INTERNATIONAL
FUND FOR
AGRICULTURAL
DEVELOPMENT

CR 1869-UG

DOCUMENT OF
INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT

Report No. 6961-UG

STAFF APPRAISAL REPORT

THE REPUBLIC OF UGANDA

SOUTHWEST REGION AGRICULTURAL REHABILITATION PROJECT

December 11, 1987

Appraised on Behalf of the
International Fund for Agricultural Development
by the World Bank

Agriculture Operations
Eastern Africa Department
Africa Region

CURRENCY EQUIVALENTS

Exchange Rate	:	US$ 1.00 = Uganda Shillings (USh) 60.00 [1/]
	:	USh 1.00 = US$ 0.0167
	:	SDR 1.00 = US$ 1.32109 [2/]
	:	US$ 1.00 = SDR 0.75695

1/ After currency reform and exchange rate adjustment of May 15, 1987
2/ As of October 31, 1987

WEIGHTS AND MEASURES

Metric System

CALENDAR

Fiscal Year:	July 1 - June 30
Calendar Year:	January 1 - December 31
Cropping Season:	February - May August - December

ABBREVIATIONS AND ACRONYMS

ADP	-	Agricultural Development Project (Credit 1539-UG)
ARP	-	Agricultural Rehabilitation Project (Credit 1328-UG)
CIAT	-	International Center for Tropical Agriculture
DAO	-	District Agricultural Officer
DFI	-	District Farm Institute
DOA	-	Department of Agriculture
EEC	-	European Economic Community
ERP	-	Economic Recovery Program
ERR	-	Economic Rate of Return
GOU	-	Government of Uganda
ICB	-	International Competitive Bidding
ICC	-	Interministerial Coordinating Committee
IFAD	-	International Fund for Agricultural Development
ILO	-	International Labor Organization of the United Nations
IMF	-	International Monetary Fund
LCB	-	Local Competitive Bidding
MCM	-	Ministry of Cooperatives & Marketing
M & E	-	Monitoring and Evaluation Unit
MOA	-	Ministry of Agriculture
MOLG	-	Ministry of Local Government
PMB	-	Produce Marketing Board
PMU	-	Project Management Unit
RAO	-	Regional Agricultural Officer
RCC	-	Regional Coordination Committee
SIDA	-	Swedish International Development Agency
SOF	-	Special Operations Facility
UCB	-	Uganda Commercial Bank
UNCDF	-	United Nations Capital Development Fund
UNDP	-	United Nations Development Programme
UNICEF	-	United Nations International Children's Emergency Fund
USAID	-	United States Agency for International Development
VTC	-	Variety Testing Center

BLANK PAGE

UGANDA

SOUTHWEST REGION AGRICULTURAL REHABILITATION PROJECT

TABLE OF CONTENTS

This report is based on the findings of an appraisal mission in May/June 1987, comprising J. Stemp and J. Coates (World Bank), and N. Chapman, I. Guest, P. Harrison and I. Walton (Consultants). The mission was assisted by R. Williams (IFAD). V. Ashworth contributed to the drafting of the report.

List of Tables

Annexes

UGANDA

SOUTHWEST REGION AGRICULTURAL REHABILITATION PROJECT

Credit and Project Summary

Borrower: The Republic of Uganda

Amount: SDR 7.6 million (US$ 10.0 million equivalent)

Terms: Standard IDA Terms with 40 year maturity

Project Description: Project objectives are to increase food production, incomes and living standards of small farmers in the four districts of Southwest Uganda. Project costs of US$ 27.4 include: (a) Adaptive Research and Extension: US$ 3.9 million for: (i) rehabilitation of two District Farm Institutes and improvement of facilities at a research substation and a research farm; and (ii) strengthening of MOA's adaptive research and extension activities through provision of vehicles, equipment, technical assistance, training and incremental operating costs; (b) Agricultural Input Supply: US$ 8.1 million for (i) the procurement and sale of small, high volume inputs (hand tools, seeds, bicycles); (ii) vehicles, materials or equipment needed to strengthen marketing infrastructure; (iii) establishment of staff and warehouse at Mbarara for reception and distribution of goods; (c) Rural Access Roads: US$ 13.3 million for (i) a program of rehabilitation and spot repairs on 2,000 km of rural access roads; and (ii) provision of plant, equipment, and incremental operating costs including in-service training to MOLG to maintain the access road network; and (d) Project Management, Monitoring and Evaluation (US$ 2.1 million) to enable MOA's Project Management Unit to coordinate implementation and administer a community development fund.

Benefits and Risks: The project will increase production of food by smallholders, resulting in increased incomes and nutrition. Reductions in transport costs from improvements in rural access roads will reduce the costs of inputs and consumption goods in the area, and increase producer prices through improved access and competition in the food market. The viability of this project depends on the maintenance of a supportive macroeconomic environment, which includes an appropriate exchange rate, adequate production incentives and producer prices, the liberalization of food crop marketing policies and a reduction in the inflation rate. These have been agreed in the Economic Recovery Program. Project related risks which include: (i) consumer resistance to higher priced project inputs; (ii) delays in implementation; and (iii) lack of motivation amongst Government staff charged with project implementation, have been taken into consideration, and minimized, in the design of project implementation mechanisms.

	Local	Foreign	Total
	(US$ million)		
Estimated Component Costs			
Rural Access Rds Rehabilitation	4.3	6.9	11.2
Agricultural Inputs	2.3	4.6	6.9
Adaptive Research and Extension	1.3	2.1	3.4
Monitoring and Evaluation	0.2	0.4	0.6
Management Support	0.3	0.8	1.1
Baseline Cost	8.4	14.8	23.2
Physical Contingencies	1.0	1.7	2.7
Price Contingencies	0.5	1.0	1.5
Total Project Cost	9.9	17.5	27.4 1/
Financing Plan			
IDA	3.6	6.4	10.0
IFAD	4.4	7.6	12.0
SOF 2/	0.1	0.2	0.3
Government of Uganda	1.8	3.3	5.1
Total Financing	9.9	17.5	27.4

Estimated Disbursements from IDA Credit (US$ million)

IDA Fiscal Year	88	89	90	91	92	93	94
Annual	0.1	0.9	2.0	2.5	2.4	1.6	0.5
Cumulative	0.1	1.0	3.0	5.5	7.9	9.5	10.0

Economic Rate of Return: 15%
Staff Appraisal Report No. 6961-UG
IBRD Map No. 20814

1/ Includes US$ 3.0 million in taxes and duties.
2/ IFAD's Special Operations Facility would finance project startup activities.

UGANDA

SOUTHWEST REGION AGRICULTURAL REHABILITATION PROJECT

I. PROJECT BACKGROUND AND THE AGRICULTURAL SECTOR

A. Project Background

1.01 The Government of Uganda (GOU) has requested the International Fund for Agricultural Development (IFAD) and the International Development Association (IDA) to help finance the Southwest Region Agricultural Rehabilitation Project. The project, which includes the rehabilitation of access roads, improvements in agricultural extension and research, and the provision of agricultural inputs, would form part of a program to revitalize agriculture in Uganda, and assist small farmers to improve their income levels and living standards.

1.02 Project preparation was done by the Food and Agriculture Organization Investment Centre in 1985 following an IFAD mission in 1984. Project processing was delayed due to political changes which started in late 1985 and continued into mid-1986. The project was preappraised in November 1986, at which time the project scope was reduced -- rural water supply, seeds and livestock components were not included after GOU had obtained alternative donor assistance (paras 2.20-2.21). The preappraisal mission also identified a number of critical economic policy issues which needed to be resolved before appraisal could proceed. The Government made major policy changes in May 1987, which addressed the pre-appraisal mission's concerns, and the project was appraised in May/June 1987.

B. Agriculture in the Economy

1.03 Uganda is a landlocked country of 237,000 sq km with a population of about 15.5 million, over 90% of whom live in rural areas. The country's economy depends on agriculture for about 65% of GDP, 99% of exports (mostly coffee) and 93% of employment. Agricultural potential is good. Except for a few areas in the northeast, the country has fertile soils and receives adequate rainfall for successful crop production. Until 1970 Uganda had one of the strongest agricultural economies in Africa, but political instability over much of the past 15 years has seriously disrupted the agricultural sector and the economy. Output of all major commodities in 1980-85 was less than in 1966-70, in some cases substantially so. Agricultural export volumes, with the exception of coffee, are well below the level of 1966-70. Per capita food production is believed to have declined.

1.04 Land under cultivation is estimated at 5.5 million hectares. Average farm size varies considerably, ranging from 1.5 ha in the more populated fertile areas of the southwest, to 8 or 9 ha in northern Uganda. Most farmers have permanent user rights to the land they cultivate, although ownership usually rests with the tribal group. Grazing land and water sources are communally owned. In addition to food crops and livestock, cash crops such as coffee, cotton, sugar, tea and tobacco were important in the 1960s but, except for coffee, production declined sharply during the 1970s, and continues at a low level. Food crops such as finger millet, sorghum, maize, bananas/plantains, cassava, sweet potatoes, beans and groundnuts, always dominant in the farming pattern, have become even more so as cash crops have been neglected, the economy has contracted, and the transport and marketing system has deteriorated.

1.05 The livestock population has declined since 1978 and is now estimated at 3.5 million cattle, 3.5 million goats, 1.8 million sheep and 0.3 million pigs. Permanent grasslands (especially in Mbarara, Bushenyi, Moroto and Kotido), seasonal swamps, fallow areas and agricultural crop stubbles provide grazing land. The decline in livestock numbers and production was largely due to a breakdown of the disease control program. This has also resulted in tsetse fly reinfestation of previously cleared areas.

1.06 Given the near collapse of the economy and society, agricultural production at present involves low levels of capital outlay and input use by small and widely scattered farmers. With the limited technologies and inputs currently available, and the largely destroyed transport and marketing system, most farmers have moved towards a subsistence mode of production and, except for coffee, do not produce significant surpluses either for the domestic or export markets.

C. The National Economic Recovery Program

1.07 In May 1987, GOU introduced a National Economic Recovery Program for the years 1987-1990[1/]. The objectives of the Program are to: (i) restore price stability and a sustainable balance of payments position; (ii) substantially improve capacity utilization in industrial and agro-processing units; (iii) rehabilitate existing infrastructure and installed capacity; (iv) restore producer incentives through appropriate price policies and the use of markets; (v) restore discipline, accountability and efficiency in the public sector; and (vi) improve public sector resource mobilization and

---

1/ The Program is supported by and incorporated in IDA Credit 1844-UG (US$65 million), the African Facility Credit A-34-UG (US$24 million) and Special Joint Financing (ODA, UK) of US$16.0 million.

allocation. As an important first step towards achieving these goals, the Program included: a major devaluation of the currency; currency reform and a currency conversion tax; substantial increases in official producer prices for cash crops (coffee, seed cotton, tobacco and tea), and for exportable food crops (beans, maize, simsim, groundnuts, soyabeans); an increase in the price of petroleum products; and a substantial increase in civil service salaries. These specific actions are supported by additional measures including the establishment of an Open General Licensing system for foreign exchange allocations and of a credit facility for local cover for imports, as well as the pursuance of fiscal and monetary policies consistent with the objective of stabilization.

Agricultural Sector Strategies

1.08 The Economic Recovery Program (ERP) recognizes that restoring the Ugandan economy depends largely on rehabilitating the previously successful agricultural sector. In addition to political problems and economic mismanagement, agricultural development has been adversely affected by inefficient parastatal crop processing and marketing, by a lack of inputs and by delays in crop payments to producers. Further disincentives arose from low producer prices (particularly for cash crops) and an overvalued currency, reinforced by weakened agricultural support services (research, extension), inadequate supplies of inputs and a severely deteriorated infrastructure.

1.09 Government's agricultural development policy focusses on smallholder production which is responsible for around 94% of output. The policy aims to increase food production for self-sufficiency, and to increase and diversify agricultural exports. Agricultural development objectives include: (i) ensuring food security and adequate nutritional levels; (ii) increasing and diversifying the production of agricultural export commodities; (iii) producing adequate agricultural raw materials for domestic, agro-based industries; and (iv) increasing employment opportunities in the agricultural sector. As part of the program for achieving these objectives, it is intended to increase the production of the traditional cash crops and to promote the production of non-traditional export crops (para 1.07).

1.10 Increasing the supply of agricultural inputs, and restoring adequate price incentives for cash and food crops will provide the major stimulus for increased production. The ERP commits GOU to the maintenance of realistic producer prices with periodic revisions to take account of trends in world prices, movements in the exchange rate and in domestic prices, as well as changes in productivity and taxation. Projects such as this regional rehabilitation effort will enable the productive response from the ERP to attain its full potential. GOU will further promote agricultural production through the provision of inputs and the rehabilitation of the processing industry. Cooperative Unions are being strengthened and crop

financing will be improved through the direct provision of bank credit to cooperatives. The operation of parastatals will also be reviewed and action taken to improve the efficiency of operation and management of cash crop marketing. Multichannel marketing of food crops involving private, cooperative and public trade will be encouraged. The rehabilitation of the transport network will play a crucial role in increasing marketable supplies throughout the country. In the longer term, the Government is committed to the improvement of agricultural services such as research and extension.

1.11 Agricultural production in Uganda is relatively free of Government intervention and control. Its large subsistence and small scale sectors operate freely, and helped avoid economic catastrophe during the years of upheaval. The controls which are in effect are mostly concerned with the marketing of key export crops through marketing boards, and in the setting of producer prices. Prices of a few basic necessities which are in scarce supply, namely sugar, salt and soap, are also regulated pending an easing in the supply situation.

1.12 To provide a sound basis for the formulation of appropriate policies, the Government, with World Bank support, organized a number of Agricultural Task Forces which concluded their work in April 1987. Their recommendations cover a wide range of topics including marketing, agricultural inputs, agricultural credit, manpower and training, land tenure, and agricultural research. Some of these recommendations are already incorporated into the ERP. Others are in the process of being translated into policy actions.

1.13 Under the ERP producer prices are to be reviewed twice a year; once prior to planting and a second time in the harvesting and marketing season. Accordingly, the Government will review and, if necessary, adjust producer prices again in consultation with IDA. To improve efficiency in agricultural producer pricing, the methodology used in price decisions is currently under review. The recommendation of the Agricultural Task Forces for a revised methodology has been adopted by the Agricultural Policy Committee, and is now under consideration by the Presidential Economic Council. The proposed methodology incorporates the relevant price parameters for market efficiency such as parity prices, market exchange rates, domestic resource costs, and relative prices of competing crops. The new methodology will also encourage the production of higher quality products, and compel the cooperative unions and the marketing boards to reduce their overhead costs.

1.14 The government is aware of the need for improvement in crop financing and has recently introduced a system whereby credit is provided directly from the commercial banks to cooperative unions with satisfactory accounting and financial expertise. Once fully operational, the direct provision of bank credit to producer-owned cooperatives would improve the efficiency in the use of credit, and would relieve the Coffee Marketing

Board and the Lint Marketing Board of the financial burden of supporting the cooperative unions. In addition, GOU is planning to establish a monitoring and supervision unit in the Ministry of Cooperatives to assure prompt payment to farmers. The Government will review the performance of the system in December 1987, and, if necessary, will take measures to accelerate its implementation.

1.15 While the level of Government intervention in agricultural production in Uganda is substantially less than in other African countries, especially for agricultural products consumed domestically, the marketing of the major export crops -- coffee, cotton, tea, and five foodcrops [1]/, is handled by government export monopolies which have performed poorly. The Government's long-term objective is to gradually liberalize the marketing and exporting arrangements for all agricultural crops. Thus, measures are being taken to improve the operational and financial efficiency of the marketing boards including those for Coffee Marketing, for Lint Marketing (cotton), and Produce Marketing (foodcrops).

1.16 Uganda has the potential to produce foodcrops over and above its domestic requirements, but restrictions on the internal movement of foodcrops have discouraged production. The Government licenses traders in the five foodcrops with export potential [1]/ and allows their free movement across districts, except in emergency situations. Licenses are liberally issued and the licensees are free to sell to the Produce Marketing Board (PMB) or other buyers anywhere within the country. At present, however, certain restrictions are imposed on free movement of foodcrops in certain districts, particularly in border areas. Under the ERP, the Government, through the Ministry of Cooperatives and Marketing, would monitor the free movement of foodcrops across the district lines periodically, and would take action to remove restrictions when needed. The Government also intends to allow private exporters to operate alongside PMB as economic conditions improve.

1.17 Thus, the ERP and the agricultural sector policies it embraces provide a sound policy framework in which to promote agricultural growth. The full benefits of these policies at the farm level will be achieved through implementing investment and rehabilitation programs such as that proposed for the Southwest Region Agricultural Rehabilitation Project.

D. Agricultural Institutions and Support Services

Ministry of Agriculture (MOA)

1.18 MOA is responsible for the development and implementation of national crop production policies and programs. Until recently it consisted of Departments of Agriculture and Forestry, each headed by a

---

1/ Maize, beans, simsim, groundnuts and soya beans.

Commissioner. The Department of Forestry was recently transferred to the Ministry of Environment Protection. The Department of Agriculture (DOA) consists of five sections: Research, Planning and Statistics, Development, Production and Administration. MOA also supervises the Uganda Tea Authority, Uganda Tea Growers' Corporation and National Sugar Works Kinyala.

