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DRAFT REPORT

**HORTICULTURAL PRODUCTION IN THE GAMBIA:  
WOMEN'S CONSTRAINTS TO AND INCENTIVES FOR INCREASED PRODUCTION**

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## EXECUTIVE SUMMARY

### I. Background to Horticultural Production in The Gambia

Horticultural production has a long history in The Gambia. Women have traditionally planted gardens during the rainy season in dryer areas of the North Bank (of the Gambia River) and during the dry season on the South Bank, where the water supply is more abundant and markets are more accessible -- due to better roads and public transportation. Within the last fifteen years, however, the horticultural sector has expanded rapidly. This expansion has been motivated, at least in part, by the potential and, for some, current profits to be made from exporting to Europe. The expansion in horticulture can be seen most readily in the Western Division, where numerous gardens, sponsored by donors and the government, as well large commercial farms are specializing in fruits and vegetables.

The government's promotion of horticulture is a reaction to declining prices of groundnuts, the major export crop, on the world market since 1975 and increasing incidence of drought. Groundnut production fell 150 percent between 1975 and 1985. In an effort to diversify agriculture, the government turned to horticulture, a potentially higher value export sector that included a large number of smallholders.

### II. Types of Growers in The Horticultural Sector

#### A. Donor Sponsored Gardens: Women Growers

The major donors, UNDP, the Islamic Development Bank (IDB), and the EEC, have given most attention and assistance to gardens in the peri-urban area of the Western Division, with close proximity to Yundum airport (see Map 2), the tourist hotels, and the large local markets of Banjul and Serrekunda. Each donor has taken a different approach to designing their garden projects. For example, IDB gardens are the most capital intensive because of sophisticated irrigation systems, while EEC gardens are designed to minimize maintenance costs.

Donor Sponsored gardens tend to have hundreds of women on anywhere between one to fifteen hectares of land. Bakau Women's Cooperative, for instance, has 490 members cultivating a total of three hectares, 50 square meters each. The infrastructure, financed by UNDP and the Norwegian government, includes concrete lined wells from which women draw water by hand, fencing, and a building for storage, day care, and literacy and numeracy classes. The Ministry of Agriculture provides (at no expense) a full-time agricultural assistant who provides technical advice and oversees the purchase of improved seeds, inorganic fertilizer, and pesticides. These inputs are paid for up-front

by members. Assistance in marketing is provided by the Ministry and the Gambian Cooperative Union.

At present, donor sponsored gardens are not financially sustainable. Not one garden has been able to pay all of its costs and remain productive; and certainly none have been able to cover the costs of the infrastructure donated by development organizations.

#### B. Large Commercial Growers

The large commercial growers are all located in the Western Division, near Yundum airport, and include private businessmen, joint ventures between expatriate and local concerns, and Citroproducts, a parastatal. The most prominent commercial farms are Radville Farm, a joint venture between a British and local firm, and Sifoe Farm, owned by a Gambian-Lebanese businessman. Citroproducts and these two private estates are the major exporters of horticulture. They contract cargo space on British Airways for export to London twice per week. Several other commercial farms which grow smaller quantities sell their produce to these exporters.

The potential for horticulture export has attracted expatriate agribusinesses as well development organizations with packages aimed at attracting investors in equity partnerships.

#### III. Contracts Between Commercial Farms and Women's Gardens

Citroproducts has the largest farm and is most involved in contracting with outgrowers. With its 188 hectares and numerous contracts, Citroproducts has the potential for being the largest exporter of horticulture in The Gambia. Citroproducts' contracts, however, have all been verbal, at this point; and contractual agreements have not been consistently held to by either gardens or Citroproducts. Other large farms have attempted to contract with gardens but, according to representatives from the women's gardens, these attempts have been unsuccessful, to a large extent, due to mistrust between the two parties.

#### IV. Constraints to Women's Horticultural Production

##### o Women's Time Constraints

Women's workload has increased enormously with their involvement in donor sponsored gardens. Traditionally, gardening has been a dry season activity in the Western Division. With the enticement of higher profits to be made in the rainy season, women now work in their gardens year round. Rainy season gardening is being added to what was already women's busiest farming season. When time is scarce, domestic chores either do not get done or are

allocated, as much as possible, to children. According to reports from Save The Children, children's welfare has suffered as a result of women's increased involvement in gardens. Women spend less time feeding and caring for their children, and child nutrition has deteriorated.

CRS, FAO, UNIFEM, and ActionAid have introduced grain processing machines to reduce the labor and time women must devote to pounding and threshing coos and rice, their most time-consuming domestic responsibility. While some of these efforts have been successful, they are not sufficient. Women need farming technologies that will alleviate the labor intensity of gardening. EEC has proposed a hand pump for use in wells. Making machinery available for land clearance, as Bakau currently has access to, would also help.

#### o Need for Appropriate Technologies

Experience has shown in The Gambia that a balance is needed between technologies that are cost-prohibitive to maintain and those which are low cost to maintain but do not reduce labor inputs.

#### o Seasonal Gluts, Low Prices, and High Spoilage Rates

Women traditionally begin their vegetable gardens at the same time, after completing the rice harvest. Thus between February and April, there is a glut of vegetables at the market. Prices are low and spoilage is high. Pressure is being exerted on women gardeners to plant early and stagger planting in order to take better advantage of the both the European export window and to even out the supply during the winter months. Early planting, however, means starting nurseries during the rice harvest, when women's labor demands are greatest.

#### o Lack of Access to Credit

At present, there is no source of credit to which smallholders have access. Without credit, women who are not part of gardens subsidized by donors have difficulty amassing start-up capital. Funds are needed for well and fence construction, land clearance, and production inputs. Nevertheless, given the considerable amount of assistance provided to women's gardens, the WID project argues that it is unlikely that credit is the major constraint to improved production. Moreover, the Gambia Cooperative Union (GCU) and the Gambia Women's Finance Company (GWFC) are either about to or in the process of extending credit to women farmers and nonfarm entrepreneurs. The Gambia WID project has stressed the importance of balancing the emphasis of these programs on credit with savings mobilization.

#### o Access to Extension Services

Despite women's substantial contributions to agriculture, the Department of Agricultural Services (DAS) directs less than 10 percent of extension efforts towards women farmers' productive activities. Given the need for extension advice in the horticultural sector where numerous innovations are being introduced, there is a strong need for improved services. The DAS itself is limited by an insufficient number of extension agents trained in horticulture, the high farmer to agent ratio, and the lack of vehicles. The Gambia WID project plans to strengthen the institutional capacity of the DAS and their ability to meet women's needs.

#### o Access to Markets, Market Information, and Storage Facilities

All gardens have experienced problems with marketing their produce. Transporting perishable fruits and vegetables in the heat and by public transportation is difficult, time consuming, and results in significant spoilage. The lack of storage facilities either at the gardens or at the local markets adds to post-harvest losses -- estimated to be as high as 60 percent in horticultural crops.

Because the local market cannot absorb the quantity of vegetables produced during the seasonal glut, women need access to the tourist hotel and export markets to be profitable. As of yet, their ability to penetrate these markets have been limited, according to some reports, because the quality of their produce does not meet standards and, according to other reports, because women growers have not been able to produce sufficiently early to take advantage of the tourist season and the European market.

#### V. Women's Incentives for Participating in Garden Schemes

Interviews with women producers and key informants revealed that women make relatively substantial earnings from their gardens. These earnings, about \$100 for a year around garden, are even more significant when seen in light of women's opportunity costs. According to numerous reports, these women who are largely illiterate, and without investment capital, have few if any other income generating options.

So far, women have had no problem maintaining control over their earnings. In fact, as their husbands have been losing their sources of income, women have assumed responsibility for expenditures that have traditionally been men's. Men have not, as yet, tried to take control of women's new income generating opportunity. However, the burden which women are assuming for the household is increasing significantly. In the face of

financial difficulties, they "feel it is their duty to work in the garden."

#### VI. Strategies for Strengthening Women's Participation in and Contribution to Horticultural Exports

The WID Project about to be launched in The Gambia is designed to address women's constraints in the horticultural sector. This project plans to:

- o promote the provision of labor-saving devices to alleviate women's household on a sustainable basis;
- o support current lending programs through the GCU, the GWFC, and NGOs and promote savings mobilization;
- o promote the effectiveness of extension services, including providing vehicles and training female extension agents;
- o in collaboration with FAO, assist women in marketing, including the development of a Market Information System and promotion of early and staggered planting to reduce seasonal gluts;
- o promote improved post-harvest handling through by strengthening the Food and Nutrition Unit (FNU) which currently oversees pilot projects focusing on processing, marketing, and vegetable drying techniques.

