pivotal role in agriculture. Besides having the ultimate responsibility for food production, they are active in many other agricultural activities including cash cropping, animal husbandry, food processing and marketing, and in diversification activities which may or may not be linked to agriculture. Moreover, women's agricultural work is growing as more men migrate to cities and other countries for work. In some areas, increasing numbers of women are becoming heads of households and managing farms on a day-to-day basis.

1.2 If women are to carry out their extensive and multi-faceted roles in agriculture and respond to market incentives more efficiently, they need effective agricultural extension services. Extension programs can increase agricultural productivity and rural incomes by bridging the gap between new technical knowledge and farmers' own practices. Extension provides information to farmers who through informal experimentation test, adapt and, if the technologies are appropriate, adopt them. Productivity is thereby improved by changing input/output ratios or farming practices. Evaluations have generally shown agricultural extension to have a significant positive impact on farmers' knowledge and adoption, and through adoption on productivity (Saito and Spurling 1992).

1.3 The future development of the Sahel depends on fully utilizing rural women's - as well as men's - productive capacity. Yet the evidence clearly shows that, despite a growing awareness of the need to help women farmers, these services - considered to be a prerequisite for widespread and sustained agricultural development - are generally geared to male farmers. This is sometimes by design, but more often by default. Bias is evident in the delivery of extension, which is generally provided by male agents to male farmers on the fallacious assumption that the message will "trickle across" to women. Bias is also evident in the message itself, which tends to ignore the unique workload, responsibilities, and constraints facing women farmers.

1.4 Troubled by this highly inefficient use of resources, not to mention suboptimal levels of agricultural production, both the World Bank and governments of Sahelian countries have initiated innovative approaches to address this problem. Pilot programs are providing useful guidance on how best to integrate women into the agricultural extension system and the most likely problems to emerge in
different socio-economic environments. However, this is a relatively new field and much remains to be learnt.

1.5 This study on Rural Women in the Sahel (RWS) and their Access to Agricultural Extension has been undertaken by AF5AE in collaboration with and supported by AFTHR. The analysis covers five countries: Burkina Faso, Mali, Mauritania, Senegal and The Gambia. The study seeks to improve the design and implementation of agricultural extension projects by developing a better understanding of gender roles in agriculture in the Sahel and of the effectiveness of the extension services in helping women farmers. Specifically, the objectives of the study are to (a) gain a clearer understanding of the present role of women in Sahelian agriculture and the constraints they face as farmers, and thereby better identify their information and technology needs; (b) identify cost-effective ways to deliver such information and technology; and (c) make specific action-oriented recommendations to improve the effectiveness of our agricultural services projects.

1.6 Present and planned World Bank projects in the sector cover agricultural services, food security and nutrition, natural resource management, livestock, agro-processing, and small rural industries. The findings of this study should be used to modify or be included in the design of ongoing and future projects, and recommendations on how this could be done are presented in the concluding chapter. In particular, the provision of agricultural extension to women farmers is a necessary condition for ensuring that the second-generation Agricultural Services Projects answer the needs of this increasingly important segment of the farming community. The study also adds to the quantitative gender-disaggregated data base which can be used to modify the traditional "gender-blind" attitudes and identify critical areas for intervention.

1.7 Through this examination of current efforts to improve the effectiveness of extension service for women, countries will be able to benefit from each other's experience. The Bank can also learn from the best practices and lessons learnt in the different countries. The principal audience for the study are World Bank project staff, client governments and other donor agencies.

ISSUES AND SCOPE OF THE STUDY

1.8 The study addresses the following topics:

(a) Women's participation in farming and other rural income-generating activities. The study examines the effect of ethnic and social differences in women's participation, and the organization of crop and livestock production, post-harvest and off-farm productive activities by gender. The relative importance of farming households headed by women, how this is changing over time and the consequences of such change on agricultural production are also discussed.

(b) Women's contact with extension services. While such contact is not commensurate with their participation in farming, throughout the Sahel there have been important efforts to improve this situation. The success of these efforts are assessed. Involving women in extension activities is not always easy. The experience of one country in overcoming the difficulties and constraints encountered - be they social/cultural factors, education and literacy limitations or women's limited time and mobility - can be helpful to other countries.
(c) **The appropriateness of the extension system for women's needs.** There are important gender differences in agricultural activities, in farming objectives, and in constraints. Women tend to have less access to production inputs, such as land, family and hired labor, tools and equipment and credit, and face particular constraints in terms of time and mobility. Education and literacy levels, the use of technology and farming activities are also differ by gender because of socio-cultural restrictions. This study examines the importance of these differences in the Sahel, and their implications for extension. The study focuses on the relevance of the messages and advice to women farmers given their needs and constraints; the identification of the information and technology needs of women farmers; and the availability of production technologies or tools and equipment to meet these needs.

(d) **The gender of extension agents.** The study takes stock of the percentage of female agents at each grade and discusses the necessity for female agents if extension is to effectively convey information to female farmers in Muslim environment of the Sahel. And if it is necessary, then the study examines what measures can realistically be taken given the limited budgetary resources of the Sahelian governments and the lower levels of female education. The appropriateness of employing Women in Development (WID) Coordinators or WID Subject Matter Specialists (SMS) is discussed. The reality is that most extension agents in the Sahel are male, and drawing on discussions in-country, recommendations are made on how to enable male agents to work more effectively with women farmers.

(e) **Women's need for other agricultural services.** Information is only one of several inputs or conditions required to meet the desired objective (which can be, inter alia, increasing production, productivity, or income, or saving time). While extension should help farmers maximize the use of their current resource endowments, the greatest gains accrue when the most limiting factor is addressed. Farmers need a range of readily available inputs and services. These include fertilizers; pesticides; credit; labor- and energy-saving tools, equipment or strategies; access to transport and marketing; and organization and management of extension and farmers' groups. Such inputs and services are frequently lacking for all farmers; this study examines if women face particular difficulties in accessing these services and the possibility of using existing structures or procedures to meet women's needs for these inputs and services.

(f) **Institutional issues** The Bank and other donors have three options for targeting project benefits to women: (1) a WID project that is exclusively for women (as in The Gambia); (2) specific WID components in larger sector projects (as in Nigeria - not a Sahelian country but included for reference); or (3) a mainstream project that integrates women throughout all relevant components. Within an agricultural ministry, there is the option of whether or not to establish coordinators or offices at national and/or provincial levels with specific responsibilities for programs to women. This study assesses the success of the various arrangements in the countries under review (particularly the Gambian experience).
METHODOLOGY

1.9 Individual Country Studies\(^1\) have been prepared for the five countries based on desk reviews, missions to the field, and in-country data collection and workshops or seminars.

Desk Reviews

1.10 Desk reviews draw on the following: WID Assessments or Country Studies; discussions with staff working on Bank projects, sector reviews and studies; data from the Priority Surveys and Enquête Permanente sur les Conditions de Vie (EPCV) surveys carried out under the World Bank's Social Dimensions of Adjustment (SDA) Program; and previous studies and workshops on the subject that have been held in the countries. Other sources for Burkina Faso, for example, are the country study carried out for the UNDP-funded, Bank-executed study on "Raising Women's Agricultural Productivity in Africa" (Saito et al 1993) and the Training and Visit (T&V) Evaluation (Bindlish et al 1993). The WID project in The Gambia is a major source of information for that country.

Data Collection

1.11 Data on women farmers remains very difficult to obtain. Even data on numbers or percentage of extension staff by gender is not easily accessible. In Mauritania, for example, the number of female extension agents had to be obtained from the first names of extension agents in the Ministry of Rural Development and Environment. In Burkina Faso, Mauritania and Senegal much of the routine monitoring and evaluation (M&E) reporting is still not gender-disaggregated. The Gambia and certain offices in Mali are better in this respect. Special studies are similarly negligent. A 1991/2 study of adoption and diffusion of extension messages in the Gambia was not gender-disaggregated. Gender was largely ignored in the T&V evaluation in Burkina Faso. The Agricultural Education Sector Study for the Sahel (June 1993 Yellow Cover), carried out by FAO/CP for AF5AG, made no mention of gender in the six country studies. The IFPRI/ISRA study (Kelly et al 1993) in Senegal on the impact of agricultural price policies in the peanut basin and Senegal oriental failed to include estimates of women's labor contribution to household income or to the value of consumed items. Even the first version of the Beneficiary Assessment in Senegal, which included women in the study objectives, did not disaggregate data by gender.

1.12 It had been hoped to obtain a wealth of information from the SDA Priority Survey or the Permanent Survey on the Condition of Life. However, control of SDA data has remained with the countries and so the information that could be extracted varies with each country. It has generally been of limited value. Only the SDA data for Mauritania has been fully exploited for information directly useful to this study although the same questions had been asked in other countries.

1.13 Two objectives lay behind the decision to conduct modest data and information collection in four countries\(^2\) (Burkina Faso, The Gambia, Mali and Senegal). It would help to fill this data gap and

---

\(^1\) Throughout this paper the Country Studies are referred to by the country name followed by CS.

\(^2\) The data collection was not conducted in Mauritania for two reasons. First, a working paper had already been written following field mission in January 1993 as part of the preparation of an Agricultural Services Project. Second, this is not a good time to collect data as the Ministry of Rural Development and the Environment and the extension service are undergoing a major restructuring.
obtain basic information of relevance to extension projects and, more importantly, would be an awareness raising exercise. An iterative process was used. The questionnaire was discussed with the AF5AE agricultural services staff based at the Resident Missions and further modified following a pilot test in Burkina Faso. Each country modified the basic format and set of questions to fit their individual requirements after consultation between the Bank’s Agricultural Service Officers and extension officials and field extension agents.

1.14 National coverage was obtained in Burkina, Senegal and The Gambia, the three countries where the extension service collected the information. In Mali, a local consultant conducted the interviews in three of seven regions. In Senegal, questions to farmers were incorporated into a large scale (over 2000 villages) national survey and those to the Extension Agents (EAs) were dropped.

1.15 The basic format was to collect information at four levels: the national extension service, provincial extension staff, village extension agents, and farmers. At the national level, information was sought on the major farming systems with ethnic differences and the approach of the extension service toward women, and data was collected on such items as the percentage of female agents at each grade and agricultural training participants by gender. The focus at the provincial level was on the organization of extension activities for women farmers, including the use of WID SMSs, mobility of agents, monitoring and evaluation data. Both village extension workers and farmers were asked about women’s farming roles and activities, and what extension activities women need, what they presently receive and suggestions for improvements. In addition to quantitative data, the impressions of field extension staff and farmers on how extension services can be improved was also sought.

Missions

1.16 The author, a consultant from Washington, visited the countries to attend the workshops, to hold discussions with extension staff and women farmers, and to visit "best practices" (and "lessons learnt") identified from discussions. Mauritania was visited in February 1993, The Gambia and Burkina in October and November 1993, and Senegal and Mali in March and April 1994. Implementation has been discussed during missions to Mauritania (September 1994 and June 1995), The Gambia (July 1994), Senegal (November 1994 and January 1995) and Mali (December 1994 and April 1995). (Burkina Faso left the department during a reorganization). In addition, gender issues have been highlighted by Washington-based Task Managers and the Agricultural Services Staff in the countries concerned.

Workshops

1.17 Workshops in the four countries were run by the extension service and attended by relevant national agencies and women’s organizations. After discussing the problems of women farmers, the participants developed action plans for improving the extension to women farmers in Burkina Faso, The Gambia, and Mali. The workshop in Senegal concentrated on women’s groups and organisations paysannes. Burkina Faso had a slight variation: action plans developed by the 12 (semi-autonomous) regional extension services formed the basis of the national workshop and national action plan. Experience from the previous work on Women’s Agricultural Productivity in Africa (cited above) suggested that involving local staff in data collection and developing the action plans would act as an "auto-formation" (self training) on the subject. The close involvement of practitioners also ensured that the action plans would be geared to the needs of women farmers - a fundamental objective of the whole exercise.
Country Studies (CS)

1.18 The studies for each country are available on request.

OUTLINE OF REPORT

1.19 The main body of this report reflects the position at the time of the study and missions. The chapters are organized as follows:

Chapter 2 describes the household production unit, and women's participation and multi-faceted role in rural production. The prevalence of female-headed households is discussed.

Chapter 3 describes differences in men's and women's production constraints. The chapter discusses gender differences in land tenure; labor/time use; rural credit; human resources (particularly literacy and education); and technology use. The focus of this chapter is the effect of gender-related constraints on the agricultural production systems of men and women, and hence on extension needs.

Chapter 4 examines and evaluates the provision of extension advice for women farmers. It covers numbers of female agents, training of female agents, and cultural mores that affect social relationships between men and women and their implications for extension.

Chapter 5 describes the process and institutional aspects of integrating gender into agricultural extension, assesses different institutional and project strategies, discusses the operational impact of the sector study, and cites some lessons learnt.

Chapter 6 presents recommendations for governments and the World Bank.

A Cautionary Note

The broad-based brush strokes of commonalities paint a deceptively generalized picture. While this is necessary for a sector review of several countries, it does a disservice if taken at face value. All the countries are characterized by extreme diversity of women's roles and productive activities. The major factors are the ethnic group and the farming system. But diversity also exists within ethnic groups, villages, and families.

Rural women or women farmers are not a homogeneous group. Individuals and women's groups in a single village differ in the crops they grow, the livestock they keep, and the income-generating activities that they carry out or are interested in moving into. This diversity reflects the differences in resources, skills, knowledge, and opportunities. The bottom line is that the extension and agricultural support services must know their female clients, and match their support to their clients' real interests and needs. This is the challenge for improving services to women farmers.
CHAPTER 2: THE ROLE OF WOMEN IN AGRICULTURE IN THE SAHEL

Summary
The household structure and farming systems of the Sahelian countries are male-dominated. Men as community or family heads control productive resources and, to some degree, women's opportunities to earn income. According to surveys, women head less than 5% of rural households in Burkina Faso, The Gambia and probably Mali, 10% in Senegal, and over 20% in Mauritania. However, these figures are probably underestimates as some male heads are absent or young boys. The contribution of rural women's productive activities to the household and community is crucial. Women are important producers of crops and livestock, collectors of wild products, and processors and sellers of agricultural produce. They farm their own and collective group fields, and help on husbands' and communal compound or family plots. Individual women control the income or output only from their personal plots or activities, men control that from communal and their personal fields, and (except for vegetables) income earned by women's groups usually goes towards collective benefits. Although women generally control or have usufructuary rights to small areas of land, their labor input to the household economy exceeds that of men. Many changes in the physical and social environment negatively affect women by expanding their obligation to work or other responsibilities while decreasing their rights and the output of their own-account activities.

Women's productive activities are very diverse. Except for fully-irrigated rice and fonio, most staple cereals and cash crops are grown by men. Women grow swamp rice, vegetables, the minor food crops, and some cash crops. Although traditionally men provide the family food, women are increasingly responsible especially in the last resort. Men generally do the heavy field work and women, depending on the ethnic group and crop, do some or all the other tasks. Women may own livestock, be responsible for them and earn income from them. Men own most of the larger animals; women own about half the small ruminants and most poultry. Women usually control the milk, and men the meat products. Other productive activities, which rural women often carry out in groups, add value by transforming produce, are artisanal, or provide services. Their profitability is, in many cases, marginal because of low demand and poor management. Most vegetables are produced in the dry season by individual women or women's groups. Production is constrained by water and profitability by seasonal gluts exceeding demand. Conservation is undeveloped and marketing skills urgently needed.

AGRICULTURE IN THE SAHEL

2.1 Recurring drought and the ensuing environmental degradation constrain economic growth in the Sahel. The rainy seasons of the major agricultural zones in Senegal, for example, have become shorter (by 10 to 20 days) and drier (by 200 mm) during the 1980s (World Bank 1990a). Dryland agricultural production systems range from nomadic pastoralism in the northern desert areas, through agro-pastoralism to the shifting cultivation of the savannah areas. The river valleys host a range of cultivation systems ranging from flood recession crops to fully controlled irrigated rice schemes. The effect of the droughts has been a movement of the population into more favorable areas, a shortening of the regenerative fallow period, and migration, particularly of men, from rural areas in search of work. As a result, women outnumber men in rural areas in most of the Sahel.

2.2 Agriculture accounts for over 40% of GDP in Burkina Faso and Mali, and 20 to 30% of GDP in Mauritania, The Gambia and Senegal, the three countries where rates of urbanization approach
50% (Table 2.1). **Burkina Faso** is one of the few low-income countries in Sub-Saharan Africa (SSA) where economic growth has kept pace with population. Nevertheless, agriculture remains the livelihood of the majority of the population in all five countries and provides supplementary income for town-dwellers. In Senegal, for example, the agricultural income of urban households is one-tenth that of rural households. With the present high population growth rates (4% for The Gambia and 2.5 to 3% elsewhere), the long-term sustainability of agriculture is threatened by rapid degradation of the natural resource base.

| Table 2.1 The Importance of Agriculture in the Economy of the Five Countries Studied |
|---------------------------------|--------|--------|--------|--------|--------|--------|
|                                 | Burkina | Gambia | Mali   | Mauritania | Senegal | SSA    |
| GNP/capita (US$) (1993)         | 300¹    | 350¹   | 270¹   | 500¹     | 750¹²   | 530    |
| GDP annual growth (%) 1980/92  | 3.9     | 3.5³   | 2.9    | 1.9      | 3.0     | 1.8    |
| Agric as % GDP (1992)           | 44      | 23³    | 42     | 29       | 19      | 20     |
| Urbanization (%) (1992)         | 17      | 40⁴    | 25     | 50       | 41      | 29     |

¹ World Bank Economic and Social Database
³ Estimated at around $470 after the January 1994 devaluation
³ Gambia Country Brief (growth in real GDP between 1985/6 and 1991/2)
⁴ World Bank 1993c *Gambia: An Assessment of Poverty*

**SMALLHOLDER AGRICULTURAL PRODUCTION SYSTEMS**

The Household Structure

2.3 Production and consumption systems, activities, rights and obligations, and decision-making powers depend on a complex of overlapping units: ethnic group; the community; the extended family; and the nuclear family. Most ethnic groups in the Sahel live in extended family units³. The extended family (compound, *concession*) may comprise of more than one nuclear family, unmarried siblings and widowed mother, and perhaps unrelated dependents. The compound is generally divided into production units (*dabada* in Gambia, *du* in Mali) and into consumption units (*sinkiro* in The Gambia - those who eat from the same pot) which may comprise a different combination of individuals. Individuals may be members of up to 3 overlapping production units (inside and outside the family unit) each with their own objectives, resources, rights and obligations.

2.4 Cutting across all of these units are the strong effects of gender, age, and social class. Social class, which is particularly strong in pastoral groups manifests itself in the stratification of many

³ There are exceptions, however, such as members of the main ethnic group of the Basse Casamance in Senegal, the Diola, who live in nuclear families averaging 5 people.
ethnic groups into castes, and in the hierarchy of ethnic groups and of families within an ethnic group. An individual's activities and access to resources such as irrigated land or bas-fonds are affected by their social class (see Mauritania CS Box 1, and Mali CS Boxes 3 and 8, para 39). Families of forgereons and marabouts, for example, traditionally do not farm. Women's social status in the household varies considerably between senior and junior wives, and between wives with and without sons (Gambia CS para 10). The concentration of power in the hands of older men and the descendants of the founder of the lineage or village is a formidable constraint to the participation of women (and younger men and people of lower class or caste) in decision-making. The position of each person in the male-dominated hierarchy determines their rights and duties (Table 2.2).

<table>
<thead>
<tr>
<th>Table 2.2 Senegal: Rights and Duties of Family Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head of Compound</td>
</tr>
<tr>
<td>Duties</td>
</tr>
<tr>
<td>Manages land allocation</td>
</tr>
<tr>
<td>Distributes grain and salt</td>
</tr>
<tr>
<td>Is responsible for family welfare and nutrition</td>
</tr>
<tr>
<td>Pays taxes</td>
</tr>
<tr>
<td>Rights</td>
</tr>
<tr>
<td>Has final authority</td>
</tr>
<tr>
<td>Has respect from other family members</td>
</tr>
<tr>
<td>Receives free labor from family</td>
</tr>
</tbody>
</table>


2.5 Understanding the social origin of any problems encountered will help make development projects more effective. A workshop in January 1995 in Mali illustrates well the contradictions that underlie the relations between men and women and the effect these can have on men's and women's productive capacity and their motivation to participate in the project (or wider development activities). Staff from the Natural Resources Management (NRM) project (57 men out of 60 total) were asked to list local proverbs concerning husbands and wives. The proverbs showed that a husband recognizes his wife as indispensable to family survival - in terms of food production, children's education, and her important

4 Refers to the individual Country Study which is available on request.
ritual and social functions - but at the same time he considers her an outsider to his family and suspects her loyalties may lie elsewhere. Thus, men seek to control the power of their younger wives and confine them to roles which limit their freedom of expressions, of movement, and general visibility.

2.6 As a result of these gender relations, women have few decision-making powers (although they do have some behind the scenes influence) and little control over or access to productive resources. Extension information, for example, is more likely to be shared with sons than wives. Elements of competition clearly exist in the inter-gender relationships in the household. During the mission to Mali, for example, several references were made to husbands limiting their wives' earning powers by restricting the number of days they can do agricultural work for pay, or restricting the number of small ruminants they can fatten.

2.7 The decision-making authority over agricultural production and land use differs between societies. A tribal leader, the head of a kinship group or a council of elders typically has authority over pastures, forests, and water. Some decisions regarding the use of arable land may be communal (such as land tenure and allocation), and others may be taken at the household or individual level (such as land use, crop and animal production). Arable land is allocated in order of priority: first to the extended family, then to nuclear families and finally to individuals for own-account activities. The description of fields in Mali-Sud is fairly typical (Box 2.1). Wives of household heads are allocated some land to support themselves and their children. The income and produce from household fields are controlled by the household head and pooled, whereas the crops and earnings from own-account production on personal plots are retained by the individual family members who do the production. Men and women spend their "separate purses" differently. In Mali, for example, 90% of women's earnings were found to directly support the family (with health care, clothing, school materials and marriage expenses) compared to 35% of men's earnings (Mali CS para 10). The country papers give examples of women's lack of complete control of the output or the income from their own-account activities. For example, nearly 1/3 of women in a Mauritian survey needed their husband's permission before selling produce (Mauritania CS para 5). The distinction between communal family or household fields and men's personal fields is often blurred because men have decision-making powers and control the output/income from both types of fields.

2.8 The household economy is a combination of farm, off-farm, and domestic activities. In most societies in the five countries, the wife is obliged to provide labor for the communal extended family and household plots, and on her husband's personal field. Ethnic group is the major determinant of women's labor obligations. For example, Senoufo women at Doumanaba village in Mali-sud follow the usual practice and work five days per week on household fields. More unusually, Bambara women at Laminibougou village do not work on communal fields except for compensation and are able to concentrate on their own rice and vegetable fields (Mali CS para 21). In a minority of cases, women have no obligation to assist on their husbands' personal plots or, at least, not unless the husbands compensate them. Most wives are required to work 3-6 days per week on the household fields and have the remaining days for their personal plots or income-generating activities. There are also variations within ethnic groups. FulBe (Peuhl) women, for example, do not help with crop production in parts of Yatenga, Burkina Faso, but provide 28% of agricultural labor in eastern Burkina (Burkina Faso CS para 17). "Women are disadvantaged because most of the fruits of their labor are controlled by their father or their husband or their husband's father." (FAO 1992) "Nous avons payé de fortes dots pour les épouser. Il faut donc qu'elles travaillent maintenant. Il n'y a pas de raison que nous depensions encore pour acheter une charrue. Que feront-elles si nous les soulagions?" (Male rice farmer in Comoe CRPA, Burkina Faso)
Box 2.1 Mali: Classification of Fields by Manager and by Fertility

In Mali-Sud all ethnic groups have four types of fields:

(a) large fields *communs* formerly managed under the sole responsibility of the head of the enlarged family
(b) *secondaires* fields resulting from fragmentation of large fields under the pressure of young families. These are replacing the large fields as the enlarged family breaks down into nuclear family units
(c) *privé* fields of men and of women. Women’s fields are divided into
   - *champs de brousse* for cereals and groundnuts
   - *champs de bas-fonds* for rice
   - *champs de case* for condiments which are tending to disappear or be further from the house
(d) *champ collectif* worked by groups or associations according age and sex, and which may or may not be based on family relationships. (Zuidberg and Djiré 1992)

Plots are divided by fertility gradient and distance into village fields (*soforo*) which comprise about 25% of all plots and under 20% of area, and bush fields (*champs de brousse*).

*Soforos* receive manure and stover and remain in continuous cultivation longer than *champs de brousse*. Forty percent of maize plots and 35% of groundnut plots are on *soforos*. Millet/sorghum are the most frequent crops on *champs de brousse*, with rice in the *bas-fonds*.

Source: FAO/CP 1991

Responsibilities and Rights

2.9 As head of the compound or family, men in most Sahelian societies are responsible for providing the family staple food. In some ethnic groups the wife is expected to provide all the food for herself and her children and to feed the husband whenever he sleeps at her hut. In other ethnic groups she provides the sauce for the meal (FAO 1992). Discussions with women during the missions to all five countries indicate that men do not always provide sufficient family food and may discriminate among wives in a family. The bottom line is that women are ultimately responsible for providing any shortfall.

2.10 Traditional cross-obligations between family members (such as land preparation in exchange for weeding as shown in Table 2.2) were usually fairly evenly distributed in the past. But changes in the physical and social environment have often expanded women’s obligations to work or other responsibilities while decreasing their rights (for example, to land) and the output of their own-account activities. Specific examples are given in Box 2.2. To summarize, *male migration* increases women’s unpaid work and reduces their remunerative activities; *environmental degradation* increases the time women must spend collecting water and fuel, increases their difficulty in obtaining quality land, and increases women’s production of the family food; *sedentarization* increases women’s production of cereal foods, increases the time to prepare foods, and decreases their influence of decisions concerning the herd; changes in agricultural production, such as increased cotton and irrigated rice production, increase women’s unpaid work on their husband’s plots and even adoption of “labor-saving” animal traction increases the area under cultivation, and *social changes* are leading to the men’s gradual withdrawal from traditional obligations. These negative effects have important implications for agricultural strategy in the Sahel. Notwithstanding these comments, gender relationships should be seen in perspective: what might be regarded as bias against women can be offset by advantages. For example, a 1987 study in Senegal showed that women were less involved in making decisions concerning the Bakel irrigated perimeters but they also paid less per unit for their production inputs than men. Toucouleur women in the same area sold their produce to their husbands at less than market price but were saved the costs of marketing and
the husbands did not have to pay the full purchase price for the food they were obligated to provide. (Bloch 1987)

Box 2.2 The Effect of Changes in the Physical and Social Environment on Women's Responsibilities

- **Male migration.** Studies in Burkina Faso and Senegal show that male migration from rural areas results in a dramatic increase in the time all women (irrespective of their relationship to the male migrant) spend working on household fields. They had less time to spend on their own income-generating activities and had no more decision-making powers than before (Box 2.5 and paras 2.22 to 2.24. See also Burkina Faso CS para 14 and Box 3, Senegal CS para 19 and Box 1).

- **Environmental degradation** has increased the time women must spend in collecting water and fuel. (Cleaver and Schreiber 1992)

- **Sedentarization** results in cattle being herded away from the homestead and from women who own some of the animals. As grain replaces milk in the diet, women must spend more time producing and preparing food and collecting fuel and water for food preparation. Moreover, the nutrient value of the diet is reduced. (Box 2.7 and para 2.32. See also Mali CS para 15)

- **Changes in agricultural production.**
  - The introduction of totally controlled irrigation in The Gambia caused control of the rice crop to pass from women to men. This increased the labor demand on women for food crop production and decreased women's decision-making powers (Box 2.6 and Gambia CS para 20 and Box 3).
  