1.19 The DOA Research Section has carried out research on practically all major crops and pastures, but efforts have concentrated on cotton because of its former economic importance. Research has been hard hit by the instability of the past 15 years however, and has been basically dormant for the last decade. The Kawanda Research Station near Kampala used to provide agricultural research services for the south and southwestern agro-ecological zone, including the proposed project area. Kawanda also has the main laboratories for soil research and headquarters for the Crop Production Unit. In the proposed project area, the Kalangyere Highland Research Substation and nine Variety Testing Centres (VTC's) are supported by Kawanda. VTC's were established to conduct trials on crop varieties and agronomic techniques developed at the main stations. Some VTC's are attached to District Farm Institutes (Kachwekano and Bushenyi) and departmental farms (Rubare). Uganda has begun to rehabilitate the basic research infrastructure and provide technical and resource assistance to some stations and programs. USAID is assisting the rehabilitation of Kawanda and providing short-term training for research staff.

1.20 MOA has a large extension staff, about 2,300 agents, posted at district, county and subcounty levels. Some 700 are university graduates. Services are hampered by lack of confirmed technology, low salaries and inadequate transport and operating funds. The lack of timely inputs further restricts the effectiveness of extension. The agricultural extension service in the project area comes under the Regional Agricultural Officer (RAO) for the Southwest Region. Below the RAO, each of the four districts is headed by a District Agricultural Officer (DAO) who is assisted by district headquarters staff and is also responsible for junior officers working at county and parish levels: Assistant Agricultural Officers, Agricultural Assistants and Field Assistants. A total of 244 department staff are presently deployed in the project area.

The Ministry of Local Government (MOLG)

1.21 Rural feeder roads are the responsibility of MOLG, operating through Uganda's 32 district administrations. In addition to the more than 21,000 km of rural roads, MOLG is also responsible for primary school education, health care (excluding hospitals), police, welfare services and local taxation. District Administrations are granted a significant degree of autonomy by the Central Government, which also provides most of their financial support. Despite the years of political and economic instability, the institutional framework within MOLG has remained virtually intact. The framework links headquarters with districts, counties, and

parishes down to village level. Although lacking operating funds and materials it is well provided with lines of communication, authority, responsibility and administrative procedures and practices. Little road maintenance has been done during the last ten years, however, and the road network is now seriously deteriorated. While most workshop and store structures remain, they are virtually devoid of resources. Revenues generated at the district level from income taxes are now inadequate for even routine road maintenance.

1.22 Government policy for the rehabilitation and reconstruction of the economy, especially the revitalization of the agricultural sector, recognizes the importance of transport. The physical planning for rehabilitation of the feeder road network by MOLG is underway concurrently with the execution of work on arterial roads. MOLG has recently taken steps to strengthen its capability for management of the feeder road network. The roadworks function of each District Administration has been isolated from MOLG's other interests and the limited road maintenance resources of the 32 districts restructured into 12 operational units for handling the backlog of maintenance. Qualified engineers have been introduced at Works Supervision level within each district. These units will concentrate on rehabilitation of priority sections of the network within each group of districts, using a combination of central Government funding and external support. As rehabilitation proceeds and economic recovery takes place, responsibility for routine (and eventually periodic) maintenance would revert to district level and to financing from funds raised within each district.

Ministry of Cooperatives and Marketing (MCM)

1.23 MCM is responsible for implementing policies and programs affecting the cooperative movement (under the Commissioner for Cooperatives), for developing of marketing policies for various crops, and for supervising crop specific marketing agencies such as the PMB (cereals, foodcrops), the Coffee Marketing Board (processed coffee beans), and Lint Marketing Board (cotton). The MCM has a large staff paralleling the MOA and the Ministry of Animal Industry and Fisheries. MCM field staff within the Cooperatives Department provide technical assistance and guidance to all cooperatives, especially the unions, covering areas such as audit, accounting, and training in administrative methods and cooperative movement concepts. Within the Marketing Department, staff issue movement licenses to traders and control the marketing of food and other products across district boundaries. Staff are poorly paid and little field work is done as there are no funds for transport, operating costs or training.

Cooperatives

1.24 The cooperative movement has dominated the internal marketing of export crops in Uganda since independence, but is not widely involved in production. The cooperative movement in Uganda was regarded as one of the strongest in Africa, but has been considerably weakened since the late

1960s. There are about 3,500 registered primary cooperative societies in Uganda, of which about 2,300 are single purpose cooperatives concerned mainly with marketing and processing coffee and cotton. Three cooperative unions operate in the project area. The Uganda Central Cooperative Union, created to provide centralized support to unions and primary societies, has not functioned effectively for some time. Its rehabilitation will depend on the success of ongoing measures to revitalize the cooperative movement.

Uganda Commercial Bank (UCB)

1.25 UCB, a Government owned Bank established in 1965 as a successor to the Uganda Credit and Savings Bank, is the predominant banking institution in Uganda. As of October 31, 1986, it had some USh 200 billion in assets, 2,600 employees and 60 branches throughout the country. With a deposit base of USh 155 billion, it is by far the largest commercial bank in Uganda, and accounts for over 80% of total banking activity. In addition to general commercial banking activities, UCB engages in small scale industrial and agricultural term lending. It is also the executing agent for IDA's Industrial Rehabilitation Project (Cr. 1248-UG) and its Agricultural Rehabilitation Project (ARP - Credit 1328-UG). UCB's record in implementation has been reasonably good. Problems have resulted more from macroeconomic factors or difficulties with other Government agencies. UCB's Development Finance Division, which manages ARP, would also manage procurement for the proposed project. This division has some 37 higher level staff, and has developed considerable expertise in the evaluation of long term agro-industry projects, and in international procurement and related financial operations. UCB has eight branches in Southwest Uganda: two each in Mbarara and Kabale, and one each in Ibanda, Bushenyi, Rukungiri and Kisoro. Lending is short term and mainly agriculture related, most of it for marketing, with only a minor portion going into production. Finance for trade and small enterprises constitutes the remainder of UCB's banking activity. The Mbarara portfolio (the largest branch in the Southwest region) is not satisfactory with over 80% of the loans in arrears, and repayments averaging some 20% of amounts due. The portfolios of other branches in the region are in similar condition.

E. IFAD and Bank Group Support

1.26 IFAD's support for Ugandan agricultural development began in 1982. IFAD identified target groups in Northeast Uganda, an area producing mainly food crops and livestock, which had been neglected and which had suffered drought in 1980 and 1981. IFAD's immediate strategy was to bring relief to smallholders by supplying production inputs to quickly increase food production. It also became necessary to re-establish agricultural services and address the long-term needs of agricultural development. For this reason, IFAD's strategy also focussed on institutional support and adaptive research to develop productivity increasing technology, and on provision of inputs. The decentralized district administration established

before Independence is still in place but needs support to be effective. Regional planning and development are also supported by IFAD within a national institutional and policy framework. In pursuance of this strategy, IFAD will coordinate the use of its Special Resources for Sub-Saharan Africa (used for this project) and regular program resources with the efforts of other donors, especially IDA.

1.27 To date, IFAD has approved two loans for the Northeastern Region. The first, the Agriculture Reconstruction Program was completed in June 1986. Financing included Loan 80-UG for SDR 16.55 million and Grant 85-UG for SDR 875,000, effective March 30, 1982. The program made farm inputs available to smallholders enabling them to produce food for family consumption as well as for sale. Although completion studies have not yet been finalized, information collected through monitoring studies and supervision and mid-term evaluation missions indicates considerable increases in food production in the region. A follow-on loan for the Agricultural Development Project (ADP) became effective in May 1986. The total cost was SDR 31.6 million, with IFAD providing SDR 14.6 million (Loan 159-UG) and IDA a credit for US$12.0 million (Cr. 1539-UG). This project in Northeast Uganda aims at increasing food production, improving the health of the livestock population, and increasing fish-catch by providing production inputs, strengthening and improving agricultural institutions and carrying out adaptive research trials. The main problems experienced during the implementation of these projects have been due to political and military conflict, severe economic mis-management, and inadequate project level management and coordination, particularly during start-up. To alleviate start-up problems, IFAD now advocates the employment of a Project Expediter before effectiveness, detailed advanced planning, establishment of a Special Account to speed disbursements, and the use of IFAD's Special Operations Facility (SOF), to finance project start-up activities prior to loan approval. The proposed project would incorporate these measures.

1.28 The IDA country assistance strategy for Uganda has three main elements: (a) urgent policy reform to restore macroeconomic stability; (b) rehabilitation of economic and social infrastructure; and (c) investments and structural reforms to address longer-term growth objectives. Once appropriate policy reforms are underway, emphasis would be on the rehabilitation of the productive sectors, requisite infrastructure, and social services with the objective of restoring the economy to a fully-functioning level.

1.29 IDA has provided three credits totalling US$192.5 million to support Uganda's reconstruction efforts in 1980, 1982, and 1984. These credits supported policy and institutional reforms, while helping meet urgent needs for rehabilitation of the economy. Through two credits (US$23.0 million) for technical assistance projects, in 1981 and in 1984, the Association has supported rehabilitation of key government

institutions. Although small in financial terms, these projects have provided essential strengthening of administrative and institutional capacity, facilitated project preparation and implementation, and supported training. Also since 1980, fourteen credits totalling US$324.6 million have assisted rehabilitation of Uganda's infrastructure, productive capacity and social services. In addition, Uganda also received 10 loans from the Bank totalling US$244.8 million for the development of common services (railways, ports, telecommunications and finance for industry) operated regionally for the three partner states of the former East African Community. The International Finance Corporation has also invested about US$12.8 million in four projects in Uganda since 1983, covering industrial finance and food production and processing (sugar and tea).

1.30 In the agriculture sector, a 1968 small-holder Tea Project with a credit of US$ 3.4 million (Cr. 109-UG) was successful, but a 1971 smallholder Tobacco Project with a credit for US$ 4.0 million (Cr. 212-UG) failed to achieve its objectives because of defective management, the general decline of the economy and political instability. A Beef Ranching Development Project with a credit for US$ 3.4 million (Cr. 130-UG) was initially successful but the ranches established were adversely affected by the repercussions of the 1979 conflict. The reconstruction credits during the early 1980's financed some imported inputs and spare parts for agriculture. Funds from other aid sources were directed to specific activities with the result that the need for financing inputs was not satisfied. Under the ERP in 1983 with a credit for US$ 70 million (Credit 1328-UG), further imports of key agricultural inputs were provided; tea, cotton, tobacco and coffee processing rehabilitated; and reforms introduced to improve the efficiency of export marketing, development planning and agricultural policy making. It is as yet too early to assess the effects of these activities, but GOU ascribes what success has been achieved to both increased availability of agricultural tools and inputs and to improvements in producer incentives.

II. PROJECT AREA AND BENEFICIARIES

A. Area, Population and Living Standards

Area

2.01 The project area comprises the four administrative districts of the Southwest Region: Mbarara, Bushenyi, Rukungiri and Kabale (see Annex 8 and Map IBRD No. 20814). The regional headquarters is the town of Mbarara. The project area has common borders with Zaire to the west and Rwanda and Tanzania to the south, and covers about 22,400 km2 including about 750 km2 of open water. The terrain ranges from rolling savannah country in Mbarara, to high mountain ranges in Kabale. The soils vary from volcanic over clay and clay loams with high potential, to sandy loams of moderate to

low fertility. Rainfall tends to increase with altitude ranging from less than 900 mm in the lowlands of eastern Mbarara to more than 1,350 mm in the highlands of Kabale.

Population and Living Standards

2.02 The project area population is estimated at 2.4 million, increasing at about 2.7% annually. Population density is 110 per square kilometer, and is highest in Kabale -- 199 per square kilometer (Annex 5, Table 1). Of the estimated 330,000 households (average size 7 people) in the project area over 90% are farm families settled on scattered homesteads. Living conditions in the project area are not harsh due to the favorable climate. Housing is of mud and wattle with thatched roofing, although corrugated roofing iron is common in Kabale. Virtually no piped or pumped rural water supply exists, water being obtained from open sources (streams, lakes, etc.), often several hundred meters over steep paths from the houses. School enrollment is thought to be about 50% and adult literacy rates probably less than 30%.

Family Incomes

2.03 Almost all of the people in the project area are poor in absolute terms and, in relative terms, earn less than one-half of the national average. No solid data on family incomes is available. A review of tax returns for Kabale, Mbarara and Rukungiri indicated family cash annual incomes of around US$100 (1985). Notional incomes estimated in 1984 and based on average production including home consumption, were around US$470 per farm in 1984. This was about 70% of the then national income average per capita. Crop production models (Annex 6, Document A6,Tables 1-8) estimated at appraisal in May 1987 suggest net income from food crops, including the value of home consumption, of about USh27,000 per family (US$430), or a per capita income from food crops of about US$60 (para 5.08). These estimates suggest total per capita incomes of less than US$100 in the project area compared with national GNP per capita in 1984 of US$230, and neighboring Kenya's $290 per capita (1985).

Nutrition

2.04 Despite the relative poverty, the nutritive value of family food production is adequate to satisfy energy and vitamin requirements; total energy intake in 1984 was calculated at around 2,700 calories and 40gm of protein daily. The global figures do, however, hide imbalances of food and nutrition between families and family members. Small children and pregnant and lactating women are the most vulnerable groups.

B. Infrastructure

2.05 The project area, in common with many other parts of the country, experienced extensive destruction of property during prolonged fighting in 1979 and again in 1985/86. This was accompanied by serious disruptions which brought the economy to a state of virtual collapse. The severely deteriorated condition of both the physical and administrative infrastructure is a major constraint to economic recovery. Local government and agricultural support services suffer from inadequate operating funds and an acute shortage of vehicles and equipment. Office and living accommodation is in poor condition. Telephone and postal services are poor and electric power and water supplies seldom function in the district towns, and do not exist in the smaller villages. These problems have been exacerbated by the deterioration of government staff morale. Restoration of the material infrastructure of government services is not the only aspect of rehabilitation. Maintaining current staffing levels would be counter productive due to government's inability to provide adequate salaries and operating costs -- an issue in both research and extension.

Roads

2.06 The entire regional road network is in need of major rehabilitation. Mbarara, the regional capital, is linked to Kampala by 270 km of main road. From Mbarara, one branch runs due west to Bushenyi, Ishaka and northwards to Zaire. The other branch runs South West from Mbarara some 150 km to Kabale, and provides the main link between Uganda and Rwanda. These paved main roads in the Southwest Region, which total about 300km, come under the aegis of the Ministry of Works, as do a further 100km of gravel trunk road and about 400km of secondary roads. The trunk road network is under rehabilitation with financing from IDA's Third and Fourth Highway Projects (Credits 1445-UG and 1803-UG), EEC and Yugoslavia (para 2.20).

2.07 The rural access road network in the area (2,700 km), falls under the MOLG. The current status of regional roads is shown in Table 2.01. About 20% are currently impassable year round due to broken bridges and collapsed swamp crossings, and a further 40% are only passable in the dry season. All roads are also very rough. The exceptionally poor state of the roads is a severe constraint on economic and agricultural activity and on the quality of rural life. Furthermore, the poor surface causes high vehicle operating costs and slow travel speeds[1/].

1/ On the basis of the standard BI roughness scales normally used by highway engineers (see Annex 7, Document A6, Appendix 1), it is estimated that currently about 5% of the road length has a roughness factor of 6,000 (reasonable for unpaved roads), 40% a roughness factor of 8,000 (rough), 35% a roughness factor of 10,000 (very rough), and 20% a roughness factor of 12,000 or worse (normally only passable with special vehicles).

Table 2.01: Status of Project Area Access Roads

	Impassable	Dry Weather	All Weather	Total
	.....(km).....			
Kabale	8	163	210	381
Rukungiri	103	344	206	653
Bushenyi	168	91	377	636
Mbarara	300	443	269	1012
Total SW Region	579	1041	1062	2682

2.08 Public transport no longer operates in the rural areas, a fact which limits the movement of produce, access to education, and the availability of productive inputs. The quantity of agricultural produce marketed, particularly of bulky foods such as potatoes and matoke which are the main crops, is reduced, which in turn depresses farmer incomes. High vehicle operating costs also exacerbate the problem of low government budgets. The amount of effective travel by government officers is restricted to only part of what would be possible if the roads were in good condition. The negative impact of impassable and/or rough roads is most severe on poor communities situated far from the district centers.

C. Agriculture

2.09 Smallholder mixed farming dominates land use in most of the project area. Food crop production is the main activity on most farms. In parts of the area, coffee and tea are important cash crops. Many farmers also keep small numbers of livestock and there are specialist dairy farms near the major towns. Cultivation is mostly by hand and most crops are grown with minimal inputs. The area has a bimodal rainfall pattern which normally permits double cropping in higher rainfall areas. Peaks occur in February - May and September - December, but rain is usually heavier and more reliable in the first period.

2.10 Farming systems vary but three broad patterns of cultivation can be distinguished (Annex 8). The high altitude Southwest Montane area of Kabale district and part of Rukungiri (Zone 1), is intensively cultivated. It comprises about 15% of the total project area and contains about 25% of the total population. Rainfall is highest (about 1350 mm) in this area and double cropping is common. Much of the cultivated area comprises steep hillsides with step contouring. More or less continuous cropping afforded by generally well distributed rainfall throughout the year, combined with maintenance of steps, has helped minimize soil erosion. Recently, as a result of increasing pressure on land, there are reports of steps being removed to free extra land for cultivation, thus increasing the risk of erosion. A wide range of crops is grown including maize, sorghum, finger millet, beans, sweet potatoes and Irish potatoes. The latter crop is an important source of family income. Although bananas are grown at elevations up to 1800 m, they are less dominant than in other areas. On average, farmers cultivate about 2 ha of food crops.