Additional steps could be taken. These include:

- o improve Citroproducts outreach to growers, dependability as a buyer, and overall business operations;
- o review DAS' approach to providing extension services;
- o train women garden leaders in the scheduling, quality, and contracting requirements of exporting;
- o provide labor-saving devices/machinery to reduce the heavy labor demands of gardening;
- o provide community development specialist to facilitate adjustment to the demands of export activity;
- o monitor women's labor and time constraints;
  
- o strengthen the institutional capabilities the Women's Bureau;

- o provide child care facilities at gardens;
- o provide literacy and numeracy classes to women gardeners;
- o train mothers in the nutritional needs of children; and
- o promote employment opportunities for men.

There are many projects and activities presently being planned. Any additional activities should coordinate closely with those currently being implemented.

## The Gambia: Women's Horticultural Gardens

### I. Horticultural Production in The Gambia: Background

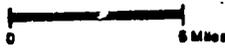
#### A. Traditional Gardens

Horticultural production is ubiquitous in The Gambia. Women plant their traditional gardens during the rainy season in dryer areas of the North Bank (of the Gambia River) and during the dry season on the South Bank, where the water supply is more abundant and markets are more accessible due to better roads and public transportation. A major paved road follows the length of the Gambia River on the South Bank, from Serrekunda to Basse (see Map 1).

Women's traditional gardens tend to be relatively unproductive because of often poor quality seeds, inadequate spacing of seedlings, infertile soil, and insect infestation. Women farmers use the same stock of seeds and plant seedlings very densely, with the belief that more plants will translate into greater yields. Instead, dense spacing results in lower yields per plant and per hectare. Soil infertility and nematode infestation are aggravated by garden wells, which consist of crude holes in the earth from which rise poor soils and insects. As gardens become increasingly unproductive, producers shift fields. Land shortages now make this an untenable solution.

#### B. History of Gardens Schemes

The Government of The Gambia (GOTG) established the first vegetable growing scheme in 1951/52, but the quantity and quality of the produce was no better than that produced traditionally on an individual basis. Nevertheless, the Gambian Department of Agriculture (DOA) continued to encourage vegetable production, and in 1971 established a pilot project focusing on onion production. By 1972/73, there were 20 schemes with 903 members. By the late 70s and early 80s these numbers more than doubled (see Table 1) as a result of contributions from the government and the Freedom from Hunger Campaign.



Secretary in London, this well had a spectacular growth. By 1818 the civilian population already exceeded 700 and by 1826 had increased to nearly 1800 inhabitants. Civil government began in 1818.

about 250 yards east of the village many different places go there ritual bath at Berending Bolong. C of people, barren women, people who men wash and drink the water. prayers are performed on behalf of the visitor is requested to bring along used for the ritual.

Five and miles of clean sandy beaches along crystal clear and warm Ocean waters



2 The building at number 58 Fajara-Atlantic Road was formally known as LUFTHANSA HOUSE. Here lived the personnel of the German Airline working at Jeshwang Airfield.

3 This is situated in the centre of Bakau seven to eight miles from Banjul. It lies about 150 yards north of Bakau. The fresh water pool, covered with green grass has been a prominent sacred place at all times. This fresh water pool is also inhabited by crocodiles which are said to be absolutely harmless to human beings. Kachikally was discovered by one Chomping Bojang who was a palm wine tapper. It is also a sacred place where barren women, people with stomach ailments and aspirants to kingship/chieftancy go to pray and offer sacrifices.

4 Sanimentereng located near Brufut village is a very important place of worship.

5 Abuko Nature Reserve near Lameng (Lamin) is the only successfully functioning Ape Rehabilitation Centre in the world. Here chimps and gorillas born in captivity in zoos in Europe and America are taught how to live and survive in nature. Specially trained Gambian wildlife guards under the direction of Mr. Eddie Brewer, the Director of the Wildlife Conservation Department and his dedicated daughter Stella, are on full time service to care for these animals. Once the chimps are qualified and can perfectly adapt themselves to nature, they are then set free on Baboon Island up river near Georgetown.

10 Visit Bakalar School and the Vit Horticultural Scheme on your way to Albrede.

11 Affureh is the ancestral home of the late Alex Haley, author of the World best seller "Roots". The Kinteh family of the late Alex's hero, Kunta Kinteh, still live compound near the small mosque.

12 The Fort on James Island was built in 1816 and was witness to much of the turbulent Gambia river region. Sacked on numerous occasions, this fort finally captured by the English in late 18th century. During tourist season, Fort James (James Island) stop for boats to Albrede and Juffureh.

13 Albrede became a French trading post like the English fort on James Island mile distance, played a crucial role in international competition for trade in Gambia region. Albrede served as French post on the river. Later when rule, Albrede was a destination for those who could claim freedom upon reaching the village square.

# ATLANTIC OCEAN



6 This sacred place is situated on the beach outside Gunjur, about 30 miles from Banjul. It was made sacred by Sheku Omar Futu's visit sometime after 1838. Today little huts, made of palm leaves have been built by people some of whom spend up to three months at the Kenye-Kenya Jamango praying to God throughout their stay.

7 Folonko is an enclave situated in a valley near Kartong. The enclave is inhabited by crocodiles and has the same variety of grass as Bakau Kachikally. Folonko is a sacred place where people perform the ritual bath, some wash their hair and others drink a bit of the water. These people are mainly barren women or people with stomach troubles and other serious illnesses, but local wrestlers also go to wash at Folonko before their combat, to achieve success.

14 In Berel pean tree

15 Bintang trading

Table 1

Onion Growing Schemes in The Gambia  
1979 to 1981

	1979	1980	1981
Number of Schemes	71	92	153
Number of Members	4,405	5,805	10,385
Total area (ha)	20.78	66.51	77.94
Area per Scheme (ha, average)	.29	.72	.51

Source: A report of the Horticultural Section, Department of Agriculture, The Gambia, 1979 - 1981.

This rapid expansion, as a result of publicly provided economic incentives, made clear women farmers' willingness to respond to new opportunities. However, it also left women with more produce than they could sell on the local market. Angry with the results of the government's initiative, women producers voiced their grievances to the President, asking for assistance with marketing. It was at this point that the GOTG began examining the possibilities of horticultural exports.

### C. Macroeconomic Incentives for Promoting Horticultural Exports

Government interest in horticultural exports was also motivated by the macroeconomic context of the mid-70s to mid-80s, when the price of groundnuts, the major source of export earnings, took a dramatic downturn on the world market. This situation was exacerbated by recurrent drought and persistent dryness, causing production to fall 150 percent between 1975 and 1985. Investment in horticulture represented an attempt to diversify Gambian agriculture and to develop a new and higher valued crop that could be sold both locally and for export.

At the intra-household level, declining yields and prices of groundnuts meant a loss of income for men, who have traditionally controlled this cash crop. Structural Adjustment in the mid-80s further eroded men's economic position, as government austerity measures cut wage employment dramatically, leaving many men, formerly dependent on wage labor, unemployed. Faced with financial difficulties within the household, women turned to horticulture as a ready means of earning an independent living.

But while men's dominant income sources have deteriorated, women have gained a new, lucrative income source as well as much attention and assistance from donors. These events raise questions concerning the impact of horticultural export activities on intra-household relations. Given men's loss of economic position, will they turn to horticulture if an export scheme makes gardening increasingly profitable? The Jahally-Pacharr rice project in the McCarthy Island Division represented a classic example of women losing control of a crop they traditionally controlled as a result of increased investments on the part of donors. In other words, there is precedence for men taking control of activities that have been the traditional bailiwick of women.

#### D. Donor Involvement in Horticultural Gardens

In the 1980s, donor interest in gardens has mushroomed, as demonstrated by the multitude of NGOs and multi- and bi-lateral aid organizations sponsoring gardens. Save The Children provides assistance to approximately 35 gardens in the North Bank Division (see Map 1). Catholic Relief Services (CRS) both directly and indirectly promotes gardens all over the country, both through several garden projects and through income generating projects with Sesame Growers Associations. ActionAid has provided D 5 million for gardens to 200 groups in 24 villages in the Upper River and McCarthy Island Divisions. Caritas has 24 village gardens and 22 school gardens in the Western Division and elsewhere. In addition, the Peace Corps, Methodist Mission, the Good Seed Mission, WISDOM (a Gambian NGO), and Freedom From Hunger Campaign sponsor gardens. Multi- and bi-lateral donors involved in gardens in the Western Division include the World Bank, EEC, Islamic Development Bank (IDB), UNDP, and the Norwegian government.

Why have so many donors been interested in gardens? Government support for horticulture is surely one reason, however, some report that donor interest in gardens is also the consequence of a "project mentality." Gardens are a relatively low-cost and limited-in-scope project that promote family nutrition and income generation. But while they are relatively easy to initiate, donors have found it difficult to design financially and technologically sustainable garden projects.