  - In contrast, the Operation Riz in Burkina Faso ensured that women retained control of the land after supplementary irrigation was developed. The higher yielding rice is becoming more important as a food crop. Consequently, women's contribution to food crop production is increasing whereas men sell more of their upland crops for income (Burkina Faso Box 5).
  
  - Irrigation in the Middle River Valley of Senegal has increased women's dependance on men by promoting the expansion of the planted area of men's fields. Moreover the labor input per unit area is greatly increased in total and in the proportion carried out by women. The returns per unit land can be greater with irrigation, but return to labor and capital are twice as great with flood-recessional sorghum and even more when the additional benefits of animal and fish production are included. With less time to cultivate their own plot - their source of independent income - women are more dependant on men. (Senegal CS footnote 2, para 34, Box 2)
  
  - An impact evaluation of cotton development in Burkina Faso found that the labor demands were met through, *inter alia*, increased female labor. The women had less time to spend on their own productive activities. (Burkina Faso CS para 16)

- **Social changes.** In Burkina Faso there is a trend towards individualization of agricultural activities. Married men are becoming increasingly less involved in communal obligations and favoring their own individual fields. By default, women are assuming additional responsibility for household obligations or expenses. (Burkina Faso CS para 9)

2.11 In addition to the family or household production system, men and women may have crop, livestock and off-farm economic activities as individuals and in groups. As a generalization, women's individual activities are their main source of income and their group activities provide social and community benefits. This may change as traditional groups turn to economic activities. Most groups
retain all the revenue for social benefits such as buying new clothes for ceremonies, buying a mill, providing a social safety net for members, or supporting community development. A few groups divide the proceeds three-ways for the group *caisse*, for reinvestment, and for distribution among members. Group vegetable production is an exception: in most cases the members produce and market individually and, after giving a proportion of the income to the *caisse*, retain the rest.

**Rural women and community decision-making**

2.12 Village groups have long been used by colonial and independent governments for political and administrative purposes. Each village may contain several traditional groups organized around common activities or interests and based on age groups or a *quartier* of the village. In addition, organizations, such as the *Associations Villageoises* (AV) in Mali, group all residents in economic and social activities. These organizations often play a key role in rural development at village level. The village head and his counsellors are the main decision-makers for the village. Their support or opposition determines the success or failure of many development projects at village level. Few women appear to be on the committees of groups which represent the whole village. Meetings often do not contain items of interest to women, women are not invited, and tradition blocks their effective participation. A survey in Mali found that 60% of the women did not participate in village meetings and many did not know of the existence of AVs. However, contact with the modern world and outsiders (such as NGOs and small projects) is increasing women's participation and assurance to act as a spokesperson for other women before men. (Mali CS para 17, Senegal CS para 82)

**EXTENT OF WOMEN'S PARTICIPATION IN AGRICULTURAL PRODUCTION**

2.13 Women participate in agricultural production as (1) farmers on their own parcels of land, (2) helpers on communal household, compound or family fields, (3) helpers (often obligatory) on husband’s personal fields, and (4) farmers of collective (usually women’s group) fields. Numerically, as many women as men farm or work in agriculture in the Sahel (Table 2.3). Women outnumber men in many rural areas. In Mauritania, for example, there are 120 women for every 100 men in the agropastoral zones, but only 70 women per 100 men in the urban areas. (Mauritania CS para 7 and Table 2) Although men may spend more time on crop and livestock production, women also spend time on other agriculturally-related activities such as gathering and transformation. A Mali time-use study showed Senoufo women spending 55% and 70% of the time men spend on crop and livestock production respectively, and Bobo women spending only 20% of the hours of men. When other activities (which included homestead maintenance and construction activities of men but not women’s domestic work) are added, women worked 60 to 70% of the hours of men. Once their domestic work is included, the number of hours worked by women considerably exceeds those of men. (Mali CS para 20)

2.14 Access to land is crucial to women who wish to farm independently of men. Throughout the Sahel, an estimated 80% to 90% of wives of male farmers have their own plot (Table 2.3). This is, however, a broad generalization, and the actual percentage depends on the traditions of the ethnic group, the availability of land, and the demand for (or traditional use of) their labor on family or husband’s fields. In the fleuve area of Mauritania, 94% of women have their own plot. In Mali, however, desertification in the north, animal traction and population pressure are depriving women of their right to individual parcels. Thus women increasingly find themselves as laborers on family fields (Zuidberg and Djiré 1992).
Table 2.3 Women’s Participation in Agricultural Production

<table>
<thead>
<tr>
<th></th>
<th>Burkina Faso</th>
<th>Gambia</th>
<th>Mali</th>
<th>Mauritania</th>
<th>Senegal</th>
</tr>
</thead>
<tbody>
<tr>
<td>% total labor force employed in agriculture</td>
<td>87 (^1)</td>
<td>84 (^1)</td>
<td>85 (^1)</td>
<td>69 (^1)</td>
<td>81 (^1)</td>
</tr>
<tr>
<td>Women as % total ag labor input</td>
<td>&gt; 50 (^1)</td>
<td>30-50 (^3)</td>
<td>-</td>
<td>-</td>
<td>55 (^9)</td>
</tr>
<tr>
<td>Women as % farmers/workers</td>
<td>-</td>
<td>51 (^4)</td>
<td>34 + 15 (^12)</td>
<td>-</td>
<td>&gt;50 (^7), 47 (^8)</td>
</tr>
<tr>
<td>% active ? working in agriculture</td>
<td>93 (^7)</td>
<td>-</td>
<td>78 (^3)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Women’s agric production as % of total agric production</td>
<td>-</td>
<td>40 (^3)</td>
<td>70 (^3)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>% women with personal plots</td>
<td>90 (^11)</td>
<td>-</td>
<td>90 in OHV and Mali sud (^6)</td>
<td>94 in fleuve (^11)</td>
<td>60 g’nutbasin 82 east Sen (^10)</td>
</tr>
</tbody>
</table>

Sources:
1 UNDP 1993b Human Development Report
2 Bryson et al 1992 and World Bank WID Assessment 1993
3 von Braun, Puetz and Webb 1989
5 World Bank 1992a Mali: WID Assessment and Strategy Paper
6 Traore and Yeboah 1992 and FAO/CP 1993a, respectively
7 World Bank 1992b Senegal: WID Country Assessment and Strategy
8 SDA survey data (Senegal 1992)
9 Arcia et al 1989 for the Basse Casamance
10 IFPRI/ISRA study of groundnut basin and oriental Senegal (Kelly et al 1993)
11 Henderson 1989
12 Informal Sector Survey (DNSI 1989): crop and livestock producers respectively
13 Data collected (mainly from extension contact groups) for this RWS study

2.15 The pattern of women’s agricultural work changes during her lifetime. Women’s labor input in total and to family fields is highest when they are girls and young women. Older women are freed from work on family fields and, having help at home, can concentrate on their own fields and other productive activities (Box 2.3).

2.16 Evidence from The Gambia supports impressions from the other countries that women’s participation in agricultural production is increasing (see Box 2.2). However, this increase is usually as labor on family and husband’s land rather than an increase in the area of their personal plots which they control. In The Gambia, for example, excluding rice which they have always dominated, women doubled the area they worked of both coarse grain and groundnut, and increased the area they controlled of coarse grains (from 1% to 3% of total area under these crops) and groundnuts (22% to 33%) between 1990 and 1992. (National Agricultural Sample Surveys 1990 and 1992 in Gambia CS para 15 and Table II). In Mauritania, the traditional extremes in the past were Soninke women who farmed and white maure women who regarded crop production as a lowly task and had slaves/servants to do the work. However, with male migration and sedentarization, rural women of all ethnic groups (except wealthy maurs) are active agriculturally and responsible for crops and activities that were previously the domain of men. (Mauritania CS para 6) The introduction of cotton growing in Mali has increased women’s work load: the agricultural season is over 2 months longer, and animal traction has multiplied women’s tasks by expanding the area cultivated. (Zuidberg and Djiré 1992) The introduction of irrigated rice production to the Senegal River Valley has dramatically increased women’s labor input and reduced their
Box 2.3 Burkina Faso and Mali: Changes in Women’s Agricultural Work through their Life-cycle

Girls assist their mothers and other household members in farming and domestic chores. For whom the younger girls work varies by ethnic group. Bambara girls in Mali-Sud, for example, are at the service of their mothers, but Bobo, Sénoufo and Minianka girls are at the service of their families and do domestic and field work. The customs of the bamanan, the major ethnic group in the Bougouni zone of Mali-Sud, forbid girls between 8 and 13 years from undertaking non-domestic activities except those concerned with marriage. As they grow older, girls are often given an individual plot, the income from which buys clothes and domestic goods in anticipation of marriage.

Most women move to the compound of their husband’s family. Young wives work in the household fields, assist their mothers-in-law and senior co-wives, and carry out their own production. They often still assist their natal family. With young children, this is the time of maximum physical and nutritional stress. The situation improves as they become older and are assisted by their children and junior co-wives.

Femmes libérées are women with sons old enough to take over their responsibilities on the compound, family or husband’s plots. Released from those obligations and helped at home by daughters-in-law, she can concentrate on her own fields or activities - but the son who replaced her on family fields is not allowed to help her. Older women in most Mali ethnic groups play a major role in social ceremonies and are mid-wives and traditional healers.


Income. Irrigated rice requires about 600 days/ha compared to about 40 days/ha for the flood-recession sorghum it replaced. Studies show that women and children provide half the labor on irrigated fields and only a third on the flood-recession fields. Women of all ages provide 37% of agricultural labor, 28% of non-agricultural labor and 94% of domestic labor. (Senegal CS para 34) This increase in women’s labor input leaves women with less time to cultivate their own plot -- their only source of independent income -- and so they become more dependent on men.

FEMALE-HEADED HOUSEHOLDS AND FEMALE CHEFS D’EXPLOITATION

The Prevalence of Female-Headed Households

2.17 Because of the widespread perception among agricultural policy-makers, managers and extension agents that few Sahelian households are headed by women, the present distribution of agricultural services in favor of men appears reasonable. However, evidence shows that surveys over-estimate the percentage of households headed by resident adult males. Estimation of the proportion of households headed by women is difficult and depends greatly on how surveys are designed and administered. "Households" can be nuclear, extended, or units of exploitation, and heads of households can be the main decision-maker, the "senior" person present, or the person who is regarded as head by immediate family or the larger community). These definitions are important when, for example, only "heads of households" are allocated land or only "chefs d’exploitation" are members of contact groups for extension. In general, national surveys and official statistics tend to under-estimate the true level of

---

5 The person who manages a farming production unit. Often synonymous with the head of a nuclear, compound or extended family.
female headedness, as the following example from the Senegal River Valley shows (Salem-Murdock, private communication). In a survey of 3405 households, 95% identified themselves as headed by a male. When a sample of 365 households were studied in more detail, the number of male-headed households was reduced to 91%. But of these male heads, 12% were under 14 years old (and 8% under 8) and 26% of those over 15 were absent. In fact, 47% of the households were not headed by an adult male who was present. Traditional attitudes preserve male-headedness despite the high rates of male migration in all countries. If migrating males are married, their wives remain in the extended family compound under a male head who is not their husband. In addition, many young widows must re-marry a close relative of her late husband, often a brother. (Burkina Faso CS para 14, Mali CS para 22, mission findings) In other areas there may be more willingness to accept that women are de facto heading nuclear families or subunits of extended families. The tendency for extended families to break into smaller units (Burkina Faso CS para 11) may hasten this change in attitude in the future.

Table 2.4 Percentage of Female-Headed Households or Chefs d’Exploitation

<table>
<thead>
<tr>
<th></th>
<th>Burkina Faso</th>
<th>Gambia</th>
<th>Mali</th>
<th>Mauritania</th>
<th>Senegal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female-headed HH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- nationally</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>18.5</td>
</tr>
<tr>
<td>- rural or farming</td>
<td>4.1</td>
<td>4 and 3.3</td>
<td></td>
<td>20 - 30.4</td>
<td>13.5</td>
</tr>
<tr>
<td>Female chefs d’exploitation</td>
<td>11.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: No estimates were obtained for Mali

Sources:
1 T&V Evaluation (Bindlish et al 1994)
2 Data collected mainly from extension contact groups for the RWS study
3 SDA priority survey (Wadda and Craig 1993)
4 SDA permanent survey 1988 data (EPCV I)
5 SDA priority survey (Senegal 1992)

2.18 Bearing these limitations of definition in mind, it is estimated from the available data that the proportion of rural or farming households headed by women is under 5% in Burkina Faso, The Gambia and Mali, 10% in Senegal, and over 20% in Mauritania (Table 2.4). None of the reports or surveys referred to on Mali gave an estimate of the proportion of female-headed households, but mission discussions indicated a low level. The variations in Table 2.4 are probably more due to differences in definition than differences in independence or autonomy of women between, say, The Gambia and Mauritania. Within country estimates from different studies vary greatly. In Senegal, for example, the SDA Priority Survey of 6,000 rural households showed that 13% were headed by women. (Senegal 1992) In stark contrast, the IFPRI/ISRA survey in the groundnut basin and oriental Senegal found that less than 1% of 226 rural households were headed by women. The towns of Kaolack and Tambacounda had 26% and 14% respectively of female-headed households. (Kelly et al 1993) (Senegal CS para 16) Differences between heads of households and chefs d’exploitation may be a partial explanation. In Burkina Faso, for example, only 4.3% of the 3600 households surveyed in the T&V evaluation were headed by women (Bindlish et al 1993), whereas an average of 11% of the members of women’s groups interviewed for the current study were chefs d’exploitation. Female chefs d’exploitation are usually

6 The responses of another 2.9% of farmers were unclear.
femmes libérées, widows, or wives of migrants, the physically handicapped or indigent. Centre-Est and Nord CRPAs with high migration rates, registered over 20% female chefs d’exploitation. (Burkina Faso CS para 14) This could indicate that either women’s groups that are encadred by extension services tend to have more of these relatively independent women than the general population, or that women regard themselves as the chefs d’exploitation of their personal fields.

2.19 Within country variations can be wide and appear linked to the farming potential of and migration from the area. The 1992 Priority Survey in Mauritania showed that when household heads are farmers, 35% away from the Fleuve and 11% in the Fleuve are women. The Fleuve region has better farming conditions and there is higher migration from the marginal areas than from the Fleuve. (Mauritania CS para 24) To show the scale of female headship it should be noted that countrywide, nearly half of all rural households whose head is not a farmer are headed by women. (Table 2.5)

<table>
<thead>
<tr>
<th>Type of household</th>
<th>Rural fleuve</th>
<th>Rural elsewhere</th>
</tr>
</thead>
<tbody>
<tr>
<td>HH head is a farmer</td>
<td>11.2</td>
<td>35.4</td>
</tr>
<tr>
<td>HH head not a farmer</td>
<td>45.6</td>
<td>46.2</td>
</tr>
</tbody>
</table>

Table 2.5 Mauritania: Proportion of Farming Households Headed by Women (percentage female-headed households)

Source: Extract from draft "Enquete sur les Priorites 1992", Office de National Statistiques, Ministere du Plan, GRIM

Characteristics of Households and Implications for Extension

2.20 Traditional household profiles are changing, particularly under the impetus of male out-migration. Extension, technology generation and agricultural support services have been based on an assumption of a traditional household profile of male heads, their wives and children. Yet in Mauritania, for example, only half the farming households fit this profile: 23% of households surveyed were headed by women, 16% were headed by a man who was not living with his wife or whose wife was absent for over 9 of the previous 12 months, and a further 6% were headed by bachelors, widowers or divorcees (Table 2.6). In fact, only 55% of all households were headed by husbands whose wife or wives were present for three or more months of the year (classifications male classic and polygamous in Box 2.4). Similar levels were found in the Senegal survey already discussed (para 2.14), only 53% of household heads were adult and present males.

2.21 The characteristics of male- and female-headed households affect the way the households can farm. Household characteristics include the supply of family labor and the education and age of household head. Female-headed households are generally smaller than those headed by men, and thus have less family labor available. For example, female-headed households in Senegal consist of 6.5 persons compared to 9.2 persons in male-headed households, and the household sizes in Mauritania are 4.7 and 6.5, respectively. Female-headed households also have fewer members in the active 15 to 65 age range (only 61% in Senegal). Polygamous Mauritanian households were double the average size (11.0 persons) of other household types (range 3.8 to 6.4 persons) (Table 2.6). (SDA Priority Survey and Permanent Survey, respectively). In The Gambia, where only 3.8% of rural households, and even less of farming households (2.9%) are headed by women, the small number of female heads did not permit analysis of household size by gender of the head. However, for reasons which are unclear, the
Table 2.6 Mauritania: Distribution of Household Types by Household Characteristics.

<table>
<thead>
<tr>
<th>Classification of household&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Male headed households</th>
<th>Female headed HH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Single</td>
<td>Classic</td>
</tr>
<tr>
<td>(sample size)</td>
<td>(19)</td>
<td>(317)</td>
</tr>
</tbody>
</table>

**Percentage of farming households**

<table>
<thead>
<tr>
<th></th>
<th>Male headed households</th>
<th>Female headed HH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3</td>
<td>52</td>
</tr>
<tr>
<td>Gender total</td>
<td>77 %</td>
<td>23 %</td>
</tr>
</tbody>
</table>

**Household characteristics**

<table>
<thead>
<tr>
<th></th>
<th>Male headed households</th>
<th>Female headed HH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Av age of head</td>
<td>27.5</td>
<td>48.8</td>
</tr>
<tr>
<td>Av age of HH (yrs)</td>
<td>25.3</td>
<td>22.4</td>
</tr>
<tr>
<td>Av size of HH</td>
<td>4.8</td>
<td>6.2</td>
</tr>
<tr>
<td>Dependency rate&lt;sup&gt;b&lt;/sup&gt;</td>
<td>49.2</td>
<td>95.5</td>
</tr>
</tbody>
</table>

Notes:  
<sup>a</sup> see Box 4 for fuller descriptions  
<sup>b</sup> dependency rate is \[\text{number members under 15 years + number over 65 years} \times 100\]  
\[\text{number members between 15 and 65}\]

Source: EPCV I

Box 2.4 Mauritania: Classification of Farming Households by Marital Status of the Head

**Male-headed households:**

- Single - male head who has never married: 3%
- Classic - male head with 1 wife who was present more than 3 months in the past year: 52%
- De <i>jure</i> - male head divorced or widowed: 3%
- De <i>facto</i> - male head not living with wife or wife away more than 9 months in past year: 16%
- Polygamous - male head with more than 1 wife: 3%

**Total male-headed households: 77%**

**Female-headed households:**

- Single - female head who has never married: 1%
- Classic - female head whose husband is present more than 3 months in past year: 7%
- De <i>jure</i> - female head divorced or widowed: 14%
- De <i>facto</i> - female head not living with husband or husband away more than 9 months in past year: 1%

**Total female-headed households: 23%**

Source: EPCV I
percentage of female-headed households noticeably increases with the degree of commercialization from 1.5% of households not selling groundnuts through about 4% for households selling a few groundnuts to 7.0% for commercial farming households. "Commercial" farm households are about 50% larger (15.9 persons/HH) than subsistence or semi-commercial households (10.7 and 10.4, respectively). (Wadda and Craig 1993) In Mauritania, the mean ages of male and female household heads was similar (48 and 46 years, respectively) but single male heads were considerably younger (under 30 years).

Effects of Male Migration on Women's Farming

2.22 The effects of migration on rural women was studied in 1992 in Burkina Faso and Senegal. Migration can be substantial: 30 - 50% of the men of 6 Mossi villages and 70 - 80% of men in the Diourbel study were living and working away from the village. In Senegal, one or two men, or more usually teenage boys, return to the compound to help the women with specific agricultural tasks. Having no right to use their absent husband’s draft animals and no independent land rights, the women remaining in the village provide labor on land controlled by men and do not themselves control the product of that land. In both countries, their decision-making power does not increase - decisions are taken by the ageing compound head. The amount of time all women (irrespective of their relationship to the migrating male) spend on farming communal land dramatically increases and adversely affects their own agricultural and other activities (Box 2.5). (David 1993a and 1993b, Burkina Faso CS para 14, Senegal CS para 18)

2.23 On the positive side, off-farm earnings and remittances augment farm income. In Senegal, for example, remittances to female-headed households in rural areas of Senegal are three times the size of those to male-headed households (Table 2.7) but are only half of those to urban female-headed households (373,000 FCFA per urban female-headed household). Remittances are generally fairly regular and comparatively substantial and have speeded up the integration of the semi-subsistence and cash economies. The lower agricultural and off-farm revenue of rural female-headed households is compensated by their receipt of larger remittances. Male-headed rural households have slightly higher total incomes per household, but slightly lower incomes per person, than female-headed households (Table 2.7). (Senegal 1992, Senegal CS paras 18 and 49).

2.24 On a more negative note, the traditional view of a woman as a working dependent of her husband, whether he is residing at home or living elsewhere, still holds to a large extent in the Sahelian countries. A large number of the households managed by women are not "headed" by women. Although de facto heads, these women have little decision-making power or control over the means of production. Without access to draft animals or land, they merely provide labor on land controlled by men and have no control over the product of the land. Consequently, they have little interest in labor-intensive, long-term activities to improve soil fertility. They will need incentives and encouragement to become effective agricultural actors. (David 1993b)

---

7 The farming households were divided into the following categories based on the sales of groundnuts:
(a) Subsistence: no groundnuts sold - but a mean of 39% of household cash income came from the sale of agricultural produce
(b) Semi-commercial: households within the lowest third of groundnut sales - but 53% of HH income came from the sale of agricultural produce
(c) Commercial: remaining farms - a mean of 72% of HH income from the sale of agricultural produce.
Box 2.5 Burkina Faso and Senegal: Effects of Male Migration on Women’s Roles in Agriculture

A study of the effects of male migration showed that:

- women replace male labor in family fields. As a result, the amount of time all women (regardless of relationship to migrating male) spend on farming communal land is dramatically increased.

- women receive declining returns from their own plots because of the extra labor they put into family fields. Some women have stopped cultivating personal fields. Productivity of family fields is also declining because of untimely and poorly performed weeding due to labor bottlenecks.

- there is greater dependance on the cash economy.

- tasks performed by men are carried out by reciprocal labor exchange or, if the compound has spare land and seed, by seasonal labor employed as sharecroppers. For reasons which were not investigated, remittances are rarely used to pay for labor.

- women have less time for their income-generating activities. Women’s access to land (and income from groundnuts) has diminished as population pressure has increased and animal traction has expanded the area cultivated. Women now invest any surplus income in small livestock which can be sold in emergencies. The introduction of labor-saving devices has freed labor which is used to engage in market activities, agroprocessing and small livestock.

- household structures are altering. “Compounds, which were formerly split into a number of individual consumption and production units, have now become unified. In many compounds, the absence of men to head individual households has led to everyone now eating and working together.” (David 1993b referring to Senegal)

- women are beginning to join the rural exodus, particularly during the dry season.

Source: David 1993a and 1993b

<table>
<thead>
<tr>
<th>Table 2.7 Senegal: Total Annual Revenue in Rural Areas by Gender of Household Head (F CFA)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender of HH head</strong></td>
</tr>
<tr>
<td>-----------------------</td>
</tr>
<tr>
<td><strong>Revenue per HH</strong></td>
</tr>
<tr>
<td>Agricultural</td>
</tr>
<tr>
<td>Non-agricultural</td>
</tr>
<tr>
<td>Remittances</td>
</tr>
<tr>
<td>Total 1</td>
</tr>
<tr>
<td><strong>Revenue per person</strong></td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Note: 1 for statistical reasons the means do not add up to the total

Source: Senegal 1992
WOMEN'S PARTICIPATION BY TYPE OF CROP, LIVESTOCK AND TASK

The Diversity of Women's Participation

2.25 As all the country papers underline, women's roles and activities in the agricultural and rural sectors are extremely diverse: they work in crop production, livestock raising, collection of wild products, processing, and marketing. This diversity is tied to ethnic group or agro-ecological farming systems, and also occurs within ethnic groups, within villages, within households, and particularly with pastoralists and nomads, among different strata within an ethnic group. A parallel diversity is generated in the needs of women for extension and other support services. Generalizations are not a basis for planning extension or other support activities, and extension staff and their managers must understand the local situation well to be successful. A fixed program of extension messages and activities is not suitable: an à la carte menu of modules from which clients can choose what they need is a better approach.

Gender Differences in Crops Grown

2.26 The actual crops grown are determined by the agro-ecological zone and availability of (or access to) water (flood or controlled) and land. As a generality, men are responsible for the staple food crops and women for the vegetables and condiments for sauces. There are, however, exceptions. When men have an opportunity to increase personal income by moving into another crop, women are frequently left responsible for the staple even when this entails changing the staple crop (see Boxes 2.2 and 2.6). The degree of gender-specificity in who grows any particular crop varies widely even within countries. In Senegal, for example, irrigated rice is grown by men in the Middle Valley and flood plain rice by women in the Basse Casamance.

2.27 In The Gambia, the crops and animals men and women raise are markedly different (Table 2.8). Women are practically the sole producers of rice (over 95% of area), horticultural crops and sesame, but cultivate less than 6% of the coarse grain (millet, maize and sorghum) areas. In upland villages, household food production (maruo) of coarse grains is largely men's responsibility, whereas individual (kamanyango) crops are cotton for men and groundnuts for both men and women. Women in lowland villages traditionally cultivate swamp rice as the subsistence crop (maruo), while men grow dryland coarse grains for food and cash and groundnuts for cash. (Gambia CS para 18)

2.28 Data from The Gambia confirms the generalization that tree ownership is largely a male preserve. (Gambia CS para 19). Women's right to plant and use trees is limited and not necessarily tied to the ownership of or usufructuary rights to the land on which they grow. Women's usufruct rights to land does not confer the right to harvest the trees on that land even when women traditionally transform those fruits (see para 2.32 below). Individual ownership is typical for planted trees and certain natural species (karité and néré) and their exploitation by non-members of the compound is at the discretion of the chief. Access to some species or to individual trees for gathering, wood collecting, natural pastures, and stover in the fields is not controlled and women generally have the same access as men. The complex nature of tree ownership and use rights, and the lack of secure tenure, has implications for women's adoption of agro-forestry technologies.