2.11 The central part of the region including most of Rukungiri, Bushenyi and Western Mbarara districts (Zone 2) supports mixed cropping with bananas as the dominant crop. This Zone covers about 57% of the project area and contains about 65% of the population. Smaller plots of maize, beans, groundnuts and sweet potatoes are common. The total area of food crops per farm is similar to the Southwest Montane area, averaging about 2 ha. Coffee is widely grown as a cash crop and in north Bushenyi, tea is also grown. Slopes are gentler and valleys wider than in the high montane area and there is less fragmentation of land holdings.

2.12 The predominantly pastoral areas of Eastern Mbarara and part of the North Bushenyi districts (Zone 3) cover the remaining 28% of the project area with only about 10% of the population. Rainfall is relatively low (900 mm) and soils poor. Extensive grazing of mixed cattle, sheep and goat herds on open rangeland is the principle farming activity. Small areas, averaging only about 0.3 ha per farm family are cultivated with bananas, cassava, maize, sorghum, groundnuts and sweet potatoes.

D. Agricultural Credit

2.13 Agricultural credit is channeled through UCB. Most credit is short term and financed from UCB's own resources. Long term credit for rehabilitation of plant and equipment is only occasionally available through UCB, using funds from IDA's Agricultural Rehabilitation Project (1328-UG). The Cooperative Bank is undergoing reorganization and a department for rural credit has been established. It sometimes serves as a channel for distributing Government funds for predetermined items, such as the purchase of 8 ton trucks by cooperatives. The Uganda Development Bank located in Kampala, a source of long term credit, has not been active in the region.

2.14 Little agricultural credit is used for production, most of it being destined to marketing and processing of coffee and other cash crops. Those farmers that do receive production credit are the more financially secure (usually dairy or other livestock). Strict collateral is required for all loans. Even so, repayment experience has not been good. This is reflected in the poor quality of the banks' portfolios. Interest rates (38-42% per annum) are substantially below recent inflation rates (250 percent in 1986/87). Loan principal is not indexed or adjusted with inflation. Consequently, the value and earning power of the bank's old loans (over 2 years) has been considerably reduced. This problem is less severe than it could be, as most loans to agriculture are short term, and finance marketing operations. Funds are channeled through the Cooperative Unions and are used for the marketing of coffee and other industrial crops. Any problems with the transport and marketing of coffee affects the capacity of the unions to sell their stocks, and hence their capacity to repay banks.

2.15 Two new credit lines have been approved, and will begin to be used in the project area: The UCB's Rural Farmers' Scheme, and the Bank of Uganda's Small Farmer Credit Guarantee Scheme. The Rural Farmers' Scheme is aimed at providing small farmers (cropping under 2 ha) with production inputs either in kind with UCB acting as inputs supply merchant (for small tools, chemicals) or in cash, to cover services such as the hire of tractors and labor. Loans would be appraised and supervised by UCB. Priority in this scheme would be given to women farmers. Some USh 6.0 billion of UCB's funds has been set aside for this program. Collateral (land title/lease documents) would not be required. It would be implemented in 25 of UCB's branches, located in areas of concentration of small farmers. Lending activity would initially be restricted to within 25 km from the bank branch. Within the Southwest Region, the Rural Farmers Scheme would operate from branches in Rukungiri, Kisoro, Ibanda and the Mbarara Regional Office. Loans would be generated by the branches and approved at the Regional Level. Interest charged would be 15% below the standard UCB lending rate (currently 38-42%) for borrowers with collateral, and 10% below, for those without collateral. Currently inflation rates are in the order of 250 percent per annum, but are expected to be substantially reduced with the implementation of the ERP.

2.16 The Credit Guarantee Scheme became effective in Southwest Uganda in the second half of 1987. This is another line of credit aimed at providing production inputs to small subsistence farmers, where the problem of obtaining loan collateral is diminished by having the Bank of Uganda guarantee 75% of the value of the loan, against a guarantee fund. A service charge of 1% per annum is assessed to obtain the Guarantee. UCB uses its own funds for the initial loans, to be provided on standard terms.

E. Marketing

2.17 Food crops in the project area are marketed either directly by the farmers themselves in village markets, through licensed traders who normally own transport, or through the cooperative network (either primary cooperative societies or district unions). PMB, recently given responsibility for nationwide purchases and export of five strategic commodities (maize, beans, groundnuts, simsim and soya beans), is not active in the area and only handles purchases through agents.

2.18 Produce is transported in small quantities from farms to local markets on the heads of farmers or by bicycle. From village markets onwards transport is generally by pick-up or truck. Although most marketing of food crops is private, it has, in recent years, been subject to various controls. Traders have to have licensed stores, both in buying and in selling regions, and movement papers are required for inter-district transport of individual loads of dry produce (maize, beans). These restrictions have disrupted food crop marketing and made it more costly. In an attempt to restrict "unofficial" border trade (caused largely by an overvalued local currency), Government banned the export of food crops by private traders, which further inhibited marketing of food crops in the Southwest Region. Under ERP (para 1.16) agricultural marketing in the project area will be liberalized and is expected to improve rapidly.

2.19 The poor roads and the shortage of transport have resulted in high price differentials between Kampala and the project area. For example, matoke (bananas), sold on farm at about USh30 per bunch (US$25 per ton) in Bushenyi, sell in the markets of Kampala at USh 150 per bunch (US$125 per ton). These margins should reduce sharply in future as: (i) a substantial number of new trucks have been made available to the cooperatives in the project area; (ii) the main roads from Kampala to Mbarara, Bushenyi and Kabale are being improved; and (iii) access roads in the area are improved under this project. These factors should increase marketing efficiency, reduce marketing costs, and lead to higher producer prices and lower retail prices.

F. Other Regional Development Activities

2.20 A number of ongoing and planned development activities in the project area are to be implemented over the next 3-5 years and are complementary to this project. These include projects in the roads, rural health and water supply, agriculture and livestock sectors. Rehabilitation of the entire primary road network in the Southwest will be undertaken over the next 3-4 years with financing from IDA, EEC and Yugoslavia. A national training program in rural road rehabilitation and maintenance for MOLG is being established with ILO assistance, funded by UNDP and UNCDF. In-service training will be undertaken through the establishment of production training

units based at Mbarara and Kabale. A rural health and water supply project covering the four districts of the Southwest Region will be implemented with UNICEF and SIDA financing. The first phase of this project with financing of about US$6.0 million, will focus on the community participation necessary for successful operation and maintenance of these services, and will work with local women's organizations, community groups and private non-profit organizations to create a village structure capable of supporting local development initiatives. This work will be supported by the work of the MOA Home Economics Unit, financed under this project.

2.21 A number of donors are supporting seed improvement and multiplication projects focussing on food crops. Maize, sorghum, beans, soybean and groundnuts are included in an EEC funded project. CIAT are supporting a bean improvement program, and a seed multiplication project for beans, soybeans and groundnuts is to be financed by West Germany. A Coffee Farming Systems Development Project is planned for funding by EEC as a follow up to the Coffee Rehabilitation Project. The proposed project will adopt a farming systems approach and will support food crops as well as coffee programs, an approach of special relevance in the Southwest. Ongoing projects in the livestock sector include a UNDP funded Tsetse control project for Southwest Uganda and the Veterinary Training and Extension Services project. Planned projects include a UNDP/UNCDF financed Dairy Industry Development project; a regional milk processing unit for Mbarara and Kabale funded by UNCDF; and a Livestock Project under preparation with IDA assistance. The proposed Livestock Project would support a national disease control program, the improvement of veterinary services (with a pilot area for initial implementation and testing in the Southwest Region), and inputs and production support to dairy farmers in the Southwest. This approach would complement agricultural development in the Southwest, rounding out support for all aspects of the farming system.

III. THE PROJECT

A. Project Rationale

3.01 The Government has recently begun to implement its National Economic Recovery Program and has reconfirmed the priority of the proposed project. These actions provide the necessary framework to boost agricultural production incentives. The proposed project aims to support these initiatives, and maximize the productive response through focussing specifically on further constraints faced by the small farmers in a densely populated high potential area of the country.

3.02 At project identification in 1984 GOU and IFAD agreed that the Southwest Region had high priority. While the physical and administrative infrastructure is severely rundown, the project area has good agricultural potential. The population is rural, poor and consists of smallholders whose

main activity is food crop production. Most agricultural labour is done by women. The Southwest is probably the most secure Region in the country and should provide a stable environment for project development.

3.03 The proposed project is simple, and has been designed to fit into the existing organizational structure of Government. It complements other ongoing and planned development projects in the Southwest Region (paras 2.20 - 2.21). It addresses the three key constraints to smallholder production growth: (i) the development and transfer of production technology through adaptive research and extension; (ii) the availability of appropriate agricultural inputs; and (iii) high transport and communication costs, through rural road rehabilitation. Activities are confined to two ministries. Emphasis is given to rehabilitation in each of these areas. While it is Government policy to take a national approach to strengthening major research activities, the project would include a modest adaptive research and extension component focussing on food crops (previously neglected). Supplies of imported inputs (tools, vegetable seeds, chemicals, etc.) have been both intermittent and limited. The provision of a regular supply of agricultural inputs under the project would remove a major constraint to increasing smallholder food crop production. The deplorable state of project roads, and its effect on production is discussed in paras 2.06 - 2.08. Once basic infrastructure and agricultural support services have been brought up to acceptable standards, the Southwest Region will be well placed to take advantage of future national projects developing agricultural services such as research, extension or credit.

3.04 The project would support the ERP and IDA/IFAD's agricultural strategy in Uganda by: (i) increasing food security and levels of nutrition; (ii) improving the incomes of the rural poor; and (iii) strengthening rural institutions. As women are responsible for virtually all farming activities associated with food crop production they would be an important group of beneficiaries under the project.

B. Project Objectives and Description

3.05 The objectives of the proposed project are to increase food production, incomes and living standards of the small farmers in the Southwest Region, who constitute the large majority of the population. These goals support the broader objectives of the ERP, and would enhance the production response obtained from the improved incentives of the national recovery program.

3.06 The project estimated to cost US$ 27.4 million includes:

(a) Adaptive Research and Extension (US$ 3.9 million); support for research and extension through the establishment of an adaptive research program at selected stations with an outreach program on farmers fields.

(b) Agricultural Input Supply (US$ 8.1 million)[1]: procurement and sale of (i) hand tools, seeds, bicycles, wheelbarrows, small threshers and flour mills, and agricultural chemicals; and (ii) vehicles, materials or equipment needed to strengthen marketing infrastructure in the region.

(c) Rural Access Roads (US$ 13.3 million): (i) engineering and financial support for a program of rehabilitation and spot repairs over critical parts of the 2,000 km of the rural access road network not receiving attention from other agencies (US$ 8.3 million); and (ii) strengthening of MOLG's district level road maintenance capacity (US$ 5.0 million).

(d) Project Management, Monitoring and Evaluation (US$ 2.1 million) to enable the Project Management Unit in MOA to coordinate implementation, ensure project objectives are met, and administer a small community development fund.

C. Detailed Features

Adaptive Research and Extension

3.07 An adaptive research program geared to the needs of small farmers would be established. Emphasis would be given to the major food crops of the region; soil conservation and soil fertility improvement would be important aspects of this work. Research would be conducted at the Kalengyere Research Substation and the Kachwekano DFI in Kabale district, and Bushenyi DFI and Rubare Farm in Bushenyi district. These four sites are representative of the major cropping zones of the project area. An outreach program would be developed to test research recommendations on farmers' fields.

3.08 The project would provide in-service training for agricultural extension staff in the region. Given the severely rundown nature of agricultural services, the inadequate research base and lack of inputs, a phased approach to strengthening extension would be adopted. Initially, an outreach program, linked to the adaptive research program, would be developed within priority areas selected for their potential for increased food production, their representation of regional cropping systems and accessibility. The seven counties of Rubanda, Ndorwa, Rwampara, Kashari, Igara, Shema and Rujumbura would be included in the initial phase. During a proposed mid term review (para 4.19) feasibility of extending coverage to the remaining fourteen counties would be decided on. Funding for this

1/ Costs given in parentheses include physical and price contingencies.

likely expansion is included under the project. Provision of a focussed adaptive research program linked to outreach programs and staff training would lay the foundation for the launch of a Training and Visit extension approach on a national level. In view of the importance of women in food crop production, support would be given to the Home Economics staff in MOA. The regional Home Economics Units would be fully integrated into the extension program.

3.09 Funds would be provided for the renovation of the two DFIs at Kachwekano and Bushenyi, construction of a small office/store at Kalengyere research substation and an office at the Rukungiri district headquarters. A further small store would be constructed at Rubare farm and two staff houses at Mbarara (total construction costs US$ 0.8 million). The project would also finance vehicles and equipment (US$ 0.6 million), and incremental operating costs including training (US$ 1.6 million). To support the development of this component, the project would provide technical assistance in adaptive research and extension training (US$ 0.9 million). A research agronomist and an extension training specialist would be recruited to assist in establishing and planning the adaptive research and extension training programs.

Inputs Supply

3.10 The objective of this component is to provide agricultural inputs to small farmers in the region, in a timely and accessible fashion. The project would encourage market competition by all entities (cooperatives, unions, private traders) willing to procure and distribute inputs on commercial terms. Some US$ 8.1 million (including $1.0 million in taxes) would be provided for : (i) importing key production inputs needed by small farmers (US$ 6.2 million); (ii) importing vehicles, materials or equipment needed to strengthen marketing infrastructure in the region (US$ 0.7 million); (iii) one 1,500 sqm warehouse in Mbarara, vehicles, allowances and equipment to handle the reception, storage and sale of inputs and materials procured under the project (US$ 0.6 million); (iv) 36 staff months of technical assistance would fund an Inputs Supply Manager to set up the wholesaling operation, and supervise its initial implementation; and (v) ten staff months of technical assistance in project Year 3 to set up the eventual privatization of this operation (US$ 0.6 million) (para 3.11).

3.11 Under the project, the Project Management Unit (PMU) to be established in Mbarara would act as a wholesale merchant for key agricultural inputs (paras 4.06 - 4.11). During Project Year 3, the PMU Inputs Supply Manager would supervise a study of about five staff months to evaluate inputs supply activities to date, and investigate the way in which the project's input supply operation could be set up as a financially and managerially independent operation. An additional five staff months of technical assistance is provided to be used over the last two years of the project to provide training and assistance as necessary to implement the recommendations of the study.

Rehabilitation of Rural Access Roads

3.12 The project would undertake a program of rehabilitation and spot repairs on the 2,000 km of Class II and III roads, which come under the administration of MOLG and which are not scheduled for improvement under other projects. The aim would be to provide year round access over most of this rural road network, which would facilitate all ongoing and planned development activities in the region.

3.13 The road rehabilitation program (US$ 8.3 million) would be implemented by contractors obtained through ICB procurement (para 3.22), supervised by internationally recruited consulting engineers (US$ 0.7 million). The work would take about three years, starting at the beginning of project year two. The definition of roads and sections to be rehabilitated, and the standards of finish, would be determined during a roads inventory and evaluation study undertaken by consultants as a part of project start-up activities (para 3.17). Criteria for selection of roads to be rehabilitated would be based on the estimated net socio-economic benefits, and the requirements of the agricultural extension and research aspect of the project. These would be determined by the balance between: (i) various factors likely to contribute to potential benefits -- reduced vehicle operating costs -- linkages with other project activities -- potential for increased agricultural output and marketing; and (ii) engineering factors which would indicate likely unit costs of rehabilitation of particular road sections.

3.14 The project would also support and strengthen MOLG's road maintenance capability (US$ 5.0 million). Plant and equipment, including mechanical workshop equipment and tools, transport facilities and incremental operating costs, including in-service training, would be provided for each of the four district maintenance units in the project area. In addition to training provided under the project (para 4.13), provision would also be made under the road rehabilitation contract to second MOLG plant operators for limited periods for on-the-job training. Government would study district level financing to support road maintenance and other services under its national recovery program. Assurances were given that Government would provide sufficient funds to adequately maintain project roads after completion of the project.

Project Management, Monitoring and Evaluation

3.15 The project would be managed by a PMU located in the regional MOA headquarters in Mbarara, operating under the national and regional interministerial coordinating committees (paras 4.01 - 4.03). Within the component cost of US$ 2.1 million, some US $ 0.8 million would be used for a Monitoring and Evaluation (M & E) Unit to bring together information on project implementation and evaluate impact (paras 4.17 - 4.20). The PMU would also administer a Community Development Fund of up to US $ 95,000 in support of productive activities by small groups in the Project Area (para 4.12).

D. Project Costs

3.16 The total cost of the project including physical and price contingencies is estimated at US$ 27.4 million (USh 4,209 million) with a foreign exchange component of US$ 17.5 million (USh 2,681 million) or about 64%. Project costs are summarized in Table 3.1 and detailed in Annex 3. These cost estimates have been based on prices prevailing in mid 1987.