## II. Characteristics of Donor Sponsored Gardens

Donors have given most attention and assistance to gardens in the peri-urban area of the Western Division. Because of their proximity to the airport as well as access to water, agricultural inputs, and the large local markets of Serrekunda and Banjul (see Map 2), Western Division gardens have the greatest potential for

being incorporated into export schemes. A number of them currently contract with exporters and marketing agents for tourist hotels. UNDP, the Islamic Development Bank (IDB), and the EEC have been major donors involved in gardens in this area. To illustrate the characteristics of donor sponsored horticultural schemes and the different approaches to project design, a sample of gardens funded by these three donors is analyzed.

#### A. UNDP Funded Gardens

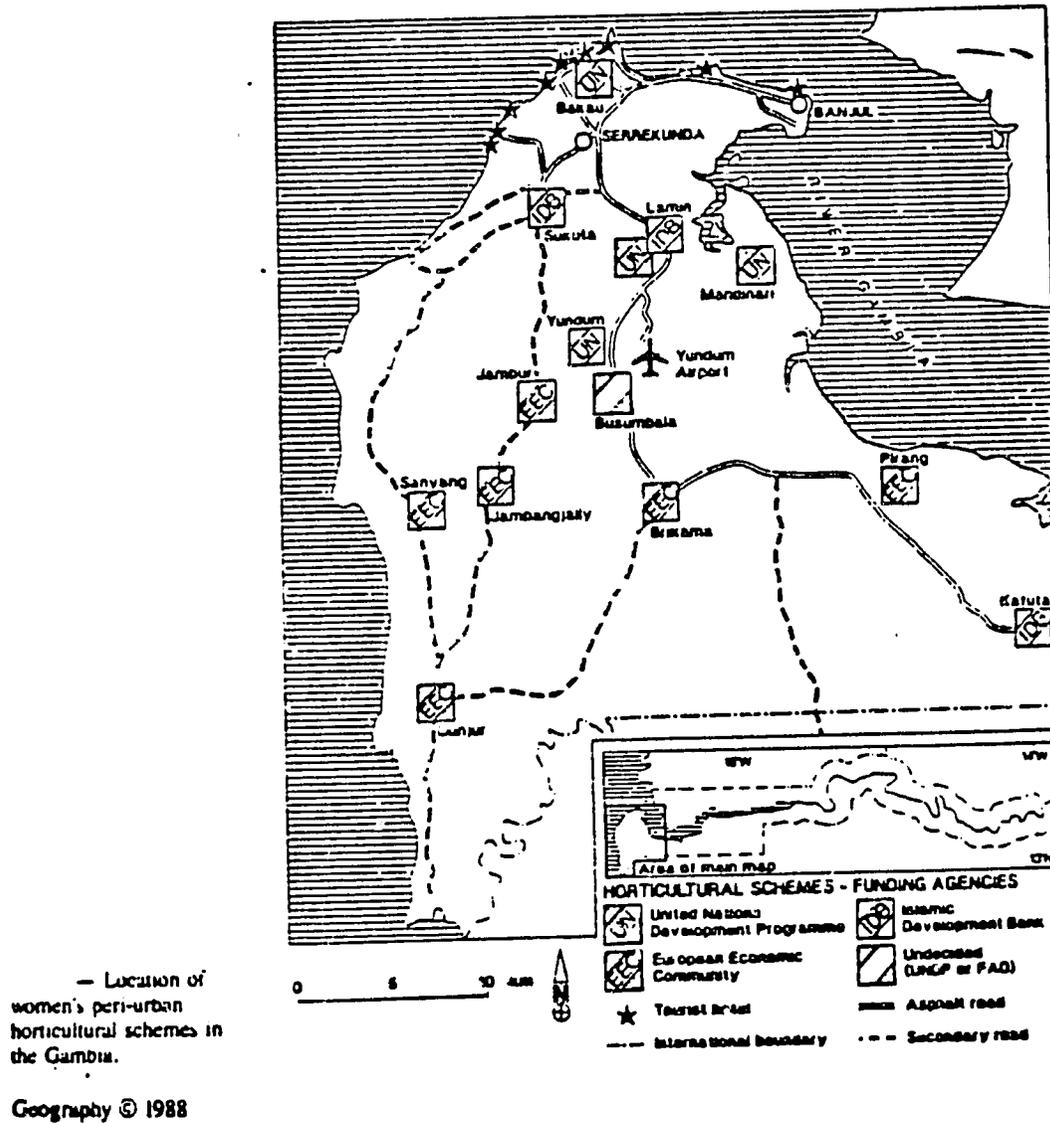
UNDP provided funds for gardens at Bakau, Lamin (II), Yundum, and Mandinari (see Map 2) to the Ministry of Agriculture, which was the implementing agency. The Ministry has two locations and a number of departments. The administrative branch is located in Banjul and is staffed by political appointees. Unfortunately, this was the branch that both designed and implemented the garden projects. It did so without input from the Departments of Agricultural Services (extension) and Research located in Yundum, despite their technical expertise. Consequently, these departments did not provide the continued assistance needed to make these gardens viable over the long-run.

The concrete lined wells of UNDP gardens were, in some cases, poorly constructed and over time have deteriorated and even collapsed. Input delivery and extension services have not been consistent, and productivity has waned. The exception to this is Bakau. Although originally funded by UNDP which provided a loan for land clearance and a grant for digging wells, constructing fencing, and purchasing implements, Bakau is now a cooperative, receiving additional assistance from the Gambian Cooperative Union (GCU) as well as the Norwegian government. This assistance has included the construction of a building for storing tools, holding literacy and numeracy classes, and housing day care facilities. The Bakau Women's Cooperative has a full-time agricultural assistant, demonstration plots organized by the Department of Agricultural Services, and assistance from the Ministry of Agriculture and the GCU in obtaining inputs and marketing produce. Bakau producers, for the most part, sell their produce individually at the Serrekunda and Banjul markets. However, the GCU has helped women in arrange contracts with Citroproducts, a parastatal involved in exporting, and with marketing agents with contracts to tourist hotels.

Bakau Women's Cooperative has 490 members, all women, who each cultivate plots of 50 square meters during the dry and rainy seasons. The entire garden is five hectares in size, though only three are under cultivation. According to members, they own the land on which they grow chili peppers, aubergines, okra, onions, and cabbage. Although production is done on an individual basis, members save collectively. Grower groups elect an Executive Committee, that collects membership fees and manages a bank

APPENDIX 1G.

Major horticultural schemes in The Gambia.



Source: Barrett and Browne in Geography Magazine, 1988, page 159, Fig. 1

account from which inputs are purchased and operational costs paid.

Table 1  
 Characteristics of Bakau Women's Cooperative

Name	Size	Members: #/Sex	Donor	Crops	Inputs/ Tech.	Market	Problems
Bakau	5 ha 3 cult. each member 50msq	490/F	UNDP Norway	chilies auberg. okra onions cabbage	no credit, pay up- front for seeds, fert. pestic./ concrete wells, hand water'g, demonstrat. on crop rotat. and stagg'd prod.	Citrop. Serrak.	one of the most successful projects

Bakau is considered one of the most successful women's gardens largely as a result of the assistance provided. It represents a model of what can be achieved with substantial aid and good project design.

#### B. IDB Funded Gardens

In 1985, the Islamic Development Bank provided financing to the GOTG for horticultural projects. The IDB gardens, Sukuta, Lamin I, and Kafuta, are the more capital intensive than those of UNDP and EEC. IDB financing was used to install irrigation systems consisting of boreholes and borehole pumps, generators and generator houses, sprinkler irrigation systems for five hectares of vegetables and drip irrigation systems for ten hectares of fruit trees. Sites were cleared with the assistance of women-farmers, willing to participate in the garden project, and fenced. Producers were initially attracted to these gardens perhaps because of the irrigation system that demanded lower labor inputs than other gardens. However, since IDB only financed the irrigation system and participants had to supply working capital (as well as labor), women soon found the burden of petrol costs for the generator problematic. The Norwegian Government and the GOTG stepped in with additional assistance. Nonetheless, women are still responsible for covering the costs of inputs and the amortization of equipment. These costs remain so high that net profits, according to Sukuta gardeners, are very low.

Low profits at Sukuta have led to accusations of mismanagement by the garden's Executive Committee. In addition, there have been technical difficulties with the sprinkler systems. Rats have eaten away at the pipes, and during the windy season, the crops do not get sufficient water. Producers also complain of a lack of tools.

The Sukuta garden has 15 hectares of land, five of which are devoted to cabbage, tomatoes, aubergines, mint, chili and green peppers, and watermelon; and ten hectares to fruit trees, mostly mangoes. Like Bakau, Sukuta is a year-round garden. According to the members, the government requested the land from a family, who gave it to the women free of charge. The women believed that their land tenure was secure. The agricultural assistant as Sukuta claimed that the alkalo, or village chief, gave the land to the women. He too believed that their land tenure was secure.