2.29 The crops grown by men and women can change over time. In The Gambia, for example, one-third of the traditionally male groundnut area was grown on women's plots in 1992 (Gambia CS para 18). In Mali, the introduction of cash crops (cotton and groundnuts) and decline in cereal yields have encouraged women to shift from other productive activities to cash and cereal crops.
Table 2.8 The Gambia: Gender Differences in the Area of Major Crops Owned and Tasks Performed

<table>
<thead>
<tr>
<th>% land area under crop owned by women</th>
<th>% area in which women carry out task</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Plowing</td>
</tr>
<tr>
<td>Total coarse grain</td>
<td></td>
</tr>
<tr>
<td>- maize</td>
<td>3</td>
</tr>
<tr>
<td>- e. millet</td>
<td>4</td>
</tr>
<tr>
<td>- l. millet</td>
<td>6</td>
</tr>
<tr>
<td>- sorghum</td>
<td>0</td>
</tr>
<tr>
<td>Upland rice</td>
<td>96</td>
</tr>
<tr>
<td>Swamp rice</td>
<td>95</td>
</tr>
<tr>
<td>Groundnuts</td>
<td>33</td>
</tr>
</tbody>
</table>

Source: NASS 92

to supplement the food shortfall. Older women traditionally produced rice, but irrigated and rainfed production are now equally practiced by men and women following the introduction of new varieties and water control in bas-fonds and perimeters. Groundnuts, which were grown by women in the champs de case, are now grown by women for family consumption and by men and women for sale. (Mali CS para 26) The classic example of changes in gender-specificity of crop is the introduction of irrigation schemes to The Gambia during the 1970s and early 1980s. This resulted in men moving into rice production and forcing women to grow upland dryland crops (Box 2.6). Recent deterioration of these schemes has reversed this trend. Another change in The Gambia has been men's increasing movement into non-farming activities -- the Priority Survey shows that over 50% of farming household heads (97% of whom are men) have secondary jobs -- while women have moved into the cultivation of cash crops. (Gambia CS para 20)

Gender Differences in Tasks

2.30 Although men control or are responsible for certain crops, women help to produce them (Table 2.8). But there is less reciprocal work by men on women's crops. In general, men do the mechanized (or skilled/technical) and heavy tasks (such as land preparation and spraying) whereas women do the manual and lighter tasks (hand sowing and weeding). On upland farms in The Gambia, for example, men often help women with heavier tasks such as land clearing, and with plowing, planting and weeding when animal traction is used. Women in turn do most of the harvesting and agro-processing. In lowland villages, women all the production tasks on their crops except for land clearing which men help with. Gambian women are beginning to use animal traction by hiring animal traction services, using their husband's animals and equipment or by owning animal traction units. (Gambia CS para 21) Data for three areas in Senegal (Table 2.9) show that land preparation remains men's work. None of the other tasks is carried out exclusively by men or women. For rice in particular, all tasks except land preparation tend to be carried out by either men or women depending on the type of rice; whereas the tasks on other crops are generally divided between men and women.
Box 2.6 Gambia: Effect of Introducing Controlled Irrigation on Gender Roles

The Jahally-Pacharr Project demonstrates how easily farming systems and the control of resources and proceeds can change. Women traditionally grew rainfed swamp rice evenly split between private and communal crops. The project aimed to benefit rural women by introducing fully-controlled irrigation and supplying technical packages to increase yield. However, 87% of land registrations made in 1982 and 1983 were to men. A redistribution of land titles in 1984 did little to redress the imbalance as a later study showed that women controlled:

- 10% of fully-controlled irrigation fields yielding 6.6 tons/ha
- 77% of partially-controlled irrigation fields yielding around 2.5 tons/ha
- 91% of traditional fields yielding 1.3 tons/ha.

The consequences were:

- Swamp rice changed from being a 50:50 communal-private crop grown by women to an almost exclusively communal food crop grown by men.
- The decision-making authority moved from women to men as men took control of the crop.
- Family food became grown on communal irrigated rice plots on which women were obligated to work. Labor shifted from private to communal work. Women’s labor increased 22.5% while men’s only increased 6.9%.
- Men were able to reduce the area of other rainfed communal plots or their expenditure on food. Women’s extra work on communal rice was a partial cause of men effectively increasing their income. Men’s extra income has generally not filtered back to wives and children.
- Since irrigated rice plots were not available for private crops, women’s private production shifted from rice to groundnuts and cotton.

In the long-term, most women earned higher real incomes from groundnuts than they ever did from rice. As a result, they have been taking an increasing role in decisions related to expenditure and in actual spending.

The implications are:

- Returns to labor are as important as yields per hectare in determining the success of water management efforts, and
- Focusing on labor productivity allows researchers to understand the basis of gender differences in access to resources and to devise broad-spectrum crop production strategies that would reduce intrahousehold competition for the product of agricultural labor.

Table 2.9 Senegal: Gender Division of Labor by Crop and Agro-Ecological Region

<table>
<thead>
<tr>
<th>Crop</th>
<th>Basse Casamance</th>
<th>Middle Fleuve Valley</th>
<th>Groundnut Basin</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rice</td>
<td>G/nuts</td>
<td>Rice: Tomato</td>
</tr>
<tr>
<td>Area (ha)</td>
<td>0.4</td>
<td>1.27</td>
<td>0.3 + 0.5</td>
</tr>
<tr>
<td>Yield (kg/ha)</td>
<td>876</td>
<td>605</td>
<td>5000 2500</td>
</tr>
<tr>
<td>Land preparation</td>
<td>♂</td>
<td>♀</td>
<td>♀</td>
</tr>
<tr>
<td>Sowing/(re)planting</td>
<td>♀</td>
<td>♀</td>
<td>♀</td>
</tr>
<tr>
<td>Fertilizing</td>
<td>♀</td>
<td>♀</td>
<td>♀</td>
</tr>
<tr>
<td>Pest/disease control</td>
<td>♀</td>
<td>♀</td>
<td>♀</td>
</tr>
<tr>
<td>Weeding</td>
<td>♀</td>
<td>♀</td>
<td>♀</td>
</tr>
<tr>
<td>Harvest</td>
<td>♀</td>
<td>♀</td>
<td>♀</td>
</tr>
<tr>
<td>Vegetable garden</td>
<td>♀</td>
<td>♀</td>
<td>♀</td>
</tr>
<tr>
<td>Fruit gathering</td>
<td>♀</td>
<td>♀</td>
<td>♀</td>
</tr>
<tr>
<td>Small livestock</td>
<td>♀</td>
<td>♀</td>
<td>♀</td>
</tr>
</tbody>
</table>

Note: (m) mechanical
- information not applicable or not available

Gender Differences in Livestock Raised

2.31 In many societies in the Sahel, livestock are more a form of cash savings and a reserve of meat for festivals than an on-going income earner. Women have three roles in livestock keeping which do not necessarily overlap. They may own stock, have responsibility for them, or may use them as an income-generating enterprise. In general, men own cattle whereas slightly more women than men own, or have responsibility for, small ruminants and poultry (Table 2.10). There are, however, wide variations, as shown by a survey of 4 villages with different ethnic groups in Mali where the percentage of poultry owned by women ranged from 3% to 40%. Although women may be responsible for sick animals and élevage de case, they frequently delegate much of the livestock work to small boys. Throughout the Sahel, women are increasingly moving into fattening of small ruminants, particularly sheep for the Tabaski festival. Profit margins reported from The Gambia are 60% for Tabaski sales and 30% for the rest of the year, but the risks are high because of disease or theft.

Table 2.10 Livestock ownership by gender

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Burkina Faso</th>
<th>Gambia</th>
<th>Mali</th>
<th>Senegal</th>
</tr>
</thead>
<tbody>
<tr>
<td>% women owning</td>
<td>% stock owned</td>
<td>% stock owned</td>
<td>% women's groups</td>
<td></td>
</tr>
<tr>
<td>livestock</td>
<td>by women</td>
<td>by women: range in 4 Mali-Sud villages</td>
<td>with &gt;50% members owning livestock</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>13</td>
<td>23</td>
<td>nd</td>
<td>14</td>
</tr>
<tr>
<td>Sheep</td>
<td>23</td>
<td>47</td>
<td>0 to 11</td>
<td>} 43</td>
</tr>
<tr>
<td>Goats</td>
<td>55</td>
<td>72</td>
<td>0 to 42</td>
<td>}</td>
</tr>
<tr>
<td>Poultry</td>
<td>66</td>
<td>most</td>
<td>3 to 40</td>
<td>60</td>
</tr>
<tr>
<td>Pigs</td>
<td>nd</td>
<td>nd</td>
<td>0 to 81</td>
<td>nd</td>
</tr>
</tbody>
</table>

Note: nd no data
Source: Burkina Faso: data collected for this RWS study
Gambia: National Agricultural Sample Survey 1990
Mali: Coulibaly 1992
Senegal: RWS data collection 1993

2.32 Pastoral/nomadic women traditionally became the owners of 5 to 10 head of cattle as their dot (dowry) but this practice is becoming less common except among the Peuhls. As with arable societies, pastoral women's rights are usufructuary and derived from men. For example, women cannot themselves dispose of livestock or realize their capital value despite being able to inherit and pass livestock on to their children. They do, however, have entitlements to milk and other products. Gender roles in pastoral societies are described in Box 2.7. Generally, women are milk managers and regard livestock as a means of subsistence whereas men are herd managers and view livestock as an indicator of wealth and prestige. However, gender roles and tasks are changing in pastoral societies. When male labor is in short supply, women take over tasks such as herding and watering that were regarded as "male". Sedentarization and degradation of grasslands are resulting in a separation of women, who remain at the new sedentary site, from the animals which are herded far away. A village visited by the mission in Mauritania contained women but only three men - the rest had departed on the transhumance. Sedentarization increases the demand for wood (for building and cooking cereals) and hence for women's labor. The trend from milk products, which women typically control, to meat products, which men control as the disposers of livestock, similarly diminishes women's authority. Overall, commercialization
of livestock production is giving men greater control over women's labor and income, and is increasing the demand for women's labor. (Joekes and Pointing 1991)

Box 2.7 The Role of Women in Pastoral Societies

In pastoral societies (Tuareg, Peul, Moor, Wolof and Mandingo) there is a marked distinction between the activities of men and women.

- Older men control most of the animals and are responsible for the major decisions related to herding practices (even when women own the animals). Young men and older boys usually do the actual herding, especially of cattle and camels.
- Women are responsible for important tasks in pastoral production such as collecting animal fodder, watering and feeding small ruminants, and caring for young and sick animals. They process and market milk and milk products, hides, skins and wool, and participate in agricultural production in agro-pastoral areas. Women's control over dairy products gives them some degree of economic autonomy.

Livestock keeping can be an important source of income for pastoral women. In many societies women own a part of the household's herd, obtained either through inheritance or investment of surplus income from other economic activities. Among the pastoral Hausa in Niger, women own 80% of small stock. However, in other communities, such as the Wodaabes in Niger and Mali, women have few or no individual rights to livestock but have exclusive milking rights to the family herd and gain important revenues from milk sales.

Changes in the division of labor and responsibilities. Increased male migration adds to the workload of women and children in pastoral societies as they take over men's chores and search for water, fuel and fodder. Women are losing their traditional rights to land as pressure on land increases in agricultural areas. The number of female-headed households who have decision-making powers is increasing. However it is uncertain to what degree deserted women gain control over their husband's herds and benefit directly from sales of animals and products. The effect of increasing education and exposure to urban societies on women's roles appears to be countered by a revival of Islamic fundamentalism, especially in pastoral societies.


2.33 A study of Organizations Pastorales (OP) in the Sahel concluded that projects and programs targeting women seldom reflect women's actual responsibilities and exclude their direct participation (Box 2.8). Pastoral women have indirectly benefitted from improved animal health and water supply, but have gained little direct benefit in living conditions, literacy or access to credit. Moreover, they have been adversely affected by an increased work load in building dams, preparing food for meetings and visitors, and loss of marketing opportunities when cooperatives were established without female members. (Shanmugaratnam et al 1992)

Other Productive Activities of Women

2.34 In addition to crop and livestock production, women have a wide range of other productive activities (Table 2.11). Some add value through the transformation and sale of gathered or produced raw materials, others are more artisanal in nature, while others provide services such as milling or trading. Off-farm activities differ in relative importance and in type by agro-ecological zone. Palm oil extraction in Senegal, for example, is carried out by over 6% of groups in St. Louis Region and by none in Dakar, Louga, and Kolda Regions. In Burkina Faso, off-farm income of men and women accounts for over 50% of household income in the agro-ecological zones of greatest and least potential. Off-farm activities in the low-potential Sahel agro-ecological zone tend to be based outside the agro-ecological zone to reduce the vulnerability of the household to locally fluctuating cropping incomes, whereas in the Guinean zone they are based on up- and down-stream agricultural activities. Women's participation in off-farm
Box 2.8 The Sahel: Women’s Participation in Pastoral Organizations: Consequences and Recommendations

Pastoral women and Pastoral Organizations

Women do not take part in village level meetings and so do not directly participate in establishing Pastoral Organizations (PO). "Noble" women have an indirect input in the several cases where the women’s group president is married to the village chief who is president of the OP. No formal links exist between POs and women’s groups although all members are from same families. Women’s group officers are often aged 50 to 60 years and are normally appointed by men.

Programs targeting pastoral women

NGOs or bilaterals fund a very few, small-scale programs that target pastoral women, and these are mainly channeled through groups. Programs seldom reflect women’s actual responsibilities in livestock keeping, agro-pastoralism and NRM, and virtually none aim at improving women’s living conditions or mobilizing them into POs. Most programs targeting women have activities such as midwife training, credit for handicrafts and vegetable production, tree planting, and dune stabilization. Crop production and crop/livestock integration are areas where pastoral women can play an important role in the future.

Impact of programs on pastoral women

Overall impact of formation of POs on women difficult to assess. Probably little direct effect on women’s living conditions, literacy (only in Senegal have as many as 10% of the students been women), or access to credit. Women commonly want credit for investment in their own herds, but project management in Mali and Niger has refused women credit for livestock and crop production. Women have probably indirectly benefitted from improved animal health services and water supply. Some negative impacts include increased workload on dam construction among sedentary Peul in Mali, preparing food for PO meetings and visitors, and loss of marketing when cooperatives established with no women members.

Recommendations to facilitate the full participation of women in POs in the long-term:

- Increase research and data gathering on gender issues as part of the pastoral development program and highlight women’s role in NRM, particularly their influence in decision-making
- Integrate gender issues in program planning, implementation and evaluation
- Address gender issues in project progress reports, supervision and evaluation reports
- Strengthen female staff at all levels in the pastoral programs
- Institutionalize the training and awareness of gender issues among both male and female staff in the implementing agencies
- Encourage more women to join training courses in literacy, economic planning and management, accounting, agro-pastoralism, and NRM and to become pastoral development agents to work among women in their own areas
- Donors should encourage the inclusion of women’s programs to stimulate income-generation, for example credit schemes
- In societies where pastoral women have a relatively high status, programs should encourage the participation of women in PO formation and other mainstream program efforts
- In societies where women have a relatively low status, the program should support the formation of women’s groups and encourage interaction between these groups and the new POs.

Source: Shanmugaratnam et al 1992

activities increases with the potential of the zone (Haddad and Reardon 1992). Where the agricultural potential is limited in Mauritania, activities like making charcoal, collecting wood for sale and artisanal activities, which were only resorted to in poor rainfall years, have recently increased (FSG 1992).
## Table 2.11 Senegal: Main Activities of Women’s Groups
(percentage of groups)

<table>
<thead>
<tr>
<th>Main Activity of Group</th>
<th>Women’s Groups of all Types</th>
<th>Groupment de Promotion Feminin</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CROP PRODUCTION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetables</td>
<td>16.9</td>
<td>25.4</td>
</tr>
<tr>
<td>Field crops</td>
<td>25.7</td>
<td>12.3</td>
</tr>
<tr>
<td>Rice</td>
<td>0.9</td>
<td>0.9</td>
</tr>
<tr>
<td>Fruit or trees</td>
<td>-</td>
<td>0.6</td>
</tr>
<tr>
<td><strong>ANIMAL PRODUCTION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Livestock</td>
<td>12.7</td>
<td>3.2</td>
</tr>
<tr>
<td>Small ruminant fattening</td>
<td>8.1</td>
<td>7.9</td>
</tr>
<tr>
<td>Fish</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Poultry</td>
<td>2.9</td>
<td>1.9</td>
</tr>
<tr>
<td>Milking + sale</td>
<td>4.8</td>
<td>-</td>
</tr>
<tr>
<td>Milk transformation</td>
<td>2.4</td>
<td>-</td>
</tr>
<tr>
<td>Water point management</td>
<td>-</td>
<td>1.2</td>
</tr>
<tr>
<td><strong>ENVIRONMENT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reforestation</td>
<td>-</td>
<td>5.7</td>
</tr>
<tr>
<td>Protect crops</td>
<td>-</td>
<td>0.6</td>
</tr>
<tr>
<td><strong>ARTISANAL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dyeing</td>
<td>2.6</td>
<td>5.5</td>
</tr>
<tr>
<td>Sewing</td>
<td>1</td>
<td>4.1</td>
</tr>
<tr>
<td>Weaving</td>
<td>-</td>
<td>0.2</td>
</tr>
<tr>
<td>Gathering produce</td>
<td>4.2</td>
<td>-</td>
</tr>
<tr>
<td>Food production</td>
<td>0.2</td>
<td>-</td>
</tr>
<tr>
<td>Palm oil extract</td>
<td>1.5</td>
<td>-</td>
</tr>
<tr>
<td><strong>FINANCIAL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lending</td>
<td>0.6</td>
<td>3.5</td>
</tr>
<tr>
<td>Savings</td>
<td>0.8</td>
<td>2.9</td>
</tr>
<tr>
<td><strong>HUMAN RESOURCE DVLPMT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Literacy training</td>
<td>1.8</td>
<td>4.1</td>
</tr>
<tr>
<td>Human resource development</td>
<td>2.3</td>
<td></td>
</tr>
<tr>
<td>Managing a mill</td>
<td>1.3</td>
<td>6.8</td>
</tr>
<tr>
<td>Petty Trading</td>
<td>10.0</td>
<td>9.4</td>
</tr>
<tr>
<td>Store/sell cereal</td>
<td>10.0</td>
<td>9.4</td>
</tr>
<tr>
<td>Other</td>
<td>6.4</td>
<td>7.6</td>
</tr>
</tbody>
</table>

Note: The GPF data contained both single and combined activities. Percentages for combined activities were divided among the activities mentioned.

Source: RWS data collection
2.35 The transformation and sale of agro-sylvo-pastoral products is a major activity of women throughout the Sahel. Such activities include transforming sheanuts (karité) into butter and then to soap, locust beans (néré) into soumbala, onions into boules; and drying of fruit, vegetables and fish; and making syrups and jams. Over 30 cultivated or gathered products that were commonly agroprocessed were listed at the workshop in The Gambia (Gambia CS Box 4). All 12 CRPAs in Burkina Faso listed transformation among the main income-generating activities of women. Processing is carried out mainly by groups and less commonly by individuals or employees. These activities can improve household income and food security, but face a number of operational and economic/financial hurdles. Labor and energy efficiencies are low because of water and fuel collection, rudimentary equipment such as open fires, and poor quality and small quantity of the final product. The raw material is often not a free good. In Burkina Faso, for example, locust bean trees (néré) found in the bush are common property, but those found in fields belong to Mossi men. If women take néré nuts without permission from the fields they use, they risk losing the usufructuary rights to that plot. Some men will allow wives to keep a portion of the néré in exchange for collecting the pods, others will not give the nuts free of charge or on credit. (Bryson et al 1992) As a man at Koutoura, Comoe, commented: "I sell the nuts to my wife, she cooks them, and then I eat them. I have no problem with the arrangement." There are, however, regional variations: among the Bobo in southwest Burkina Faso, for example, locust bean and shea nut trees are owned by matrilineages and exploited by groups of related women. (Burkina Faso CS para 20)

2.36 Separate evaluations by UNDP, UNICEF and UNFPA of projects for women's groups in Senegal concluded they have had a minimal impact on women's incomes and social status. Women remained constrained in their access to the factors of production and because the output is mostly consumed at home, insufficient cash is generated to repay loans. Women's groups and villages may have benefitted from the establishment of grain mills but individual women have not reduced their heavy daily work loads, and men have benefitted from taking over the management of the mills and control of revenues. Unless the opportunity cost of using labor-saving devices is at least equal to user fees then women will prefer using hand labor. For women's projects to be self-sustaining, there must be access to markets, and benefits must spill over to the rest of the family to overcome social constraints. (Senegal CS para 62)

2.37 Several factors account for the uncertainty of income-generation from these activities (see Box 2.9 for a collection of mini-case studies from Mali). The widespread prevalence of poverty in rural areas results in a lack of purchasing power. Other problems are the weak management of women's groups (discussed in paras 3.31 et seq.) and a general lack of appropriate technology (such as mills, decorticators and karité presses) at a price, operating cost, and ease of operation and maintenance that is suitable for the human and financial resources of women. Moreover, as several examples in Box 2.8 show, donors should act more responsibly when supporting such activities. Hundreds of state, donor and NGO agencies intervene to promote women's activities -- in 1992 over 100 NGOs listed activities in Burkina Faso's Centre Ouest CPRA alone. Their objectives, resources and modus operandi vary widely. Some even adversely affect women's ability to successfully undertake income-generating activities by providing loans or equipment without careful thought to the feasibility or consequences. An NGO in Burkina Faso, for example, has developed a robust manual karité press which is economical in its use of time, fuel and water. Although selling the press on credit to women's groups, NGO officials admitted the press had not been evaluated financially and they had no idea of the economics of its use by women's groups. (Burkina Faso CS para 44) The bottom line is that financial and technical feasibility studies for income-generating activities are urgently needed.
Box 2.9 Mali: The Profitability of Women’s Income-Generating Activities and Interventions to Aid those Activities

As these evaluations show, women’s income-generating activities are often risky. Frequently, the risks could have been reduced if the agencies intervening had acted more responsibly.

Dolo (beer) from cereals is made by many women. The availability of raw material affects revenue: shortage increases the price but decreases the ability of consumers to buy. (Coulibaly 1992)

Pork raising is done almost exclusively by women, but the difficulty in finding a market casts doubt on profitability. DRSPR study shows fattening with rice bran or rice flour is not profitable. (Coulibaly 1992)

Poultry Cockerels of improved breeds have been issued by CMDT to women’s groups. Poultry raising is a profitable activity even when large amounts are home-consumed or given as gifts and sacrifices. Feeding and health can be problems. Equipment is made locally. (Zuidberg and Djiré 1992)

Sheep fattening for Tabaski is profitable with profits of 3,500 - 4,500 FCFA/head. Women usually fatten 1 to 4 sheep each. (Zuidberg and Djiré 1992)

Karité • Donors provided presses to women’s groups to reduce hard work and encourage communal work. But technical problems increased social tensions between women of different quarters of the village. (Coulibaly 1992) • A donor installed a press under collective management that was unrepresentative of the traditional work group. Also technical problems: hydraulic presses were unprofitable, involved heavy labor and did not cover all tasks; centrifuge presses were also not promising due to high initial costs and infrequent use. (Zuidberg and Djiré 1992) Soap making • using caustic soda, cotton oil and karité has limited potential: in poor years little karité is available and in good years women prefer the traditional karité-only method. (Zuidberg and Djiré 1992) • Collective soap making initiated by a project was unprofitable. Karité butter by individuals was profitable when good rains produced sufficient fruits. (Coulibaly 1992) • In OHV average margin over costs of soap-making was 1225 FCFA/30 pieces of soap. A local market for soap exists. (Traore and Yeboah 1992)

Mills and decorticators • A rice decorticator was introduced to reduce the heavy work but numerous technical breakdowns made it unprofitable. Most women finished by pounding themselves. (Coulibaly 1992) • A mill installed under collective management in 1988 is profitable. Another mill is only profitable because of a subsidy. The decorticator often breaks down. (Zuidberg and Djiré 1992) • A rice decorticator was installed in 1988 to be managed by a women’s group. Profitability was affected by the prior presence of a privately owned mill. After 4 years, the mill was operating at 12% capacity, and the annual cash flow was negative when annual credit charges were paid. Problems included the very small amounts (10-30 kg) brought for milling, too large a capacity for throughput, suspicions over honesty of millers, and mechanical breakdowns. (DRSPR 1991)

Making soumbala • from soya appears financially more worthwhile than making from néré (yielding 422 FCFA compared to 75 FCFA for 3-4 hours work). Soya soumbala has better taste and smell, but worse color, than néré soumbala. (Traore and Yeboah 1992) • Preliminary results using either néré or soya are positive. (Zuidberg and Djiré 1992)

Cash cropping • Some women collectively cash crop cotton, groundnuts and sorghum. But profitability is limited by weed growth, availability of women to work, and low fertility of fields. Sugar peas is a traditional income-generating activity: the women’s project in CMDT provided a loan for storage and later sales because of price fluctuations, but the produce was still sold at a loss. (Coulibaly 1992)

Storage and marketing of agricultural produce • First evaluations of 3 village rice stores are favorable but produce must be sold at the right moment. Re-sale of cotton seed oil by 3 groups looked profitable, but the demand is now being met by the factory supplying private traders. (Zuidberg and Djiré 1992)
WOMEN AND HORTICULTURAL PRODUCTION

2.38 Horticultural production can be grouped into two types: demand-led production of fruit (mainly mangos), vegetables and fresh flowers for the export market by large-scale commercial growers; and supply-led, village-based vegetable gardening by women as individuals and/or groups primarily for local consumption. Vegetable production, certainly in Mauritania and to a lesser extent in The Gambia, Mali and Senegal, is regarded by government and donors as the focus of development activities for women. It is a dry season activity as women are too busy with the field crops during the rains. In The Gambia, it is estimated that women's group gardens with 20,000 producers are farming 300ha. Groups cooperate in their access to land, water, and inputs, but the actual vegetables are often grown and sold by individual members. Although group production has received most interest and encouragement from governments, NGOs and donors, discussions with women indicate that their own personal plots amount to a larger area and are of more interest to them. Women in most Gambian households grow vegetables for home consumption and sale, and over half the women sell most of their production. (Gambia CS para 24)

2.39 Many donors and NGOs in The Gambia assist women’s vegetable groups with fencing, extension advice, and sometimes irrigation systems. Externally-funded irrigation systems include borehole, motor or solar pumps, reservoirs and supply network, and sprinkler, flood or drip irrigation. Installation costs appear around D200,000 (US$22,000) per ha. Groups without such external help rely on hand-dug wells, which have to be renewed two or three times per year, and local fencing which is replaced annually. (Gambia CS para 25)

2.40 A question mark hangs over the profitability of small-scale vegetable production carried out by women’s groups, irrespective of the level of technology and technical assistance. For example, after consuming about 25% at home, net returns from group gardens in The Gambia are anecdotally estimated to be D10-20,000 (US$1-2,000) (FAO/UNDP 1991): this amounts to very little when distributed among 100 or so members. Operating costs of generators and pumps are so high (D40,000, about US$4,500, for the 4-month season) that groups cut down on use of fertilizers and pesticides and so compromised production. Groups with manual water lifting, on the other hand, could afford to use inputs, had higher yields and earned about double the net income. Many groups are not financially viable and only survive because they are supported by NGOs and projects with free or subsidized inputs and fencing. (Gambia CS para 26) A study in San and Fani, Mali, concluded that vegetable production can be profitable if cultural recommendations are followed and water is available throughout the year. Estimates of revenue were 20 FCFA/m² or 4,600 FCFA/woman for individual women growers and 15 FCFA/m² or 70 FCFA/woman for groups which were still learning. (Mali CS para 33)

2.41 The main problem is marketing the seasonal gluts of a narrow range of vegetables: there are many producers but few nearby buyers, and marketing in urban areas is hindered by transport difficulties and the lack of producer/buyer linkages. For The Gambia and Senegal, the types of vegetables grown, the amount and seasonality, and the quality are unsuitable for the export market. Promoting the conservation, preservation and storage for sale or consumption later would help ease marketing problems. To do this requires appropriate technologies within the financial capacity and technical capability of women and women’s groups. The challenge is to identify and disseminate those technologies suitable for local circumstances. If or when marketing can be improved, subsidiary problems which will become important are water supply and extraction, fencing, and, particularly in

---

8 ActionAid has developed 137 vegetable gardens in The Gambia. The country director described vegetable production as women’s most profitable income-generating activity and yet an article in that organization’s May 1993 publication discusses the lack of profitability and wonders if they should be removed from the list of schemes that are called income generating.
Mauritania, production under very hot conditions. It was noticeable on the missions that agricultural staff and farmers are not yet seeking alternative solutions to these problems. At the workshop in The Gambia, for example, women’s vegetable production was discussed but improving the efficiency of water use was not suggested as a solution to water availability and extraction problems. Similarly, integration of women’s vegetable production with women’s livestock production (particularly, small ruminants and poultry) could be a means of converting unsold and unconsumed vegetables into a sellable product and of using animal waste in place of purchased fertilizers.