Table 3.1: Project Cost Summary

	(U. Sh '000)					(US$ '000)				
	Local	Foreign	Total	% Foreign Exchange	% Total Base Costs	Local	Foreign	Total	% Foreign Exchange	% Total Base Costs
A. RURAL ACCESS ROADS REHABILITATION	255,984.4	415,230.8	671,215.2	62	48	4,266.4	6,920.5	11,186.9	62	48
B. AGRICULTURAL INPUTS	136,690.6	278,180.2	414,870.8	67	30	2,278.2	4,636.3	6,914.5	67	30
C. ADAPTIVE RESEARCH & EXTENSION	77,111.7	124,531.2	201,643.0	62	14	1,285.2	2,075.5	3,360.7	62	14
D. MONITORING & EVALUATION	12,501.4	26,691.2	39,192.6	68	3	208.4	444.9	653.2	68	3
E. MANAGEMENT SUPPORT	18,603.2	48,304.0	66,907.3	72	5	310.1	805.1	1,115.1	72	5
Total BASELINE COSTS	500,891.4	892,937.5	1,393,828.9	64	100	8,348.2	14,882.3	23,230.5	64	100
Physical Contingencies	61,735.6	100,401.7	162,137.3	62	12	1,028.9	1,673.4	2,702.3	62	12
Price Contingencies	971,548.0	1,681,490.0	2,653,038.0	63	190	547.3	922.8	1,470.0	63	6
Total PROJECT COSTS	1,534,175.0	2,674,829.1	4,209,004.1	64	302	9,924.4	17,478.4	27,402.8	64	118

Physical contingencies of 15% have been provided for civil works and 10% on all other items except agricultural inputs for resale which are essentially of a program nature and quantities estimated are only indicative. Physical contingencies total some 12% of baseline costs. Price contingencies for both foreign and local costs have been based on expected increases in world prices. Over the five-year-project period these average just under 3% per year, and amount in aggregate to 6% of base costs. Included within the US$ 27.4 million project costs is an estimated US$ 3.0 million of direct and indirect taxes. These include direct import duty and sales tax on agricultural inputs purchased for resale (US$ 1.0 million); indirect taxes on fuel and parts which are included within vehicle operating costs (US$ 0.8 million); and indirect taxes on civil works and operating costs which would be levied on fuel, parts and other imported items used by contractors (US $1.2 million). Vehicles and equipment imported directly for use by the project are assumed to enter Uganda tax free.

E. Start-up Activities

3.17 To speed up implementation, a number of activities need to be completed prior to commencement of the project. These include: (i) The preparation of plans and specifications for buildings to be constructed or renovated under the project; (ii) the renovation of the proposed project office; (iii) the procurement of vehicles and equipment necessary for project management; (iv) the initiation of documentation for procurement of buildings, vehicles, equipment and agricultural inputs to be provided during the first year of the project; (v) the preparation of a detailed roads inventory and bidding documents to form a basis for contracting out the road rehabilitation component; and (vi) finalizing terms of reference for consultants to be hired under the project and arranging for consulting contracts to be let. The estimated costs of these pre-project activities are summarized in Table 3.2 and detailed in Annex 3, Table 8 for 1987/88. A Project Expediter (technical assistance) would be retained for 4 months to assist in completing these tasks. It is envisaged that these pre-project activities would be funded by an IFAD SOF Grant of about US$0.3 million.

Table 3.2: Start Up Activities Cost

	(US$ '000)			
	Local	Foreign	Total	%
Renovation of Project Office	33	22	55	20
Vehicles and Spares	1	32	33	12
Office Equipment	1	7	8	3
Vehicles Operating Costs	4	5	9	3
Miscellaneous Operating Costs	3	1	4	2
Technical Assistance	16	145	161	60
Total Base Cost	58	212	270	100
Physical Contingencies	7	23	30	11
Price Contingencies	3	10	13	5
Total Cost	68	245	313	116

F. Financing

3.18 The US$ 27.4 million project cost would be financed by a US$ 0.3 million SOF Grant from IFAD, a US$ 12.0 million equivalent loan from the IFAD Special Programme for Sub-Saharan African Countries Affected by Drought and Desertification, a US$ 10 million equivalent IDA credit and US$ 5.1 million from Government contributions including US$ 3.0 million in taxes (Table 3.3). IFAD/IDA would thus be funding 80% of the total project costs. This amounts to 100% of the foreign exchange cost plus about 50% of the local costs excluding direct taxes.

Table 3.3: Financing Plan

	US$ Million	SDR Million[1]/	Percentages
IFAD - SOF	0.3	0.2	1
IFAD Loan	12.0	9.1	44
IDA Credit	10.0	7.6	36
Government[2]/	5.1	3.9	19
	27.4	20.8	100%

1/ Based on an Exchange Rate of US$ 1.00 = SDR 1.32109
2/ Includes US$ 3.0 million in taxes

3.19 The Government has severe budgetary constraints. In order to ensure adequate financing for the initial years of this project, donor funding would cover 50% of local costs (para 3.26). Assurances were also obtained that the Government would include the project recurrent cost funding requirements into its recurrent budget, ensuring that sufficient funds would indeed be forthcoming after the project implementation period had finished. Although not earmarked specifically for this project, local cost funding should be available within the development budget from the proceeds of input sales under the IFAD/IDA funded Agricultural Development Project (Loan No. 159-UG/Credit 1539-UG), and subsequently from revenues derived from inputs sales under this Project. Indeed, the direct net impact of the project on Government finances is estimated to be slightly positive as the expected receipts from the resale of agricultural inputs are projected to exceed the total Government contribution to the project by about US$ 1 million. Assurances were provided that adequate local funding would be made available for project activities.

G. Procurement

3.20 Procurement arrangements are summarized in Table 3.4:

Table 3.4: Proposed Procurement Method [1]/
(US$ Millions)

Project Element	ICB	LCB	Other	Total	Foreign (%)
Civil Works (Roads)	7.6(6.1)	-	-	7.6	51
Civil Works (Other)	-	1.6(1.0)	-	1.6	38
Vehicles	2.3(2.3)	0.2(0.2)	-	2.5	95
Equipment	0.3(0.3)	0.3(0.3)	-	0.6	88
Agricultural Inputs	4.0(3.5)	2.0(1.8)	0.9(0.7)	6.9	67
Technical Assistance		-	3.3(3.3)	3.3	97
Recurrent Costs			4.9(2.5)	4.9	46
Total (IDA/IFAD)	14.2(12.2)	4.1(3.3)	9.1(6.5)	27.4(22.0)	64

1/ Figures in parentheses refer to IDA/IFAD financed procurement.

3.21 Under the agreed financing arrangements the IDA credit would finance civil works, vehicles and equipment. The agricultural inputs, technical assistance and training, and operating costs would be funded from the IFAD loan (para 3.26). As the IFAD loan would come from the Special Programme for Sub-Saharan African Countries Affected by Drought and Desertification, procurement for the items financed by IFAD would be restricted to those industrialized countries that are signatories and contributors in good standing to the above program, and developing countries. IDA guidelines would be adhered to in the procurement of goods and services, with the countries eligible to bid on IFAD financed contracts adjusted as described above. All project procurement would be coordinated by the Inputs Supply Manager (para 4.03).

3.22 Civil works (apart from rural roads) are small-scale and scattered through the project area. They would be unlikely to appeal to international contractors. These civil works contracts would therefore be grouped to the extent possible and awarded according to local competitive bidding procedures. As local bidding procedures are not as yet fully satisfactory, bidding documentation would be reviewed by IDA/IFAD prior to invitation, and bid evaluations and award recommendations reviewed prior to award of contract. The country has adequate local contracting capability. Civil works for repair/rehabilitation of rural access roads would be let as one contract under International Competitive Bidding (ICB) procedures in accordance with IDA Guidelines. Vehicles and equipment would be bulked to the extent possible into packages of US $ 200,000 or more, and procured under ICB procedures.

3.23 Agricultural inputs and construction materials would be bulked, to the extent possible, into packages of US$ 200,000 or more and procured under ICB procedures in accordance with IDA guidelines, with country eligibility restricted as indicated in para 3.21 above. Qualifying domestic manufacturers would receive a preference in bid evaluation of 15% of the bid c.i.f. price or the actual customs and duties and import taxes, whichever was less. Contracts for goods valued at less than US $200,000 but more than US $50,000, would be awarded either according to ICB procedures for goods not available locally, or on the basis of the competitive bidding procedures, using the review procedures specified in para 3.22 above. Purchases of less than US $ 50,000, and of certain specialized items, including seed (available in Kenya) and equipment with only one or two known suppliers, and some spare parts, would be procured according to negotiated contract, or prudent shopping procedures up to a maximum of US $ 1 million worth of goods. Procurement would be staggered through the project period and demand for previously purchased goods would be assessed by MOA before further orders are placed. Items procured as agricultural inputs would be taken from an agreed positive list (para 4.08). As local production and supply capacity for certain products is developed (hoes, pangas and small tools) the positive list could be revised to exclude them from priority import needs.

3.24 Inevitably, given the wide variety of items to be procured, the total number of packages is considerable (Table 3.5). Approximately 28 contracts are expected under ICB accounting for over 78% by value of purchase of goods and civil works. With a threshold of US$ 0.20 million, procurement documents for about 12 packages would be reviewed by IDA, covering 61% of contract value. Except for local competitive bidding packages of over $50,000 for civil works, where prior review will be necessary, the balance of contracts would be subject to selective post-award review.

Table 3.5: Procurement Profile of Value and Number of Contracts
(US$ Millions)

Estimated Size US$[1]/	Estimated No. of Contracts	Contract Value	% Total Value Above Threshold
Above 500,000	11	7.9	42%
200,000 to 500,000	11	3.5	19%
100,000 to 200,000	23	6.3	-
0 to 100,000	15	1.1	-
Total	50	18.8	61%

1/ Includes civil works contracts; excludes technical assistance.

3.25 Internationally recruited consultants would be selected in accordance with IDA Guidelines with country eligibility restricted as indicated in para 3.21. Assurances were also obtained that consultant terms of reference, qualifications, terms and conditions of employment would be satisfactory to IDA/IFAD and GOU.

H. Disbursements

3.26 The IFAD loan of US$ 12.0 million and the IDA credit of US$ 10.0 million would be disbursed over seven years (Annex 1). Although shorter than the average period for agriculture projects in East Africa, seven years is considered more than adequate for this operation, as : (i) it will be implemented in the most stable and secure area of the country, reducing the possibility of civil disturbances; and (ii) the use of large ICB contracts for roads (to be let in one contract), road maintenance equipment (one contract), and agricultural inputs (large annual contracts), all of which account for some 78 % of project costs, will speed disbursement. Disbursements would be as indicated in Table 3.6. IDA would disburse against expenditures for categories I and II (Civil Works, Vehicles and Equipment), and IFAD would disburse against expenditures in categories III, IV and V (Inputs, Operating Costs and Consultant Services). Disbursements would be against full documentation, except for disbursements for operating costs, including allowances for Government agencies, and for civil works and goods contracts of less than US $ 20,000 equivalent, which would be against statements of expenditure. The Closing Date for this project would be June 30, 1994. Should IFAD/IDA suspend disbursements on its loan/credit for this project, the other donor could at its discretion also suspend disbursements.

Table 3.6: Disbursements Schedule

	Total Disbursed US$ Million	IDA Credit	IFAD Loan	% of Expenditure Financed
Category I - Civil Works				
Road Rehabilitation	5.08	5.08	-	80
Other Civil Works	0.76	0.76	-	60
Category II - Vehicles & Equipment				100 of foreign
Vehicles and Equipment	2.80	2.80	-	50 of local
Category III - Inputs for Resale				100 of foreign
Goods	4.83	-	4.83	50 of local
Procurement Charges	0.38	-	0.38	100
Category IV - Operating Costs				
Vehicle Operating Costs	1.40	-	1.40	50
Other Operating Costs	0.64	-	0.64	50
Category V - Consultant Services				
Studies & Training	2.67	-	2.67	100
Category VI - Unallocated	3.45	1.36	2.08	
TOTAL	22.00	10.00	12.00	

Special Account

3.27 In order to expedite the flow of funds for disbursement of minor amounts for each of the financing agencies, two Special Accounts would be established by the Bank of Uganda in favour of the PMU in a commercial bank or banks acceptable to IDA and IFAD. The total value of each Account would be US$ 400,000 equivalent for IDA and US$ 500,000 equivalent for IFAD. Expenditures under all categories would be eligible for reimbursement. Assurances were given that the Special Accounts would be established prior to credit and loan effectiveness and operated as described.

I. Accounts and Audits

3.28 The PMU would open and administer a project account for project-related activities. The Project Financial Controller (technical assistance) and the Senior Accountant would be responsible for maintaining accounts related to the procurement and use of goods; and for accounts of project related expenditures in MOA. Project expenditures in MOLG would be accounted for by the accounts department (Projects Section) of MOLG. The Development Finance Division at UCB would open and maintain a project account to cover project related inputs supply procurement activities. It was agreed that (i) records would be kept permitting identification of all receipts and payments under the project and monitoring of program implementation. These records would be made available to IDA/IFAD on request; (ii) project accounts at MOA, MOLG and UCB, the Special Account and the Southwest Development Revolving Fund, would be audited by independent auditors acceptable to IDA/IFAD, and certified copies of the auditor's opinion, and of the relevant financial statements would be made available to IDA/IFAD no more than six months after the end of the Financial Year; (iii) a separate audit opinion would be provided on records and accounts used to support disbursements against statements of expenditure; (iv) the Financial Controller with qualifications and experience acceptable to GOU and IDA/IFAD and the Senior Accountant would be appointed and in post by September 30, 1988 (para 4.03).

Southwest Development Revolving Fund

3.29 Revenue from sales of agricultural inputs procured under the project (financed by IFAD) would be deposited in a special account at the nearest branch of the Uganda Commercial Bank for onward transmission to an account in the Bank of Uganda set up specifically for this Fund. These funds would be used to support the Government's rural development program, in consultation with IFAD.

J. Women's Role

3.30 Traditionally, women are responsible for the cultivation of food crops, and men for cash crops. Food crop production is the predominant farming activity in the project area and it is the women who do most of the farm work. In addition, a woman's daily workload includes the collection of water and fuel wood, the preparation of food and the care of children.

3.31 In the past women have had less access than men to farm inputs and technology, while the predominantly male extension force has not adequately catered to the extension needs of women. Under the project, women would be fully integrated in development planning and would have equal access to all the services the project provides. The Home Economics Unit of MOA would be supported by the project in its work with rural women. Women's groups would purchase project inputs (possibly using local credit sources (para 2.15)) for retail or use in productive endeavours. Women will also be major beneficiaries under the UNICEF/SIDA rural health and water supply project (para 2.20). It was agreed that, in order to promote the full participation of women in productive activities, the PMU shall take all measures necessary to ensure that, by December 31, 1991: (i) at least 10 % of the contact farmers working with the extension service are women; (ii) training programs are put in place to raise the number of farm level extension workers to at least 10%; (iii) the content of the Home Economics Program is relevant and useful to the needs of women; and (iv) that gender questions are included in the evaluation criteria in the various studies to be undertaken from time to time by the monitoring and evaluation team. The impact of the project on women would be assessed during the mid-term evaluation of the project (para 4.19).

K. Environmental Impact

3.32 The project is expected to have no adverse effects on the environment. Present farming practices involve very little use of inputs. Intensive cultivation, particularly in areas of high population density is resulting in declining soil fertility and there is evidence of increasing soil erosion. Adaptive research, extension training and outreach programs would contribute to improving the environment through the introduction of improved crop husbandry methods, including appropriate soil conservation practices and the judicious use of fertilizers and agrochemicals. No fertilizers or chemicals that may have an adverse effect on the environment would be purchased under the project. Assurances were given that the selection, procurement and use of pesticides by the project would be undertaken according to guidelines acceptable to IDA/IFAD. The rural access road rehabilitation component would be generally beneficial to the environment. No new roads would be constructed, rather roads which in some cases now act as storm water runoffs would be rehabilitated with proper road side drainage. Erosion would thus be reduced.

IV. PROJECT IMPLEMENTATION

A. Organization and Management

4.01 Project implementation would be coordinated through an Inter-ministerial Coordinating Committee (ICC) at the center, and a Regional Coordinating Committee (RCC) in the project area. The ICC would be chaired by the Permanent Secretary for MOA and would include representatives from the ministries of Local Government, Agriculture, Planning and Economic Development, Finance, Cooperatives and Marketing, and the Bank of Uganda and Uganda Commercial Bank. A project liaison officer would be appointed in MOA who would serve as secretary to ICC. A Project Coordinator, who would be appointed by MOA and head the PMU would also be a member. The Committee would meet quarterly and would have responsibility for approving annual workplans and budgets, reviewing annual progress reports, approving major procurement contracts, reviewing annual accounts and audit reports, deciding on policy issues and approving overseas training.

4.02 The RCC would be chaired by the Project Coordinator and would include the Regional Engineer (MOLG), the MOA Regional Agricultural Officer, the Regional UCB officer, the Regional MCM officer. The Regional Evaluation Officer, who would head the Project M & E Unit, would serve as secretary. Other staff concerned with project implementation would be included on invitation. The committee would meet monthly. Meetings would be held at the four district headquarters in rotation. RCC would prepare the annual workplan and budget, facilitate the implementation of project activities, coordinate with other projects in the region, prepare requests to MOF for funding on a quarterly basis, and prepare and review quarterly progress reports for submission to ICC. The establishment of these two committees and appointment of the Project Liaison Officer, the Project Coordinator and the Regional Evaluation Officer under terms of reference and with qualifications satisfactory to GOU and IDA/IFAD, is a condition of credit/loan effectiveness.