Table 2

Sukuta Women's Garden

Name	Members: Size	#/Sex	Donor	Crops	Inputs/ Tech.	Market	Problems
Sukuta	15 ha 5ha veg 10 ha fruit	261/F	IDB	mangoes cabbage tomatoes mint chilies auberg. lettuce	high tech. sprinkler irriga. system, bore hole generator, hand tools	Citrop. Serrak. Banjul	problems with Citrop. contracts, inputs costs too high, very low profits, mgt. prob'ms, lack tools, technical problems with irrig. system

Lamin I has about 200 female members, cultivating 5 hectares of vegetables and 10 hectares of fruit trees. According to the agricultural extension agent, Lamin is in the process of leasing this land. Like Bakau, Lamin is a cooperative, and thus receives assistance from the GCU. Despite its privileges as a cooperative, Lamin has many of the same problems as Sukuta: high input costs. Moreover, the generator and pump are the property of the Ministry of Agriculture which has limited funds with which

to purchase spare parts and maintain the infrastructure. Since members have been required to pay for inputs up-front, membership has dwindled.

Table 3

Lamin Women's Cooperative

Name	Size	#/Sex	Donor	Crops	Inputs/ Tech.	Market	Problems
Lamin	15 ha 5 ha veg 10 fruit 100 sq m/ member	206/F	IDB Norway	tomatoes onions chilies	no credit, pay up- front for inputs, fert & pest. sprinkler system, bore hole, generator, hand hoes	assist. w/ mar- keting, Citropr. Serrak.	high input costs, pest problem, lack tools

IBD gardeners market their produce individually, except for that which is sold through contract to Citroproducts, a parastatal. Most IBD garden produce is sold locally, in Banjul, Serrekunda, and/or Brikama (see Map 2).

C. EEC Gardens

EEC established three gardens in 1977 at Pirang, Sanyang, and Gunjur. Unlike IBD gardens, EEC projects use much less sophisticated technology that, while less costly both for producers and donors over the long-run, requires more intensive labor inputs. The irrigation system of EEC gardens consists of a gravity-fed irrigation system made up of a series of concrete wells and reservoirs evenly distributed over the area of the garden. Producers draw water from the wells by hand, fill the raised reservoirs, and then allow water to flow into furrows dug throughout the garden. EEC provides inputs, including fertilizer, seeds, pesticides, and even tools, free of charge and an expert to manage production and deliver inputs. According to some reports, EEC's donations have created dependencies among the women producers, who look to EEC to cover all of their garden expenses.

The women at Pirang are organized into groups for both production and marketing; the profits are divided evenly after harvest. This system so far seems to be working well. The 136 members seem to enjoy working in their self-selected groups. Each group

collectively cultivates 10 garden beds; the entire garden is three hectares. A female technical assistant from the U.K. works with these women on a full-time basis, and seems to be more successful at communicating with the women than the male agricultural assistants in other gardens.

Last season, middlemen came to Pirang, located a considerable distance from the major local markets of Brikama and Serrekunda, and purchased all the harvested produce at a price which left members with no profit. EEC experts argued that the price women received was unfairly low, when compared to the price at the Serrekunda market (and presumably the cost and risk of transport and marketing). According to EEC representatives, middle-men and women commonly exploit women producers, who have no knowledge of market prices and are a considerable distance from a major market (compared to UNDP and IBD gardens).

Table 4

Pirang Women's Garden

Name	Size	#/Sex	Donor	Crops	Tech./ Inputs	Market	Problems
Pirang	2 ha	136/F	EEC	Fr. beans chilies okra auberg. squash	hand watering & gravity system, concrete wells, locally made tools/ seeds, fert., pest, and tools provided by EEC	Citrop. Serrek. Brikama	last season made no profit cheated by middlewomen

A cost analysis conducted by an FAO Horticultural Marketing Economist (Planas, 1989) comparing IDB and EEC gardens revealed that EEC gardens have the capability of generating over twice the net income as IBD gardens. Realizing this income potential will require that EEC gardens find a solution to their marketing problems. This season EEC gardens are contracting with Citroproducts. While this will help provide a market, ultimately access to the local markets will have to be improved.

#### D. Constraints Faced by Donor Sponsored Gardens

According to the draft project paper for the Gambia WID project, none of the NGOs operate financially sustainable garden projects at this time. The above evidence on UNDP, IDB, and EEC gardens suggests that these too fall into the category of "unsustainable." EEC provides inputs free of cost; IDB gardens are cost-prohibitive to maintain; and UNDP gardens are either deteriorating from lack of investment or, in the case of Bakau, still dependent on assistance (from the Norwegians). Most NGOs have made increasing efforts to improve the sustainability of projects. At Bakau, Sukuta, Lamin, and a number of others, producers have been organized into groups where they save as a collective and use this savings to purchase their own inputs. Some groups have faltered since members have been required to pay for inputs; others are adapting. Breaking the pattern made over the years of being dependent on donor grants has not been easy for either donors or producers.

Numerous reports (Seeburger and Singh, 1989; draft WID project paper) criticize the lack of coordination of NGOs and other donors working in the horticultural sector. NGOs have attempted to concentrate in different geographic areas so as not to duplicate efforts. Nevertheless, there are a multitude of development agencies working in the Western Division. Some provide inputs free-of-charge, others require up-front payment for inputs, and still others provide inputs on credit. CRS has a policy of paying for all inputs the first year, 50 percent the next year, and none thereafter. Without consistency to their approach to sustainability, donors' efforts are too often at cross-purposes.

#### III. Large Commercial Horticultural Farms

The large commercial horticultural farms are located in the Western Division, near Yundum airport, and include private businessmen, joint ventures between expatriate and local concerns, and Citroproducts, a parastatal. The most prominent are Radville Farm, a joint venture between a British and local firm, and Sifoe Farm, owned by a Gambian-Lebanese businessman. Citroproducts and these two private estates contract cargo space on British Airways for export to London twice per week. Several other commercial farms which grow smaller quantities sell their produce to these exporters.

The large commercial farms use, in comparison to the women's gardens, sophisticated production technologies. Although one Lebanese businessman stated that he used the least sophisticated technology possible; this includes a sprinkler irrigation system, improved seeds, inorganic fertilizer, and pesticides. According to USAID, commercial farms employ mostly male laborers, though at least two, Radville and Sifoe, reported hiring a large percentage

of female laborers. Citroproducts employs women laborers for grading and packing of vegetables and weeding and harvesting, and men for clearing land, fencing, staking, weeding, and harvesting.

The potential for horticulture export has attracted expatriate agribusinesses as well development organizations with packages aimed at attracting investors in equity partnerships. For example, the Swiss are considering a joint venture; Radville is presently a joint venture with a British firm; and the Commonwealth Fund for Technical Cooperation (CFTC) is funding a feasibility study for increasing export activity at Faraba Farm. CFTC plans to invest in infrastructure as a means of attracting a joint venture with Agro Holding Ltd., the present owner of Faraba Farm, and making Faraba Farms a model export scheme.

With 188 hectares, Citroproducts has the largest farm and is most involved in contracting with outgrowers. To-date, Citroproducts has contracted with gardens at Bakau, Sukuta, Lamin I and II, Pirang, Sanyang, Gunjur, Yundum, Mandinari, and Brufut, and two commercial farms, Farato and Faraba. Despite its numerous contracts and the size of its farm, Citroproducts' export activity has not yet been profitable. The General Manager claims that the lack of profitability can be explained by an insufficient number of vehicles for pick-up, under-capitalization, and the newness of the export and contracting activity. Nevertheless, given its size and current outreach, Citroproducts has the potential for being the largest exporter of horticulture in The Gambia.

Radville and Sifoe Farms have not been as successful at contracting with women's gardens. Moukhatara, owner of Sifoe Farm, states that he has no interest in contracting with outgrowers; though women at the Lamin garden contradicted this. Radville Farms attempts at contracting, according to garden representatives, have been unsuccessful, reportedly, due to distrust between women producers and Radville. This distrust may be related to labor disputes at the estate, in which Radville supposedly threatened to fire all (female) laborers and replace them, rather than address grievances. Others claim that Radville Farms has flooded the local market with nonexportables.