2.42 The policy of many donors and projects to encourage new vegetable groups throughout the Sahel is unwise given this financial uncertainly. A specific recommendation for Senegal is to fund three NGOs that work in the environmental and appropriate technology fields to establish three model vegetable plots incorporating their best practices. These would be used for demonstration, teaching, and research of the economics of production.

TRENDS IN WOMEN’S ROLES IN AGRICULTURAL PRODUCTION IN THE SAHEL

2.43 Farming systems and gender roles do not remain static as several examples in this chapter illustrate. A number of trends emerge; some are contradictory reflecting the local variations that have been emphasized. In general, the rural areas are becoming increasingly feminized as men migrate, but while women take over the work of the male migrants, they do not assume their decision-making powers. Polygamy is increasing, particularly in areas where a profitable cash crop has a high labor requirement (in Burkina Faso’s cotton areas, for example). Women are taking over more of men’s responsibility for food production, but without a commensurate increase in access to resources. In fact, a theme running through this chapter has been men’s ability to take advantage of opportunities that arise, even when efforts have been made to benefit women.

2.44 On the farming side, the strict separation is breaking down between communal and men’s fields; between men’s and women’s crops and livestock; and between men’s and women’s tasks. Which crop is the staple food crop and who grows it is also changing. Some women are moving into cash cropping; others are withdrawing from income-generating activities in order to produce more of the household food. The breakdown in gender divisions of tasks is not necessarily accompanied by an improvement in women’s access to animal traction which would lessen her load. Women’s labor input on compound and husband’s fields is, in fact, increasing and women are taking on tasks that were previously male responsibility. In particular, women are increasingly preparing the land because male labor is less available and because the work is not so heavy following shorter fallow periods. But they rarely receive compensation from men for doing what was a men’s task.

2.45 As discussed above (paras 2.31 - 2.33) pastoral women also seem to be losing out as the society becomes sedentarized. Their work load is increasing with the move to cropping and to cereal-based diets, but their distance from the herd is reducing their influence on the livestock enterprise.
CHAPTER 3: GENDER DIFFERENCES IN PRODUCTION CONSTRAINTS AND PRODUCTION SYSTEMS

Summary

All small farmers in the Sahel face constraints in farming, but women have particular needs and problems which limit their efficiency as farmers. The main constraints of women farmers in the Sahel are:

- Socio-cultural restrictions on access to resources, opportunities and influence on the disposal of the products of their labor.
- Women's very heavy work load limits their available time at the margin and adversely affects their health, productivity, and attendance at extension or other meetings, even when those meetings will benefit them. Women's capacity to prioritize time is limited by obligations to work for husbands and their household and reproductive responsibilities.
- Women's low level of literacy, numeracy and management skills.
- The weak demand for the products of their activities such as vegetable production, and seasonal gluts in supply.
- The lack of appropriate and affordable technology, especially to save labor and energy, and to transform and store produce, such as vegetables.
- Women's less frequent use of animal traction or improved inputs.
- The risky and financially marginal nature of diversification activities due to weak markets and to poor functional literacy.
- Limited access to formal credit to facilitate access to labor-saving devices, inputs and raw materials.
- Lack of information which poses as great a limitation as their lack of production information.

Land has not been included as a constraint. Women would have difficulty in using more land productively because of other constraints, particularly time. Women need access to inputs, information and technology, and need to be functionally literate to increase their returns to the land they are already using. Security of tenure, "land ownership rights", and land quality are more limiting than area.

The changing physical and social environment adversely affects rural women by requiring more of their labor input and reducing their income-earning opportunities. Such changes include increasing environmental degradation, sedentarization, promotion of cotton and irrigated rice, and social changes such as men withdrawing from household obligations.

INTRODUCTION

3.1 This chapter describes the constraints women face in their productive activities. The production constraints listed by women farmers and extension agents in Burkina Faso for the current study offer a good summary. The constraints were comprehensive but fairly similar for all CRPAs (those most frequently voiced are given in Table 3.1). Some problems are specific to women while nearly all the others affect women more than men. In addition, as the previous section shows, current trends are increasing these differences. Underlying most constraints is the socio-cultural environment described in paras 2.3 to 2.9. Socio-cultural attitudes are not fixed and vary between countries, and regions or communities within a country. Box 8 of the Mali CS describes two Bambara villages only 30km apart: the women in one are forbidden access to land even to grow condiments and women in the other have land they will be able to pass on to children living in the village. The recent increase in women's participation in extension activities indicates that improvements are possible. The first step is awareness workshops to demonstrate the economic and financial benefits to the country, to the household, and to
meː of decreasing women’s constraints. Simulations of Kenyan rural household data show that if women farmers had the same characteristics and input levels as male farmers the value of women’s output (of maize, beans and cowpeas) would increase by around 22% (Saito et al 1994).

Table 3.1 Burkina Faso: Constraints of Women Farmers

<table>
<thead>
<tr>
<th>Specific to women</th>
<th>Not specific to women but probably affect women more than men</th>
</tr>
</thead>
<tbody>
<tr>
<td>• sociological problems including women’s non-participation in making decisions and lack of authority to speak in public when men are present</td>
<td>• difficulties in accessing formal credit</td>
</tr>
<tr>
<td>• the extreme rarity of women owning land and their obligation to ask men for permission to use land</td>
<td>• ignorance of agroforestry techniques</td>
</tr>
<tr>
<td>• the poor quality of the land allocated to women</td>
<td>• the lack of water for vegetable production and livestock</td>
</tr>
<tr>
<td>• women’s lack of tools and equipment for crop production, and for transforming and conserving products</td>
<td>• difficulties of marketing produce, especially vegetables</td>
</tr>
<tr>
<td>• the domestic work which women must do in addition to their agricultural and other productive activities</td>
<td>• the very limited capacity of extension agents to diagnose production constraints and to formulate appropriate extension messages.</td>
</tr>
<tr>
<td>• ignorance of techniques for transforming and conserving produce</td>
<td></td>
</tr>
</tbody>
</table>

Source: data collected for the current RWS study

GENDER DIFFERENCES IN ACCESS TO LAND

Allocation Practices and "Personal" Plots

3.2 Land is an increasingly scarce resource in the Sahel in quantity and quality. Only Burkina Faso has increased its area of useable land by eliminating onchoceriasis. The quality of land is being adversely affected by population pressure and environmental degradation. Women met during the field visits noted their increasing responsibility to augment the declining household food supply. Because women lack direct rights to land, they are likely to be the losers when competing for access to land. Women in Mali, for example, are finding themselves as laborers on family fields because desertification, animal traction and population pressure is causing them to lose their rights to individual plots (Mali CS para 26). As increasing monetarization of the rural economy in Senegal accentuates the pressure on land, the social hierarchy inside and outside production are reinforced, and family plots are becoming fragmented. Women are left with small areas of last choice land and have increasing difficulty in accessing land especially for cash crops (Senegal CS para 31).

3.3 Access to land is complicated by legal and traditional land tenure issues and changing customary and social norms. Even where attempts have been made to introduce more equitable land tenure, customary rules still prevail. In Senegal, for example, powerful and wealthy men still manipulate the land allocation system to the detriment of small farmers in general and women in particular (Senegal CS para 30). Land is generally regarded as belonging to the state or the community although households may have established permanent usage rights which are mostly inherited patrilineally. Male religious
(earth priest in Burkina Faso), secular (District Council in The Gambia) or tribal authorities allocate land to extended families (with noble or grandes familles coming first) who, in turn, divide the land among households and individual members. Land distribution is not equitable in terms of area and location, size and quality of plots. In the multi-ethnic communities of Burkina Faso, for example, economic activities, access to quality land, and relative political authority of each group depend on linkages and connections with patronage networks. Senior men in the kin-group have the right to better located and more productive fields than junior men.

3.4 In the patrilineal and patrilocal societies of the Sahel, women move to their husband's village on marriage. A woman has no long-term rights to land in her natal village because the community cannot risk her allowing (by sale, renting or lending) a man from outside onto community land. Under Islamic law a woman cannot inherit land. Most wives have rights to a plot that their husband will allocate them from the household land or by borrowing. In Mali, for example, this occurs after 3 years of marriage. Virtually all women have at least a corner of the household plot on which to grow condiments. Bas-fonds areas for rice production are typically "owned" by women. Wives can also access land by other means. They may borrow from friends or relatives; the village-head or other authority may allocate a collective plot to a women's group, or more rarely a plot to an individual women; a mother-in-law may give parcels to a young women in exchange for contrepartie in kind; or women may be able to transfer the use of bas-fonds parcels to others of the same family.

3.5 Women are at the bottom of the hierarchy of land allocation after family (compound or household) plots for food production and men's personal plots for income. Table 3.2 summarizes data from various sources on women's access to land in the 5 countries. The proportion of women who have their own "personal" plots varies with ethnic group, land availability and, as in the case of Senoufo women in the Sikasso area (Mali CS para 39), the obligation for women to work fulltime on the household or husband's plots. The 38% of plots "owned" by women in the Mauritian survey is uncharacteristically high compared to the other countries, but female headed-households are also more numerous in Mauritania than elsewhere (para 2.16).

3.6 Government interventions have typically ignored the rights of women to individual plots both where the development has been to benefit local people and where people are relocated. Women are rarely allocated land on irrigated perimeters or when bas-fonds are improved. For example, after 50 years only 12 of the 2,348 farmers under the Office du Niger in Mali are women; all land titles granted by the Volta Valley Authority in Burkina Faso went to male household heads; and women "own" only 4% of the village perimeter area and 2.7% of the cuvette area in Podor department in Senegal. Women's access to irrigated land in the Bakel small irrigated perimeters of Senegal is related to the availability of this land (Senegal CS para 33). Nearly 20% of households in the fleuve area of Mauritania are headed by women and yet women comprise only about 5% of participants on SONADER schemes, 1% on AGETA and 7% on Ferme M'Pourie (Mauritania CS para 54). Even when an effort is made to retain women as the users of land, the advantage may still go to the men in the long-term, as was the case in Operation Riz in Burkina Faso (Box 3.1), or may be frustrated by local male authorities. A 1984 NGO proposal to allocate plots equally to men and women on the Niandane III perimeter in Senegal "was opposed by the local rural council in favor of an allocation to heads of households" (Woodhouse and Ndiaye quoted in Horowitz and Salem-Murdock 1993).

Characteristics of Women's Plots

3.7 The size and location of the plots are influenced by the social status of the woman herself, her husband and his family. Although, probably over 60% of women in the Sahel region have their own plot, these add up to small proportions of the total number of plots or of the total area. For example, 82% of women surveyed in Mali-Sud (Mali CS Para 39) had their own plot, but these plots only
Table 3.2 Women's Access to Personal Plots of Land

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Burkina Faso</th>
<th>Gambia</th>
<th>Mali</th>
<th>Mauritania</th>
<th>Senegal</th>
</tr>
</thead>
<tbody>
<tr>
<td>% women with personal plots</td>
<td>90% national</td>
<td>nd</td>
<td>85%</td>
<td>nd</td>
<td>60% g/nut bn</td>
</tr>
<tr>
<td>% plots farmed by women</td>
<td>nd</td>
<td>4% c. grains</td>
<td>4%</td>
<td>38% national</td>
<td>nd</td>
</tr>
<tr>
<td>% area farmed by women</td>
<td>5% &amp; 16%</td>
<td>3% c grains</td>
<td>nd</td>
<td>nd</td>
<td>nd</td>
</tr>
</tbody>
</table>

Note: nd no data

Source:
1. RWS data collection of 10 women's groups in each of the 12 CRPAs
2. 2 Mossi areas in Bryson et al 1992
3. only group fields and not personal plots at Faramana village, Hauts Bassins
5. FAO/CP 1991 quoting data from Mali-Sud
6. Three villages in OHV, Traore and Yeboah 1992
7. Survey in 7 regions, Sy 1993
8. IFPRI/ISRA study in groundnut basin and oriental Senegal, Kelly et al 1993
9. RWS data collection of 394 women's groups in 4 regions

amounted to 4% of the total number of parcels. The area farmed by female-headed households is typically smaller than the area farmed by male headed households (Mauritania CS para 53), and women's plots are smaller than men's plots (Gambia CS para 32). Plots are divided by fertility gradient and distance into village and bush fields. Except for their small condiment plots at the house, women's fields tend to be less fertile and further away. Some Senoufo women at Doumanaba village, Mali, could only obtain rice fields 8-10 km away. They live in hamlets near their fields during the growing season. (Mali CS Box 8) The low fertility of women's plots is mentioned in the reports of Mali (CS para 39), Senegal (CS para 31), The Gambia (CS para 29), and in Burkina Faso, more women than men have champs de brousse (49% to 41%, respectively) (Burkina Faso CS Table IV).

3.8 The tenure of borrowed land is even more insecure than the tenure of allocated land. Wives of immigrant laborers in one village visited in Mali had lost their plots after 20 years of use. They were not told why but, because the land was borrowed, they knew they had no rights. The courts did, however, force the chief to repay their costs of land preparation. (Mali CS Box 2.1). It is thus not surprising that borrowers make few long-term improvements -- such as diguettes (rock lines along contours) and zai (holes containing organic material) which together increase yields by up to 50% -- as these may themselves cause land to be reclaimed (Burkina Faso CS para 27). However, land allocated to women's groups tends to have more secure tenure than land to individuals as it was usually decided in open meetings.

Land Characteristics as Constraints of Women

3.9 There are arguments to support women having more land to farm. Diarra and Monimart (1989), for example, argue that without access to land, women are de facto deprived of access to extension and credit, and to a source of independent and indispensable income. Furthermore, there is
Box 3.1 Burkina Faso: The Effect of Allocating Improved Rice Land to Men and Women

The effect of gender differences in land allocation on the household production systems and the rights, obligations and benefits within the household is illustrated by two irrigated rice schemes in Comoe CRPA. The two projects had different methods of developing the *bas fonds* and allocating the land.

Traditionally women cultivated *bas fonds* land which was left on death to daughters or, if no daughters, via sons to daughters-in-law. Women grew rice with the daily help of children and, one day per week, of men. Some men also grew rice, but because they were *chef de menage* all family members were obliged to help.

**Land allocation to male farmers** One project (Kariguelo scheme) developed a total irrigation system of 350 ha. All plots were allocated to men when the scheme was developed in 1975. The present 60 women exploitants (of a total 625) are those whose husband has died or left her. Family food is grown on rainfed upland fields; most of the rice is sold by the men, some is retained for consumption, and small amounts are sold by wives.

**Land allocation to female farmers** In contrast, the 1200 ha partial irrigation Operation Riz scheme, started in 1980, allocated land to the original users of the land. A few men who owned *bas fonds* land before the development are among the current exploitants. A 5-day week operates in this area of Burkina Faso: women work for 3 days on the family (and husbands’ fields), one day on their own (increased to 2 during weeding), and are forbidden to work in the fields on the fifth day. The family, as usual, is obliged to work on men’s plots. The family food consists of rice and upland produce. With the higher yields of rice from the supplementary irrigation, men are selling more of their upland crops, and women are having to contribute more to family food production. The harvest from men’s rice parcels is mainly sold for monetary needs or kept as food for ceremonies. According to the women, very little is kept for home consumption - “except when he’s in a good mood” - and is not necessarily divided equally among the wives. According to the men, the women can do what they like with the rice harvest from their plots, but the women said they could sell some but most would be retained as food to augment the food from husbands’ upland fields. While the scheme has retained women’s access to land, officials are beginning to reassess its impact on women. In effect food production has been transferred from men’s upland crops to women’s rice crop, and men’s incomes have increased while women’s have decreased.

Evidence that women’s income benefits the household more than men’s. But given the present economic and social situation of most households, many women probably do not have the labor/time or resources to use productively more land than they presently use or, indeed, to use land any more productively than their husbands. They also have problems increasing their use of inputs and technology which would enable them to use the land more productively. In the context of land as a diminishing resource on a per capita basis, it is important that women’s current rights to land are preserved. Women need access to inputs, information and technology, and need to be functionally literate to increase their productivity and returns to the land they use. If these constraints were alleviated, then the quantity of land could become the factor limiting women’s agricultural production. Where women are losing their rights to individual plots due to desertification, animal traction, or population pressure, then area becomes a constraint.

3.10 Characteristics of land other than area can constrain women farmers’ productive activities. Simple lack of “ownership” of even a very small area of land can restrict access to credit and limit influence on household and community decisions concerning land use and development. Security of tenure, “land ownership rights” (such as permission to improve and plant trees), and land quality are more limiting constraints to raising productivity, production or revenue than area. Land tenure must be viewed within the patrilineal and patrilocal society (para 3.4). A culturally acceptable compromise suggested by a male extension official in Mali would be for women to own land in their husband’s village with the proviso that they could only leave such land to their sons. The low quality of women’s plots and the disincentives to improving land are constraints, especially as women lack the resources to buy fertilizers. The distance to plots is a greater hardship to women than for men who have shorter working days, less work that is tied to the homestead, and more access to vehicles such as carts and bicycles.
GENDER DIFFERENCES IN LABOR INPUT AND TIME CONSTRAINTS

The Hours Women Work

3.11 Long working hours are the norm for women in the Sahel. Various time and labor allocation studies have found that in the growing season women work up to 16 hours per day of which about half is agricultural work (Table 3.3). Table 3.4 illustrates typical women's days in Mali Sud. Women's work exceeds men's in all the gender-disaggregated studies because of the very long hours women spend on their domestic and reproductive activities. In the dry season, women use the "spare" hours to earn extra income from such activities as growing vegetables, making crafts, trading, processing, and transforming products for sale. They also spend longer collecting wood for storage, and walking further to reliable supplies of water. Many customary observances and social activities, for which women must prepare and serve food and beer, occur during the dry season. "Leisure" time is generally associated with either lighter household chores or with off-farm activities such as marketing.

3.12 In most areas women must work specific days of the week on household (and/or husband's) plots. Often women have only their rest day (or the time of day before or after the obligated farm work) for working their own plots, with perhaps a second day for group activities. Deviations from the norm of the community must be negotiated with the community elders. There are variations. The Mali example of Bambara women working five days a week on their own fields, and Senoufo women working one day per week on their own fields have already been given (para 2.6). In most areas women must work on the household fields but cannot require other family members to help them to the same extent. Labor peaks are weeding (sometimes in conjunction with late planting) and harvest or threshing. The most labor-demanding tasks of grain cropping - sowing, weeding and threshing - are largely performed by women. Labor demands are reduced by polygamous wives taking turns to prepare the day's meal. Women's groups help by weeding members' fields and also, for a fee, nonmembers' fields.

3.13 As discussed in Box 2.3, the distribution of the work changes over time: older women in Burkina and Mali devote more time to farming and other own account activities than younger women (Burkina Faso and Mali CSs paras 13 and 20, respectively).

Table 3.3 Time Allocation Studies (hours per day)

<table>
<thead>
<tr>
<th>Type of work</th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Farming</td>
<td>Total</td>
</tr>
<tr>
<td>Burkina Faso 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rainy season</td>
<td>nd</td>
<td>10</td>
</tr>
<tr>
<td>Dry season</td>
<td>nd</td>
<td>6.5</td>
</tr>
<tr>
<td>The Gambia 2</td>
<td>nd</td>
<td>16</td>
</tr>
<tr>
<td>Mali general rains 3</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>Senoufo 4</td>
<td>3.2</td>
<td>9.2</td>
</tr>
<tr>
<td>Bobo 4</td>
<td>1.3</td>
<td>11.4</td>
</tr>
<tr>
<td>Senegal 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rainy season</td>
<td>7</td>
<td>12 - 16</td>
</tr>
<tr>
<td>Dry season</td>
<td>nd</td>
<td>8 - 12</td>
</tr>
</tbody>
</table>

Notes: nd no data

Sources: 1 Delgado 1979 in Bryson et al 1992  
2 World Bank 1990 Gambia WID Project, SAR  
3 World Bank 1992a Mali WID Assessment  
4 Zuidberg and Djire 1992  
5 Arcia et al 1989
Table 3.4 Mali: A Typical Women’s Day during the Growing Season

<table>
<thead>
<tr>
<th>Time of day</th>
<th>Activity</th>
<th>Hours per day</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 to 6 am</td>
<td>Collect water, prepare breakfast, collect karite nuts</td>
<td>6-7 hours</td>
<td>Household work</td>
</tr>
<tr>
<td>6 to 10 am</td>
<td>Pound cereals, wash dishes and utensils, sweep the yard</td>
<td>1-3 hours (May - July)</td>
<td>Gathering karité</td>
</tr>
<tr>
<td>10 to 5 pm</td>
<td>Take food to the fields, field work, collect and transport wood</td>
<td>5-7 hours</td>
<td>Agricultural work</td>
</tr>
<tr>
<td>5 to 9 pm</td>
<td>Pound, prepare meal, various cleaning, spinning and/or socializing if there is time</td>
<td>1 hour</td>
<td>Transport</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7-9 hours</td>
<td>Rest</td>
</tr>
</tbody>
</table>

Source: 1 FAO/CP 1991  
2 DRSPR 1991

3.14 In addition to agriculturally-related work, women also spend considerable time on domestic chores such as child care, cooking, cleaning and home maintenance, and collecting firewood and water. Women’s domestic work is generally in inverse proportion to their farm work. Agricultural work decreases in the dry season and more time is spent collecting a store of wood for use during the rains when priority must be given to agriculture. Smaller variations, such as the time spent on food preparation, can be made within a season to release time for more important activities. The lack of basic services - reliable potable water supplies, health centers, stores, woodlots, transport, mills - in rural areas adds considerably to women’s domestic chores. In the groundnut basin and oriental Senegal, the lack of a reliable nearby supply of water was a problem in just under half the villages surveyed (Senegal CS para 35). Grinding grain, a common task for women throughout the Sahel, requires an average of one and one-half hours per day (Burkina Faso CS para 29). A simple and cheap device developed by Appropriate Technology International in Senegal saves up to 20% of hand pounding time: the pestle (pilon) head is covered by a metal sheath for only 200-300 FCFA. A survey in Mauritania found that the use of mills was influenced by distance and by ethnic group. Distant mills were used by Peul women who were accustomed to traveling and sold milk en route, but not by black maur women who preferred to stay near their homes. (Mauritania CS para 59) The SDA survey showed that 94% of rural households in Senegal cook by wood (Senegal CS para 35). Women must, therefore, spend considerable

---

9 A survey undertaken by Purdue University in Burkina Faso estimated that the mean annual value of women’s home-based activities (including child care, agro-processing, cooking, cleaning and home maintenance, and collecting firewood and water) was equivalent to 61% of the average annual household income from crop production. The value of women’s home production falls from a high at 20 years, but at 60 years is still 43% of the family’s farm income. The marginal productivity of female labor was six times that of male labor, probably because the male household heads were older (mean 57 years) than their wives (mean 40 years). Other wives and adult daughters are substitutes for a given wife’s home production. The time a woman spends in home production increases with the size of the farm and the hours of animal traction, but decreases with age and her implicit wage rate in agriculture. (This is the marginal product of labor as derived from the output elasticity of wife’s farm labor in a Cobb-Douglas production function.) Since the availability of animal traction reduces labor requirements on the farm, women can increase their time in home production, where they can be more productive. (Burkina Faso CS paras 30 and 31)
time collecting firewood. For example, the average round trip in Hodh el Chargui, Mauritania, is 15 km once every 10 days by cart or 3 times a week by headload (Mauritania CS para 58). In four of the five countries, the excess demand for wood over supply (Table 3.5) will increase the time for this chore in the future (the data for Mauritania showing a surplus are difficult to believe). The use of donkeys and carts may benefit women by redistributing tasks: men who would not head load are not adverse to transporting water, wood or crops by cart.

Table 3.5 Fuelwood Supply-Demand Balance
(Difference between increase in stock and total utilization in million cubic meters in the year specified)

<table>
<thead>
<tr>
<th></th>
<th>Burkina Faso</th>
<th>The Gambia</th>
<th>Mali</th>
<th>Mauritania</th>
<th>Senegal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>-2.6</td>
<td>-0.6</td>
<td>0.4</td>
<td>3.8</td>
<td>0.3</td>
</tr>
<tr>
<td>2000</td>
<td>-11.2</td>
<td>-1.5</td>
<td>-5.0</td>
<td>3.8</td>
<td>-4.4</td>
</tr>
</tbody>
</table>

Source: FAO in Cleaver and Schreiber 1992

Implications for Agriculture and Extension

3.15 Because tasks are frequently gender-specific, men and women have different labor peaks, and labor bottlenecks cannot be overcome by substituting one for the other. Gender differences in labor use can have unexpected (and undesirable) effects when new crops commodities or technologies are introduced. Promotion of agricultural development often increases the demands on women’s time and reduces their income or autonomy. On the irrigation schemes in Senegal, for example, the introduction of double cropping on men’s fields has increased women’s workload and left them with less time to cultivate their own plot -- their only source of independent income -- and accentuated their financial dependence on men (Senegal CS para 34). Animal traction reduces the labor demand per unit area for men by 30% and of women by 40% (oxen) or 50% (donkeys) (Burkina Faso CS para 31). However, since animal traction is generally used to increase the area under cultivation, women’s work in the field will not decrease by similar amounts.

3.16 The severe demand on women’s time and energy has several adverse implications. First, it is physically debilitating. Second, it restricts their time to handle and process crops in the most efficient and nutritious way. For example, rice is frequently served because preparation is easier and quicker than for the coarse grains, although the latter are more nutritious. There is evidence that rural households with proportionately more women to share food preparation tend to be better nourished. Third, and most important for this study, it limits their time to learn new or adopt technologies, even though such technologies may, in fact, raise the productivity of their labor (Gambia CS para 34). This is evident from five years of Suivi Evaluation Permanent (SEP) in Mali-Sud which showed that while production was intensifying, women’s income was limited by excessive demands on their time and weak access to information/extension. The revenue/ha of women farmers was influenced by timeliness of operations or by acquiring certain knowledge (early sowing, scraping off striga before flowering). Women farmers’ attitude to increasing input use in order to intensify production was influenced by external factors such as the cost of inputs, the sale price of output, and marketing problems. Revenue/ha of all farmers was related to mechanization, expenditure/ha on inputs, and on the percentage of the exploitation in cotton (Mali CS para 57).
Several reports at various workshops held on gender in agriculture drew attention to women's long working hours and heavy workload. A report from the Basse Casamance, Senegal, pleaded for more creches and collective nurseries as women devote their time to lucrative activities outside the home (Senegal CS para 36). The Hauts Bassins CRPA (regional office of the agricultural ministry) study, Burkina Faso, concluded "the lack of time seems to be the main problem of women". To alleviate women's workload, BPAF agents (office promoting women's activities) in this CRPA are beginning to talk to village men about the benefits to the entire household of helping women. In Mauritania, some women's groups encadred by the NGO, Fédération Lutherienne Mondiale, are arranging child care while mothers work in the fields. (Mauritania CS para 57)

WOMEN'S ACCESS TO CREDIT AND INPUTS

Problems Women Face in Accessing Credit

Providing formal credit to the rural sector is not easy given the high risk of farming and other rural activities, low recovery rates, and high transaction costs to both lender and borrower due to the dispersion of the borrowers and the many small loans. A case study of financial services for the small scale and informal sectors (mainly non-agricultural) in Mali, which looked at a continuum from tontines\(^\text{10}\) to a commercial bank, identified five characteristics of successful financial mechanisms for small scale operators: (1) an individual receives the benefit within a reasonable period (3-4 months) of meeting institutional requirements; (2) savings and credit mechanisms build upon the group's common economic interest; (3) users have significant and equal economic stakes in the success of the projects financed; (4) the savings base and number of beneficiaries is always expanding to permit equitable distribution (to those who have not yet borrowed) and sustainability; and (5) the groups develop/adapt mechanisms that offer clear incentives to repay and enforceable sanctions if they do not. In Mali, the Groupements d'Intérêt Economique (GIE) have been particularly successful in generating savings and providing credit, though on a relatively small scale (Duggleby 1993). Most GIEs are men's groups and are moving from informal to formal credit sources: they are, thus, unrepresentative of women's groups in villages.