B. Executing Agencies

4.03 Primary responsibility for project execution would be with the Ministries of Agriculture and Local Government, strengthened where necessary. As far as possible existing institutional arrangements have been maintained. In keeping with the Government's objectives of decentralization, project management would be delegated to regional and district staff. A PMU would be established at MOA's Regional headquarters in Mbarara. The PMU would be headed by the Project Coordinator and would include the Regional Agricultural Officer, the Regional Evaluation Officer and the M & E Unit (paras 4.17-4.18), the Inputs Supply Team (para 4.06), the Senior Accountant and financial and administrative staff, and four technical assistance staff: the Inputs Supply Manager, the Financial

Controller and the Agricultural Research and Extension Training Specialists. These four specialists would be internationally recruited. During negotiations, assurances would be sought that the PMU as described would be established, the local staff appointed, the reassignment of staff to the M&E Unit completed (para 4.18) and the technical assistance staff recruited by September 30, 1988.

Adaptive Research and Extension

4.04 The MOA Chief Research Officer would have overall responsibility for project related agricultural research. Technical support and supervision of adaptive research would be provided by staff of the Kawanda Research Station and annual research work programs would be reviewed at Kawanda before submission to MOA's National Research Committee for approval. Direct responsibility for the identification, detailed planning and establishment of adaptive research programs would be with the consultant research agronomist and the local counterpart working closely with district extension staff. Research tailored to farmers needs would be developed on the Kachwekano and Bushenyi DFI's, and on the Kalengyere Research Substation and Rubare Farm. Subsequently, an outreach program to test research recommendations on farmers fields, would be introduced which would involve field extension staff in selected areas and establish linkages between research and extension.

4.05 The RAO, under the direction of the Deputy Commissioner for Production, would continue to have overall responsibility for extension services in the project area. Extension services at the district level would continue to be administered by the DAOs assisted by the consultant extension training specialist and the local counterpart. Organization and management of extension training courses would be the responsibility of the Principals of the Kachwekano and Bushenyi DFIs, who would receive administrative supervision from the DAO's at Kabale and Bushenyi. The consultant training specialist would assist in the design and management of the required training courses.

Procurement, Pricing and Sales of Inputs

4.06 The PMU would survey the market, and place orders for agricultural inputs through UCB. It would take delivery of the inputs and materials, store, re-package where necessary, and sell to area retailers who would include cooperatives and other groups. A reserve price, and minimum and maximum purchase requirements would be established (para 4.08). The inputs supply team in Mbarara would be headed by (i) an Inputs Supply Manager (technical assistance) and would also include; (ii) a Deputy Inputs Supply Manager, who would take over management of the team as the technical assistance staff phases out in Year three; (iii) a Warehouse Manager; and (iv) guards and laborers. In order to get inputs supply activities underway with the initiation of the project, a first purchase of about US$ 1.0 million worth of key equipment, tools and chemicals would be made during

the first year. It was agreed that the consultant Input Supply Manager satisfactory to be GOU and IDA/IFAD, would be employed, and the Deputy Input Supply Manager and Warehouse Manager appointed and in post by September 30, 1988.

4.07 Procurement of inputs would be coordinated by the Input Supply Manager. The actual sourcing and purchasing of goods would be done by UCB's Procurement Department within the Development Finance Division. This department currently handles procurement under the IDA, EEC, USAID, Agricultural Rehabilitation Program (Cr. 1328-UG). UCB has considerable expertise in this area, and is well placed to make the financial and other arrangements necessary to ensure safe arrival of goods in Mbarara. It is expected that one large tender would be completed each year, using ICB procedures. Other purchases are expected to use local competitive bidding or prudent shopping procedures. UCB would hire a qualified international procurement agency on a short term basis to assist with the ICB tenders. The international procurement agency would be better placed to: (i) ensure correct and adequate product specifications; (ii) evaluate the firms submitting bids; and (iii) conduct the technical/engineering evaluation of the competing products. The international procurement agency would be hired on approval of the PMU under terms of reference satisfactory to IDA/IFAD. It was agreed that the fee for the international agency would be paid by MOA.

4.08 In order to provide agricultural inputs to small farmers in the project area in a timely and accessible fashion, PMU shall encourage free market participation by all entities engaged in wholesale and retail trade in such inputs. Agricultural inputs procured under the project shall be sold on a cash basis at wholesale market prices to (i) traders, cooperative unions and societies licenced to operate in the four districts of the project area, and (ii) farmer groups from the Southwest. It was agreed that the Inputs Supply Manager and his team within the PMU would submit to IDA/IFAD a satisfactory proposal on the management of the sale of inputs under the project. Alternatives presented under this propcsal would include, amongst others, (i) the sale of inputs at market wholesale prices set by the PMU after a survey of similar prices in the project area, and taking into consideration the purchase prices evaluated at the market exchange rate and cost of handling and transport; and (ii) the sale of selected inputs through a pilot auction system. The proposal would also, for each alternative, cover amongst other things, the minimum and maximum amounts to be sold to a given purchaser, the periodicity of price review, the methodology for price determination, and for the pilot auction system, the criteria for selection of the goods to be auctioned, the periodicity of the auction, and the setting of reserve prices. The various pricing systems in use by the project during the first two years would be evaluated in a study to be undertaken by the Inputs Supply Manager and his team in the PMU, and completed and sent to IDA/IFAD for comment by December 31, 1989. Recommendations would be made on the pricing method to be adopted subsequently by the project, after agreement by IDA/IFAD. It was agreed that the goods to be procured and sold by the project would be: (i) hoes, pangas, hand tools for small farmer cultivation, wheelbarrows, bicycles, motorcycles, ox ploughs, carts and animal drawn equipment, small mills and

small scale agro-processing equipment, agricultural chemicals, including fertilizers, pesticides and insecticides, improved seed, workshop equipment and spare parts, fencing materials and tools, packaging materials, equipment and materials to support crop storage and marketing; and (ii) storage construction materials and equipment and vehicles for cooperative unions and societies, farmers groups, and produce and inputs traders to support the development of agricultural inputs and crop marketing services up to US$ 700,000 equivalent. Furthermore, it was agreed that the prices of agricultural inputs across the country, including those charged by the project, would be monitored by the Agricultural Secretariat which would submit a report for IDA/IFAD review and comment by December 31 of each year. The financial aspects of the wholesale operation would be supervised by the project Financial Controller, who would be charged with setting up the necessary accounting system, and supervising its operation along with the Input Supply Manager.

4.09 The study on the future input supply management (para 3.11) would be conducted by consultants appointed not later than June 30, 1990, under terms of reference agreeable to GOU and IDA/IFAD. The study would be completed by December 31, 1990. GOU and IDA/IFAD would review the findings and recommendations arising from this study and, within six months of its completion, PMU would initiate the transfer of its inputs supply operation to the agreed new agents to commence operation under the supervision of the PMU. GOU would ensure that the necessary foreign exchange requirements would be made available to the procurement agent or agencies for the importation of inputs to meet recurrent requirements. Assurances to this effect were provided during negotiations.

4.10 Any trader licenced for the Southwest, cooperative society or group headquarted in the Project Area, with sufficient funds for the minimum amount could purchase project agricultural inputs. Community or women's groups created under the sponsorship of this or other projects would be eligible. Such a group could if necessary obtain funds from UCB under one of the new agricultural credit schemes to finance their initial purchases of inputs. Demand for project sponsored inputs is expected to be quite high, as the goods are of relatively low value (e.g. a hoe costs US$ 2.50, three days wages or five bunches of bananas at farmgate prices). Goods which have been in demand under the ADP project in Northwest Uganda would be purchased initially. Although inputs have been available in the past in the region at subsidized prices, which could undercut project sales, this is no longer expected to be a problem, due to the realignment of the exchange rate under the economic recovery program.

4.11 UCB would operate under the terms of an Agency Agreement. An outline of this agreement can be found in Annex 6, Document A2. The PMU would pay UCB a fee of 7% on the CIF Mbarara cost of goods procured, which approximates the fee UCB receives for administering procurement for ARP (Cr. 1328-UG). A rough estimate of the costs of running such an operation shows that a fee of this magnitude would be adequate (Annex 6, Document A2, Appendix 3). The contents of this Agency Agreement are described in Annex 6, Document A2, Appendix 2. Assurances were given at negotiations that

this Agency Agreement would be signed by September 30, 1988 under terms and conditions acceptable to IDA/IFAD. It was agreed that signature of a satisfactory agreement is a condition for disbursement of funds by IFAD for purchase of agricultural inputs.

Community Development Fund

4.12 The PMU shall be responsible for the administration of a Community Development Fund of US $ 95,000, designed to support the formation of farmer's groups, women's groups and primary cooperative societies in the Project Area. Applications for funds would have to be sponsored by MOA's Extension Service, or Home Economics Service, or other Government agencies such as MCM and the Department of Community Development of MOLG, or by private, non-profit voluntary organizations. Applications for assistance would be sumbmitted to the PMU and would contain a statement of the group's objectives, membership, management team and activities to be funded by the project. The activities to be funded should be productive, provide additional employment and should include, inter alia, the marketing of agricultural inputs or agricultural products, the processing of agricultural commodities and the production of agricultural inputs. The fund could be used to cover: (i) initial operating costs, supplies and allowances; (ii) renovation of buildings for use by the group; and (iii) courses and training programs for the group run by the sponsoring institution. Not more than US $ 3,000 equivalent would be disbursed to any one group. Assurances to this effect were given at negotiations.

Rehabilitation of Rural Access Roads

4.13 Rehabilitation works would be done by contractors selected through ICB procedures and supervised by consulting engineers (also selected under IDA/IFAD guidelines for recruitment of consultants) in conjunction with the Regional Engineer MOLG and the District Works Superintendents. During the pre-contract start-up period, a detailed road inventory would be prepared by consulting engineers from which details of the work to be completed by contractors would be prepared. The supervising consulting engineers would provide a project engineer, two assistant engineers and a mechanical superintendent. The project engineer would be based at Mbarara and, in conjunction with the Regional Engineer MOLG, would report to the Project Coordinator. The assistant engineer would be attached to the contractors work units and would supervise daily progress. The mechanical superintendent would assist with the operation and also maintenance of equipment to be provided under the project, and would also provide in-service training to MOLG staff. Road maintenance would be under the direction of the Regional Engineer MOLG, and, at the district level, would be under the District Work Superintendent. In addition to training provided under the project, MOLG staff would benefit from training to be provided under the UNDP/UNCDF financed road rehabilitation and maintenance project (para 2.20). Terms of reference for the detailed road inventory are listed in Annex 6, Document A3 of the Project File.

C. Training and Technical Assistance

4.14 Most of the field extension staff in MOA have had little or no access to technical training since completion of their certificate, diploma or degree courses. Under the project, all regional extension staff would receive refresher training in crop husbandry, extension methodology and communication techniques. This would be followed by further training for field staff involved in the phased development of the outreach program including staff of MOA's Home Economics Unit dealing with women groups. Farmer training would mostly be by means of on-farm demonstrations and field days, but special training courses for selected group leaders would be provided. Training funds would be provided for selected research and extension staff to complete appropriate short courses or study tours outside Uganda.

4.15 Internationally recruited technical assistance would be provided for the positions of Adaptive Research Agronomist, Extension and Training Specialist, Inputs Supply Manager, and Financial Controller. Additional short term consultancies would be provided during the pre-project start-up period, for a Project Expediter, preparation of a building design contract, and a rural roads inventory.

4.16 Virtually all technical assistance staff would be involved in training and funds have been provided for training counterpart staff to enable them to take over project responsibilities when consultancies have ended. All long term technical assistance would be phased out in project year four. The draft terms of reference for the technical assistance personnel are given in Annex 6, Document A7.

D. Reporting, Monitoring and Evaluation

4.17 The project would establish an M&E Unit at the project headquarters in Mbarara. The Unit would design and institute a monitoring system involving periodic reporting of selected key indicators of project performance. These indicators would be compared to physical and financial targets set annually in a work plan and budget. All project agencies and ministries involved in project implementation would be responsible for submitting the required information on a quarterly, seasonal and annual basis to the M&E Unit. The RCC would approve the annual work plans, budgets and progress reports, and submit to ICC for review and approval to ICC. It was agreed that annual work programs would be submitted to IDA/IFAD for review and comment before April 1 each year. The first annual work plan, including an initial assessment of goods to be imported, would be submitted to IDA/IFAD as a condition of loan/credit effectiveness.

4.18 In preparing the annual work program, care would be taken to ensure that the methodology of other M&E units already established in Uganda should, where appropriate, be followed. The M&E Unit at MOA headquarters at Entebbe, which is being strengthened under the IFAD/IDA financed ADP (para 1.27), would provide a coordinating role in this respect. The project M&E Unit would be staffed by MOA personnel currently in the Region. The incremental cost of the M&E component is estimated at US$0.8 million. This includes a provision of 24 staff-months of technical assistance in the form of periodic visits during each year, and the necessary vehicles and field and office equipment for the survey program. A suitably qualified candidate will be appointed as the Project Evaluation Officer as a condition of loan/credit effectiveness (para 4.02), and reassignment of required field staff from the existing cadre of extension and statistical personnel to the M&E Unit will be completed by September 30, 1988 (para 4.03). The position of Project Evaluation Officer would be upgraded to Regional Evaluation Officer by June 30, 1989.

4.19 Impact evaluation would be measured against a baseline survey of small farming households, repeated at the mid-term, final year and post-project stages. Smallholder income levels would be monitored in these various studies. Additionally, a series of small scale studies would be conducted throughout the project on selected target areas and communities. Assurances were given that the M&E Unit would, under the supervision of the MOA Planning Division, prepare a mid-term review of project progress and impact including the identification of implementation constraints and recommendations for project modification or change, not later than December 31, 1990. The mid-term review would be prepared in accordance with terms of reference agreed with IDA/IFAD. The GOU mid-term review report would be presented to IDA/IFAD for review. GOU and IDA/IFAD would then conduct a joint field review of project progress to determine the changes required to improve project impact during the remainder of the implementation period.

4.20 GOU, through the ICC and RCC would prepare and send to IDA/IFAD semi-annual reports outlining (inter alia) the progress with project implementation (both financial and physical), to the extent possible, the impact of project activities on the target beneficiaries, and special issues which may arise during project implementation. The semi-annual progress reports would compare actual progress with that proposed in the annual work program and budget. Progress reports would be sent to IDA/IFAD within two months of the end of the reporting period. The first report would be sent to IDA/IFAD by December 31, 1988. Within six months of completing the project, GOU would provide a project completion report in accordance with an outline agreed by GOU and IDA/IFAD, which would cover all aspects of the project including an estimate of project impact on the living standards of the beneficiaries and on the economy of both the Southwest Region and the country as a whole. Assurances were given that the above reporting procedures would be implemented.

E. Implementation Schedule

4.21 An indicative implementation schedule is appended as Annex 7. Project start up would occur under SOF financing during 1987/88. The lead time for procurement of civil works, vehicles and equipment is based on recent experience on IDA/IFAD financed projects in Uganda. The Project Completion date would be December 31, 1993.

V. PRODUCTION, MARKETS, AND FINANCIAL ANALYSIS

A. Smallholder Production

5.01 This project fits within a much larger array of economic activities, policy adjustments and other projects expected to improve smallholder food and cash crop production in Uganda and in the Southwest Region. Crop production in the project area is expected to increase as farmers respond to improved security and sharply improved producer incentives as a result of economic policy changes made by the Government in May 1987 (para 1.07). As a result of improvements in access roads, the strengthening of the extension and adaptive research services, and the increases in supply of agricultural inputs, an additional production response from smallholders in the Southwest would be achieved. Most of the production increases are likely to occur in Zones 1 and 2, which have high productive potential both in terms of yields which could be achieved on individual crops and also the range of crops which can be produced. A much lower impact would be expected in Zone 3, which is likely to remain a food deficit area for the foreseeable future.

5.02 No impact on production is expected before project year two. Thereafter, introduction of improved planting materials and management techniques should have a rapid impact on production on farms in direct contact with the extension service and through spin-offs to the farming community at large. Improved availability of inputs, largely tools and equipment to facilitate cultivation should also increase opportunities for improved husbandry practices and hence greater production from existing varieties (Annex 6, Document A5).

5.03 Estimated areas under food crops and average production figures by farm are detailed in Annex 6, Document A6, Tables 3 - 5. On average food crop production on farms which participate fully in the project is likely to increase by about 30% in 5 years. Assuming that 10% of farms in Zones 1 and 2, and 2% of those in Zone 3 participate fully in the project by the end of year five, the aggregate increase in food production due to adaptive research and extension at full development is likely to be about 3%. The greatest potential for yield increases per unit area are likely to come from potatoes (with fertilizer), maize and sorghum. Because of the large proportion of the area under the crop, the biggest physical increase in

production would be from bananas. Table 5.01 summarizes the expected incremental food crop production from the adaptive research and extension components (details given in Annex 6, Document A6).

Table 5.01: Incremental Production

	Incremental Production at Full Development (tons)
Bananas	71,913
Cereals	6,197
Peas/Beans/Groundnuts	819
Potatoes	2,759
Other Root Crops	5,061

5.04 In addition to incremental production from the relatively small portion of farms benefiting directly from adaptive research and extension, agricultural production would also increase as a result of the project because of: (i) increased use of agricultural inputs; and (ii) an expansion of areas planted and the proportion of the crop marketed resulting from better accessibility and reduced transport costs. A rough estimate of this impact would be an additional 2 - 5% by the time of full project development.

B. Marketing of Project Output

5.05 Most incremental food crop production in the project area would be marketed through traditional markets in the private sector. As many of the food crops, particularly potatoes, bananas and other root crops are bulky, the improvements in road transportation and the reduction of haulage costs by about US$0.05/ton km for trucks and about US$0.20/ton km for pick-ups will help to improve farmgate prices. This will be particularly important for those products such as bananas which are sold outside the area.