Table 5

Sample of Large Commercial Growers

<u>Name</u>	<u>Size</u>	<u>Crops</u>	<u>Tech.</u>	<u>Labor</u>	<u>Market</u>	<u>Con-tracts</u>
Radville Farms owned by British joint venture	N/A	Asian veg	high	mostly female labor (150)	export hotels	has tried but failed

<u>Name</u>	<u>Size</u>	<u>Crops</u>	<u>Tech.</u>	<u>Labor</u>	<u>Market</u>	<u>Con-tracts</u>
Sifoe Farm owned by Moukhatara, Lebanese businessman	150 ha 40 cult.	melons auberg. Fr. beans squash	least sophis. possible, alot of fert. & pestic.	mostly female labor	export	no

<u>Name</u>	<u>Size</u>	<u>Crops</u>	<u>Tech.</u>	<u>Labor</u>	<u>Market</u>	<u>Con-tracts</u>
Faraba Farm owned by Agro Holding Ltd,	27 ha 3 ha fruit, 24 ha will be veg	chilies auberg. okra melons Asian bananas mangoes citrus	irrig needs improvt, needs better prod control	mostly male	mostly sells to other exporters since quantities small	N/A

<u>Name</u>	<u>Size</u>	<u>Crops</u>	<u>Tech.</u>	<u>Labor</u>	<u>Market</u>	<u>Con-tracts</u>
Tesito Farm owned by Pres.	N/A	mangoes tomatoes okra auberg. cabbage chilies	good facil- ities	mostly male(?)	local & export	N/A

note: good grading and packing facilities; started export activities late; have good export potential for mangoes.

<u>Name</u>	<u>Size</u>	<u>Crops</u>	<u>Tech.</u>	<u>Labor</u>	<u>Market</u>	<u>Con-tracts</u>
Lenrie Farm	22.5ha 6 ha cult.	mangoes papayas bananas veg.	irrig. problem new pump to be install'd	mostly male?	gearing up for export	N/A

note: no packing and grading facilities; lacks harvesting boxes; packing shed under construction; improved irrigation system being constructed.

<u>Name</u>	<u>Size</u>	<u>Crops</u>	<u>Tech.</u>	<u>Labor</u>	<u>Market</u>	<u>Con-tracts</u>
Citroproducts	188.6ha 5ha veg	mangoes limes chilies Fr. beans auberg. okra melons Asian veg	irriga.	mostly male laborers	export hotels	yes

#### IV. Contracts and Competition between Commercial Farms and Women's Gardens

Contracts between Citroproducts and women's gardens have all been verbal. Although the GCU has developed a model for a formal contract, it has not yet been used. Radville proposed a written contract with a CRS garden; but it was turned down for fear of possible legal actions, if the women were not able to fulfill the quantity and quality requirements.

Citroproducts has been willing to accept verbal contracts. But even with these, there have been reports the contracts have not yet been consistently upheld on either side. Women producers complain that Citroproducts, has on occasion, has left them waiting for pick-up trucks and payment, to no avail. Similarly, Citroproducts claims that they have sent out trucks only to find women otherwise occupied and the produce unharvested. Citroproducts also reports that the situation is improving every year. The General Manager argues that since these contracts are based on trust, they must be built over time, with mutual dependability. Moreover, not all contracting arrangements have been problematic. For example, Sukuta Women's Garden stated that they had contracted successfully with Citroproducts for three years.

A former researcher with the University of Wisconsin's Gambia Agricultural Research and Development (GARD) project stated that there have been conflicts between growers and Citroproducts over the quality of the produce. Mr. Ceesay of Citroproducts confirmed these difficulties, but reported that this is to be expected at this early stage, and that the women are learning what "export quality" means.

Another problem expressed by both the GARD project and an EEC technical assistant is that of producing on schedule. Conversations with GARD and EEC suggested that women growers are not familiar with producing according to a time schedule. Although some are pessimistic about changing this in the near future, Citroproducts contends that the women can adjust when the opportunities are made apparent. As of yet, women producers have not had a consistent and significant market for their produce. They have had difficulty selling on the local market because of seasonal gluts, and the access to the export market is still nascent. Citroproducts appears to be willing to work with women producers, with the expectation that successful contracting arrangements can be worked out.

FAO's Horticultural Marketing Economists fears that the large and efficient commercial farms may squeeze women producers out of the market. To prevent this, the government is making efforts to ensure equitable returns on resources and foster profitable operations among smallholders. FAO and EEC respectively, have brought in production and marketing specialists to improve the quality and coordinate the marketing of produce from UNDP, IDB, and EEC gardens.

## V. Characteristics of Women Growers

### A. Age

Interviews and observation suggested that growers in donor sponsored gardens tend to be older, about the age of forty. These women, with grown children, who can assume their mothers domestic responsibilities, and thereby free older women to spend all day every day in the garden. Younger women with infants are more constrained by the domestic demands. Young women may work half-time in the garden, with their babies tied to their back. But full-time gardeners were between the ages of 35 and 60.

### B. Marital Status

Most women in The Gambia are in polygamous marriages; the average number of wives is somewhere between two and four. Polygamy was a commonly debated topic of conversation, particularly in the peri-urban area where economic changes are generating social

transformations and polygamy is being questioned both by women and men. Women's heightened economic position may be increasing the pressure for monogamous marriages. Even husbands interviewed in the urban areas spoke of the difficulty of polygamous marriages, and the conflict they engender.

Female-headed households are very rare in The Gambia. A divorced or widowed woman is generally absorbed into her eldest brother's household. Even if an unmarried woman is able to support herself, she normally returns to her family. She may head her own "pot" within this family, and thus be responsible for producing the rice for this pot; but even this is not customary.

#### C. Fertility Rate

A report by Barrett and Browne (1988) stated that the fertility rate in The Gambia is between seven and eight. A survey conducted by Save The Children in the North Bank Division calculated a fertility rate of 5.2 (Vermilya, 1988). Women in Gambia tend to marry and bear children in their teens.

#### D. Child Care

Mothers usually take their infants of under six months to the fields with them, tied to their back. Pre-school children are left in the care of older daughters or young nursemaids, while school age children are increasingly attending school. Bakau Women's Cooperative has a rule that does not allow school-age girls to work in the garden. Interviews with women in a number of gardens revealed the importance mothers place on their children's education.

#### E. Education and Ethnicity

The women-farmers in donor sponsored gardens are largely illiterate. The agricultural assistant at Bakau stated that this garden has more literate women than others, since more of the women are Wolofs. Wolofs are typically better educated than Mandinka, the dominant ethnic group in The Gambia and in the gardens. Although Mandinka women, according to key informants, tend to be independent and business-oriented, they have generally not had the opportunities for education that the Wolofs, who tend to be of a higher socio-economic status, have had. In the urban and peri-urban areas this is changing, as more value is being given to education for both girls and boys.

## F. Husband's Occupation

Interviews with women gardeners suggested that men in the peri-urban area are employed in wage labor jobs. A woman gardener at Bakau stated that, "men in the urban areas do not grow groundnuts; they have wage labor jobs. When men return from their jobs in the evening, they work in their coos fields." Although men are responsible for the production of such coarse grains, as millet, sorghum, and maize, few women classified their husbands as farmers.

## VII. Constraints to Women's Horticultural Production

### A. Women Gardeners' Time and Labor Constraints

#### 1. Gender-Based Division of Agricultural Labor

The traditional gender-based division of labor in The Gambia is changing as a result of drought and transformations in the broader economic environment. Although men traditionally control the production of and returns to groundnuts, millet, sorghum, and maize, there is increasingly evidence of women, even in the east, becoming involved in both groundnut and maize production. Rice, on the other hand, is traditionally a woman's crop, though with the introduction of irrigated rice projects, men taken to producing this crop (only irrigated). Traditional rice in upland and swamp fields remain the major responsibility of women. Vegetable production has always been and remains almost solely a women's activity. One of the first garden projects in the Western Division, Bajulinding sponsored by the World Bank, attracted male producers. However, reports claim that these men were of minority ethnic group, and that most men in The Gambia do not work in gardens. In fact, commonly husbands refuse to assist with garden tasks that are traditionally male, such as land clearing and fencing. Others demand payment for this work.

Farming during the rainy season (March thru October/ November) begins with land preparation in June, after the ground has softened. Men have major responsibility for this task, though women may assist men in preparing land for swamp rice production and for gardens. In July, groundnuts, maize, early millet, sorghum, and rice are sown in the uplands. Men sow their late millet at the end of July, and women start their seedlings for swamp rice in July and transplant them in early September. Men begin to harvest their maize and early millet in September; in October, women harvest their upland rice, and men their late millet, and sorghum. In January, women harvest swamp rice. (See Agricultural Time Table)

Table 6

The Agricultural Time Table

Crops	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
upland rice						M i-----	W i-----	weeding(W)	W i-----			
						land prep.	plant		harvest			
swamp rice			W --i			M/W i-----	W i-----	prep	W i-----	weeding (W)		
		harvest				land prep.	seedl'g/transplant					
veget. (dry season)			W ----i							seedlings M/W i-----	W i-----	W i-----
		harvest						land prep		transpl.		
								fencing (M)				
maize early millet						M i-----	M i-----		M i-----			
						land prep.	plant		harvest			
sorghum late millet						M i-----	M i-----			M i-----		
						land prep.	plant			harvest		
groundnuts						M i-----	M/F i-----					M/F i-----
						land	plant					harvest

2. Women's Periods of Peak Labor Demand

The months of July, September, October, and January, when women are occupied planting and harvesting upland and swamp rice, are the peak labor demand months for women farmers. Vegetable production has traditionally been adjusted to the rice cropping calendar. As a result, gardens are often not started before November, which is late for taking advantage of the European winter market and the tourist season. Donors and government extensionists have exerted pressure on producers to start their nurseries earlier. This means planting during the rice harvest, when labor demands are greatest (see Agricultural Time Table).