Even though women have generally better repayment records than men (Thillairajah 1993, Rhyne and Holt 1993), they face many constraints in obtaining formal credit. The required collateral is often, as in the case of loans from banks in Mauritania, land title which women do not have, or banks may require a male co-signer. Compared to men, women have less time and money to travel to distant credit institutions, and their lower levels of education and experience with formal institutions makes them less confident and able to complete the formalities. Finally, the small scale of many women's operations increases transaction costs per unit of loan. These handicaps are more severe for rural women whose enterprises are highly vulnerable to weather vagaries and who have limited skills in business management. Moreover, women's eligibility for agricultural sector credit is reduced by the targeting of commodities (such as cash crops) or production systems (such as irrigated land) or certain types of groups (such as cooperatives or GIEs) that are dominated by men. Adding to these constraints in the Sahelian countries are socio-cultural factors: credit is generally regarded as "men's business". In Mali, for example, women as individuals and even as groups must apply through or obtain the permission of husbands or male community leaders before applying for credit (Mali CS para 45). Women may also suffer from cultural constraints in accessing credit.

\(^{10}\) Tontines are informal rotating savings and credit associations (ROSCAs). Throughout SSA, ROSCAs are very common in rural areas, especially among women. They typically have between 20 and 30 members who know each other, often because of location, activity, or kinship. Group cohesiveness is fostered through frequent meetings combining social and business affairs. Each member contributes a fixed sum of money on a regular basis to a pool and group members in turn receive the total amount collected.
constraints in using credit for agricultural production. NGOs and donors in Senegal have found that women are obliged to use credit for personal expenses, ceremonial purposes, buying food in the hungry season, and emergencies. In an attempt to steer credit to "productive" uses, one NGO now restricts women’s credit to shorter-term loans for groups (Senegal CS para 42).

3.20 A study of rural finance markets in Sub-Saharan Africa (Thillairajah 1993) noted that “women are economically rational actors who make judicious use of financial services when they are accessible and designed to match their income streams and productive opportunities”, and concluded that demand-driven services with group liability and the use of female extensionists and bank officers show the most promise. The Grameen Bank model in Bangladesh is often cited as an example for other countries. Grameen’s approach has successfully provided credit to thousands of the rural poor - mostly women - and has a repayment rate of around 90%. However, the Grameen Bank has not succeeded in recovering the extra costs of increasing the rural poor’s access to credit and is unsustainable without external concessory funds. Most institutions that attract large numbers of poor women borrowers have common features. They are decentralized (sometimes working through NGOs) to provide easy access for deposits and borrowing. Women are encouraged to participate when forms are simple, collateral is appropriate (such as solidarity groups, character references or activity viability analysis), loans are flexible and fit women’s needs, repayments are rapid, interest rates only cover transaction costs, and repeat loans are promised. But the bank must have rigorous and disciplined operations and trained staff to be successful (Weidemann 1992).

Women’s Access to Credit in the Five Countries

3.21 All farmers in the five countries under review are having increasing difficulty obtaining formal credit as many credit institutions have gone bankrupt. The Cooperative Unions of Mauritania and The Gambia no longer function and have not been replaced. Everywhere, credit allocated to women is described as much less than credit allocated to men. In Senegal, for example, only 6% of the credit from the Caisse Nationale de Crédit Agricole du Sénégal (CNCAS) went to women (Senegal CS para 38). Certain donors (such as Norway and ILO in Senegal) and NGOs provide credit to women’s groups - mostly for such activities as vegetable production, weaving, dyeing, small ruminant fattening, and petty trading. But for most women, the only possibility to obtain credit is from informal sources, family, money lenders and such like, or to save through tontines. In Senegal, for example, 35% of the rural population belong to a tontine and most tontine members are women. Some women’s groups have saved significant amounts of money from their economic activities: amounts of nearly US$ 5,000 were mentioned in The Gambia. But they tend to be unwilling to reinvest this money in income-generating enterprises obviously feeling the risks are too great. They prefer to retain this money for emergencies or to accumulate to buy a mill, while trying to obtain repeat external funding for ongoing activities. This is a rational decision given rural poverty in the Sahel and the risky nature of many income-generating activities (see para 2.33 and Box 2.9 above).

3.22 The data collection undertaken in Burkina Faso for this report confirms women’s poor access to formal credit (only 2 of the 74 groups reporting had obtained funds from the National Bank of Agricultural Credit (CNCA)) but shows relatively good access to NGO and small project credit - sources which are uncertain in the longterm. Just under half the groups interviewed had received credit during the previous 12 months from sources other than the group, tontine, money lenders or family members. Several groups had obtained credit from more than one source, or used the funds from one source for

\[^{11}\) No data was received from 2 CRPAs; 2 more CRPAs had no groups that received credit; 40 of 74 groups in the 8 remaining CRPAs received credit. Extension service staff thought that the groups interviewed were representative in their access to credit, but in CRPA Sud-Ouest which included both encadred and non-encadred groups, the 3 groups receiving credit where all encadred.
two activities. The loans ranged in size from FCFA 17,500 to FCFA 1.6m per group or from FCFA 2,500 to FCFA 20,000 per person, and the duration from 5 to 48 months. The interest rate charged ranged from nil to 20%, with most around 10 to 12%. Women's groups in the Nord and Sahel CRPAs, in particular, benefitted from interest-free credit from certain NGOs. Some loans were used for group activities and so benefitted all group members; others were for individual activities. About 70% of the members of those groups that received credit used the credit individually or in the group. Uses reflect the wide range of women's activities and concentrated more on diversification activities than on crop production or saving labor: 21% went to buying and fattening livestock; 17% to each of trading in cereals and agricultural produce and buying and operating a mill, and 15% each to petty trading and crop production including the purchase of donkey, plow or carts. (Burkina Faso CS paras 34 and 35)

3.23 In Senegal, 29% of the women's groups surveyed for this study had used credit in the previous 12 months. Of the groups receiving credit, 50% received less than 50,000 FCFA and largest amount was 3m FCFA. Just under half the loans (47%) were used for agriculturally-related activities, 35% went to petty trading, and 22% for tontine contributions. (Senegal CS para 39)

Examples of Promising Rural Financial Mechanisms in the Sahel

3.24 There are, however, a number of rural financial mechanisms starting up in the Sahelian countries which hold promise for the future. The four described below follow three different routes. The Ministère du Développement Rural et de l'Environnement (MDRE) in Mali provides a mechanism by which farmers can access formal credit. The Ministry of Agriculture (MOA) in The Gambia effectively provides credit for inputs which is passed on to the purchasers. And Mali and Senegal both have fledgling grass-roots savings and credit institutions.

3.25 Mali is unusual in having a mechanism by which women's groups can access formal credit. The Centre d'Assistance Coopérative (CAC), which is the district level office of the Direction Nationale d'Action Coopérative (DINACOOP) of MDRE, acts as a channel by which men's, women's and mixed groups and tons (village groups often with legal status) can access credit from the Banque Nationale de Développement Agricole (BNDA). However, indications are that women's groups are disadvantaged in obtaining this credit. There are only 3 women's cooperatives out of the total 149 encadred by CAC Segou, applications from women's groups must be authorized by the male dominated Associations Villageoises, and women complain that the process takes too long: profitable use of the credit is compromised when it arrives after the optimal date for starting a seasonal activity. (Mali CS para 49)

3.26 In The Gambia an innovative arrangement successfully provides both credit and inputs to farmers. In the Sahel, inputs and credit are frequently tied to the promotion of cash crops. In The Gambia, the Agricultural Inputs Office (AIO) acts as an importer/wholesaler of inputs for small farmers. The AIO supplies inputs on credit to individuals or groups who then supply members and/or other clients. The scheme originated under an FAO Fertilizer Project using men, and the occasional woman, as retailers. The WID Project, however, has recruited individual women and women's groups as retailers during the past 2 years. There is one group, or "input block", per division. The female private retailers and input blocks are doing particularly well. The only retailers currently operating are 6 male and 18 female private retailers, and 6 women's input blocks. All the others (18 men and 1 woman, and all the men's block villages and groups) are in default for non-repayment. Anecdotally women are said to sell inputs to men for cash and to women on credit because the latter have higher repayment rates. Despite private and block retailers being free to sell to anyone, women appear now to get priority because of this concentration of input retailing in the hands of women. The WID project has hired and trained 18 female technical sales agents (TSA) who are attached to the 18 female retailers for the first 2 years. The TSAs
help the retailers with the bookkeeping, advise customers and promote the use of agricultural inputs, particularly by female farmers. (Gambia CS para 37 and 38)

3.27 Mali's *Caisses Populaires d'Epargne et de Crédit* (CPEC) were started in 1987 to mobilize village savings. The NGO World Education works through four local NGOs to support women's groups that run CPECs. Credit is available to members for their individual activities. Although the support includes sensitization followed by 3 training sessions per month after the *caisse* is established, the women's CPEC visited during the mission highlighted the difficulties of introducing new concepts of credit, savings and interest rates. The original credit supplied to start the CPEC off has been fully repaid to the NGO, and the *caisse* had about 400,000 F CFA in the capital fund but no more credit had been issued to individual members because the group was trying to save for a mill. Since the cash was kept in the village, it was not earning any interest. In addition, the confusion of the account books of the *caisse* and the two microenterprises (soap making and dyeing) indicates that the training needs improvement. (Mali CS para 48)

3.28 A similar grass-roots savings and credit structure, *La Caisse Populaire de l'Epargne et de Crédit* (CAPEC), has recently started in Senegal. CAPECs currently operate in Kolda, Tambacounda, Kaolack, Louga and St Louis Regions, and a Union of CAPECs is being formed. Membership is open to all social classes and geographic solidarity provides repayment pressure. The organizing committee includes members of the local administration and auditors. In Sedhiou Department, for example, 8 caisses sited in the small towns or large villages have a membership of 2400 and total deposits of 20m FCFA. Women comprise the majority of account holders (280 out of 450). The minimum deposit to open an account is 6,500 FCFA. Deposits earn 6% per annum and credits are charged at 2% every month with a maximum of 6 months. Credit is only given after accounts are open for 6 months. The loan must be 100% covered by collateral, which must not be a house, and women typically use jewelry. Credit is given for crop and livestock production, vegetables and fish, artisanal and petty trading. Local technical agents check the feasibility of applications. (Senegal CS para 41)

**HUMAN RESOURCES**

3.29 Farming is hard and skilled work which is done most efficiently by healthy, educated farmers. Poor health and nutrition affects not only the amount of agricultural work but, in the case of women, caring for sick children and other family members takes their time away from economic activities. The level of education has been shown to positively affect the efficiency of agricultural production (Jamison and Lau 1982) and the adoption of agricultural recommendations (see para 3.37 below). In the case of women, education directly affects their ability to manage their economic affairs and has a more pervasive effect on their self-confidence and stature in the household and society. These Sahelian countries have worse health and education indicators (Table 3.6) than the Sub-Saharan Africa (SSA) average. Adult illiteracy is higher, primary and secondary school enrollment is lower, and gender differences are greater.

**Education of adult rural women**

3.30 Functional literacy is a means to economic and social benefits. The Burkina Faso CS (paras 38 and 40) noted a positive relationship between education and participation in extension activities. Moreover, extension agents commented that women with some education are visibly better off economically and had higher status in the household. Throughout the Sahel, illiteracy of adult rural women is extremely high, and (except in Mali) only a third to a half that of rural men (Table 3.6). Only in The Gambia (78%) do illiteracy rates of rural women fall below 90%. Factors which hinder women from becoming literate are time and income constraints, women's lack of self confidence which prevents
### Table 3.6 Human Resource Indicators

<table>
<thead>
<tr>
<th></th>
<th>Burkina Faso</th>
<th>The Gambia</th>
<th>Mali</th>
<th>Mauritania</th>
<th>Senegal</th>
<th>Sub-Saharan Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9.5</td>
<td>2.8</td>
<td>2220</td>
<td>2290</td>
<td>2260</td>
<td>2260</td>
</tr>
<tr>
<td>Population growth rate (%)</td>
<td>2.8</td>
<td>3.7</td>
<td>107</td>
<td>107</td>
<td>109</td>
<td>109</td>
</tr>
<tr>
<td>( % of min requirement)</td>
<td>2220</td>
<td>103</td>
<td>95</td>
<td>95</td>
<td>95</td>
<td>95</td>
</tr>
<tr>
<td>Illiteracy rates of rural adults</td>
<td>73/84</td>
<td>94/78</td>
<td>94</td>
<td>94</td>
<td>94</td>
<td>94</td>
</tr>
<tr>
<td>Men</td>
<td>83</td>
<td>40</td>
<td>88</td>
<td>73/84</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Women</td>
<td>94</td>
<td>78</td>
<td>99</td>
<td>99</td>
<td>94/84</td>
<td>90</td>
</tr>
</tbody>
</table>

**Notes:**
- * % of age group enrolled in education
- na data not available
- mr most recent available year

**Source:**
- World Bank World Development Report 1994 except where indicated
- UNDP Human Resource Indicators 1994
- World Bank 1995 African Development Indicators 1994-95
- National survey of agricultural statistics, 1994
- SDA survey, Wadda and Craig, 1993
- 8000 people in Mali-Sud, FAO/CP 1991
- *." Heads and members of farm households, EPCV I survey
- WID Country Assessment

them from realizing their capabilities, and social attitudes that limit women's autonomy and regard literacy as men's business. In Mali, for example, a woman frequently needs the permission of her husband, co-wives, and the Association Villageoise committee (if they are organizing the classes) before she can attend literacy classes. The AV in one village visited reserved the village literacy center for men's classes and forced women's classes to use a less suitable meeting place.

3.31 As the Mali CS notes, literacy training that targets women needs to be specially developed and delivered so that the language of instruction, the time or site of instruction, and the use of material are geared to women's needs and interests. The recent initiative by the Agricultural Services Project in Senegal to hold sessions for women between 9 and 11 at night, albeit "un choix délibéré des intéressées pour concilier au mieux les contraintes de calendriers très chargés durant la journée et l'intérêt tout particulier qu'elles accordent à ce programme" (EM from PNVA dated 20 May, 1994) graphically illustrates the time problem. Mali's Functional Literacy Department (DNFLA) in the Ministry of Education has prepared course materials that are especially interesting for women, but the PNVA project were using "gender-neutral" materials of lesser interest to women. Women in several groups in Burkina Faso commented that they had forgotten their skills through lack of use. Sensitization of the local community may also be necessary to overcome cultural constraints.
The Effect of Low Education Levels on the Management of Women's Groups

3.32 Women's groups are a traditional and essential part of rural society throughout the Sahel. Groups convey social recognition and, because development activities are rarely carried out with individual women, provide new possibilities. The highly informal and loosely organized nature of women's groups is suitable for their social and safety-net functions, but their lack of authority, resources, and capacity for self-management limits their ability to move successfully into the economic world. Economic development depends on access to productive resources and group membership enables women to have easier access than would be possible for individuals. However, groups that have been formed as a condition of intervention by an NGO or project tend to lack social cohesiveness.

3.33 Women's management of their groups and economic activities is seriously hampered by their relative lack of literacy and numeracy, and by their lack of status and confidence. Although many groups express a wish to have a mill, very few have the capability to do simple feasibility assessments. When group members and officials lack skills in accounting, project preparation, implementation and evaluation, then enterprises are less likely to be profitable and long-lasting. Many groups in the Sahel compensate for this deficiency by including one or two men who organize the members, keep the books, or carry out "male" tasks. In Mauritania, the situation is made worse by the tendency for older wives of community leaders to be the officials of women's groups in preference to younger and more educated women who are open to new ideas (Mauritania CS para 64). Extension agents in several countries noted how contact with NGOs and projects increased women's status and confidence.

3.34 Recognizing these limitations, NGOs and small women's projects in the Sahel are placing more emphasis on training. (Mauritania CS para 64, Senegal CS para 59) Production and management training and assistance are crucial for a group's economic activities. Yet only a minority of the literally thousands of women's groups in every country benefit from extension and other support services. The most successful group enterprises are linked to fairly intensive technical advice. For example, the 1994 winner of the best women's group in Senegal raise poultry and compound livestock feed on livestock department land. The members benefit from considerable technical advice (Senegal CS para 45). A strong impression from field visits to all five countries is that the women have little idea of the costs and income of the enterprises or any concept of how to assess feasibility of activities, or increase profitability. They are, thus, open to being cheated and liable to make wrong choices. The capacity of women's groups to technically and financially manage grinding mills is particularly weak. In The Gambia, for example, 40% of mills are estimated to be inoperable and 80% to be in disrepair (Gambia CS para 47).

3.35 In an initiative to address these deficiencies of women's groups, the Action Plan of Comoe CRPA in Burkina Faso includes assisting groups to evaluate their activities. Groups would be trained and encouraged to ask themselves: what is working? what is not working? why is it not working? and, what should they do next time? The Gambian WID project has gone even further. Multi-disciplinary teams have held 2-day discussions in 6 villages with "problem" vegetable groups. The group's executive committee is helped to identify their production, marketing and group management problems, suggest alternative solutions, and plan strategies for improvement. The WID agricultural component coordinator admits that although a problem-solving approach is taken, the solutions tend to be top-down. While perhaps not yet perfect, the participative and interactive process is extremely encouraging. The lessons learned will be further discussed at technical meetings with, inter alia, the research department, the engineering and soil and water management units, and NGOs. (Gambia CS para 73)

3.36 The training of uneducated group officials and members to run their own economic activities efficiently is not easy. EDI's Femmes et Formation en Gestion Appliquée (FEFGA) program (Box 3.2) has designed a program using pedagogic methods suitable for illiterate and semi-literate students. Pilot projects in Burkina Faso and Senegal have been encouraging (Burkina Faso CS para 45
and Senegal CS para 44) and are now being extended in these and other Sahelian countries. The treasurer of a FEFGA trained group visited in Senegal showed exceptional mastery of financial concepts. The profits from the initial business enterprise, a mill, had been plowed back into a village shop and poultry production.

Box 3.2 EDI’s Femmes et Formation en Gestion Appliquee (FEFGA) program or Women’s Management Training Outreach Program (WMTOP)

EDI has designed a program using pedagogic methods suitable for illiterate and semi-literate students. Training aids include role-plays, skits, exercises, videos, proverbs, case studies, and drawings. Some trainers have recorded cassettes with messages reinforcing the lessons learnt for the women to take back to their groups and villages. Four modules covering the management of human, and financial resources, microproject management (including project preparation), and marketing were developed following a needs analysis.

In a pilot phase, EDI trained 16 trainers from government agencies and NGOs in Burkina Faso and Senegal. They in turn have trained a total of 287 women leaders from 54 local women’s organizations. Follow-up visits to each group help group officials to implement what they have learnt and provide a learning experience for group members who are encouraged to attend. The average cost per student of over 55,000 F CFA will be substantially reduced when development is finished. The modules could be easily translated into other languages and modified for local conditions.

An evaluation in 1993 found “a marked improvement in the structure and activity level of the local women’s groups, as well as in the organization and efficiency of their meetings, elections, distribution of roles and responsibilities, and members’ ability to participate more actively in discussions.”

(Burkina Faso CS para 45 and Senegal CS para 44)

GENDER DIFFERENCES IN THE USE OF TECHNOLOGY AND INPUTS

3.37 In general, women use less modern technology and fewer improved inputs than men, as shown by women’s lower adoption rates of extension recommendations in Burkina Faso shows. In 1993/94, fewer women’s than men’s plots were sown in lines (9% and 27%, respectively), a technology which requires extra labor, and fewer had agroforestry and anti-erosion measures (7% for women and 13% for men in both cases) (Burkina Faso CS para 50). The T&V Evaluation did not disaggregate adoption rates by gender, but the categories of farmers with higher adoption rates - contact group-members and literate farmers, and larger farms - are those which other data show to contain very few women (Burkina Faso CS para 50). Women’s adoption rates are especially low for agricultural recommendations that require extra labor, or cash outlays, or when they need to make investments that are difficult given their lack of secure tenure. As previously seen, the lack of time limits women’s agricultural income (para 3.16). Women’s use of fertilizers and other inputs may be limited by physical, time and financial constraints (as already discussed) and by a lack of knowledge about the technologies (see Chapter 5, below). The lack of security of tenure may reduce the benefits women gain from using long acting inputs or technologies such as natural phosphate in Mali. (Mali CS para 59)

3.38 Cultivation in the Sahel is typically by hoe or, less frequently, by animal traction. The Gambia has the highest use of animal traction - over 90% of coarse grain and 95% of groundnut areas are seeded by animal traction - followed by Senegal where 67% of farming households own a plow (Gambia and Senegal CSs paras 49 and 8, respectively). Fewer women than men use animal traction. In Burkina Faso, for example, ENSA data record that 17% of women’s plots and 25% of men’s plots are animal cultivated. Unlike the other countries, women in Burkina Faso are not restricted by cultural
taboos from using or operating animal traction but they are restricted by access and financial constraints, and do not know how to care for or operate the animals or equipment. Thus, they tend not to perceive animal traction as a technology to use themselves. (Burkina Faso para 48) In Senegal, the SDA data of 10,000 households indicates a gender bias in ownership of agricultural equipment (Table 3.7). Ownership of plows for the crucial task of land preparation is 9.5% for female-headed and 36% for male-headed households. The EPCV survey in Mauritania showed gender differences in the purchase of fertilizers and pesticides (17% of male- and 11% of female-headed households) but little difference in either the ownership of equipment and tools or in the purchase of other inputs (Tables 3.7 and 3.8).

### Table 3.7 Mauritania and Senegal: Ownership of Tools and Equipment (percentage of male- and female-headed households)

<table>
<thead>
<tr>
<th>Gender of HH head</th>
<th>Mauritania</th>
<th>Senegal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Tractor</td>
<td>nd</td>
<td>nd</td>
</tr>
<tr>
<td>Plow</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Cart</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

Note: nd no data
Source: Mauritania EPCV I survey
Senegal: SDA data (Senegal 1992)

3.39 Such differences in the use of modern technologies and improved inputs between men and women are not always entirely due to gender bias. Rather, they may be inherent in the different activities of men and women. In The Gambia, for example, more fertilizers and seeds are used on coarse grains which are 97% grown by men, than on rice which is 95% grown by women. This difference can partly be explained by the small response to fertilizers of local swamp rice varieties under the salinity and poor water control regimes. Certainly throughout the Sahel, the use of animal traction is culturally a male preserve for reasons of strength and ownership of animals and equipment, but it is not suitable for all crops. Very little animal traction is used on swamp or bas-fond rice, for example, which are virtually exclusively women's crops. The heaviness of the soil precludes its use on these crops, in contrast to the high use on men's coarse grain crops. Improved seeds are generally unavailable for the specialized crops women grow (such as bambara nuts).

### Table 3.8 Mauritania: Crop Input Purchases by Male- and Female-Headed Households (percentage of farming households)

<table>
<thead>
<tr>
<th>Gender HH head</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample size</td>
<td>429</td>
<td>132</td>
</tr>
<tr>
<td>Fertilizer and pesticides</td>
<td>17</td>
<td>11</td>
</tr>
<tr>
<td>Irrigation water</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Fuel, spare parts</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Tractor, transport, storage</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Sacks, string</td>
<td>17</td>
<td>11</td>
</tr>
<tr>
<td>Labor</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: EPCV I
THE IMPLICATIONS FOR EXTENSION OF GENDER DIFFERENCES IN CONSTRAINTS AND LEVELS OF TECHNOLOGY

3.40 The way men and women are able to carry out their production activities is affected, directly or indirectly, by gender differences in access to markets and the means of production, and in the level of technology used. Gender differences in crop, livestock and other activities obviously create a demand for different extension subjects. Similarly, time and mobility constraints affect the timing and location of extension activities that will be accessible to women. In addition, gender differences in rights and obligations, social norms, access to the factors of production, and in farming objectives (including, for example, production for income or for consumption; minimizing labor requirements; or cash-flow needs) can result in men and women having, to some extent, different crop and livestock production systems. Different production systems give rise, in turn, to different demands for extension messages. Senoufo women in Sikasso, Mali, for example, need extension which takes account of two major production constraints: they fail to weed their rice plots in June and July because of conflicts with weeding communal fields 6 days a week and gathering karité which is an important source of revenue; and later the rice harvest on their personal fields coincides with them helping with the cotton harvest.

3.41 How well the extension departments of the agricultural ministries serve women farmers is the subject of the following chapter. Extension, research and other agricultural services can only address the needs of female clients when the gender differences discussed in this and the previous chapter are understood. Senegal has made an excellent start by collecting data on the operations and yield of 27 enterprises on 2152 exploitations: whether the operation was carried out, when and by whom. When the analysis is completed, differences between men’s and women’s cultural practices will be discernable.

THE RESEARCH AGENDA AND WOMEN FARMERS

3.42 Time did not permit an indepth review of the agenda of the Sahelian agricultural research establishments to the needs of women farmers. However, four aspects are recommended for further investigation. First, the crops and livestock under test: since the crops grown by women (such as various legumes, okra, roselle, swamp rice) are home consumed and do not appear in statistics, there is a danger that they are neglected by the research department. Virus of bitter tomato, for example, is widespread in The Gambia. Second, there is the question of the suitability for the resources and objectives of women of the crop and livestock cultural practices under test and evaluation. Time, women’s main constraint, is a more pertinent criteria for evaluation than the more usual area of land. Women are very interested in the production of short-cycle livestock using resources available in the village. Third, women’s transformation and other income-generating activities are often ignored by research departments. These activities are generally inefficient in their use of scarce resources such as water, fuel and time. Labor-saving devices are available worldwide, but need collecting, evaluating and disseminating in local areas. The fourth aspect is the economics and marketing of crop and livestock production and other activities.

3.43 The attention given to the needs of women farmers in the research agenda varies widely in the Sahelian countries. On the crop production side, Mali is outstanding in the attention paid to women farmers by the farming systems branch (DRSPR) of the research department. In an initiative under the Mali Agricultural Research Project (Cr 2557-ML, 1994) to build a partnership between farmers’ organizations and research, the local working groups of farmers will include at least one woman. These groups will help decide the research agenda, evaluate results, and decide which results to disseminate. The Gambia, Mali and Senegal have food technology units in the agricultural ministries, and all countries have NGOs which work in this field. In The Gambia, uncertainties over funding partly explains the weakness of the Food and Nutrition Unit and the decision in the Agricultural Engineering Unit to stop the interesting work it was doing on tools and equipment for women farmers.
CHAPTER 4: AGRICULTURAL EXTENSION AND WOMEN FARMERS
IN THE SAHEL

Summary The rational target for extension is the person who is able and has the incentive
to make the desired change. Local variations are too great to give meaningful targets for female
participants in crop and livestock extension, but the targets should at least be proportional to the
percentage of female-headed households or to women as producers of the individual crops and
livestock. Women should comprise over 50% of functional literacy students and over 80% of
trainees in income-generating activities.