5.06 Present farmgate prices for main food crops are set out below in Table 5.02:

Table 5.02: Farm Gate Prices

	USh/Kg	US$/Ton
Bananas	1.5	25
Potatoes	9	150
Maize	10	167
Beans	15	250
Sweet Potatoes	5	83

These prices are reasonable and, on the basis of current exchange rates, are well above export parity prices but below import parity prices.

5.07 Incremental project output should be easily marketed as the anticipated growth in demand for food in the project area is substantially larger than the incremental food production due to the project. Local demand for food is expected grow at about the same rate as population growth i.e. about 2% p.a. Over 9 years therefore, the local demand for food would have grown by about 20% whereas production due to specifically identifiable project components is likely to increase output by about 3% due to adaptive research, and 2 - 5% due to improved roads and incremental inputs. Furthermore, if Government carries through with its policy of deregulating the market and relaxing trade regulations, increased opportunities for both inter provincial trade and project area exports to Zaire, Rwanda and Tanzania should occur. These will be particularly important for regional specialty crops such as potatoes from Kabale or bananas from Bushenyi. With strong demand and marketing improvements there is every likelihood that producer prices in the project area will increase at the farmgate.

C. Financial Viability of Smallholder Production

5.08 The estimated total annual value of food crop production per farm is about US$ 520 for farms in Zone 1, US$ 500 for farms in Zone 2 and US$ 50 for farms in Zone 3. After 5 years these figures are estimated to increase to US$ 670 for Zone 1, US$ 620 for Zone 2 and US$ 55 for Zone 3. Details of production, consumption, sales, costs and labor inputs for these farms are given in Annex 6, Document A6, Tables 3 to 8 and summarized below.

Table 5.03: Typical Characteristics of Food Crop Production on Farms on which the Project has a Direct Impact

		Zone 1	Zone 2	Zone 3
Area of Food Crops (ha)		1.95	2.12	0.33
Gross Value of Food Crops				
"Without Project"	US$	520	500	50
"With Project"	US$	670	620	55
Net Income (incl. consumption)	USh '000	23	28	3
"Without Project"	US$	380	470	50
Net Income (incl. consumption)	USh '000	33	34	3
"With Project"	US$	550	570	50
Incremental Net Cash Flow	USh '000	6.6	5.0	0.2
From Food Crops	US$	110	83	

5.09 Within Zones 1 and 2, farm family members consume an average of about 2,000 calories per capita from their own output and show net cash flows of US$150 and US$233 per annum respectively from food crops. Out of these cash incomes they buy additional foods. As a result of the project, the net cash flow after consuming the same amount of food would increase by about US$110 for Zone 1 farms and US$83 for Zone 2 farms. To achieve this, some incremental labor would be required. It is estimated that the incremental output per incremental labor day is about US$2.67 for farms in Zone 1 and US$2.08 for farms in Zone 2. These figures are both substantially larger than the present wage rate of about US$0.83 per day. Food crop production in Zone 3 however, is marginal and returns to incremental labor are relatively unattractive. For this reason it is unlikely that a significant increase in food crop production will take place in Zone 3 except in special situations.

VI. BENEFITS, JUSTIFICATION AND RISK

A. Benefits and Beneficiaries

6.01 Only quantifiable benefits attributable to this project are considered in this section and in Document A6 of Annex 6; i.e. the likely impact on agricultural production of the adaptive research and extension component (a relatively small part of project costs), the cost reducing effects of improving the rural access road systems (a large part of project costs), and the impact of agricultural inputs. In the case of this project, benefits are likely to be larger than those that have been quantified. The basic objective of the project is to re-establish functioning systems of agricultural production, marketing and input supply in an area where these have been largely destroyed or are currently inoperative, and where, as a consequence, individual farmers are reverting to a largely self-protective, subsistence system. Of still greater significance will be the economic policy adjustments the Government undertook in May 1987, which were a precondition for this and other projects. These adjustments reestablish a viable exchange rate and open the door to a return to an open marketing system. These two changes should have a dramatic effect, stimulating agricultural production and trade in the project area and in Uganda as a whole. The returns to this project will be additional to the production response to the National Economic Recovery Program.

6.02 Most of the 270,000 farm families in Zones 1 and 2 of the project area would benefit directly or indirectly from the improved supply of inputs. The majority of these farmers are smallholders who cultivate food crops as a main activity, and fall within IFAD's target group. They have been regular buyers of tools, vegetable seeds and, to a lesser extent, agro-chemicals. The increased availability of inputs, the improved

distribution system, and the improved road system which would be brought about by the project, can be expected to reduce the cost of distribution and introduce competition in the local market, thereby reducing the possibility of other suppliers charging monopolistic prices.

6.03 Virtually all of the 2.4 million people (340,000 families) in the project area can be expected to benefit from the rehabilitation of rural access roads. Opening up the 20% of roads in the Region which are at present impassable and making the 40% of Regional roads currently impassable during the wet season passable year round, will increase the possibilities for communications and trade and facilitate the delivery of government and social services. Secondly, reducing the roughness of roads, and therefore lowering vehicle operating costs by about one third on average, should lead to increased transportation services at lower cost. These would include (i) the re-introduction of rural buses in some areas; (ii) increased goods transport and better marketing services (hence higher farm gate prices), and (iii) greater availability of government services. The improvements in rural roads will also help expedite other projects which are presently planned, or ongoing in the Region. They would be of particular value in supporting the Rural Health and Water Project planned by UNICEF and the animal health and marketing aspects of the proposed Livestock project.

6.05 The numbers benefiting directly from the adaptive research and extension component would be limited initially, because of the components' phased implementation and because not all farmers are likely to be adopters of improved practices. Furthermore, and the major reason for the relatively small size of this component and the modest assumptions regarding its impact, is the absence of readily available technologies that can be expected to sharply improve crop yields in the area. The main techniques to be introduced at first are essentially improved cultivation practices, supported by the input component, which is largely hand tools and related equipment. The mission estimate is that about 20,000 farmers, or 6.1% of the farm population, would benefit directly from the adaptive research and improved extension during the life of the project (paragraphs 5.01 - 5.07). Most (over 95%) of these would be in Zones 1 and 2, which are the main food producing areas of the region.

B. Economic Analysis

6.06 The cost benefit calculation for this project is not done in the traditional way, by aggregating all costs and benefits, and providing an overall rate of return. Rather, each of the three main components is analyzed separately, and it is shown that, under a series of minimal assumptions, which are highly likely to be met, an economic rate of return of at least 15% will be obtained. If the conditions are better than those posited in these minimal assumptions, i.e. if the farmer adoption rate is greater than 7% in the high potential zones, or if the average traffic on project roads is over 10 vehicles per day, then the rate of return will be

higher than 15%. Further information on the economic analysis for the various components is given below. Road rehabilitation and maintenance account for about 48% of project costs, adaptive research and extension for 14% and agricultural inputs some 30% of project costs. The remaining 8% are for monitoring and evaluation and management support.

6.07 Most of the benefits from road rehabilitation and maintenance will come from (i) increased marketing of agricultural produce; (ii) increased supplies of inputs; (iii) increased public transport; and (iv) time saved and lower vehicle operating costs on generated traffic. Because of the low present traffic volumes in the area, savings on existing traffic are likely to be relatively small, whereas the savings on the expected rapid increas in traffic generated by this and other projects, by improved security and by economic policy improvements, is likely to be large.

6.08 Rather than estimate an internal rate of return to the rural road component, an estimate is made of the future average daily traffic volumes which would be required to provide the project with an internal rate of at least 15% from time saved and reduced vehicle operating costs. Detailed calculations of unit cost savings for different types of vehicles have been made and are presented in Annex 6, Document A6, Tables 11 and 12.

6.09 Provided daily traffic volumes are equivalent to 2 buses, 2 medium goods vehicles, 3 light goods vehicles and 3 4WD vehicles, very modest assumptions, the roads component would show an internal rate of return of 15% (Annex 4, Table 3). This does not take into account the benefits from motorcycles, bicycles, easier foot passage, improved services, increased trade or higher marketed agricultural output. Given the fairly low overall road density in the area, 1 km of all types of road per 700 people (or per 6 km^2), it is quite likely that these traffic volumes would be achieved on the rural network. Thus this component is likely to show a good economic rate of return.

6.10 To estimate the economic returns to adaptive research and extension and the increased availability of inputs, potential improvements from typical farms in each of the zones taking up the project inputs and participating in the applied research/extension program have been estimated and are set out in Annex 6, Document A6. In making economic estimates of net project benefits from this component, the financial costs of operating it have been adjusted for taxes, and the economic value of farm labor has been assessed at half of the present rural wage rate i.e. at USh 25/day. No conversion factor has been applied to food crop prices as they are presently between import and export parity levels[1]/.

1/ Although the Ugandan currency is probably still overvalued at USh 60 per US dollar (which would indicate economic prices of food crops below their financial prices) this is considered to be offset by the impediments which presently exist to local food exports which depress present prices at the farm level.

6.11 For the applied research/extension component to show an internal rate of return of 15%, about 7% of the farmers in Zones 1 and 2 would need to participate by year 5 (Annex 4, Table 1). Overall, this would mean an increase of food production in the project area of about 2% by year 5, equivalent to a growth rate of 0.2% per annum. This increase would be over and above the growth expected to result from the ERP. Agricultural production has at best been stagnant over the past ten years.

6.12 It is estimated that a somewhat higher rate of growth of about 3% p.a. will occur by full development. This can be expected as the rundown nature of agriculture in the area becomes revitalized, farmers become able to use hitherto unavailable tools, seeds and chemicals. Response will also be good in view of the suitable soils and rainfall, and the good possibilities for improving agricultural production through improved techniques.

6.13 The type of agricultural inputs to be provided under the project are well known by farmers and are largely those that facilitate traditional cultivation -- hoes, pangas etc. They will be supplied to farmers at market prices. Consequently they are only likely to be purchased by farmers if they perceive a good financial or social return. Most of these inputs are annual inputs or have a short life. Normally, farmers expect a benefit cost ratio of around 2:1 before they are prepared to purchase annual inputs, which would equate to a rate of return of about 100%. There is every indication that farmers are prepared to take up the inputs that are to be supplied under the projec

C. Risks

6.14 Agricultural inputs imported under the proposed project would be sold at market prices, which would be higher than for some albeit limited supplies of subsidized inputs previously available through various donor supported programs. Some sales resistance may therefore be expected until farmers realize that subsidized supplies are no longer available, and that the prices obtained for their produce are much higher than formerly. There is a risk that this resistance would hamper project implementation by causing stock build up of unsold items. The level of risk is slight however, and unavoidable in the process of re-establishing trade on a normal, commercial basis. Under the project, the initial supply of inputs would be restricted to known high demand items. Subsequently, the PMU would assess the demand for goods and regulate supplies to prevent unsold items accumulating in the project warehouse. There remains some risk that inputs would be sold either in other regions or outside the country, because of continued exchange rate distortions. However, this risk would be minimized by the Government's new pricing and exchange rate policy and, in addition, the distribution and sale of goods in the project area would be constantly monitored to ensure that inputs were used locally.

6.15 There is a risk of possible delays in delivery of project items to Uganda, and a delay in the implementation of the project. The proposed implementation procedures and organization and management structure of the project would minimize this risk. For the procurement of recurrent imports, the project would benefit from UCB's experience under ARP (Cr. 1328-UG) and UCB would in turn be assisted by an international procurement agent. Procurement and disbursement for the rehabilitation of rural roads should be rapid since this would be the responsibility of the contractor for which penalties would result from delays.

6.16 Low salaries and GOU's failure to pay expenses and allowances have caused a general lack of commitment and low morale in staff of all ministries. GOU has recently increased salaries and allowances and under the project this problem would be reduced further by the provision of transport and other facilities and the prompt payment of travel and transport allowances. Better working conditions, regular payment of allowances and clearly defined work programs are expected to provide sufficient incentives to improve staff productivity and to raise staff morale.

6.17 Most of the incremental food crop production anticipated under the project would be sold to meet increasing local demand, with some portion traded internationally (para 5.07). There is a risk that Government intervention in marketing would continue and act as a disincentive to farmers to increase production. However, Government's policy to encourage multichannel marketing (para. 1.16), the supervision of agricultural prices and marketing policy in the context of the Economic Recovery Credit, and the Government's expressed strong political commitment to the project would significantly reduce this risk.

VII. AGREEMENTS REACHED

General Conditions

7.01 It was agreed at negotiations that:

(a) the Government would provide sufficient local funds to support project execution (para 3.19), and to adequately maintain project roads after completion of the project (para 3.14). Project recurrent costs would be included in the recurrent budget (para 3.19);

(b) procurement would be undertaken according to the procedures outlined in paras 3.21-3.23. Goods to be procured under the inputs supply component will be from an agreed positive list (para 3.23, 4.08); no agricultural chemicals with an adverse effect on the environment would be purchased, and guidelines acceptable to IDA would be followed in the procurement of pesticides (para 3.32);

(c) internationally recruited staff would be selected in accordance with IDA Guidelines on the "Use of Consultants by World Bank Borrowers and by the World Bank as Executing Agency" with country eligibility adjusted (para 3.25);

(d) financial and physical records would be maintained as set forth in para 3.28, and that the project accounts in MOA, MOLG, UCB, and the Special Accounts and the Southwest Development Revolving Fund would be audited by independent auditors acceptable to IDA/IFAD. Certified copies of the audit reports would be provided to IDA/IFAD not more than 6 months after the end of the Financial Year.

(e) revenue from sales of project inputs would be deposited in the Southwest Development Revolving Fund and used to support the Government's rural development program in consultation with IFAD (para 3.29);

(f) the international procurement agency to assist UCB would be hired under terms of reference satisfactory to IDA/IFAD and its fee would be paid by MOA (para 4.07);

(g) agricultural inputs would be sold by the project using pricing and sale procedures (which would include a pilot auction scheme) to be determined by study and trial as outlined in para 4.08;

(h) the Agricultural Secretariat would monitor input prices and submit a report to IDA/IFAD by December 31 of each year (para 4.08);

(i) subsequent to study, transfer of project input procurement and distribution operations and facilities to agents acceptable to IDA and IFAD be initiated, and that sufficient foreign exchange be made available for the recurrent importation of agricultural inputs once the project disbursement period had finalized (para 4.09);

(j) that the PMU administer a Community Development Fund along agreed lines, with a maximum of US $ 3,000 equivalent going to any one group (para 4.12);

Dated Covenants

7.02 It was agreed at negotiations that:

(a) by September 30, 1988, (i) the PMU have been constituted, (ii) local staff had been reassigned from extension and statistical services to the M & E Unit, (iii) other local staff be appointed and in place, including the Deputy Inputs Supply Manager, the Warehouse Manager, and the Senior

Accountant, and (iv) the internationally recruited Financial Controller, Inputs Supply Manager, Agricultural Research Specialist, and Extension Training Specialist be appointed and in place under terms of reference, and with qualifications and experience acceptable to IDA/IFAD (paras 3.28, 4.03, 4.06, 4.18);

(b) a proposal on the pricing and sale of agricultural inputs have been provided to IDA and IFAD by September 30, 1988, for review and approval prior to the initiation of sales, (para 4.08);

(c) UCB and MOA have signed an Agency Agreement acceptable to and IDA/IFAD covering inputs procurement responsibilities by September 30, 1988 (para 4.11);

(d) the PMU and the Agricultural Secretariat would submit a study evaluating the inputs sale systems, and recommend on the system to be used in subsequent years by December 31, 1989 (para 4.08);

(e) (i) by June 30, 1990, PMU would appoint consultants to undertake a study on the future management and privatization of the inputs supply component, to be submitted to IDA/IFAD for review and comment by December 31, 1990; and (ii) that transfer of input procurement and distribution operations and facilities to agents acceptable to IDA/IFAD be initiated prior to June 30, 1991 (para 4.09);

(f) by December 31, 1991, training programs be instituted to ensure a minimum 10% participation of women in the extension service; that at least 10% of contact farmers are women; that the Home Economics Program reflect women's needs; and that gender questions be included in project monitoring (para 3.31)

(g) annual workplans be submitted to IDA/IFAD for review before April 1 of each year (para 4.17);

(h) the midterm review be undertaken using terms of reference acceptable to IDA/IFAD, and that the final report be provided to IDA/IFAD for comment and review not later than December 31, 1990 (para 4.19); and

(i) semi-annual progress reports be sent to IDA/IFAD within two months of the end of the reporting period. The first report would be sent by December 31, 1988. Within six months of completing the project, GOU would provide IDA/IFAD with a project completion report prepared in accordance with agreed terms of reference (para 4.20).

Conditions of Loan/Credit Effectiveness

7.03 It is a condition of Loan/Credit effectiveness that:

(a) the Government establish two Special Accounts in a commercial bank acceptable to IDA and IFAD, and operate them under agreed procedures (para 3.27);

(b) the Government (i) establish the Interministerial Coordinating Committee and the Regional Coordinating Committee, and (ii) appoint and have in place the Project Liaison Officer, the Project Coordinator and the Project Evaluation Officer under terms of reference satisfactory to GOU, IDA and IFAD (para 4.02); and

(c) The Government have submitted a work plan for the first year of the project satisfactory to IDA/IFAD (para 4.17);

Condition of Disbursement

7.04 It was agreed at negotiations that the signature of the Agency Agreement between MOA and UCB satisfactory to IDA/IFAD would be a condition for disbursement of funds from Category I of the IFAD loan, to be used for the purchase of agricultural inputs (para 4.11);

7.05 With the above assurances and conditions, the project would be suitable for an IDA Credit SDR 7.6 million (US$ 10.0 million equivalent) on standard IDA terms, with 40 years maturity.