### 3. Conflicts between Horticultural and Rice Production

Extension agents contend that planting nurseries does not take that much time away from women's rice harvest, particularly in light of the substantial payoffs. Nevertheless, some women in the peri-urban area claim that they no longer grow rice. Research in the North Bank (Shroeder, 1989) revealed that women were delaying rice harvests in order to plant early, despite the potential for crop loss. This caused such dissension that in two towns in the North Banks, laws were passed preventing women from starting their gardens before the rice was harvested. The conflicts between gardening and rice production, and the increasingly profits potentially to be made from the former, may push women in the Western Division out of rice production. However, interviews indicate that presently, most full-time gardeners, grow rice during the rainy season.

### 4. Women's Increasing Time Constraints

Vegetable production in the Western Division is traditionally a dry season activity. However, the higher profits to be had during the rainy season have motivated more and more women to become year-round gardeners. Agricultural research (GARD, Ministry of Agriculture, and CRS) has identified varieties that can survive the heavy rainfall of the wet season. The labor bottlenecks created by year-round horticultural production, however, are significant. Women are essentially adding to this new activity (rainy season gardening) to the busiest farming season.

According to the agricultural extension agent at Bakau, women spend about two eight hour days every week in the garden during the rainy season, since watering is not necessary, and three days per week in their rice fields. During the dry season, year-round gardeners at Bakau, who draw water from hand from wells and water with sprinkler cans, spend eight hours, seven days per week in their gardens. On the other hand, women at IBD gardens, with their mechanized sprinkler systems, spend only two to three days per week gardening during the dry season. Bakau Women's Cooperative hires "strange farmers" from Mali to alleviate their severe labor constraints.

### 5. Seasonal Gluts

Because women traditionally start their gardens at the same time, after the rice harvest, there are seasonal gluts between February and April when these vegetables ripen. Prices are low and losses due to spoilage are high. To alleviate this problem, women are being encouraged by donors and government extensionists to stagger production. This evens out the supply of any given vegetable at a given time, improves prices, and reduces losses. Demonstration plots at a number of Western Division gardens have experiments of staggered production in order to teach growers the technique and its benefits. Staggered production is combined

with early planting, thus labor constraints are associated with both. It is not clear to what extent women have adopted staggered production.

## 6. The Demands of Women's Domestic Responsibilities

Interviews with women from six different gardens as well as with key informants indicated a general pattern of women's daily time use. In addition, to the long hours women spend in their rice fields during the rainy season and their gardens during the dry season, women have time consuming domestic responsibilities. During the dry season, they generally rise at 6 AM; and between 6 and 9 AM, bath, prepare breakfast for their children and their husbands, get their children ready for school; clean the compound, and then go to their fields. At noon, many women walk back to their compound to prepare lunch for their family; the distance is generally about one mile. (The distance between the compound and swamp rice fields can be significantly longer.)

Women with older daughters may remain in the fields, while their daughter prepares lunch for the family and brings theirs to the field. After eight or nine hours in the field, women return to their compound around 6 or 7 PM to bath and prepare the evening meal. Water is generally available at nearby pumps and firewood is purchased at the market.

Cooking is a very time consuming task, the preparation of the evening meal but particularly the pounding of coos for the breakfast meal. This activity has been identified by the Gambia Women's Bureau as the one activity where labor saving milling machines could make an impact on women's time budgets. The Women' Bureau with help from UNDP and the Canadian government has begun a program of installing diesel-powered milling machines (Brown and Barrett, 1988).

## 7. Effects of Women's Time Constraints

Women have severe time constraints as a result of the time they spend in their gardens combined with their domestic responsibilities. When time is scarce, domestic chores either do not get done or are allocated, as much as possible, to older children. Save The Children reports that children's nutrition has suffered with women's increased involvement in gardens. Women allegedly spend less time weaning and feeding their children, and they give priority to selling their produce over feeding it to their family. Although, the income earned is, in turn, spent on children, it appears it is the lack of time that women spend with their children, not the lack of food, that is causing a decline in child nutrition. ActionAid adds that the enormous time women devote to their gardening has also affected

the quality of child care. Child care facilities at Bakau have helped to address this problem, at least for this garden.

A Save The Children (Richard Shroeder, 1988) report, based on interviews with women gardeners in the North Bank, claimed that husbands were complaining that their wives were neglecting them and contributing less labor to husbands' fields. Shroeder contends that these events have resulted in dissension within the household. My own interviews in the Western Division were only with the women themselves who reported that their husbands did not mind the time they spent gardening. Rather, they claimed, their families enjoyed the much needed income that the gardens provided.

#### B. Need for Appropriate Farming Technologies

The inability of women to afford the operating costs associated with sophisticated technological inputs of IED gardens underscores the importance of using appropriate technologies in garden projects. At the same time, women producers of more profitable (than IED gardens) but labor intensive gardens expressed the need for labor-saving farming technology to alleviate the heavy labor and time demands of gardening. A UNIFEM report (Sandhu, 1989) in the past women have rarely benefitted from improved farming practices. Many of the projects introduced machinery for men's tasks (land clearing), while weeding, a female task and often mentioned as a labor constraint which improved technologies do not address, was actually made more arduous by the introduction of fertilizers that stimulated weed growth. The introduction of rotary tillers has been rejected since it requires the expensive or time-consuming removal of stumps in the fields. Thus, while women need machinery to lighten their workload, the choice of machinery must be cognizant of women's needs and constraints.

Many tasks that have been traditionally male, e.g. land preparation, fencing, and well digging, women now have to pay men to do. In a number of cases, women have cleared land themselves. Some gardens have had access to farm machinery for land clearing. Wider availability of machinery for this purpose may be one way to lessen women's labor burdens. The energy to draw water from wells by hand is considerable; EEC has plans for purchasing a simple pump for its gravity-fed system.

#### C. Lack of Access to Credit

Women in a number of the gardens complained of the lack of farm implements, and the cost of digging wells and constructing fences. Those gardens that are heavily subsidized by donors obviously do not have problems covering these costs. However, where women are responsible for paying for tools and infrastructure, the burden can be great especially after a season

of no profit, as was the case at a number of newly established garden. At present, women only have minimal access to institutional credit; they make up only 12 percent of the GCU, The Gambia's only source of institutional agricultural credit. Women tend to rely, rather on informal savings and credit groups, susus, or to borrow from their husbands who borrow from the GCU and then on-lend to women at a higher interest rate.

Several agencies are attempting to reach women farmers and nonfarm entrepreneurs. The GCU has a pilot project through its Village Branch Lending Program for lending to women's groups. The GWFC is presently negotiating a guarantee scheme with Standard Charter Bank for women entrepreneurs. To balance the emphasis on credit of these programs, the Gambia WID project is proposing savings mobilization campaigns. The importance of assisting women to save was stressed by a number of key informants as well as The Gambia WID project paper:

In Gambian households, men and women's properties are maintained separately; however, the extended family system requires that those with accessible cash assist those in need of it. Consequently, both sexes tend either to pursue non-monetary savings strategies or to hide their money somewhere in the compound. The cash, buried or hidden, earns no interest and is often used to meet unforeseen compound needs when they arise. Removing income from the physical compound and securing it in the name of the woman herself (either in individual or group accounts) would both enable a woman to earn interest on her savings and to accumulate capital as a form of financial security and leverage for future investments.

Interviews with garden representatives and key informants revealed that while women do spend their money on priority items such as food and school fees, expenditures on clothes and jewelry are also common. Women in the urban areas place a high value on personal appearance and clothes. Moreover, cloth and jewelry are forms of savings. Access to institutional savings would allow women to accumulate investment capital outside of their homes and the demands of their extended family. However, as one key informant suggested, training might be important to educate women to the wisdom of investing in an economic activity as a form of financial security.

#### D. Limited Access to Extension Services

The Gambia WID project paper states that "despite the fact that women farmers contribute more than 50 percent of agricultural labor, less than 10 percent of the Department of Agricultural Services (DAS) extension efforts are currently directed towards women farmers' productive activities." Women's access to extension services are inadequate both for reasons relating to gender and to the DAS' lack of staff and funding. They include

the lack of extension agents trained in horticulture, the high farmer to agent ratio, the lack of vehicles, and difficulty in scheduling meetings with women farmers because of their domestic workload.