Women presently comprise 15% to 20% of extension participants in Burkina Faso, Mali
and Senegal, and are over 60% in the Gambia. In Mauritania, extension reaches only 5% of
female- and 15% of male-headed households. The dramatic increase in The Gambia (up from
5% of contact farmers in 1989) is due in large part to the stimulus of the WID Project. The
50% increase in 2 years in Mali is due to a move from chefs d'exploitation to active farmer, and
a remarkable increase in mixed contact groups.

Many ethnic groups discourage contact between male agents and female farmers. But
there are few female extension agents. Women comprise under 5% of ministry field staff in
Mali, Mauritania and Senegal, and 11% of crop agents in Burkina Faso. In The Gambia, 33%
of livestock but only 7% of crop agents are female. Except in Burkina where female graduates
coordinate women's activities in all 12 regions, very few women are at higher grades.
Moreover, given present female enrollment rates in agricultural education, the prospects for
increasing female staff are bleak without special initiatives. Male agents need training in
culturally acceptable ways of approaching and executing extension with rural women.

Women require extension in the following subjects: specific commodities or activities of
importance to women, such as swamp rice and short-term livestock; tasks that women perform
and that require skills training, such as transplanting; and managerial skills for group
diversification activities. No country has a quantitative breakdown of extension by subject and
gender, but themes concentrate on production technologies and ignore the main problems of
women: time and marketing the products of diversification activities.

4.1 This chapter examines the importance of effective targeting of extension and the
appropriate level of extension for women. It then examines the actual level of women's participation in
agricultural extension in the Sahel and the relevance of the subjects and messages. The need for female
agents and their supply and training is also discussed.

4.2 Obtaining gender-disaggregated data on extension staff and clients was very difficult. The
almost complete lack of centrally kept data of staff by gender was compounded by the many structures
involved in public sector extension. In some cases, the numbers of staff were obtained by checking lists
for women's names, or by asking staff to remember (or guess) the figures for their region of structure.
In most countries, clients were disaggregated by gender of the group (Mauritania did not even have that
data), but not by gender of individual group members or participants. Only The Gambia could provide
details of participation by subject or extension activity. These problems highlighted the lack of gender-
disaggregated Monitoring and Evaluation data, without which it is impossible to analyze demand and
supply by subject or by region, or to identify measures to alleviate gender-specific barriers.
THE NEED TO TARGET EXTENSION EFFECTIVELY

4.3 The two questions are who to target and what to target. Countries must chose the most effective targets for agricultural extension among the farming population. Extension in the past targeted chefs d'exploitation and largely excluded women even in areas where they formed a sizeable proportion of household heads. The rational target in terms of an efficient use of resources should be the person who is able and has the incentive to make the desired change. Whether this is the decision-maker or the person who performs the task depends on the activity and the message. For fertilizer applications, for example, messages concerned with deciding to apply fertilizer should target the person who will decide whether or not fertilizer will be applied, but messages on the placement of fertilizer need to target the person who will apply the fertilizer. Forward planning of extension meetings would be necessary to decide at each meeting the most suitable attendant for the next session. A disadvantage would be the loss in group dynamics and continuity of not having the same participants at all activities.

4.4 The direct participation of women in extension is important because women traditionally receive information third or fourth hand. External information goes, in turn, through the male head of the village, to the male heads of the grandes familles, to household heads, to the first wife and finally to other wives. Husbands tend not to pass extension information on to their wives. In a Mali survey where none of the women was in contact with an extension agent, only 18% gave their husband as their main source of information (Mali CS para 77 and Table X). Two sources in Burkina Faso found that only 1% of women surveyed received information from their husbands. On group met in Burkina said they had difficulty understanding their husband's accounts of extension messages and learnt more from the agent in group meetings and even more after group meetings when individuals meet with the extension agent (Activité de Suivi et de Visite des Exploitations (ASVE)). (Burkina Faso CS para 71)

4.5 Many extension staff in the Sahelian countries argue that women do not need the traditional extension services on crops and livestock because they are not the main decision-makers in farm families. Some wives met on the field trips were content to leave the responsibility and extension activities for food production to men. They expressed more interest in extension activities for their group and individual activities: areas where they are responsible and draw personal benefits. But this was not the view of the majority. Crop and livestock extension was cited as the main extension need of women’s groups in Senegal (Senegal CS Table XX) with functional literacy training as second. There are also social and economic justifications. The produce and income from women’s crop and livestock production are important as they supplement household food, contribute proportionately more to household welfare than men’s income, and are essential for the wellbeing of the sub-units in a polygamous society. Female heads of households, who are completely responsible for all agricultural production, are particularly in need of agricultural extension. Econometric simulations on Kenyan data (Saito et al 1994) found that when women were given equal access to resources, they use them more efficiently than men.

4.6 As a broad generalization, it is suggested that women should comprise at least 80% of participants in extension activities on income-generation and diversification subjects, and over 50% of functional literacy students because of their lower starting base. The variations are too great for meaningful national target figures to be given for extension activities for women on crops and livestock, but the targets should be roughly proportionate to the percentage of female-headed households or to women as producers of the crop or livestock in question with the proviso that the women themselves should decide their priorities. Naturally, any national targets should be adjusted to local conditions such as where a sizeable proportion of the households are headed by women (for example, in parts of
Mauritania and Senegal), in areas of high male migration where women are de facto heads, or when crops or livestock are markedly specific to women. In The Gambia, for example, virtually all rice extension should target women and the targeting of extension on groundnuts should be in proportion to the gender growing the crop in that locality. Women should receive extension on milking and should also be involved in pasture, herding, and nutrition extension because of their intimate knowledge derived from the effects on milk yield.

WOMEN FARMERS' PARTICIPATION IN EXTENSION ACTIVITIES

The Level of Women Farmers’ Participation

4.7 Women’s participation in extension activities can be estimated from sample surveys or measured as percentages of the actual participants in the various activities, of contact farmers, of contact group members, or contact group leaders. Unlike Mauritania and Senegal, Burkina Faso, The Gambia and Mali have started routine data collection that allows women’s participation to be monitored annually. Gambia’s data are broken down into individual extension activities: no overall estimate is provided and not all activities are reported each year.

4.8 In Burkina Faso, Mali and Senegal, between 15% and 20% of the participants in extension activities are women (Table 4.1). In The Gambia, participation in 1992/93 ranged from 44% for microplot demonstrations to 77% for village based training. A similar estimate is not available for Mauritania where the ministry could not (and did not consider it an exercise worth doing) provide any estimate of the relative numbers or membership of the men’s and women’s groups used for extension. However, Mauritania’s EPCV survey shows that three times as many male-headed as female-headed households (15% to 5%, respectively) were in contact with extension. The Burkina Faso figures show a commendable four-fold increase from under 5% in the mid 1980s. The 50% increase in female participants in 2 years in Mali is due to a move from contact groups of chefs d’exploitation to contact groups of active farmers and a remarkable increase in the number of mixed and female groups. Only one mixed group was planned in 1992/93 but 1,167 were realized. (Mali CS para 74) No estimates are possible of the trends or speed of change in Mauritania or Senegal.

4.9 The most dramatic increase in female participation has been in The Gambia. The impetus has been the WID project’s ability to “purchase” a focus on women farmers. As noted in the previous chapter, in 1989 women comprised only 5% of contact farmers and 29% of participants in farmer-based training, while by 1991 women’s share had increased to 68% and 75%\(^\text{12}\), respectively. In addition, women are the main beneficiaries of the work of the Food and Nutrition Unit, the Horticultural Unit, and the Soil and Water Management Unit of the Ministry of Agriculture. The livestock extension service has a policy of at least 30% women in all contact groups, targets women’s activities, and has a very effective strategy for promoting livestock production among women. Regional and National Livestock Shows have concentrated on small ruminants and include sales for the tabaski feast which have increased from 700 animals in 1991 to 5,000 in 1993. Participants at the first fair in May 1991 were mainly men, but assistance with travel expenses (now phased out) was later restricted to a man and a woman per household. The fair has diversified into other agricultural activities and involves organizations such as NGOs, private firms, and other ministries such as Health. (Gambia CS paras 71, 74 and 75)

\(^{12}\) While not wanting to detract from this spectacular improvement, it should be pointed out that the 1989 and 1991 figures are not completely comparable. The 1989 baseline figure is based on contact farmer and perhaps underestimated women farmer’s contact with extension services at that time. The increase has undoubtedly been accompanied by some decrease in intensity of contact due to the change from one on one contact used with predominantly male farmers in 1989 to contact with larger groups of women in 1991. (Gambia CS para 71)
Table 4.1 The Level of Women Farmers’ Participation in Extension Activities (1993)  
(women as percentage of total)

<table>
<thead>
<tr>
<th></th>
<th>Burkina Faso</th>
<th>Gambia</th>
<th>Mali</th>
<th>Mauritania</th>
<th>Senegal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants in extension activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- crop</td>
<td>20</td>
<td>1</td>
<td>na</td>
<td>na</td>
<td>15</td>
</tr>
<tr>
<td>- livestock</td>
<td>21</td>
<td>1 - 60</td>
<td>na</td>
<td>na</td>
<td>15</td>
</tr>
<tr>
<td>Members of contact groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- crop</td>
<td>na</td>
<td>10</td>
<td>na</td>
<td>na</td>
<td>15</td>
</tr>
<tr>
<td>- livestock</td>
<td>30</td>
<td>17</td>
<td>15</td>
<td>5</td>
<td>na</td>
</tr>
<tr>
<td>Households in contact with extension services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- male-headed</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>15</td>
<td>na</td>
</tr>
<tr>
<td>- female-headed</td>
<td>12%</td>
<td>1200%</td>
<td>50%</td>
<td>2 yrs</td>
<td></td>
</tr>
<tr>
<td>Percentage increase</td>
<td>1 year</td>
<td>5 years</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: na data not available  
1 target percentage  
2 comparing women as contact farmers to women as extension group members

Constraints to Women’s Participation

4.10 All the countries studied cited three main constraints to women’s participation: the attitude of husbands and the community to women, the availability of women’s time, and the attitude of the extension services. Nearly every regional report at Senegal’s May 1993 workshop mentioned women’s low status and subservience to their husbands. SODEVA’s report from Thies Region in Senegal stated that the time spent on domestic activities prevent most women from participating effectively and efficiently in extension activities even when a real need for extension was expressed by women in a preliminary survey. (Senegal CS para 75).

Types of Groups and their Suitability for Extension

4.11 Women’s membership of village organizations significantly affects their participation in development activities, as both the state and donors generally intervene for women through groups. The advantages of using groups - the low unit cost, the numbers who can be reached, the cooperative learning, and reduced constraints in meeting male agents - are well known but there are also some disadvantages. First, women’s traditional groups are typically organized for social and cultural reasons rather than for production or income. Second, except for vegetable production, women’s group activities are organized to benefit the group as a whole rather than to individual members. Individual earn their cash income from crop production on personal fields, personal livestock raising, and petty trading. When extension concentrates on women’s traditional groups, philosophical difficulties arise with extension methodologies which emphasize individual interests. Third, traditional women’s groups are large whereas T&V contact groups are much smaller. These differences between traditional and T&V groups were discussed at length during the 1993 Senegal workshop (Senegal CS paras 79 - 82, see also Burkina Faso CS para 70 and Gambia CS para 72) and are summarized in Box 4.1. The workshop discussion concluded that it was preferable to provide extension to subgroups of women’s groups organized around productive activities than to establish artificial extension contact groups for women. The mid-term review
of Senegal’s extension project recommended appointing specialists in *organisations paysannes* to help deal with some of these questions (Senegal CS para 83).

### Box 4.1 Characteristics of Traditional Women’s Groups and Groupement Promotion Feminin (GPF), and T&V Contact Groups (CG) and their Suitability for Agricultural Extension Activities

<table>
<thead>
<tr>
<th></th>
<th>Traditional and GPF groups</th>
<th>T&amp;V Contact Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective</td>
<td>Social and cultural benefits. Safety net for bad times.</td>
<td>Increasing production or income is major aim</td>
</tr>
<tr>
<td>Philosophy</td>
<td>Group or communal interest paramount. Collective work and income does not always ensure good execution of recommendations and does not allow individuals to apply recommendations correctly. So:</td>
<td>Individual interests, work and production. Fewer problems with CG of autonomous women except that their lack of equipment or means to buy inputs may limit their adoption and financial benefit they can gain from technical knowledge. Linkage with Groupement d’Interet Economique-type organizations is only chance of obtaining needed inputs</td>
</tr>
<tr>
<td></td>
<td>- must ensure that groups understand the objectives of extension and the importance of having individual parcels of land</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- designate individual members to be completely responsible for demos and parcelles d’adoption</td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>50 to 300 members</td>
<td>About 10 members</td>
</tr>
</tbody>
</table>

4.12 The question of single sex or mixed groups has to be decided locally depending on the subject of extension activities and the socio-cultural norms of the area. A woman may be more comfortable talking in front of men if she is regarded as a spokesperson for all the women rather than a woman in her own right.

### THE GENDER OF EXTENSION AGENTS

#### The Need for Female Extension Agents

4.13 The need to have female extension staff varies widely. Each country in the Sahel has ethnic groups which tolerate contact between male agents and women farmers, but there are other groups or villages which discourage or forbid such contact (Mali CS para 72). Seventeen percent of women’s groups surveyed in *Burkina Faso* for this study reported restrictions on their meeting with male agents (Burkina Faso CS para 75). Socio-cultural factors are less of a hinderance to male extension agents working with female farmers in *The Gambia* than in most other Sahel countries, as is shown by the effectiveness of the action already taken by the agricultural department to increase women’s contact with the extension service. Cultural restrictions can be alleviated by identifying and teaching male staff the most sensitive method of approaching the problem. Some CRPAs in *Burkina Faso* have found that approaching women farmers through the men of the village is the best tactic. Sensitivity training of male agents is already being carried out in *Mauritania* and *Burkina Faso* and should be extended within these countries and to other countries. Another strategy that has been successfully used in Cameroon and Nigeria is using female agents to introduce male agents to women’s extension groups.

4.14 Another reason for increasing numbers of female agents, and for closely monitoring extension for women, is that women farmers may find that their only contact with extension services is
through a very small number of female agents. There is, for example, evidence that regions in Senegal without any female agents have higher participation by female farmers in extension activities than do regions with the one or two female agents. Where there are a few female agents, female farmers tend only to receive visits from female agents and thus have less access to extension than in the regions where male agents do visit female farmers because there are no female agents. In addition, there was evidence during the March 1994 mission to Senegal that the very few female agents concentrated on transformation and did not provide production advice.

Numbers of Female Extension Agents

4.15 With the exception of livestock agents in The Gambia, very few women hold technical positions in agricultural ministries of the five countries at field level (Table 4.2) or at higher grades. Five percent or less of field staff are women in Mali, Mauritania and Senegal. The situation is better in the crop department in Burkina Faso (11% women), the non-ministry agencies affiliated with PNVA in Senegal (14%) and, particularly, in the livestock department in The Gambia (33% of extension agents, and a half of livestock superintendents are women). These agricultural field staff are augmented by animatrices or extension auxiliaries in Burkina Faso, by Monitrice Rurales in other ministries in Senegal, and by Monitrices Sociales in Mauritania. The work of Senegal's Monitrices Rurales with women's groups is very polyvalent and includes some agricultural extension. Very few women are employed as SMSs (1 each in DIREL in Senegal and Office Riz Mopti, Mali). None of the three women with experience and in-service training in promoting rural women in Mauritania's MDRE in 1992 had formal training in agriculture (2 are Monitrices Sociales and one a law graduate) and none were permanent staff of the ministry of agriculture. Only one was still working in MDRE by March 1995.

4.16 The number of women at higher levels vary widely; most often they are in administrative positions (for example the Director of Administration and Finance in Mauritania) or in research and laboratories. Mauritania has no senior women with technical qualifications, and, in fact, no one knew of a woman with an agriculturally-related degree. Senegal's livestock department (DIREL) has a female SMS, a recently appointed female coordinator of women's programs, and 5 female veterinarians. Other technically qualified women are in other departments of the ministry and in other agricultural agencies. Most departments of Mali's MDRE have a women's section headed by a female Ingenieur Agronome or equivalent and several women with technical degrees work in MDRE. The Gambia has four women with degrees (2 animal science and one each on food technology and agricultural economics) in the

---

13 Although it had been requested in advance, none of the countries had accurate data available on the numbers of female staff at each grade either in the ministry or in other agencies. There were no central gender-disaggregated records and obtaining the data was complicated by the number of departments or agencies involved (nearly 50 in Mali, for example). The figures given are based on extracting women's names from staff lists, or by asking ministry officials to estimate or count the numbers from memory. The data should be regarded as indicative rather than exact numbers.

14 This Mali data was obtained on the first visit in October 1993. Data from October 1994 shows a large discrepancy in the gender of staff between the PNVA project structure and the ministry, MDRE. In PNVA, only 0.6% of all staff and also of AVBs were women. In MDRE (but excluding CMDT for which gender-disaggregated data was not supplied), 11% of C level staff (moniteurs), 0.9% of B level (techniciens) and 6% of A level (ingenieurs) staff were women. The high numbers at the lowest grade may include support staff. Women are virtually absent from the middle grade. None of the 20 Specialists in Organisations Paysannes recruited in late 1994 were women although they were charged with mobilizing groups including women's groups.
ministry and those currently being trained are food technologists or horticulturists and not agronomists. The female coordinator of the agricultural subcomponent of the WID project has recently left to pursue a Masters degree and has been replaced by a man. **Burkina Faso** has the best higher level coverage with a female graduate in all 12 CRPAs.

### Table 4.2 Agricultural Ministry Field Staff by Gender 1993

(percentage of staff who are female)

<table>
<thead>
<tr>
<th>Field staff</th>
<th>Burkina Faso</th>
<th>Gambia</th>
<th>Mali</th>
<th>Mauritania</th>
<th>Senegal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural ministry</td>
<td>11</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Agriculture</td>
<td>6</td>
<td>33</td>
<td>5</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

4.17 The freeze on recruitment and the low numbers under training restrict the possibility of increasing the proportion of female agents in the future. However, in **The Gambia**, recruitment in October 1993 doubled the proportion female crop village extension agents from 4% (2 of 50) to 7% (six of 82) although none are employed at supervisory, subject matter specialist or divisional coordinator levels.

#### Constraints to Recruitment and Employment of Female Agents

4.18 Very few women apply for posts in the extension service for three main reasons. **First**, very few have the required agricultural training; **second**, except in Burkina Faso, they are reluctant to ride motorbikes or mobylettes due to culture, security and health during pregnancy; and **third**, they are reluctant to be posted to villages away from parents or husbands. The social constraints are less for senior staff in research or head-quarters-based specialized units. Since few women have field experience, virtually none are in supervisory positions. In general, NGOs employ and retain more female agents than the civil service probably because of better conditions of service such as higher pay, rent allowances and motorbikes. **The Gambia**'s livestock service, unlike the crop extension service, has demonstrated that female agents can be recruited and retained by making their jobs and conditions of service acceptable to them. The female livestock extension agents are based in towns and travel out to villages to give extension on small ruminants and poultry. They also do office-based monitoring, conceptualization and laboratory work.

4.19 Should affirmative action be used to encourage the employment of female extension agents? This is a hotly debated question, especially in **The Gambia**. Female staff in The Gambia's crop department argue that it is the only strategy to increase numbers; male staff think it will produce jealousy problems with male staff, although no such problems were mentioned by the Director of Livestock Services where such affirmative action has been taken. The WID project made no attempt to increase the proportion of female crop extension agents, but the Agricultural Services Project intends to increase the number of female students and VEWs, and "DAS and DLS would endeavor to fill vacancies by female professionals whenever feasible" (Project SAR). A condition of the Natural Resource Management (NRM) Project in **Mali** is the recruitment of 25 women out of 50 new agents. This has
proven difficult. The profile of the job favors male applicants who have more experience in rural areas, are more willing to travel long distances on a motor-bike, are more available during their 25 to 45-year age range (a project requirement and a time when women are most occupied with families), and are willing to make a 5-year commitment. Since no woman was selected in direct competition with men, the project has now decided to recruit men and women in a separate selection process. In Burkina Faso, when the husband of a married couple in public service is moved, the wife is found a job in the new area if she requests one.

4.20 Two groups visited in Senegal specifically requested that one or more members selected by their group or village should be trained in their activities and should act as relais-formatrices to teach the other members. Training would be from \( \frac{1}{2} \) day to 2 weeks depending on the complexity of the subject. The livestock extension service is already using this strategy to train paravets and the Basse Casamance project use it to supplement basic training which an agent gives. (Senegal CS Box 4) Burkina Faso's policy of using "para-extension agents" is rarely practiced except for rice extension on some rice schemes in Comoe and, in common with several countries, in functional literacy training. (Burkina Faso CS para 63, Mali CS para 83, Senegal para 86)

Training of Female Agricultural Specialists and Agents

4.21 Recruitment of more female staff depends, inter alia, on a supply of qualified women from agricultural educational institutions. In all five countries, female students are a minority in agriculturally-related courses at all levels (Table 4.3). Overall, about 15% of agricultural students are female. Because of the numbers and different types of institutions involved, exact figures were not readily available. Even the FAO/CP-executed study for the World Bank on agricultural education in the Sahel did not obtain numbers by gender. The main reasons for the low female enrollment are the lower educational levels of girls in general and the socio-cultural problems they face as students and in employment. The relatively high number of livestock students in The Gambia - nearly a quarter - probably reflects the better conditions of employment for women in the livestock department in that country (para 4.18). Strategies being considered by The Gambia increase female enrollment in agricultural courses include scholarships, lower entry requirements and remedial teaching, and a recruitment drive at secondary schools. In Senegal, more women are degree level students in agriculture (16%) than are Subject Matter Specialists (SMS) or Agent de Vulgarisation de Base (AVB) level students (8% and 7% respectively).

4.22 A review of agricultural education in the Sahel (World Bank 1993b) found an oversupply of students, particularly at higher levels, compared to the demand by extension services and other state agricultural institutions who are the major employers of agricultural graduates. Even though some countries have decreased their intake, projections are for an oversupply in the medium term of medium and higher level trainees (Table 5.4). Mali will have the largest oversupply and Senegal will be short of field level staff. This oversupply and the freeze on civil service recruitment in most countries prevents any increase in the numbers of female staff in the foreseeable future except under short-term contracts for projects.

4.23 The number of female agents is unlikely to increase greatly in any Sahelian country in the near future because of these cultural and recruitment constraints. Therefore the maximum use must be made of the current profile of agents. Three strategies are to make the maximum use of female agents or of male agents or to train female "para-extension agents" such as rural female agents who are already working with women's groups or "relais formatrices" selected by women's groups (Box 4.2).
Table 4.3 Female Students in Agricultural Education 1993
(% female students)

<table>
<thead>
<tr>
<th></th>
<th>Burkina Faso</th>
<th>Gambia</th>
<th>Mali</th>
<th>Mauritania</th>
<th>Senegal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moniteur training</td>
<td>na</td>
<td>12</td>
<td>25</td>
<td>} 19</td>
<td>} 7</td>
</tr>
<tr>
<td>Crop</td>
<td>na</td>
<td>23</td>
<td>33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Livestock</td>
<td>na</td>
<td>na</td>
<td>13</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Technicien training</td>
<td>na</td>
<td>na</td>
<td>9</td>
<td>n/a</td>
<td>na</td>
</tr>
<tr>
<td>Ingenieur training</td>
<td>na</td>
<td>na</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: na not available
n/a not applicable

Table 4.4 Projections of Medium-term Balance between Demand and Supply of Agricultural Trainees

<table>
<thead>
<tr>
<th>Level</th>
<th>Burkina Faso</th>
<th>Mali</th>
<th>Senegal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadres supérieur (ingénieur, etc)</td>
<td>+50</td>
<td>+50</td>
<td>+50</td>
</tr>
<tr>
<td>Techniciens supérieurs (TS, SMS)</td>
<td>+70</td>
<td>+195</td>
<td>+70</td>
</tr>
<tr>
<td>Techniciens moyens (agent technique, EA)</td>
<td>=</td>
<td>+105</td>
<td>-40</td>
</tr>
</tbody>
</table>

Source: AF5AG 1993

WOMEN'S PARTICIPATION BY EXTENSION SUBJECTS, THEMES AND ACTIVITIES

What Extension Advice is Needed by Women Farmers

4.24 The analysis of women's activities and constraints in the five countries indicates that agricultural extension services should make special efforts to provide extension to women in the following areas:

- specific commodities or activities where women are dominant or significant, for example:
  - rural vegetable production (throughout the Sahel, though somewhat less in Burkina Faso)
  - swamp and bas-fond rice (in The Gambia and elsewhere in the Sahel)
  - fattening of small ruminants and poultry keeping
  - transformation of crop, livestock and gathered produce
  - other diversification activities such as marketing, petty trading, artisanal activities, running mills and cereal banks
  - condiments, gumbo and voandzou (pois de terre) in private fields or near the compound
Box 4.2 Strategies to maximize use of female and male agents for agricultural extension with women farmers

- Maximize use of female agents
  - up-grade and use them as TS (SMS) to train male agents in gender-specific activities and in gender-sensitive ways to provide extension to women in the rural community. Include measures to give them experience and knowledge at village level.
  - increase their mobility: promote women's use of "ladies bikes" as in Nigeria, or provide lessons in riding motor bikes.
  - use them as facilitators to introduce women's groups to extension and to male agents.

- Increase use of male EAs.
  - sensitize them to gender issues
  - train them in activities carried out by women
  - give them targets of numbers of female CG or proportion of women in total clients.

- Use para-extension agents
  - retrain (recyclage) female rural agents from other ministries in crop and livestock and agriculturally-related activities. Although they would probably remain with their current ministries (Interior, Community Development and Women, Children and the Family) or agencies, they should be included in monthly technical review meetings. The scheme should be voluntary as they are not ministry of agriculture staff and some may not be interested in working more on agricultural subjects. They should return to their villages.
  - train a group member as a "relais formatrices". She would receive technical training in the group's activities (or alternatively a number of members given training in different activities). Modules could be from 1/2 day to 2 weeks depending on the complexity. Two groups visited during the mission to Senegal specifically requested this strategy and were willing to select a suitable woman. A similar strategy is already used in the livestock extension service (as paravets), and by DERBAC for functional literacy and technical messages. DERBAC uses the strategy to supplement basic training which an agent gives the GIE in the village. Old ideas are reinforced in 1/2 day training while new ideas are taught in 1-2 day sessions. Most "relais" they use are literate in French. They know the needs and opportunities of the village.

Within such technical training:
- priority should go to commodities for home consumption or which have an assured market
- where the market demand is uncertain, the emphasis should be on
  - marketing strategies (such as improving quality, seeking out markets, linking with retailers or consumers)
  - conservation or alternative uses (integration of vegetables and livestock)
  - production messages that will reduce production costs or the use of a scarce resource (for example, efficient water use in vegetable production)
- tasks that women perform and that require skills training (although men may be responsible for the commodity). For example: thinning, transplanting, harvesting

- non-technical skills that women require to improve their diversification activities, for example:
  - literacy and numeracy
  - organizational, management, financial, planning, and marketing training to improve profitability
  - feasibility assessments, preparing project proposals, accessing credit options
The household economy is a combination of farm, off-farm and domestic activities of all household members. Women’s domestic and diversification activities are often as important as their agricultural activities in the social and economic wellbeing of rural households, and, indeed, many add value to agricultural production. This is one justification of the use of publicly-funded agricultural services to help women farmers with their activities that are outside pure agriculture or extension. Another is that women will not be able to utilize extension advice until constraints such as lack of time, credit, appropriate technology and functional literacy are addressed. Extension services in the Sahel already train women in quasi-agricultural activities (such as soap-making and tie-dyeing). They should be expanded to cover the broad range of activities needed to support agricultural production and income generation. These include management training; facilitating access to credit, inputs, and tools and equipment; measures to facilitate access to water and fuel; and help with establishing village boutiques, cereal banks and grain mills. It is not suggested that the extension service provide all these services but that the service should act as a source of information to help women start an activity themselves or tap into the resources of other agencies. A list of the resources and their sources could be developed if the extension service (in the person of a coordinator of women’s activities) liaised and collaborated at local level with extension and NGOs, other agencies and projects.