UGANDA

Annex 1

SOUTHWEST REGION AGRICULTURAL REHABILITATION PROJECT

Estimated Schedule of Disbursements

(US $ millions)

IDA Fiscal Year	Quarter Ending	Quarterly Disbursements 1/2/			Cumulative	
		Total	IDA	IFAD	IDA	IFAD
1988	September 1987	-	-	-	-	-
	December 1987	0.1	0.0	0.1	0.0	0.1
	March 1988	0.1	0.0	0.1	0.0	0.2
	June 1988	0.3	0.1	0.2	0.1	0.4
1989	September 1988	0.4	0.1	0.3	0.2	0.7
	December 1988	0.4	0.1	0.3	0.3	1.0
	March 1989	1.1	0.3	0.8	0.6	1.8
	June 1989	0.9	0.4	0.5	1.0	2.3
1990	September 1989	0.9	0.4	0.5	1.4	2.8
	December 1989	1.0	0.5	0.5	1.9	3.3
	March 1990	1.5	0.5	1.0	2.4	4.3
	June 1990	1.1	0.6	0.5	3.0	4.8
1991	September 1990	1.2	0.6	0.6	3.6	5.4
	December 1990	1.2	0.6	0.6	4.2	6.0
	March 1991	1.7	0.7	1.0	4.9	7.0
	June 1991	1.1	0.6	0.5	5.5	7.5
1992	September 1991	1.1	0.6	0.5	6.1	8.0
	December 1991	1.1	0.6	0.5	6.7	8.5
	March 1992	1.4	0.6	0.8	7.3	9.3
	June 1992	1.1	0.6	0.5	7.9	9.8
1993	September 1992	0.9	0.5	0.4	8.4	10.2
	December 1992	0.9	0.5	0.4	8.9	10.6
	March 1993	0.7	0.3	0.4	9.2	11.0
	June 1993	0.6	0.3	0.3	9.5	11.3
1994	September 1993	0.4	0.2	0.2	9.7	11.5
	December 3/1993	0.3	0.1	0.2	9.8	11.7
	March 1994	0.3	0.1	0.2	9.9	11.9
	June 4/1994	0.2	0.1	0.1	10.0	12.0

1/ IDA : Categories I and II (Civil Works, Vehicles and Equipment).
2/ IFAD : Categories III, IV and V (Inputs, Operating Costs and Consultant Services.
3/ Project Completion Date: December 31, 1993.
4/ Project Closing Date: June 30, 1994.

Annex 2

UGANDA

SOUTHWEST REGION AGRICULTURAL REHABILITATION PROJECT

Inflation and Exchange Rate Assumptions

	1987-88	1988-89	1989-90	1990-91	1991-92	1992-83
International Inflation (%)	2.0	1.0	1.0	2.3	3.5	3.5
Domestic Inflation (%)	87.4	24.3	14.4	10.0	10.0	10.0
Constant Purchasing Parity Exchange Rate	85.4	123.0	144.7	159.5	170.5	181.2

Annex 3

Table 1

UGANDA
SOUTHWEST REGION AGRICULTURAL REHABILITATION PROJECT
SUMMARY ACCOUNTS COST SUMMARY

	(U.Sh '000)					(US$ '000)				
	Local	Foreign	Total	% Foreign Exchange	% Total Base Costs	Local	Foreign	Total	% Foreign Exchange	% Total Base Costs
I. INVESTMENT COSTS										
A. CIVIL WORKS	232,929.6	222,158.4	455,088.0	49	33	3,882.2	3,702.6	7,584.8	49	33
B. VEHICLES	6,669.2	126,713.9	133,383.0	95	10	111.2	2,111.9	2,223.1	95	10
C. EQUIPMENT	4,225.5	29,775.5	34,000.9	88	2	70.4	496.3	566.7	88	2
D. AGRICULTURE INPUTS	117,348.0	237,732.0	355,080.0	67	25	1,955.8	3,962.2	5,918.0	67	25
Total INVESTMENT COSTS	361,172.2	616,379.7	977,551.9	63	70	6,019.5	10,273.0	16,292.5	63	70
Physical Contingencies	47,763.7	72,745.9	120,509.6	60	9	796.1	1,212.4	2,008.5	60	9
Price Contingencies	672,007.9	1,136,127.0	1,808,134.9	63	130	351.3	593.7	945.1	63	4
Total INCLUDING CONTINGENCIES	1,080,943.8	1,825,252.6	2,906,196.4	63	209	7,166.9	12,079.2	19,246.1	63	83
II. RECURRENT COSTS										
A. OPERATING COSTS - VEHICLES	71,174.4	103,728.9	174,903.4	59	13	1,186.2	1,728.8	2,915.1	59	13
B. OTHER OPERATING COSTS	21,697.2	9,298.8	30,996.0	30	2	361.6	155.0	516.6	30	2
C. SALARY AND ALLOWANCE	41,477.5	-	41,477.5	-	3	691.3	-	691.3	-	3
D. TECHNICAL ASSISTANCE	5,370.0	163,530.0	168,900.0	97	12	89.5	2,725.5	2,815.0	97	12
Total RECURRENT COSTS	139,719.2	276,557.8	416,276.9	66	30	2,328.7	4,609.3	6,937.9	66	30
Physical Contingencies	13,971.9	27,655.8	41,627.7	66	3	232.9	460.9	693.8	66	3
Price Contingencies	299,540.1	545,363.0	844,903.1	65	61	195.9	329.0	524.9	63	2
Total INCLUDING CONTINGENCIES	453,231.2	849,575.5	1,302,807.7	65	93	2,757.4	5,399.3	8,156.7	66	35
Total BASELINE COSTS	500,891.4	892,937.5	1,393,828.9	64	100	8,348.2	14,882.3	23,230.5	64	100
Physical Contingencies	61,735.6	100,401.7	162,137.3	62	12	1,028.9	1,673.4	2,702.3	62	12
Price Contingencies	971,548.0	1,681,490.0	2,653,038.0	63	190	547.3	922.8	1,470.0	63	6
Total PROJECT COSTS	1,534,175.0	2,674,829.1	4,209,004.1	64	302	9,924.4	17,478.4	27,402.8	64	118

December 2, 1987 19:04

Annex 3

Table 2(a)

UGANDA
SOUTHWEST REGION AGRICULTURAL REHABILITATION PROJECT
Project Components by Year

	Totals Including Contingencies (U. Sh '000)							Totals Including Contingencies (US$ '000)						
	87/88	88/89	89/90	90/91	91/92	92/93	Total	87/88	88/89	89/90	90/91	91/92	92/93	Total
RURAL ACCESS ROADS REHABILITATION	-	87,010.0	668,394.3	708,551.0	408,957.5	210,138.8	2,083,051.6	-	707.4	4,619.6	4,442.0	2,398.1	1,159.4	13,326.7
AGRICULTURAL INPUTS	-	184,930.9	211,375.6	259,336.1	283,238.2	322,511.2	1,271,391.9	-	1,584.9	1,460.9	1,625.8	1,660.9	1,779.5	8,112.0
ADAPTIVE RESEARCH & EXTENSION	-	190,113.3	102,142.3	99,270.4	87,653.4	96,932.7	576,112.0	-	1,545.7	706.0	822.3	514.0	534.8	3,922.9
MONITORING & EVALUATION	-	37,129.5	14,385.1	16,137.3	17,751.1	27,592.8	112,995.9	-	301.9	99.4	101.2	104.1	152.2	758.8
MANAGEMENT SUPPORT	25,343.7	57,290.9	25,158.4	29,111.7	16,787.4	11,762.6	165,452.7	296.9	465.8	173.9	182.5	98.4	64.9	1,282.4
PROJECT COSTS	25,343.7	566,474.6	1,021,453.7	1,112,406.5	814,387.6	668,938.0	4,209,004.1	296.9	4,605.7	7,059.8	6,973.9	4,775.6	3,690.9	27,402.8

Annex 3

Table 2(b)

UGANDA
SOUTHWEST REGION AGRICULTURAL REHABILITATION PROJECT
Summary Accounts by Year

	Totals Including Contingencies (U. Sh '000)							Totals Including Contingencies (US$ '000)						
	87/88	88/89	89/90	90/91	91/92	92/93	Total	87/88	88/89	89/90	90/91	91/92	92/93	Total
INVESTMENT COSTS														
A. CIVIL WORKS	5,453.4	248,848.6	404,180.7	464,515.2	224,265.1	1,401.7	1,348,665.7	63.9	2,023.3	2,793.5	2,912.1	1,315.1	7.7	9,115.6
B. VEHICLES	3,129.8	56,580.5	192,685.8	113,203.7	-	-	365,599.7	36.7	460.0	1,331.8	709.7	-	-	2,538.1
C. EQUIPMENT	711.3	26,889.8	55,486.4	5,318.5	-	-	88,386.1	8.3	218.5	383.5	33.3	-	-	643.6
D. AGRICULTURE INPUTS	-	136,214.8	178,322.7	219,020.5	261,845.8	308,141.1	1,103,544.9	-	1,107.5	1,232.5	1,373.1	1,535.5	1,700.2	6,948.7
a) INVESTMENT COSTS	9,294.5	468,513.7	830,675.7	802,058.9	486,110.9	309,542.7	2,906,196.4	108.9	3,809.3	5,741.2	5,028.2	2,850.6	1,707.9	19,246.1
RECURRENT COSTS														
A. OPERATING COSTS - VEHICLES	808.1	18,298.8	63,941.4	120,708.4	166,151.6	204,477.4	574,385.7	9.5	148.8	441.9	756.7	974.3	1,128.2	3,459.5
B. OTHER OPERATING COSTS	0.0	6,408.5	16,233.6	20,960.2	24,884.5	30,367.2	98,854.1	0.0	52.1	112.2	131.4	145.9	167.6	609.2
C. SALARY AND ALLOWANCE	0.0	4,965.9	15,673.3	25,373.9	40,140.2	50,364.4	136,517.7	0.0	40.4	108.3	159.1	235.4	277.9	821.0
D TECHNICAL ASSISTANCE	15,241.1	68,287.7	94,929.7	143,305.2	97,100.3	74,186.2	493,050.2	178.6	555.2	656.1	898.4	569.4	409.3	3,267.0
a) RECURRENT COSTS	16,049.2	97,960.9	190,778.0	310,347.6	328,276.7	359,395.3	1,302,807.7	188.0	796.5	1,318.6	1,945.6	1,925.0	1,983.0	8,156.7
PROJECT COSTS	25,343.7	566,474.6	1,021,453.7	1,112,406.5	814,387.6	668,938.0	4,209,004.1	296.9	4,605.7	7,059.8	6,973.9	4,775.6	3,690.9	27,402.8

Annex 3

Table 3

UGANDA
SOUTHWEST REGION AGRICULTURAL REHABILITATION PROJECT
Summary Account by Project Component
(U. Sh '000)

	RURAL ACCESS ROADS REHABILITATION	AGRICULTURAL INPUTS	ADAPTIVE RESEARCH & EXTENSION	MONITORING & EVALUATION	MANAGEMENT SUPPORT	Total	Physical Contingencies	
							%	Amount
I. INVESTMENT COSTS								
A. CIVIL WORKS	378,000.0	20,148.0	42,840.0	-	14,100.0	455,088.0	15.0	68,263.2
B. VEHICLES	103,980.0	1,629.0	22,650.0	3,144.0	1,980.0	133,383.0	10.0	13,338.3
C. EQUIPMENT	17,073.1	-	9,446.4	2,081.4	5,400.0	34,000.9	10.0	3,400.1
D. AGRICULTURE INPUTS	-	355,080.0	-	-	-	355,080.0	10.0	35,508.0
Total INVESTMENT COSTS	499,053.1	376,857.0	74,936.4	5,225.4	21,480.0	977,551.9	12.3	120,509.6
II. RECURRENT COSTS								
A. OPERATING COSTS - VEHICLES	109,162.6	5,313.8	45,688.6	9,115.2	5,623.2	174,903.4	10.0	17,490.3
B. OTHER OPERATING COSTS	-	3,300.0	18,978.0	2,454.0	6,264.0	30,996.0	10.0	3,099.6
C. SALARY AND ALLOWANCE	20,999.5	600.0	15,960.0	3,918.0	0.0	41,477.5	10.0	4,147.8
D. TECHNICAL ASSISTANCE	42,000.0	28,800.0	46,080.0	18,480.0	33,540.0	168,900.0	10.0	16,890.0
Total RECURRENT COSTS	172,162.1	38,013.8	126,706.6	33,967.2	45,427.3	416,276.9	10.0	41,627.7
Total BASELINE COSTS	671,215.2	414,870.8	201,643.0	39,192.6	66,907.3	1,393,828.9	11.6	162,137.3
Physical Contingencies	86,021.5	42,494.5	22,308.3	3,919.3	7,395.7	162,137.3	0.0	0.0
Price Contingencies	1,325,814.9	814,026.8	352,162.8	69,884.0	91,149.7	2,653,038.0	10.3	273,806.4
Total PROJECT COSTS	2,083,051.6	1,271,391.9	576,112.0	112,995.9	165,452.7	4,209,004.1	10.4	435,943.7
Taxes	204,823.1	162,537.0	83,894.6	10,280.8	8,614.2	470,149.8	10.3	48,618.6
Foreign Exchange	1,279,842.0	854,630.7	346,840.7	75,594.9	117,920.8	2,674,829.1	10.1	269,311.1

December 2, 1987 19:04

Annex 3

Table 4

UGANDA
SOUTHWEST REGION AGRICULTURAL REHABILITATION PROJE
Table 100. RURAL ACCESS ROADS REHABILITATION
Detailed Cost Table

	Unit	Quantity 87/88	88/89	89/90	90/91	91/92	92/93	Total	Unit Cost	Base Costs in $ 87/88	88/89	89/90	90/91	91/92	92/93	Total
I. INVESTMENT COSTS																
A. CIVIL WORKS																
MAKING PASSABLE	SUM	-	-	-	-	-	-	-		-	-	400.0	500.0	200.0	-	1,100.0
ADDITIONAL DRAINAGE	SUM	-	-	-	-	-	-	-		-	-	250.0	400.0	200.0	-	850.0
SHAPING	SUM	-	-	-	-	-	-	-		-	600.0	800.0	450.0	-	-	1,850.0
REGRAVELLING	SUM	-	-	-	-	-	-	-		-	-	400.0	800.0	500.0	-	1,700.0
PRELIM. & GENERAL & TRAFFIC	SUM	-	-	-	-	-	-	-		-	-	400.0	250.0	150.0	-	800.0
Sub-Total CIVIL WORKS										-	600.0	2,250.0	2,400.0	1,050.0	-	6,300.0
B. VEHICLES																
GRADER 120 HP	EA	-	-	4	4	-	-	8	4,800	-	-	320.0	320.0	-	-	640.0
WHEEL LOADER 80 HP	EA	-	-	4	-	-	-	4	3,900	-	-	260.0	-	-	-	260.0
TIPPING TRUCK (8 TON)	EA	-	-	8	8	-	-	16	1,920	-	-	256.0	256.0	-	-	512.0
VIBRATING ROLLER	EA	-	-	4	-	-	-	4	450	-	-	30.0	-	-	-	30.0
4 WD PICK UP	EA	-	-	8	-	-	-	8	900	-	-	120.0	-	-	-	120.0
MOTOR CYCLES	EA	-	-	4	-	-	-	4	120	-	-	8.0	-	-	-	8.0
BICYCLES	EA	-	-	40	-	-	-	40	4.5	-	-	3.0	-	-	-	3.0
SPARE PARTS (INITIAL STOCK)	SUM	-	-	4	-	-	-	4	2,400	-	-	160.0	-	-	-	160.0
Sub-Total VEHICLES										-	-	1,157.0	576.0	-	-	1,733.0
C. EQUIPMENT																
HAND TOOLS	SUM	-	-	4	-	-	-	4	458.28	-	-	30.6	-	-	-	30.6
WORKSHOP TOOLS	SUM	-	-	4	-	-	-	4	60	-	-	4.0	-	-	-	4.0
WORKSHOP & OTHER EQUIPMENT	SUM	-	-	4	-	-	-	4	3,750	-	-	250.0	-	-	-	250.0
Sub-Total EQUIPMENT										-	-	284.6	-	-	-	284.6
Total INVESTMENT COSTS										-	600.0	3,691.6	2,976.0	1,050.0	-	8,317.6
II. RECURRENT COSTS																
A. VEHICLES																
GRADER 120 HP	e000 HR	-	-	2	6	10	12	30	979.8	-	-	32.7	98.0	163.3	196.0	489.9
WHEEL LOADER 80 HP	e000 HR	-	-	2	4	5	6	17	795.6	-	-	26.5	53.0	66.3	79.6	225.4
TIPPING TRUCK (8 TON)	e000 HR	-	-	5	15	23	28	71	580.2	-	-	48.4	145.1	222.4	270.8	686.6
VIBRATING ROLLER	e000 HR	-	-	2	4	4	5	15	173.4	-	-	5.8	11.6	11.6	14.5	43.4
4 WD PICK UP	PER/MTH	-	-	48	96	96	96	336	42.6	-	-	34.1	68.2	68.2	68.2	238.5
MOTOR CYCLES	PER/YR	-	-	2	4	4	4	14	71.52	-	-	2.4	4.8	4.8	4.8	16.7
BICYCLES	PER/YR	-	-	20	40	40	40	140	1.2	-	-	0.4	0.8	0.8	0.8	2.8
WORKSHOP & OTHER PLANT	PER/MTH	-	-	24	48	48	48	168	41.46	-	-	16.6	33.2	33.2	33.2	116.1
Sub-Total VEHICLES										-	-	166.8	414.5	570.5	667.6	1,819.4
B. OTHER OPERATING COSTS																
SENIOR STAFF ALLOWANCES	M/YR	-	-	20	40	60	60	180	13.2	-	-	4.4	8.8	13.2	13.2	39.6
MACHINE OPERATORS ALLOWANCES	M/YR	-	-	30	60	66	72	228	18	-	-	9.0	18.0	19.8	21.6	68.4
HEADMEN/[illegible]RERS ALLOWANCES	M/YR	-	-	300	700	1,000	1,361	3,361	4.32	-		21.6	50.4	72.0	98.0	242.0
Sub-Total OTHER OPERATING COSTS										-	-	35.0	77.2	105.0	132.8	350.0
C. TECHNICAL ASSISTANCE																
CONSULTING ENGINEER SUPN RD CONTRACT	SUM	-	-	-	-	-	-	-		-	-	20.0	220.0	220.0	140.0	600.0
MECHNICAL ENGINEER FOR MAINTENANCE EQUIPMENT	SUM	-	-	-	-	-	-	-		-	-	40.0	40.0	20.0	-	100.0
Sub-Total TECHNICAL ASSISTANCE										-	-	60.0	260.0	240.0	140.0	700.0
Total RECURRENT COSTS										-	-	261.8	751.7	915.5	940.4	2,869.4
Total										-	600.0	3,953.3	3,727.7	1,965.5	940.4	11,186.9