Additionally, there are few if any female extension workers, and male agents admit to having difficulty communicating with women gardeners. Efforts to hire female extension agents have not been successful, according to the DAS, because it is not a job to which educated women are drawn. Nevertheless, observations revealed that male extension workers could use training in how better to communicate with female producers. They appear to have difficulty in communicating to women as equals, and the women appear sometimes to ignore their directives. This is illustrated very clearly by the demonstration plot at Lamin, where the women made the male extensionist carry out his experiments a distance from their fields and from the water source. Not only could the women not see what he was doing (thus defeating the idea of a demonstration plot), but he had to hire workers just to water the plots. The female extensionist at Pirang, on the other hand, has very good rapport with the gardeners.

The DAS has attempted to hire female extension workers, but reportedly educated women have little interest in working in fields. Thus, efforts should be directed at sensitizing men. The Gambia WID project aims to strengthen the institutional capacity of the DAS by means of a "sensitization campaign for extension staff and women's group leaders in each division, semi-annual in-service training workshops for extension staff in each division on specific production activities for women farmers, production of a comprehensive set of extension manuals for use by all extension workers, ... coordination and exchange of experience among government and non-government extension services through a national extension workshop, and regular monitoring and evaluation of progress.

#### E. Problems Associated with Post-Harvest Handling and Marketing

All gardens have experienced problems with marketing their produce. For many women transporting perishable fruits and vegetables in the heat and by public transportation is difficult, time consuming, and results in significant spoilage. Moreover, the majority of women do not have access to market stalls at local markets and thus sell on the side of the road with no shelter from the sun. The lack of storage facilities at gardens or local markets adds to post-harvest losses, which are estimated to be as high as 60 percent in horticultural crops (draft WID project paper, 1989).

These losses are only exacerbated by the problem of seasonal gluts. To absorb produce during the glut periods, women producers and marketers need access to the tourist hotel and

export markets. As of yet, their ability to penetrate these markets has been limited, according to some reports, because the quality of their produce does not meet standards and, according to other reports, due to the fact that women growers have not been able to produce sufficiently early for the tourist season and the European market. The WID project paper adds another reason to this list. The rapid development of the hotel industry has produced a class of male and female marketing agents with supply contracts with hotels. However, like others, these agents are generally limited to public transportation and thus can only buy from market centers accessible by public transport. The difficulty of transportation results in substantial losses in terms of quality and quantity of saleable produce, and time for these marketing agents.

To address these marketing problems, FAO has brought in a Horticultural Marketing Economist. This expert will work toward coordinating and improving marketing for EEC, UNDP, and IDB gardens in the Western Division, focusing on local as well as export marketing constraints and opportunities. Efforts will be made to expand contracting relationships between the gardens and exporting agents such as Citroproducts. The WID project will concentrate on improving women's access to market information. The agricultural assistant at EEC's garden in Pirang underscored the importance of training women in numeracy and accounting to enable them to understand market information. Both their lack of access to market information and their lack of knowledge of numeracy put them at an extreme disadvantage when bargaining with middle-women and men.

#### F. Efforts to Increase Women's Access to Productive Inputs

The Gambia WID Project, currently about to be launched and funded by the World Bank, bi-lateral donors, and NGOs, proposes to address many of women's production and marketing constraints. The project has plans to:

- o support of GCU and GWFC programs aimed at providing credit to women and promotion of savings mobilization;
- o provide appropriate input and farm implement packages to women both individually and in groups; this will include provision of improved inputs and draught animals;
- o expand and strengthen the private sector input distribution network by establishing additional women retailers;
- o strengthen leading service agencies to deliver technology transfer packages, develop appropriate educational and training programs, and train female

extension agents to improve women's access to extension services.

- o expand program of demonstration trails to promote early and staggered planting, varieties with different maturity periods, and post-harvest handling techniques -- to address the problem of seasonal gluts;
- o establish eight vegetable growing schemes involving about 800 women in 10 fruit/banana orchards;
- o erect perimeter fences, sink wells, and construct water reticulation systems to improve the degree of land development of women's gardens;
- o provide food processing technologies and farm labor-saving devices on a sustainable basis;
- o develop a Market Information System in collaboration with FAO funded Horticultural Marketing Economist; and
- o promote storage cribs and introduce improved crop handling techniques in order to reduce post-harvest losses.

#### VIII. Women's Incentives for Participating in Garden Projects

##### A. Income Earned

Most estimates of per capita net income earned from donor sponsored year-round gardens are around D1,000 per annum. Although the GCU quoted Bakau's net profits at D600 or D700 per year per member, Bakau's agricultural assistance gave the figure of D945. Net profits at Tuba Kolong, in the North Bank Division, and Lamin were estimated at D1,000 per member for a year-round gardens. The significance of this income was debated. Numerous key informants argued that, for these women, the profits were substantial. The Gambia WID project paper asserted that gardens earnings were hardly sufficient to meet women's basic needs.

When these earnings are viewed in light of women's opportunity costs, their significance is uncontested. Most of the producers interviewed were illiterate women with no investment capital and few if any other income generating options. Since membership in gardens required no capital investment and, in many cases, inputs initially provided free-of-charge, the only requirement for women was their labor. Thus, gardens were for most women a very attractive and scarce income generating opportunity.

Women's low opportunity costs were illustrated by their willingness to participate in garden projects even after a season of no profit. Women in several gardens, including Tuba Kolong, Sukuta, and Nema Kunda complained that they earned no income last season from their garden. At Tuba Kolong, a considerable distance from the large regional markets of Banjul and Serrekunda, middlemen did not come to purchase their produce as was the case last season. Unable to transport the produce themselves, producers were left with more produce than they could eat or sell locally and, in end, with no profits. Having made no money the previous season, women were strapped for funds to repair their fence this year and purchase needed farm implements.

Despite these losses, women did not abandon these gardens. When asked, "why are you working in the garden this year, when you made nothing last year," they responded that it was their only source of income. A British educated school teacher working in the area explained:

"D1,000 is quite alot of money for these people. Moreover, their options, given no or very small amounts of capital, are so few that the garden, even if uncertain, is their best opportunity for generating income."

Given increasingly severe financial difficulties within the household as a result of men's declining income, women have more pressure to generate whatever income they can.

#### B. Income Control

Based on interviews from 18 Save The Children gardens in the North Bank, Richard Shroeder (1989) suggested that women's significant increases in income were having important effects on social and economic relations within Mandinka households. Although his findings had not yet been fully analyzed, Shroeder's interviews with Mandinka husbands indicated that they felt that their wives were spending an excessive amount of time in their gardens. As a result, wives were "neglecting their household responsibilities" and in particular, taking care of their husbands. Traditionally, wives assisted husbands in their fields, but since women had become involved in gardening, their husbands complained that they are not getting the help they used to.

The potential for intra-household dissension may be exacerbated by men's concurrent loss of income as groundnut prices have fallen and wage labor jobs have dwindled. In order to alleviate the tensions created by women's gains and men's losses, efforts might be directed at increasing economic opportunities for men. Balancing donor attention on income generating opportunities for women with assistance to men would likely benefit household social and economic relations.

Given the precedent set by the Jahally Pacharr irrigated rice project where women lost control of a crop they traditionally controlled, there is concern over the future outcome of horticultural gardens in The Gambia. A spokesperson for Save The Children, suggested that men would more likely be attracted to gardening if capital-intensive investments were made. Thus the more "appropriate" the technology introduced, the greater the chance, it was argued, that women will be able to maintain control over their new-found source of income. An EEC expert suggested that the probability of loss of income control might likely depend on the amount of new income women earned; the labor demands of gardening; the strength and political clout of women's organizations; and men's commitments to their own farms. Unless, men can find a profitable commodity to produce, their commitment to their own fields will be tenuous and they may, as Shroeder forecasts, see women's gardens as an attractive option.

### C. Women's and Men's Expenditure

As men's income sources have diminished and women's income has rivaled and sometimes exceeded men's (Shroeder, 1989), women have contributed more and more, and in a growing number of cases are totally responsible for all expenditures. Key informants found evidence of women purchasing rice during the rainy season, paying for children's clothing and school fees, and covering feast day expenses for the whole family -- responsibilities that have traditionally belonged either solely or partially to men. In theory, men are supposed to give women "fish money" for household expenditures; according to a number of sources, the practice is breaking down. Save The Children has reports of women making loans to their husbands for equipment, construction expenses for the compound, and draught animals.

How do men feel about this shift in responsibilities? According to a CRS informant who has worked with women's groups in The Gambia for 15 years, men are pleased with women's new income since it compensates for their own losses. Men are not interested, themselves, in getting involved in income generating activities. Rather their interest is in wage labor jobs, and the status and prestige associated with them. Educated men prefer unemployment to farming. Moreover, "Mandinka women have always been independent and business oriented -- this is accepted by men."