Women’s Participation by Subject Matter

None of the countries studied could provide a quantitative breakdown of the subject matter of extension by the gender of the participants. Vegetable production (and to, a lesser extent, diversification activities) appears to be the main focus of extension to women farmers in all five countries. In Mauritania, for example, women’s groups receive extension advice on vegetable production but not on field crops, despite over 20% of farm households being headed by women, nor on small ruminants, despite women being responsible for élevage de case. The Gambia WID project concentrates extension to women’s kafou groups on horticulture and small livestock to the partial neglect of field crops, particularly swamp rice, and women’s activities on their personal fields and on the family/compound fields. The concentration on vegetables in Senegal (27% of DA’s demonstrations and 21% overall) is commendable. The overall impression is that relatively little of the extension on field crops reaches women. While this neglect is understandable from the rationale of the area which women control, it ignores the economic value of this production in supplementing food production by men, particularly during the hungry season, and in contributing to household income.

The Agricultural Service Projects in the Sahel have functional literacy components. In Mali, the only country to produce data, 25% of students and 7% of the instructors are women (Mali 1994). There is no indication that the situation is better in the other countries. This data shows that IDA-funded components are widening the gender gap in countries where women’s literacy rates are well below men’s (paras 3.29 and 3.30 above). The lack of gender-disaggregated data and concern is highly regrettable given the proven positive benefits of female education (World Bank 1991). SODEFITEX in Senegal, for example, use their EAs in the off-season as the functional literacy teachers. The villagers provide the building and benches and SODEFITEX provides the teaching materials which have been jointly produced with the Ministry of Education. Courses are held 4 hours per day, 3 days per week, initially for 2 years and recently for 1 year. Producer groups that have enough literate members are encouraged to take on economic activities for which they are remunerated. MA is using a modified SODEFITEX model. As not all extension agents are literate in the local language, relais formateurs selected from groups will be trained to hold the basic functional literacy courses with their groups. (Senegal CS para 86 and Box 9) In Mali, the initial basic training is under the functional literacy
The Relevance of the Messages for Women

4.28 As previously discussed, women in all five countries have a wide range of activities and constraints and, therefore, the advice and information they need will vary accordingly. An assumption is often made that the messages and methods of extension to men and women should be identical. Little or no account is paid to the effect of women’s lower status, limited access to resources, and fewer decision-making powers on their production systems. If women are unable to sow or weed on time or to apply fertilizers according to the "itinéraire technique", then the varieties and cultural practices that should be recommended to them may differ from those suitable for men.

4.29 In general, agricultural extension messages in these Sahelian countries are routine and global; they are not tailored to the varying needs of the different population groups and do not reflect the integrated nature of the farming system. Reports to Senegal’s May 1993 workshop by extension staff, for example, admitted that extension in the perimeter at l’Ile de Morphil rarely takes account of women’s priorities. (Senegal CS para 85) Moreover, themes concentrate on production technologies although, certainly in the case of women and vegetables, marketing the output is the main problem. The lack of female staff with agricultural and field experience in The Gambia impedes a check on the relevance of extension messages for the production conditions and objectives of women farmers. The impact points selected by extension officials are not necessarily what women farmers want to know or what will make the most impact.

4.30 A prerequisite of relevant messages is the diagnosis of the constraints and needs of women farmers, the feedback of those needs to the research service, and the generation or identification of themes and messages that respond to those needs. Research-Extension-Farmer linkages are generally poor and gender adds another layer of difficulty particularly when agents are not sensitive to the issues. The diagnosis should cover all the categories of farmers and all the production systems of the village; the choice of person or people to be questioned is crucial. Even when women do find the time to attend (or are allowed to do so by husbands) diagnostic meetings or interviews, they are culturally hindered from expressing their views in mixed meetings. The quality of the diagnosis, thus, is limited and the priority problems of the producers of lower status (women, young, lower caste) are overlooked. The tendency of extension staff to ignore women is illustrated by the Senegal workshop on women's access to extension. Even after discussing the problem, the recommendations for a good diagnosis did not contain elements to ensure that women’s needs were included (Senegal CS para 87). In addition, the priority problems of women farmers - provision of inputs and credit, and marketing - are not addressed by the extension services.

4.31 In an attempt to improve feedback, the National Committee for the Coordination of Rural Organizations in Senegal is examining a proposal that each family contribute FCFA300 into an account to enable them to participate in the decision-making process about agricultural services, especially on technology development.

4.32 The input of gender issues into up-stream policy-making is equally important. Senegal’s Gender Resources Awareness for National Development (GRAND) linear programming model included 10 equations representing resource and cultural constraints and 25 variables representing household activities. By illustrating the negative economic impact of policies and strategies that neglect the key role
played by women in the development process, this type of study can provide a forceful argument to justify social change. The results showed that vegetable production should be promoted (accompanied by training and extension) in the Basse Casamance, and that credit would enable women to adopt new groundnut technologies in the groundnut basin. In the middle valley, labor-saving devices would make life easier for women but, given the limited income-earning opportunities in that area, increases in women's income could only be at the expense of men's income. (Senegal CS para 89)

WOMEN FARMERS AND THE MEDIA

4.33 A suitable delivery system will include both the face-to-face extension activities discussed above and the media. Unless care is taken, women can find it difficult or impossible to access the various types of mass media. Written material, even if in the vernacular, is unaccessible to the 90% of rural women who are illiterate. In Mauritania, for example, a poster for the campaign to promote vegetable consumption, clearly targeted at women, was in French and the message was not immediately obvious visually.

4.34 Theoretically, the radio holds great potential. In Mali, for example, national radio covers most of the populated areas. However, under half of rural households (48%) own a receiver and a small survey showed that agricultural programs had lower listenership than the extension service expected. The main problem was the program's remoteness from reality: the listeners had difficulty understanding the message and preferred to talk directly to an extension agent. Women face more barriers than men in obtaining agricultural information from the radio: they have problems with the language, since fewer women than men speak anything other than their local language; they have less access to a radio, since radios belong to men who often carry the radios with them or forbid wives to listen when leaving the radio at home; and the time of transmission may not coincide with women's time at home. In the Mali data collection, only 12% of women, compared to 35% of men, listened to the agricultural program regularly or often. Men are said to be more willing to let their wives listen to a newly started solar-powered radio station which is using a female presenter for its women's programs. (Mali CS para 82) The Gambia is pursuing an innovative approach to avoid the studio-bound dullness noted in a review of Burkina Faso's agricultural broadcasts, radio and video programs are recorded in villages with farmers as actors (Gambia CS para 77)

4.35 The Gambia has a particularly good Agricultural Communications Unit (ACU) that produces a wide variety of media. Except for radio broadcasts, the output has concentrated almost exclusively on women since the WID project has financially supported the ACU. ACU is producing manuals, videos and posters on women's horticultural, field crops and livestock. To make the messages more accessible to women, a competition has been run with village groups portraying extension messages through the medium of local drama and songs. (Gambia CS paras 77 and 78)

RURAL WOMEN'S PARTICIPATION IN NATURAL RESOURCE MANAGEMENT PROJECTS

4.36 Women's traditional lack of participation in community decision-making is an obstacle to the elaboration of community development or action plans, especially for Natural Resource Management, that will answer the needs of the whole community. The Natural Resource Management projects in the region have addressed this problem using different strategies. The Burkina Faso project works on the principle that gentle persuasion is more effective and sustainable than hard and fast rules. The SAR (Cr 2229 BF, 1991) makes only passing reference to women and does not suggest that they should be
represented on the Terroir Management Committees. All but 1 or 2 of the multidisciplinary technical teams had female members and the village Rapid Rural Appraisals have been conducted with three population groups - men, women and youths. The diagnostic stage, therefore includes input on the needs of the women. There is no indication yet of whose needs will have precedence and how much the needs of women will be translated into actions when the village plans are implemented. (Burkina Faso CS para 86)

4.37 The Mali project (Cr 2370-MLI, 1992), on the other hand, imposed strong affirmative actions in the gender of agents (see para 4.19), consultancies, and in the procedures as laid out in the manual. Gender actions or targets for training, skills development, land tenure, installation of equipment, and monitoring were all outlined. To ensure that women's needs are not only identified but also included in the community action plans, 30% of the villagers approving the action plans had to be women. Targets were set for women's representation on village and local government NRM committees. This approach has not proved entirely realizable. A February 1995 supervision states: "Developing the role of women in the project is going to be very much more complicated than presented in the Project Document. Traditional customs (eg, not talking in front of their husbands in public etc ...) can not be ignored and it is therefore inappropriate to insist on 50:50 inputs at meetings. We need to nuance this a great deal and find out effective ways of moving forward. The project is aware of this; the technical teams (who are not aware of donor concern on this issue) less so."
Summary  
Gender equity in agricultural extension differs among the countries. In general:  
**Mauritania** Most policy-makers and officials are unaware of gender issues in extension. Despite women heading 25% of farm households, field crop and livestock extension is directed to men. Women receive vegetable extension, but their need for advice on other subjects is disregarded.  
**Mali and Senegal** Both countries have agencies with a history of targeting women farmers. The agricultural ministries, aware that women are neglected, are taking appropriate measures.  
**Burkina Faso** Staff at all levels are aware of gender issues and positive steps have been taken.  
**The Gambia** has achieved a numeric breakthrough under the WID Project. Women comprise 60-70% of participants in extension activities. By providing funding for several units within the ministry, the project effectively purchased the services of these units for women farmers.

Several strategies were used. The Sector Study in the context of lending operations allowed for persuasion rather than prescription, a long time-frame within on-going activities, the mainstreaming of gender into Bank activities, operational means of obtaining the results, and national coverage. The free-standing WID project in The Gambia provided financial support to various units in the Ministry of Agriculture which increased their output and focus on women and activities in the women's domain. The WID coordinators were effective in The Gambia (and Nigeria) where women with an appropriate personality, academic qualifications and field experience were recruited. Elsewhere, the coordinators and the women's unit in Burkina have concentrated on post-harvest activities rather than on integrating rural women into the extension methods of the agricultural service projects. Other successful strategies include targeting an increased proportion of mixed and women's extension groups, changing the criteria for membership of extension groups, and targeting women's activities.

5.1 The Sahel region has been characterized by fragmented extension services conducted by several development agencies in each country. These development agencies were frequently based on a particular commodity or farming system; other agricultural activities, even when practiced by the same farmer or household, were largely ignored. Agencies used different extension methodologies and their attitude to women farmers was similarly varied. Not only was extension for crops separate from extension for livestock, but different crops could be under different extension systems. The new generation of Agricultural Service Projects is unifying the services and moving towards polyvalent agents covering crop, livestock and natural resource management subjects.

5.2 The body of this overview and the individual country studies reflect the findings at the time of the desk reviews and missions. This chapter describes the process by which gender issues are integrated into extension services and into the Agricultural Service Projects. Countries and World Bank-funded projects use different strategies to advance through these stages. This chapter discusses this Sector Study and various other strategies that have been used by projects and countries (including the near neighbor Nigeria) and presents the lessons learnt with examples of how the countries have dealt with the main issues. Other strategies discussed include a self-standing WID project (The Gambia), short-term separate pilot project followed by mainstreaming (Nigeria), female coordinators and/or Women’s Unit in the extension service (Burkina Faso, Mali, The Gambia and Nigeria), training and redeployment of rural agents (Nigeria and Senegal), and changing extension client criteria (Mali).
THE PROCESS OF INTEGRATING GENDER IN AGRICULTURAL EXTENSION

5.3 All five countries have had gender initiatives in agricultural extension for many years (see the individual Country Studies). In Senegal, for example, a women's unit was established as long ago as 1959 in the Direction de l'Animation Rurale and de l'Expansion, and evolved into Secrétariat d'État à la Condition Féminine in 1978. (Senegal CS para 59) Women's units in most countries are political and concentrate on non-formal education, and skills training such as sewing. Some elite urban women have benefitted politically from these offices and from the plethora of gender-centered NGOs, but the effect of these women's units and ministries on the well-being of the rural non-elite remains to be seen.

5.4 National efforts to improve the gender balance in agricultural services are more recent. The Gambia set up a Food and Nutrition Unit in 1986 (Gambia CS para 59) and women's units were established in regional extension offices in Burkina Faso in 1988 (Burkina Faso CS para 56). However, the first female agents in agricultural ministries were often deliberately kept separate from the male crop and livestock agents and their work was restricted to providing advice on alleviating domestic chores, and training in home-based and income generating activities particularly vegetables and ruminants. Special efforts for rural women have included the Netherland's-funded women's projects associated with CMDT in Mali, the FAO-funded project on women in Mauritania and the UNDP-funded and Bank-executed study on women's agricultural productivity in Burkina Faso. These all helped to pave the way for the present initiatives.

5.5 The experiences of the five countries shows that the process of integrating rural women in agricultural extension activities follows a clearly defined path. The stages are as follows:

**Stage 1** Extension is male orientated. Most ministry of agriculture officials and managers of the extension services do not question whether a male-oriented extension service reflects the reality of agricultural production.

**Stage 2** Gender awareness increases. As awareness gradually increases, officials begin to realize that, although women are important participants in agriculture, they are neglected by agricultural support services. Gender analysis is often needed to bring about the necessary attitudinal change.

**Stage 3** Quantitative remedies are undertaken. Officials decide that actions must be taken to increase quantitatively women's participation in extension activities. There is also recognition of the need to improve other services such as input supply, credit, and improve women's access to land and security of tenure, and access to affordable labor-saving devices.

**Stage 4** Qualitative remedies are undertaken. Officials decide that actions must be taken to match the subject matter to women's activities, and to match the types of messages with women's objectives and systems of production.

**Stage 5** Impact is evaluated. There is a questioning and evaluation of impact of increased extension on women's production, productivity, income and standard of life. As extension improves, the provision of complementary services to address women's production constraints becomes more important.
Stage 6 Other support services are improved. Actions are undertaken to improve other support services.

5.6 Within each country, various agencies and institutions involved in agriculture are at different stages, but broad generalizations can be drawn about the five countries. Mauritania is moving from the first to second stages. Despite a major study on women in agriculture in 1980 and a Promotion Femmes Rurales project which covered a lot of ground in 1991/92, the vast majority of agricultural policy-makers and officials in Mauritania remain unaware of the importance of gender issues in extension. None of the Action Plan recommendations drawn up from the studies and workshops of the Promotion Femmes Rurales project were implemented - not even those that could be implemented without extra resources. The official gender-neutral approach masks a general disregard for the needs of women farmers in a country where one-quarter of all farm households are headed by women. Extension on field crops goes to men's groups and on vegetables to women's groups. Government policy and most government officials assume that women are represented in the "men's groups" used for extension to the extent that they are growers of field crops. No data was available at mission time on the proportion of women on the irrigated rice perimeters or of women in "men's (extension) groups". It was also assumed that identical messages are suitable for men and for women when they grow the same crop/livestock. However, recent reports from Mauritania suggest an increase in awareness.

5.7 Mali and Senegal are between Stages 2 and 3. Both countries have autonomous agencies or sections of the agricultural ministry that have made efforts to increase extension to women since the early 1980s. But neither country raised awareness in the ministry or mainstreamed women's issues in the standard work agenda of the ministry. In Senegal, for example, encadrement of the increasing numbers of female heads in the river valley in the 1980s was only by female agents and vegetables and small ruminants were the only crops and livestock covered for women. In Mali, CMDT appointed regional coordinators for women's activities in 1980, and the Netherlands-financed women's projects within CMDT created a separate service which failed to integrate. On a more positive note, the farming systems research unit of Institut d'Economie Rural (IER) of the Ministry of Agriculture, has had a women's component in the CMDT zone since 1986. Data is disaggregated by gender and write-ups include an evaluation from the women farmers' perspective.

5.8 Awareness in both countries has increased and actions are being taken. Mali now has women's sections in the directorates of MDRE headed by female Ingénieur Agronome or equivalent; but the coordinatrice for crop extension was only appointed in December 1993. Actions to increase women farmers' participation in extension include encouraging agents to work with mixed and female as well as male groups and removing the household head criteria. Senegal has female staff in women's projects but only in the river valley are they a significant force in the extension service. The livestock department, but not the crop department, has someone to overlook the interests of women farmers. Despite these signs of growing awareness and actions, ministry staff in neither country are enthusiastic about addressing their gender inequities. Mali extension agents were reluctant to have a working group on integrating women in the mid-term workshop of the Agricultural Services project. Only one woman attended the mid-term review workshop in Senegal although project objectives specifically mention women, and the Beneficiary Assessment (April 1995) did not include gender-disaggregated data.

5.9 Burkina Faso is at the third stage. Improvement of extension services for rural women has been an on-going concern of the government since survey results in the mid-1980s showed that
women were only 4.5% of extension clients. National and regional Offices for the Promotion of Women’s Activities (BPAF) were created within the Ministry of Agriculture and Animal Resources in 1988, and recently strengthened. There is awareness among extension staff at all levels that women were missing out in obtaining extension advice and appropriate steps are being taken to improve the situation. This had not yet been translated into a major increase in the number of women in contact with the extension service. The Minister of Agriculture demonstrated the interest at highest levels by attending both the opening and closing sessions of the workshop held 180 km from Ouagadougou in connection with this study. Government and Bank staff are now very aware of gender issues and interventions targeting women are included in ongoing projects.

5.10 The Gambia had achieved the numeric break-through. Women comprised at least 65% of the participants in extension activities. This dramatic leap, from just 5% of contact farmers, took only 4 years. The catalyst was the self-standing WID Project. Rapid rural appraisal, studies, workshops and pilot projects during the start-up of the project provided a good base for future improvements. The project, by providing funding for several units within MOA (such as the communications and horticultural units), effectively purchased the services of these units for women farmers (paras 5.18-5.20 and Box 5.2 below). The Gambia is beginning to question both the quality of extension for women and its impact.

THE SECTOR STUDY AS A TOOL FOR CHANGE

5.11 This Sector Study was the first occasion that the agricultural division of the Bank’s Western Africa (previously Sahel) Department had been substantively involved in gender issues. The past two years has witnessed strong progress in actions to equalize gender staffing and gender participation in extension activities. In some countries this is a continuation of an effort that had already started; in others, it represents a new initiative. As the developments described in Box 5.1 show, the Sector Study proved to be a successful tool for encouraging actions to increase gender equality. It provided the impetus for
- developing a dialogue on the subject which raised awareness in the countries under study.
- developing close cooperation between HQ and RM staff concerned with on-going projects which enabled this initiative to be mainstreamed into on-going and new Agricultural Service projects.
- promoting cross country exchange of experiences and spread the initiative to other countries.

5.12 Institutional strengthening. Before this study started, the only national coordinator for women’s agricultural activities was the subcomponent manager under the WID project in The Gambia. By the end of 1995, all five countries plan to have national coordinatrices. Regional coordinatrices were appointed to all regions of Burkina Faso in June 1993, and are expected to be appointed in Mali and Mauritania (only 2) in 1995. Three countries are increasing the numbers of female agents, most outstandingly in Senegal where rural agents from other ministries are being retrained. Burkina Faso is taking advantage of anciens agents de terrain. In response to requests from the NRM project in Mali, EDI is now developing modules to raise social and gender awareness among policy makers and managers and to introduce a Social and Gender Analysis Approach to extension agents.

5.13 Gender-related issues and initiatives are being mainstreamed. In The Gambia, for example, the agricultural subcomponent of the WID Project has mainstreamed into the Ministry and into the Agricultural Services Project. The mainstreaming of gender into training and extension processes was illustrated by a workshop on Linkages between Research-Extension and Farmers held in Mali in December 1994 with 60 Malian participants and representatives from five neighboring countries. Gender
Box 5.1 Results in the field

Burkina Faso:

- The BPAF units were strengthened in June 1993 with recruitment of women with masters degrees as coordinators in each CRPA and nationally. Initial 2-year contracts have been extended to the end of the PRSAP project (December, 1996) and future will be discussed during the appraisal of the next phase. BPAF units further strengthened in April 1994 by recruitment to permanent posts of "anciens agents de terrain" to the 30 provinces.

- More female staff and stronger BPAF units has improved extension for rural women. With identification of their real and specific needs, rural women now receive as much crop and livestock extension as post-harvest extension, and receive more training on specific subjects (such as income-generating activities). Male agents are supported in their extension activities with women by visites-appuis from BPAF and CPAF (provincial) agents, by BPAF and CPAF agents attending monthly meetings when subjects relate to women farmers and by male agents feeding-back problems to BPAF agents for solutions. In addition, a collaboration is building up between the IDA-funded Agricultural Services Project (PRSAP), other donors and NGOs for gender-related activities.

- Women as a percentage of farmers encadred has increased from 16% in 1992/93 to 20% in 1993/94, and is expected to show a further increase in 1994/95. The percentage of female participants in training and demonstration activities of working groups (ATG) averaged 30% in 1994/95, an increase of about 5% over the previous year. Absolute numbers of women participating increased between 1993 and 1994 by 24% for livestock extension and slightly (1%) for crop production.

- Each CRPA collected data for this study, evaluated their provision of extension services to women, and drew up own action plans.

The Gambia

- The gender equalization of extension and related activities pre-dates this study. During the study, the agricultural subcomponent has been increasing integrated and mainstreamed into the IDA-funded Agricultural Services Project. ASP's deputy manager became the WIDP agricultural subcomponent coordinator when WIDP's female coordinator left for further training. Within 6 months the integration was virtually complete.

Mauritania

- The IDA-funded Agricultural Services Project (Cr 2575 MR, 1994) will recruit a coordinator for women's activities in the office of the Director of Extension and two female coordinators in regional posts.

- SONADER, the government agency carrying out extension activities in the irrigated areas along the Senegal River Valley, is reported to have increased its extension to women's groups.

issues were included throughout the two week exercise.

5.14 Extension activities Burkina Faso, Mali and Senegal have increased women's participation in extension activities by increasing the number of mixed or women's contact groups. Data are not available from Mauritania and women in The Gambia are already a focus of MOA. However, the decision at the April 1994 mid-term review of the Agricultural Service Project in Mali that 3 to 5 of the 16 to 24 contact groups per AVB should be mixed and/or women's groups appears to have stalled the previous year's increase.
### Box 5.1 (cont) Results in the field

**Mali**

- PNVA has a national coordinator for *Promotion Feminin* and the recruitment of female ingeneurs as Regional coordinators appears accepted in principle. Female agricultural ministry extension agents increased in the past year from 1 to 3% and 5 to 13% for crops and livestock respectively. In MDRE as a whole, women are concentrated in the lower and upper grades (11% moniteurs, 0.9% techniciens and 6% ingeneurs) with 7.4% overall. However, under 1% of 1451 PNVA staff members are women although two are national supervisors (research and water and forests).

- The increase in female and mixed contact groups in 1993 has not been sustained. Only 4% of CG members were women during the 1994 rainy season with wide regional variations: 15% in Gao and 0.7% in Tombouctou. Almost no women participate in adaptive research (TMP) and exchange visits except those to mills and income-generating activities. Women's participation should increase with dry season vegetable production and small livestock fattening. (Mali, 1994) Vegetable conservation has been emphasized with production of *fiches techniques* and a workshop.

- Gender issues were lightly touched on in the midterm review of the Agricultural Services Project and were a theme running through the workshop on diagnosis in December 1994. Resulting improvements are smaller demonstration plots and shorter demonstrations (to save women's time), and a better targeting of extension activities to CG interests. Direction d'elevage to conduct study on women's social and economic roles in livestock production.

**Senegal**

- The number of female agents will be increased by using Monitrices Rurales and Sociales as agricultural extension agents. PNVA have identified the MR from other ministries who work with rural women and women's groups. A needs assessment for training in agriculture is being done. Protocols to be drawn up with their parent ministries will enable them to be linked with the agricultural extension service. The number of female AVB associated with PNVA is expected to rise from 19 in 1993 to 25 in 1994, and 121 in 1995 (5%, 6% and 24% respectively). Female SMS will also increase from 1 in 1993 and 1994 (3%) to 10 (19%) in 1995.

- A coordinatrice position has been agreed in principle, but her institutional location is being discussed.

- The numbers and percentages of female participants in extension activities is being increased by increasing the number and percentage of female and of mixed contact groups. The 196 female contact groups (5%) increased to 430 (9%) in 1994 and is expected to be 1846 (20%) in 1995. The figures for mixed groups are 19 (0.4%), 1903 (40%) and 5538 (60%). The phasing out of men only contact groups, from 95% in 1993 to 20% in 1995, will result in an increase of female members of contact groups from 3.6% in 1993, to 19% in 1994, to 30% in 1995.

5.15 Improvements in the quality of extension services are more difficult to judge. One farmer in five interviewed during the diagnostic phase in Senegal must be a woman and Burkina Faso is improving the match between the activities of the group and extension.

5.16 **Literacy and management skills** The study showed an urgent need in all five countries for (1) affirmative action in functional literacy classes to compensate for gender skews in rural illiteracy rates, and (2) for training the leaders of women's groups in management skills to run groups and micro-enterprises. On the basis of data from Mali and anecdotal evidence from elsewhere, it appears that participation in functional literacy components is unequal and the gender gap in rural adult literacy is probably widening in most countries. This study coincided with pilot projects in Senegal and Burkina Faso (and other countries outside the Sahel) of EDI's Grassroots Management Training program (para
The Sahelian countries have been able to benefit from the FEFGA initiative and similarly the initiative has found a ready demand from agriculturally-related projects in the five countries and elsewhere in the region.

5.17 Several reasons explain the positive impact of the study

- **The Sector Study has been persuasive rather than prescriptive**
  The missions undertaken in the context of this study induced countries to think about and discuss gender issues. Although gender evaluations had already appeared in supervision reports of several of these countries, the first fact-gathering missions for this study provided an impetus which was followed up by specific missions on the subject and by an increased gender input into routine missions. The beneficial effect of the data/information collection on extension staff was particularly noticeable in **Burkina Faso** where each CRPA conducted its own survey and developed an Action Plan, and in the regional reports for the May 1993 workshop in **Senegal**. Several reports from both countries were self critical and suggested solutions to constraints such as women's shortage of time. One CRPA has even started sensitizing village communities to the benefits of alleviating gender-specific constraints. (para 3.17) Operation Riz in **Burkina Faso** (paras 3.6 and Box 3.1) and the WIDP agricultural subcomponent in **The Gambia** (para 5.19) are beginning to question the impact of their actions on women and the household. This questioning should improve the quality of services to men and women over time.

Because cultural norms determine gender-specific constraints and barriers, success ultimately depends on the cooperation of the community at all levels from government to household. Only in **Mauritania**, where officials are less sensitive to gender issues than in the other countries studied, has project conditionality been resorted to as a means to promote change. The appointment of one national and two regional coordinators for women's activities was a condition of the Agricultural Services Project (Cr 2575 MR, 1994). Nevertheless, gender, unless it is monitored, can be ignored even when explicitly written into objectives. Examples are the T&V evaluation in **Burkina Faso**, the beneficiary assessment in **Senegal** and the adoption/diffusion study in **The Gambia** which were all conducted in past few years since the Bank has been emphasizing gender.