## IX. Who Will Benefit and Who Will Lose from Increased Export Activities?

Answering the question, who will benefit and who will lose from the further development of horticultural exports in The Gambia can only be conjectured. However, given past experiences, it is at least clear that caution must be taken in designing an export scheme to ensure that it contributes to development while at the same time being profitable. To illustrate, Class, Gender, and Agribusiness in West Africa, a recent book by Maureen Mackintosh, analyzes the developmental impacts of the Bud-Senegal scheme, a horticultural estate of hundreds of hectares outside of Dakar. The scheme began with plans for a nuclear estate with outgrower contracts. In the end, however, management decided that the quality and timing of production could be better controlled by concentrating all activities on the estate. Laborers were hired on a seasonal basis. Eventually, Bud-Senegal began selling nonexportables on the local market and out-competing smallholders. According to Mackintosh, the losers in this scheme were smallholders who lost their local market, and in return gained low paying, seasonal wage labor jobs on the Bud-Senegal estate.

Mackintosh's concern for the impacts of such schemes are shared by development experts in The Gambia. The FAO Horticultural Marketing Economist writes that there is "competitive race presently raging in the (horticulture) sector due to the presence of very large and efficient farms" (Planas, 1989). She fears that unless women's gardens can become competitive they will get squeezed out of the race to export.

Others fear that because women producers are largely illiterate and have so few options for generating income that they are at a disadvantage in bargaining with businessmen. They could easily be exploited, as many argue they already have been by middlemen. The strength of women's organizations will be important to their bargaining power and their ability to demand a fair return on their efforts and an equitable distribution of resources. The Women's Bureau, created by an act of Parliament, has been a voice for women's grievances to which President Jawara has repeatedly responded.

Will women's husbands attempt to take control of their garden income? Shroeder fears that women's enthusiasm for their gardens and concomitant neglect of their husbands could lead to intra-household dissension with significant repercussions for women.

The Women's Bureau argues that women's enthusiasm for their gardens within the context of increasing household financial difficulties has put excessive labor demands on them. Efforts are being made by a number of development agencies to introduce labor-saving devices for the household and for farming; nevertheless, the workload of women should be monitored. Reports of lower standards of child care and nutritional problems among

children make clear the justification for monitoring the effects of women's labor and time constraints.

But while, these potential "losses" are serious and require attention, the benefits of gardening to women also need to be emphasized. Barrett and Browne (1988) write that participation in horticultural projects has given women much needed cash to invest in their homes and families and -- to some for the first time -- economic power.

#### X. Strategies for Strengthening Women's Participation in and Contributions to Horticultural Export Activities

The following are recommendations for project activities to promote the extent to which women producers participate in and contribute to increased horticultural exports. A number of these recommendations are already incorporated into the Gambia WID Project about to be launched. Thus any actions on the part of USAID would have to be coordinated with those currently being planned.

- o improve Citroproducts outreach to growers, dependability as a buyer, and overall business operations.

Citroproducts has been most successful and most interested in contracting with women's gardens. More than other large farms, Citroproducts has been willing to work with women gardeners to develop successful contracting arrangements. However, while it has the potential for being the largest exporter, Citroproducts is not yet profitable. Strengthening the operations of this parastatal will require the provision of trucks for pick-up, cold storage facilities, and operating capital. It may also require training in management, accounting, and other business operations.

- o review DAS' approach to providing extension services.

In order to compete and thus be included in future export activities, women must adopt agricultural techniques that are new to them. They will have to plant early and stagger production, use pesticides and crop rotation to control pests, and other techniques to produce export quality produce. This means that agricultural extension services are a critical component to women gardeners' success. The DAS's model for providing extension, based on the T&V method, may not be very effective in communication with women gardeners. Observation of extension services at a number of gardens suggested that the communication feedback between extensionists and women producers is not sufficient if existent. Women do not appear to have sufficient opportunity to express their needs or their understanding or lack

of understanding the techniques extensionists attempt to communicate. The DAS needs to incorporate a more effective feedback of communication, between women gardeners, on the one hand, and agricultural research and extension, on the other.

- o train women garden leaders in the scheduling, quality, and contracting requirements of exporting.

A number of sources stated that women producers did not understand the scheduling, quality, and contracting requirements an export horticultural business. They do not understand the need to time their production and harvest to a strict schedule, meet specific quality standards, or abide by a legal contract. It appears that neither buyers nor sellers understand the legal ramifications of a written contract. Increased export activity will likely require the discipline of a legal contract in placement of the verbal contracts that are now used. To facilitate the transition, women gardeners may require training from business advisory services. In addition, women's transition to producing export quality produce according to a schedule would be facilitated by training sessions with garden leaders, that might even include taking them to the final market, to demonstrate what is involved in exporting: where the produce is finally sold, the quality required by the final market, and their competition.

- o provide labor-saving devices/machinery to reduce the heavy labor demands of gardening.

Women's increased involvement in gardening has added enormously to women's workloads. Unless women's labor demands are attenuated, they may be unable or unwilling to adopt new farming techniques or to increase production. The Gambia WID project paper raises the need for labor-saving farming devices; however, plans for how to address this need are not clear. The potential deleterious impacts of women's increased workloads are severe, ranging from intra-household conflict to a deterioration of child welfare. Thus, mitigating women's labor demands should be a priority.

- o provide community development specialist to facilitate adjustment to the demands of export activity.

Reports of women abandoning rice harvests in order to plant early, neglecting labor obligations to husbands, and overlooking other domestic responsibilities are indications of the difficulty women gardeners and their families are having adjusting to the considerable changes brought about by expansion of the horticultural sector. A community development specialist might facilitate this adjustment, for example, by examining the opportunity costs of hiring laborers to do work for which women

no longer have time. Such a specialist might furthermore examine alternatives for child care and other domestic responsibilities, etc. These interventions might ease the tensions currently experienced by women and their families and, thereby, promote women's productivity.

- o monitor women's labor and time constraints.

While programs are proposed to alleviate women's labor and time constraints, efforts should be made to monitor women's labor and time constraints and their impacts on their productive and reproductive responsibilities.

- o strengthen the institutional capabilities the Women's Bureau.

The Women's Bureau is an important institution through which women can voice their grievances. In fact, the Women's Bureau is the most likely institution to oversee monitoring of the impact of horticultural export activities on women. Officials at the Bureau expressed a need for additional training and technical assistance for their staff.

- o provide child care facilities at gardens.

Bakau already has child care facilities, donated by the Norwegians. Other gardens are in need of day care facilities.

- o provide literacy and numeracy classes to women gardeners.

Literacy and numeracy classes are important to ensure that women understand market information, including weights and prices, and are therefore better able to bargain with buyers. Bakau currently has such classes. Given the higher rates of illiteracy at other gardens, classes at additional gardens are needed. Training in financial management might also be important to educate women about the wisdom of investing their savings in their gardens as a form of financial security with higher potential returns than investments in consumer items.

- o train mothers in the nutritional needs of children.

A component of The Gambia WID Project addresses the nutritional needs of children. The Women's Bureau is involved in a task force to address this problem. Save The Children also has activities aimed at making mothers more aware of the nutritional needs of their children. Additional assistance in these endeavors may be needed.

o promote employment opportunities for men.

The concentration of donor assistance on women, given men's declining economic opportunities, may be setting the stage for intra-household conflicts. Efforts should also be made to increase wage labor jobs for men.

## APPENDIX A: PEOPLE INTERVIEWED

### GOVERNMENT ORGANIZATIONS

Mr. Ceesay, Citroproducts  
Binta Sidibe, Women's Bureau  
Isatou Ngie, Women's Bureau  
G.O. Gaye, Dept. of Agriculture  
Sunny George, Dept. of Agriculture

### USAID/BANJUL

Don Drga, USAID/Banjul, Agricultural Development Officer  
Peter Riley, USAID/Banjul, Private Sector Officer  
Paul Clemens, USAID/Banjul  
Earl Gritton, GARD Project  
John Rowe, GARD Project  
Kathy Jabara, Cornell Food and Nutrition Program

### NON-GOVERNMENTAL ORGANIZATIONS

Margaret Luck, Save The Children  
Abou Tall, Save The Children  
Glen Knapp, Catholic Relief Services  
Momadou Krubally, Catholic Relief Services  
Omar Somko, Catholic Relief Services  
Sana Jabang, ActionAid

### DONOR ORGANIZATIONS

Richard Vits, EEC  
Rose Clarkson, EEC

DONOR SPONSORED GARDENS (producer groups interviewed)

Bakau Women's Cooperative, UNDP

Women's Borehole Garden, Sukuta, IDB

Lamin Women's Garden, IDB

Nema Kunda Women's Garden, CRS

Toubakalong, North Bank, Save The Children

PRIVATE ENTERPRISES

Abid T. Massry, T. Massry Co. Ltd.

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