- **The process allowed for a long time frame within on-going activities**
  Time is needed to move through the stages from awareness raising to concrete actions, and for ministry staff to realize that gender should be mainstreamed into every aspect of their work. There is an initial tendency to put gender only in those operations where a special directive is issued (for example, targets for mixed CGs) and to omit gender from routine operations such as M&E. Frequently, little progress appears or actions are taken until subsequent missions - either those connected with the study or regular supervision or appraisal missions. In **Mauritania** and **Senegal** the first mission raised awareness but showed little or no concrete progress.

- **The project Task Managers helped to mainstream gender into most Bank activities connected with the projects**: (for example, supervision, workshops, meetings, dialogues). Each reinforced the other.

- **New and on-going projects provided the operational means of obtaining these results/improvements**.
Gender was included in planned operations and interventions (such as the new projects in Mauritania and The Gambia and into the training program) and in on-going operations (such as supervision missions). The NRM projects in particular have made important efforts to include rural women in the diagnosis, planning and implementation of community Action Plans, and in the institutional improvements.

- The use of IDA-funded projects enabled gender actions to have national coverage.

Generally, bilateral donors, NGOs and UN agencies have been ahead of the Bank in their gender initiatives. Extension and agricultural services in the countries are fragmented. Many gender initiatives in the past have not spilled over into another agency and so they have not had the national coverage or the long term in which to make significant changes. Indeed there are signs of competition and distrust between agencies which contribute to a lack of cooperation and cross learning.

THE GAMBIA'S SELF-STANDING, MULTI-SECTORAL WID PROJECT WITH A MAINSTREAMED AGRICULTURAL COMPONENT

5.18 The US$ 15m (US$ 7.0 million from IDA) Women in Development Project (WIDP) (Credit No. 2141-GM, approved May 1990, effective December 1990) contains agricultural, communications and health components covering 200 villages (over 10% of the total in The Gambia). The project aims to increase women's agricultural productivity through better extension, access to inputs, improved coarse grain milling, and mobilizing women's savings; to improve women's welfare and status; to strengthen government institutions to enable them to deal more effectively with women's issues; and to change Gambian society's perception of the role of women. Horticulture and livestock are the focus of agricultural activities. (See Box 5.2 for details of the components that are helping women farmers.)

5.19 The project has been a great success in increasing women's participation in extension activities from 5% of contact farmers and 29% of participants in village-based farmer training in 1989 to women being a minimum of 60-70% of participants in all extension activities by 1994. The Monitoring and Evaluation Unit (MEU) estimates that there has been a large and positive impact on women's knowledge and awareness. Whether this will be translated into adoption and ultimately into increased production, productivity, income or social benefits remains to be seen. Women are still comparatively disadvantaged in their other resources (such as inputs, animal traction, time and land). Access to purchased inputs has improved more for women than for men as a result of the project, but women started from a lower base. The WID project plans to assess the impact before the project ends in 1996.

5.20 Ministry officials admit that this improved participation of women would have been unlikely without the WID project's extremely fast affirmative actions. How has this success happened when previous World Bank agricultural projects in The Gambia, as audit reports quoted in World Bank 1990 pointed out, worsened the situation of women farmers? The project effectively purchased a proportion of the services of various MOA units by financially supporting them. As a result, the crop, livestock, horticulture, communications, and agricultural inputs units increased their output and focus to women farmers or activities in the women's domain. Other factors contributing to the project's success are the enthusiasm of the WID agricultural coordinator, and constant reinforcement of gender sensitivity by project staff and donors. Male farmers did not object to receiving less extension as they were members of groups that provided more concrete help (such as those tied to inputs/credit for cash crops such as maize and groundnuts) than the extension agent could provide. The agricultural component of
Box 5.2 The Gambia: The IDA-funded WID Project (Credit No. 2141-GM)

Implemented Activities

Strengthened extension services (a) for women's field crops by a campaign sensitizing field staff through workshops attended by staff and leaders of women's groups; by semiannual Ministry workshops to plan and evaluate T&V schedules; annual meetings with NGO extension staff to exchange experiences and improve strategies on extension to women; and extension manuals with special reference to women. (b) for women's horticultural crops by providing logistical support and training to Horticultural Extension Program (HEP) staff, preparing a comprehensive horticultural manual, and supporting the demonstrations of the FAO Fertilizer Project. Except for salaries, the project funds most of FNU's work on conserving and transforming of vegetables and promoting consumption by cooking demonstrations and recipe development. (c) for women's livestock by logistical support and training of DLS staff, developing delivery systems for healthcare and feed supplements, establishing a revolving fund for drugs, and providing laboratory equipment.

Assisted female input suppliers The Agricultural Input Office established under the FAO Fertilizer Project has identified and assisted 18 women retailers to become farm input suppliers. Candidates were selected on basis of previous experience, track record, and geographical location. Retailers received business training and credit, and a Technical Sales Agent to help them with book-keeping, input distribution and farmer liaison for 2 years.

Established an agricultural component coordinating unit in MOA The coordinator has facilitated the implementation of agricultural component and its integration into Ministry activities.

Improved Information, Education and Communication The Agricultural Communications Unit has been supported to produce videos and printed matter targeted at women farmers. Materials for non-formal education have been prepared. Video halls have been built in 30 villages and are equipped with solar-powered TVs and videos.

Late started components

Established an unallocated fund NGOs have started to use this fund for a variety of village-level activities, small projects and programs designed to help women and children. Possible areas of intervention include digging wells, providing credit or inputs to rural women, and enabling NGOs to expand ongoing successful activities.

Promoting basic numeracy, literacy, and income-generation skills through a skills development program Trained Community Development Assistants have started to identify and select 125 women tutors, from kafoo groups if possible, for 3 months up-grading and training in functional literacy and income-generation skills. Those trained, and possibly their groups, would then be eligible for credit for non-farm activities including processing.

Mobilizing women's savings and improving women's access to credit by supporting women's cooperative groups The Gambia Women's Finance Company is helping to organize and educate existing women groups to promote and improve savings procedures, familiarize them with savings options and facilitate their access to regular banking channels. Institutional support financing provided for up to 7 women's credit officers (4 appointed) to identify and liaise with women farmer groups deemed suitable for credit.

Unimplemented components

Improve management of small-scale post-harvest equipment Cofinancing problems have prevented the identification of a suitable NGO or private organization to continue the work of Catholic Relief Services in testing equipment and training village mill management committees. Much equipment appears to be nonfunctional because of maintenance and management problems. However, the unit hopes to obtain funding from another source.

the WIDP is now effectively mainstreamed and the cooperation and enthusiasm of MOA staff is notable. The Agricultural Services Project, which became effective in October 1993, continues this special effort,
for example, by increasing the number of VEWs specializing in women's agricultural activities (such as swamp rice, horticulture, and short-cycle livestock species). On the negative side, WIDP has had some problems due partly to the complex multidonor, multiminity design and partly due to the weakness of the Women's Bureau and financial accounting problems within the project.

NIGERIA'S WIA PILOT PROGRAM WITH A SHORT-TERM SEPARATE SERVICE

5.21 The Women in Agriculture (WIA) program in Nigeria has been cited as a "model" for developing and delivering extension to women farmers. In just over 4 years, it evolved from pilot projects in three states to a national program central to the government's agricultural strategy. Home economics agents were given short agricultural training courses and appointed as specialist WIA agents in an initially separate extension service. This enabled a doubling of female EAs and a tripling of female contact farmers in an 18-month period. Cultural restrictions were eased by having female EAs introduce male agents to female farmers. Women's groups were identified and used for extension, credit and other interventions such as community woodlots. The implementation had a three-pronged approach: (i) annual strategy workshops at which rolling three-year Action Plans were developed for each state; (ii) thematic discussions between national and Bank staff to influence the technical messages; and (iii) field level staff receive assistance from the national apex, coordinators of regional extension services and a full-time female Nigerian agriculturist employed at the Bank's Resident Mission to assist implementing the program. Factors contributing to the success were the existence of a research project which provided a ready source of crucial and flexible funding at the start; modification of on-going Bank projects; enthusiastic support from the highest level of federal and state ministries of agriculture; a cadre of home economics agents with some agricultural training within the ministry; and the permanent presence of a local female agriculturist in the Bank's Resident Mission.

THE WID COORDINATOR AND WOMEN'S UNITS STRATEGY (Burkina Faso, Mali, The Gambia and Nigeria)

5.22 A suitably qualified, fulltime national coordinator for promotion feminine in the extension service can be very effective in integrating gender into the work program of the agricultural ministry. Burkina Faso, The Gambia and Mali have already appointed such a person, and Mauritania and Senegal are planning to do so. In addition, regional coordinators are in post in Burkina Faso and some (not national coverage) are planned in Mali and Mauritania. Most specialized Directorates of the agricultural ministry in Mali has someone with a watching brief for women in agriculture. In most countries the WID coordinators work alone or with one assistant. An exception is Burkina Faso where Offices for the Promotion of Women's Activities (BPAF) were established in the 12 regional centers (CPRA) and at the ministry head-quarters in 1988. In theory, BPAF agents act as resource persons and monitor, advise and support the CRPA services in all activities concerning women. In practice, their current job descriptions vary widely depending on the CRPA, and include teaching post-harvest transformation, income-generating activities, and technical support to the young farmer training centers. The CRPA extension services, which also employ a few female agents, cover crop and livestock production.

---

15 Although not one of the countries participating in this study, the example of Nigeria is included here because of the success of its program.

16 UNDP-funded, World Bank-executed WAPIA study
This strategy of employing a WID coordinator has been very successful in The Gambia and Nigeria. Both coordinators were women with strong personalities, much field experience and appropriate academic qualifications. Both also had a fair amount of authority and financial control. The Gambian coordinates the WID Project's agricultural component and is based in the agricultural ministry; in Nigeria, she is a member of the World Bank's Resident Mission staff and supervises gender in all agricultural projects. In the other countries studied, the coordinators for promotion feminine and women's units have had a positive effect in focusing attention on an area that has been neglected in the past - rural women who farm, keep livestock and carry out other productive activities.

Two main problems have arisen using this strategy and the associated women's units. First, it is difficult to find national or regional coordinatrices with the necessary characteristics - persuasive personality, and both academic qualifications and field experience - to be regarded as equals by male staff who have worked their way up the ladder. For example, all 12 BPAF regional coordinators recruited in Burkina Faso in mid-1993 had masters degrees (half in agriculturally related technical subjects and half in sociology) but not all had the recruitment criteria of 2-3 years post-university experience in rural areas. Consequently they were less experienced than either the in-post BPAF monitrices or the staff in the other CRPA service units. The initial friction within and outside BPAF units in some CRPAs has taken much of the two-year period of their contracts to overcome. More training before appointment and greater support afterwards would have been advantageous. The growth of a critical mass of women with experience and confidence will reduce this problem over the long-term. While appointing a women builds capacity, gender-sensitive men can be very effective. The Gambia appointed a male coordinator when the previous female coordinator left for training.

Second, the female coordinators have had difficulty in moving from an NGO and small "women's projects" philosophy (which, admittedly, is inferred from their titles in the countries studied) to integrating gender-related actions into the framework of the IDA-funded Agricultural Service Projects. They diagnose women's needs as capital goods such as mills, irrigation works, and oil presses and do not think in terms of information and training needs, the process of integrating women into the extension process, and of acting as a facilitator putting women's groups in touch with agencies that can supply their other needs. Part of the problem is that the extension services made little effort to integrate female agents. Throughout the region, the number of women who are techniciens supérieur (TS or Subject Matter Specialists) can be counted on one hand, and although BPAF staff in Burkina Faso have special responsibility for women farmers, they are not integrated (some are "attached") into the bimonthly technical meetings.

Two other strategies using similar approaches may be possible under other circumstances. One is the appointment of SMS Gender specialists. But at the time of this study, experienced female agents with the relevant middle level qualifications were not available. Women with agricultural or social science degrees were easier to recruit as coordinatrices. A cadre of Gender SMSs would have a grassroots influence by introducing the gender implications of the messages to AVBs at each monthly training session. Although very few female agents in the five countries have the TS educational qualifications for employment as Gender SMSs, several could be sent for further training and upgrading. In the meantime experienced female agents should have more input into the general extension program by appointing some as "acting TSs" for women's activities to do diagnosis and training of extension agents in gender implications. An alternative strategy is possible with the recent establishment of Units within the extension service (in Mali and Senegal, for example) with responsibility for supporting organisations paysannes (OP). This will be the strategy used in the forthcoming Agricultural Services Project in Guinea where the OP Unit already contains a women's section.
5.27 The ultimate success of these strategies may well depend on how well their work is integrated into the extension (or other department) work. If they can inject the gender dimension into the mainstream extension service, then sustainable progress is likely. But if they work only with female agents, only with rural women, and only on women’s activities outside crop and livestock production, then they and rural women are likely to stay marginalized. The BPAF units in Burkina Faso, for example, lacked the necessary numbers (only 20 agents), funds, skills and qualifications (all were Agent Technique grade until mid-1993) to carry out their work.

TRAINING AND REDEPLOYING FEMALE RURAL AGENTS (Nigeria and Senegal)

5.28 The highly successful strategy used in Nigeria to alleviate the shortage of female agents could easily be adopted in other countries where cultural norms discourage male agents meeting with female farmers. The country’s 4000 Home Economists (HE) had all received some agricultural training as part of their basic course, were small farmers in their own right, and had much experience with rural women. Some HEs were given extra agricultural training and redeployed initially as Women in Agriculture agents and within 2 years as agricultural agents. They concentrate on production technologies in the growing season and on their former home economics subjects in the dry season. Senegal is embarking on a similar strategy using the Monitrices who are employed in rural areas by a number of ministries and agencies. A survey these rural agents and a training needs assessment is presently being carried out.

CHANGING EXTENSION CONTENT OR CLIENT CRITERIA (The Gambia and Mali)

5.29 A strategy used successfully in The Gambia was to concentrate more on activities that were traditionally in the women’s domain (such as poultry and small ruminants). Agricultural fairs were arranged around small ruminant fattening, for example. In addition, extension agents were given targets for the proportion of women clients. Mali’s increase in the number of women participating in extension activities is the result of two policy decisions. The first instructed extension agents to increase the proportion of mixed and female groups used for extension. The second permitted more women to be extension group members by replacing chefs d’exploitation with active farmers as a criteria of membership.

LESSONS LEARNT

5.30 The following lessons can be gleaned for the experience of the strategies used in the five countries under study.

1. Government and ministry officials must be convinced of the need to address gender issues before actions attempted at field level

   • The Projet Promotion Feminine in Mauritania failed to do this and consequently the intense project activities were not translated into advances on the ground.

   • In the absence of adequate gender-disaggregated data, government officials tend to retain stereotyped perceptions of rural women and their activities and contributions to the rural economy.
Several factors helped to build the commitment of government officials:
- the whole hearted commitment of Task Managers and the Resident Mission,
- data that showed large gender differences in participation as in Burkina Faso (para 5.9) and The Gambia (para 5.10),
- regional extension department offices preparing their own status reports as in Burkina Faso,
- the allocation of considerable project resources to address gender biases as in The Gambia (paras 5.18-5.20) and Nigeria (para 5.21),
- the allocation of Bank resources to address gender issues (for example, the appointment of a specialist at the Resident Mission in Nigeria, para 5.23), and
- the person in charge of women's initiative having a strong personality (para 5.23).

2. Services must be integrated, monitored and have built in safeguards

- The women's programs associated with CMDT in Mali showed that separate services tend to stay separate and focus on non-agricultural extension. These programs initially concentrated on women's autonomous, largely agricultural activities (own labor and personal income), but later concentrated on literacy training. They tried and failed to integrate with the main extension service.

- When coordinators or women's units concentrate on women's post-harvest and off-farm activities, rural women (and the coordinators and units) tend to stay marginalized from the work of the main agricultural departments.

- The Gambia WID project showed that a separate initiative (but not a separate service) can buy its way into the mainstream services (paras 5.18-5.20).

- The Nigeria WIA program showed that a separate pilot program can be mainstreamed within a short period with government and Bank support (para 5.21).

- The participation of rural women in integrated services must be monitored and have safeguards built in. If not, one may find that (1) regions very variable in attention to women (Mali Box 7.2) or that (2) rural women may only encadred by the few female agents (Senegal para 4.14) resulting in a very low women's participation rate and/or a concentration on HE-type subjects.

- Gender-disaggregated data are required for the monitoring.

3. The extension and research services can improve their gender balance. Examples are:

- Selection of 200 "WID" villages where women's groups were the focus of extension activities was coupled with targeting of women's activities for other departments. (Gambia para 4.4 - 4.8)

- Deliberate moves to increase numbers of mixed and female Contact Groups (Mali para 4.8, and Senegal Box 5.1)

- Changing the criteria of CG membership from household head to active farmer (Mali para 4.8).
- The **Mali** Agricultural Research Project (Cr 2557-ML, 1994) will include at least one woman among the farmers in the Local Working Groups which will help decide on research agenda, evaluate results and decide which results to disseminate. (Mali para 3.43)

- Several groups (in **Senegal** and **Mali**) requested that a member chosen by them could receive training and then return to the group as a *relais formatrice* to teach other members.

- Several countries have set targets of various types. **The Gambia** has a target of 30% women in livestock contact groups. **Senegal**'s targets for 1995 are 20% female and 60% mixed contact groups (up from 9% and 40%, respectively, in 1994) and 30% of contact group members (from 19%).

- **The Gambia** targeted women's activities:
  - held Agricultural Fairs around the fattening of small ruminants and timed them for the Tabaski feast. Men only assisted to attend if accompanying a woman (para 4.9).
  - video and poster output and new manuals
  - newly recruited input retailers were women

**Project conditionalities must be used with care**

- They can promote government awareness of gender issues, but they are very difficult to enforce when against cultural norms (Mali para 4.37).

**Targeting women can remove common biases**

- When restocking livestock after drought deaths, both men and women and not just heads of households received livestock (Mali CS para 68)

- Selection of female input retailers was highly successful in **The Gambia** (Box 5.2).

**Time constraints can be alleviated without resort to expensive and sophisticated equipment**

- Women encadred by the NGO Fédération Lutherienne Mondiale in **Mauritania** are arranging child care while the mothers work in the fields (para 3.14)

- A metal cap on the pestle (pilon) head developed by the NGO ATI in **Senegal** reduces hand pounding time by 20% for an expenditure of 200-300 FCFA.

**Numbers of female agents can be increased with minimal increase in fiscal expenditure**

- **Senegal** has contacted the Ministère de la Femme, de l’Enfant et de la Famille and l’Association des Economistes Familiaux et Ruraux for a list of women interested in agricultural extension with the objective of increasing the numbers of female agents employed. In this way, they plan to increase the number of female agents by nearly 100 in a 1-year period. Nigeria used a similar strategy very successfully in the late 1980s by retraining and redeploying Home Economists. These female rural agents are very knowledgeable about rural women from working closely with them and often had some agricultural training and already do some agricultural extension but without any linkage into the formal extension service.
• The Gambia is decreasing the student gender imbalance by providing pre-college remedial courses in subjects such as science which fewer girls have studied.

• The NRM project in Mali recruited the top 10 women and the top 10 men, irrespective of where they came on the overall list (Mali para 4.19).

• The livestock department in The Gambia employs a high proportion of female agents (33%). They live in towns and do town-based work or travel out to villages.

• Burkina Faso has recruited "anciens agents de terrain" as female agents.
CHAPTER 6 RECOMMENDATIONS AND STRATEGIES

POLICY RECOMMENDATIONS FOR THE WORLD BANK

- Demonstrate a visible Bank commitment that will influence government officials and field staff
  - include significant references to proposed actions to benefit women farmers in the design of projects.
  - identify specific actions with key indicators. Examples include appointment of national female coordinator, establish training programs for *monitrices rurales*, percentage female participants in extension activities on swamp rice, number or percentage of training videos featuring women, percentage women in group management training, study tour of neighboring countries to discuss appropriate technology. Implementing agencies and supervision missions will then be obliged to pay due attention to gender issues.
  - include a significant amount (25% or 33%) of project component funds that specifically target women.
  - include Bank missions on WID issues as part of, in conjunction with, or supported by mainline missions, so that they are taken seriously.

REGIONAL RECOMMENDATIONS FOR AF5AE

- Employ a coordinator (preferably female) in one of the resident missions in the region with responsibility for the WID components in Bank agricultural projects. This post would be similar to that in the Nigeria Resident Mission and by the Agricultural Service Officers in the countries.

- Promote regional collaboration and exchange of experiences among the WID coordinatrices in the Sahelian countries or those responsible for women's programs in the agricultural ministries,
  - annual meetings/workshops arranged around particular themes such as appropriate technology, recruitment and employment of female agents, sensitization of male agents and farming population, increasing women’s participation in extension activities, functional literacy and group management training, specific technologies, marketing of output of women’s activities, and feasibility studies;
  - study tours to neighboring countries. For example, to the Livestock/ Agricultural Fair in The Gambia; and
  - inclusion of female ministry officials on World Bank supervision missions to neighboring countries in the same way as male ministry officials are now included.
RECOMMENDATIONS FOR GOVERNMENTS

Institutional Recommendations for Governments

- Maintain an integrated extension service with affirmative action and safeguards which are incorporated into the system and monitored.

- Appoint a national WID coordinator, preferably a woman, with field experience, personality, authority and resources. Appoint department or regional coordinators as necessary.

- Be more realistic in the activities promoted or micro-projects financed by government or donors.

Encourage women's groups to carry out activities:

  - that women are already active in
  - that are technically feasible - given climate, soils, water
  - that have an enabling environment - an established market, prices, costs, availability of inputs

- Gender-disaggregate all relevant studies and data collection and reporting. This is the only way to investigate if there are gender differences which need to be specifically addressed, to identify what is needed, and to track the effectiveness of remedial action;

- Include attention to gender as part of the Extension Agents' incentive structure. For example, have targets such as numbers of women's groups, demonstrations on women's plots taken into account in annual evaluations and promotions.

Increase the Number and Quality of Female Staff

- Establish a statut agent feminin to give women flexibility in their time and region of employment without loss of seniority, and without increasing the number of established positions or the salary bill. The main features would be:
  - A number of established positions would be "allocated" to women.
  - The number of these "female" positions would be set nationally. Not being tied to particular regions would provide geographic flexibility of employment.
  - The positions would be filled from a pool of women, not all of whom would be on the payroll at any one time. Individual women could move in and out of work using unpaid leave because, for example, of family reasons or when husband posted to an area where no suitable job is available. This would provide temporal flexibility.
  - The government would have to change or be more flexible in their regulations and conditions of service. When their circumstances permitted, women could reapply. The service would agree to re-employ the women, without loss of seniority, providing a position was available. Women wanting to return might have to wait in line for next post.
  - Government would not lose the experience of women who for various reasons are unable to work for their whole active life without interruption.
  - Women could go into marriage and a career knowing that they could juggle both.

- Upgrade the best female agents through further training
• **Recruit more female staff** (if recruitment freezes permit).
  ○ Qualified female extension agents in several Sahelian countries are unemployed.
  ○ Providing in-service agricultural training to rural development agents
  ○ Encouraging female enrollment in agricultural training institutions
  ○ Not restricting recruitment to women between 25 to 45 years.
  ○ Using *relais formateurs* who have been selected by the groups to receive extra training and then teach other members of the group.

**Increase Women Farmers’ Participation in Extension Activities.** For example,

• **Change the criteria of participation with extension services.**

• **Set targets** such as percentage of female participants in extension activities, percentage of women’s or mixed contact groups, percentage of female contact group members.

• **Increase the proportion of female or mixed groups**

• **Establish mobile training units** for diversification technologies (eg. soap making), conservation and preservation technologies (eg. drying, making jams and syrups), and labor-saving devices (water extraction, improved pestle, threshers, decorticatators).

• **Arrange activities that specifically target women**

• **Program activities to fit with women’s schedules:** day of the week, time of day and location.

• **Hold sensitization workshops and/or campaign** for ministry staff and the community

**Improve the Quality of Extension for Women**

• **Conduct a diagnosis and use as a basis of planning extension subjects and messages.** Extension agents should be trained in problem solving techniques. Messages should be matched to the production systems (resources, constraints and objectives) of farmers.

• **Develop "extension à la carte" modules** for regular crop and livestock extension, and for specific technical training. Any one woman or women’s group carry out very few of many possible activities. Not every group can access the *formation specifique* that it desires, and not every male or female agent can provide training in all subjects. Groups should be able to choose from a menu of extension modules of training activities, demonstrations, themes/messages, crops, etc. Each region or zone would develop its own modules depending on local requirements. To develop such "extension à la carte", the following steps are needed by each region/zone:
  ○ List the extension subject or training topics needed for local area
  ○ When "in-house" expertise is missing, liaise with other regions or NGOs, or train own EAs in such expertise
  ○ Build up a network of resource people (EAs, NGOs, successful farmers, individuals) who can supply modules where the ministry extension staff do not have the expertise or comparative advantage
  ○ Prepare a manual of *fiches techniques* covering the wide range of women’s activities.
Employ female agents as SMSs for women’s activities. If necessary, initially in acting grades until qualified women are available.

Train farmers to improve the management of their groups. For example, use the FEFGA program. The extension departments would need funds to purchase the services of the NGO trainers.

Three aspects are:
- train group officials in financial management, production management, marketing, and human resource management.
- train and encourage women’s groups to evaluate their economic activities.
- train extension agents in basic accountancy and project feasibility assessment.

Improve Women’s Access to other Agricultural Services

Use agents to facilitate women’s access to other agricultural support services. Coordinatrices, or extension agents or SMSs for women’s activities should act as facilitators to supplement the extension function. Coupled with this measure would be the need for the extension service to have funds to buy in the services of other agencies or resource persons as needed to supplement and complement their own service.

These supplementary functions could include helping women:
- with the decoulement of their products (identify market outlets, information, planning, putting in touch with possible purchasers or middlemen),
- to obtain labor-saving tools and equipment (investigating what is needed and what is available, liaising with suppliers and donors and credit sources),
- to obtain and profitably use credit (liaising with other agencies and banks, helping with applications, assisting with feasibility studies, management training),
- to obtain inputs and raw materials

These supplementary functions would entail agents
- identifying the needs of women farmers and women’s groups that are not available within the extension service
- liaising with NGOs, donors, projects, private and public agencies, etc
- listing the assistance, resources and comparative benefits available from all sources,
- matching women’s needs to the supply of information and resources. Local resources would then be used as efficiently as possible, and
- liaising with other ministry of agriculture departments.
REFERENCES


AF5AG 1993 Sahelian Countries: Strategy considerations for agricultural education in the Sahelian countries - synthesis of national sub-sector reviews. Yellow cover, June 9


David, Rosalind 1993b "The effects of male out-migration in women's management of the natural resource base in the Sahel: Summary report of the first phase of the research in Diourbel (Senegal)." SOS SAHELI International, London

Dey, J. 1984 Women in Food Production and Food Security in Africa. FAO, Rome


Duggleby, Tamara J. 1993 "Final Report, Financial Sector Case Study, African Management in the 90's Project." Submitted to the World bank (AFTCB), December

EPCV I "Enquête Permanente sur les Conditions de Vie des Menages en Mauritanie." GRIM and World Bank

FAO 1992 "Sociological Analysis in Agricultural Investment Project Design." FAO Investment Centre Technical Paper No. 9, Rome


Gambia Country Brief


World Bank 1993a  "Sahelian Countries: Strategy considerations for agricultural education in the sahelian countries - synthesis of national sub-sector reviews." AFSAG, Yellow Cover, June 9