November 2, 1987 21:12

Annex 3

Table 5

UGANDA
SOUTHWEST REGION AGRICULTURAL REHABILITATION PR
Table 200. AGRICULTURAL INPUTS
Detailed Cost Table
(U. Sh '000)

	Unit	Quantity 87/88	88/89	89/90	90/91	91/92	92/93	Total	Unit Cost	Base Costs in $ 87/88	88/89	89/90	90/91	91/92	92/93	Total
I. INVESTMENT COSTS																
A. CIVIL WORKS																
MBARARA WAREHOUSE	SQ/M	-	1,500	-	-	-	-	1,500	12	-	300.0	-	-	-	-	300.0
WAREHOUSE EQUIPMENT	SUM	-	-	-	-	-	-	-		-	-	32.8	1.0	1.0	1.0	35.8
Sub-Total CIVIL WORKS										-	300.0	32.8	1.0	1.0	1.0	335.8
B. VEHICLES																
4 WD PICK UP	EA	-	1	-	-	-	-	1	900	-	15.0	-	-	-	-	15.0
FORK LIFT TRUCK	EA	-	-	1	-	-	-	1	720	-	-	12.0	-	-	-	12.0
BICYCLES	EA	-	-	2	-	-	-	2	4.5	-	-	0.2	-	-	-	0.2
Sub-Total VEHICLES										-	15.0	12.2	-	-	-	27.2
C. GOOD PROCURED FOR RESAL INPUTS																
PURCHASE COST CIF MBARARA	SUM	-	-	-	-	-	-	-		-	913.0	1,006.0	1,102.0	1,198.0	1,281.0	5,500.0
PROCUREMENT CHARGE - UCB	SUM	-	-	-	-	-	-	-		-	69.0	76.0	84.0	91.0	98.0	418.0
Sub-Total GOOD PROCURED FOR RESAL INPUTS										-	982.0	1,082.0	1,186.0	1,289.0	1,379.0	5,918.0
Total INVESTMENT COSTS										-	1,297.0	1,127.0	1,187.0	1,290.0	1,380.0	6,281.0
II. RECURRENT COSTS																
A. VEHICLES																
4 WD PICK UP	PER/MTH	-	6	12	12	12	12	54	42.6	-	4.3	8.5	8.5	8.5	8.5	38.3
MOTOR CYCLES	PER/YR	-	-	6	12	12	12	42	71.52	-	-	7.2	14.3	14.3	14.3	50.1
BICYCLES	PER/YR	-	-	2	2	2	2	8	1.2	-	-	0.0	0.0	0.0	0.0	0.2
Sub-Total VEHICLES										-	4.3	15.7	22.9	22.9	22.9	88.6
B. OTHER OPERATING COSTS																
SENIOR STAFF ALLOWANCES	SUM	-	-	-	-	-	-	-		-	0.4	2.4	2.4	2.4	2.4	10.0
BLDNG REPS - RISING TO 2% CONS	SUM	-	-	-	-	-	-	-		-	-	6.0	6.0	6.0	6.0	24.0
MISC. OPERATING COSTS	SUM	-	-	-	-	-	-	-		-	-	10.0	6.0	7.0	8.0	31.0
Sub-Total OTHER OPERATING COSTS										-	0.4	18.4	14.4	15.4	16.4	65.0
C. TACHNICAL ASSISTANCE																
PROCUREMENT MANAGER	M/M	-	9	12	12	3	-	36	600	-	90.0	120.0	120.0	30.0	-	360.0
INPUTS STUDIES	M/M	-	-	-	5	3	2	10	720	-	-	-	60.0	36.0	24.0	120.0
Sub-Total TACHNICAL ASSISTANCE										-	90.0	120.0	180.0	66.0	24.0	480.0
Total RECURRENT COSTS										-	94.7	154.1	217.3	104.3	63.3	633.6
Total										-	1,391.7	1,281.1	1,404.3	1,394.3	1,443.3	6,914.5

November 2, 1987 21:12

Annex 3

Table 6

UGANDA
SOUTHWEST REGION AGRICULTURAL REHABILITATION PROJE
Table 300. ADAPTIVE RESEARCH & EXTENSION
Detailed Cost Table
(U. Sh '000)

		Quantity								Base Costs in $						
	Unit	87/88	88/89	89/90	90/91	91/92	92/93	Total	Unit Cost	87/88	88/89	89/90	90/91	91/92	92/93	Total
I. INVESTMENT COSTS																
A. CIVIL WORKS																
RECONSTRUCTION OF DFIs	BLDNG	-	2	-	-	-	-	2	12,000	-	400.0	-	-	-	-	400.0
OFFICE/STORE KALENGYERE- (60 m2)	BLDNG	-	-	1	-	-	-	1	1,080	-	-	18.0	-	-	-	18.0
NEW STORE RUBARE (80 m2)	BLDNG	-	-	1	-	-	-	1	960	-	-	16.0	-	-	-	16.0
RE-EST. OF DFI UTILITIES	SUM	-	-	-	-	-	-	-		-	92.0	-	-	-	-	92.0
NEW OFFICE RUKUNGIRI (80 m2)	BLDNG	-	-	1	-	-	-	1	1,440	-	-	24.0	-	-	-	24.0
PREFABS FOR TA STAFF (120 m2)	BLDNG	-	2	-	-	-	-	2	4,320	-	144.0	-	-	-	-	144.0
CONST FOR DEMO PURPOSES PER YEAR	SUM	-	-	-	-	-	-	-		-	-	5.0	5.0	5.0	5.0	20.0
Sub-Total CIVIL WORKS										-	636.0	63.0	5.0	5.0	5.0	714.0
B. VEHICCLES																
4 WD PICK UP	EA	-	15	-	-	-	-	15	900	-	225.0	-	-	-	-	225.0
MINIBUS	EA	-	2	-	-	-	-	2	1,800	-	60.0	-	-	-	-	60.0
MOTOR CYCLES	EA	-	8	-	14	-	-	22	120	-	16.0	-	28.0	-	-	44.0
BICYCLES	EA	-	60	-	120	-	-	180	4.5	-	4.5	-	9.0	-	-	13.5
SPARE PARTS (INITIAL STOCK)	SUM	-	1	-	-	-	-	1	2,100	-	35.0	-	-	-	-	35.0
Sub-Total VEHICCLES										-	340.5	-	37.0	-	-	377.5
C. EQUIPMENT																
EQUIPMENT FOR FIELD EXTENSION STAFF	MTH	-	60	-	120	-	-	180	14.4	-	14.4	-	28.8	-	-	43.2
EQUIPMENT - AGRICULTURE RESEARCH	SUM	-	0.5	0.5	-	-	-	1	3,462	-	28.9	28.9	-	-	-	57.7
EXTENSION TRAINING EQUIP	SUM	-	0.5	0.5	-	-	-	1	1,088.4	-	9.1	9.1	-	-	-	18.1
EQUIPMENT FOR DFIs ETC.	SUM	-	0.5	0.5	-	-	-	1	1,704	-	14.2	14.2	-	-	-	28.4
FURNISHINGS FOR STAFF HOUSES	PER HSE	-	2	-	-	-	-	2	300	-	10.0	-	-	-	-	10.0
Sub-Total-EQUIPMENT										-	76.5	52.1	28.8	-	-	157.4
Total INVESTMENT COSTS										-	1,053.0	115.1	70.8	5.0	5.0	1,248.9
II. RECURRENT COSTS																
A. OPERATING COSTS - VEHICLES																
4 WD VEHICLES (25,000 KM/YR)	P/M	-	90	180	180	180	180	810	42.6	-	63.9	127.8	127.8	127.8	127.8	575.1
MINIBUSES (15,000 KM/YR)	P/M	-	12	24	24	24	24	108	51.84	-	10.4	20.7	20.7	20.7	20.7	93.3
MOTOR CYCLES	P/M	-	4	7	14	21	21	67	71.52	-	4.8	8.3	16.7	25.0	25.0	79.9
BICYCLES	P/YR	-	60	60	180	180	180	660	1.2	-	1.2	1.2	3.6	3.6	3.6	13.2
Sub-Total OPERATING COSTS - VEHICLES										-	80.2	158.1	168.8	177.2	177.2	761.5
B. SALARARY AND ALLOWANCE																
STAFF FIELD ALLOWANCES	SUM	-	-	-	-	-	-	-		-	22.4	44.7	44.7	77.1	77.1	266.0
BLDNG REPS-RISING TO 2% CONS	SUM	-	-	-	-	-	-	-		-	-	5.0	9.0	12.0	14.3	40.3
MISC. OPERATING COSTS	SUM	-	-	-	-	-	-	-		-	30.0	54.0	64.0	64.0	64.0	276.0
Sub-Total SALARARY AND ALLOWANCE										-	52.4	103.7	117.7	153.1	155.4	582.3
C. TECHNICAL ASSISTANCE																
INIT. LONG TERM CONSULTANCIES	M/YR	-	1.3	2	0.7	-	-	4	7,200	-	156.0	240.0	84.0	-	-	480.0
FOLLOW UP ST. CONSULTANCIES	M/M	-	-	-	8	8	8	24	720	-	-	-	96.0	96.0	96.0	288.0
Sub-Total TECHNICAL ASSISTANCE										-	156.0	240.0	180.0	96.0	96.0	768.0
Total RECURRENT COSTS										-	288.6	501.8	466.5	426.3	428.6	2,111.8
Total										-	1,341.7	616.9	537.3	431.3	433.6	3,360.7

Annex 3

Table 7

UGANDA
SOUTHWEST REGION AGRICULTURAL REHABILITATION PROJECT
Table 400. MONITORING & EVALUATION
Detailed Cost Table
(U.Sh '000)

		Quantity								Base Costs in $						
	Unit	87/88	88/89	89/90	90/91	91/92	92/93	Total	Unit Cost	87/88	88/89	89/90	90/91	91/92	92/93	Total
I. INVESTMENT COSTS																
A. VEHICLES																
4 WD PICK UP	EA	-	2	-	-	-	-	2	900	-	30.0	-	-	-	-	30.0
MOTOR CYCLES	EA	-	8	-	-	-	-	8	120	-	16.0	-	-	-	-	16.0
BICYCLES	EA	-	20	-	-	-	-	20	4.5	-	1.5	-	-	-	-	1.5
SPARE PARTS (INITIAL STOCK)	SUM	-	-	-	-	-	-	-		-	4.9	-	-	-	-	4.9
Sub-Total VEHICLES										-	52.4	-	-	-	-	52.4
B. EQUIPMENT																
FIELD EQUIPMENT	SUM	-	1	-	-	-	-	1	626.4	-	10.4	-	-	-	-	10.4
OFFICE EQUIPMENT	SUM	-	1	-	-	-	-	1	1,455	-	24.3	-	-	-	-	24.3
Sub-Total EQUIPMENT										-	34.7	-	-	-	-	34.7
Total INVESTMENT COSTS										-	87.1	-	-	-	-	87.1
II. RECURRENT COSTS																
A. OPERATING COSTS - VEHICLES																
4 WD VEHICLES (30,000 KM/YR)		-	24	24	24	24	24	120	51.12	-	20.4	20.4	20.4	20.4	20.4	102.2
MOTOR CYCLES		-	8	8	8	8	8	40	71.52	-	9.5	9.5	9.5	9.5	9.5	47.7
BICYCLES		-	20	20	20	20	20	100	1.2	-	0.4	0.4	0.4	0.4	0.4	2.0
Sub-Total OPERATING COSTS - VEHICLES										-	30.4	30.4	30.4	30.4	30.4	151.9
B. SALARY ALLOWANCE																
STAFF FIELD ALLOWANCES	SUM	-	-	-	-	-	-	-		-	13.0	13.0	13.1	13.1	13.1	65.3
STAFF TRAINING ALLOWANCES	SUM	-	-	-	-	-	-	-		-	5.7	4.4	4.4	4.4	4.5	23.4
MISC. OPERATING COSTS	SUM	-	-	-	-	-	-	-		-	3.5	3.5	3.5	3.5	3.5	17.5
Sub-Total SALARY ALLOWANCE										-	22.2	20.9	21.0	21.0	21.1	106.2
C. TECHNICAL ASSISTANCE & TRAINING																
OVERSEAS SHORT COURSES	COURSE	-	2	-	-	-	-	2	600	-	20.0	-	-	-	-	20.0
M & E CONSULTANCE	MAN MTH	-	9	3	3	3	6	24	720	-	108.0	36.0	36.0	36.0	72.0	288.0
Sub-Total TECHNICAL ASSISTANCE & TRAINING										-	128.0	36.0	36.0	36.0	72.0	308.0
Total RECURRENT COSTS										-	180.6	87.3	87.4	87.4	123.5	566.1
Total										-	267.7	87.3	87.4	87.4	123.5	653.2

November 2, 1987 21:13

Annex 3

Table 8

UGANDA
SOUTHWEST REGION AGRICULTURAL REHABILITATION PROJEC
Table 500. MANAGEMENT SUPPORT
Detailed Cost Table
(U.Sh '000)

		Quantity								Base Costs in $						
	Unit	87/88	88/89	89/90	90/91	91/92	92/93	Total	Unit Cost	87/88	88/89	89/90	90/91	91/92	92/93	Total
I. INVESTMENT COSTS																
A. CIVIL WORKS																
RENOVATION OF PROJECT OFFICE	BLDNG	1	-	-	-	-	-	1	3,300	55.0	-	-	-	-	-	55.0
RENOVATION OF STAFF HOUSES	BLDNG	-	3	-	-	-	-	3	3,600	-	180.0	-	-	-	-	180.0
Sub-Total CIVIL WORKS										55.0	180.0	-	-	-	-	235.0
B. VEHICLES																
4 WD PICK UP	EA	2	-	-	-	-	-	2	900	30.0	-	-	-	-	-	30.0
SPARE PARTS (INITIAL STOCK)	SUM	1	-	-	-	-	-	1	180	3.0	-	-	-	-	-	3.0
Sub-Total VEHICLES										33.0	-	-	-	-	-	33.0
C. EQUIPMENT																
FURNITURE FOR STAFF HOUSES	SET	-	3	-	-	-	-	3	300	-	15.0	-	-	-	-	15.0
RADIO TELEPHONE EQUIPMENT	SET	-	1	-	-	-	-	1	3,000	-	50.0	-	-	-	-	50.0
EQUIPMENT FOR PROJECT OFFICE	SET	0.3	0.7	-	-	-	-	1	1,500	7.5	17.5	-	-	-	-	25.0
Sub-Total EQUIPMENT										7.5	82.5	-	-	-	-	90.0
Total INVESTMENT COSTS										95.5	262.5	-	-	-	-	358.0
II. RECURRENT COSTS																
A. OPERATING COSTS - VEHICLES																
4 WD VEHICLES (25,000 KM/YR)		12	24	24	24	24	24	132	42.6	8.5	17.0	17.0	17.0	17.0	17.0	93.7
Sub-Total OPERATING COSTS - VEHICLES										8.5	17.0	17.0	17.0	17.0	17.0	93.7
B. SALARY AND ALLOWANCE																
STAFF FIELD ALLOWANCES	SUM	-	-	-	-	-	-	-		0.0	0.0	0.0	0.0	0.0	0.0	0.0
BLDNG REPS - RISING TO 2% CONS	SUM	-	-	-	-	-	-	-		-	2.0	5.6	5.6	5.6	5.6	24.4
COMMUNITY GRPS SUPPORT	SUM	-	-	-	-	-	-	-		-	5.0	10.0	15.0	20.0	30.0	80.0
MISC. OPERATING COSTS	SUM	-	-	-	-	-	-	-		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sub-Total SALARY AND ALLOWANCE										0.0	7.0	15.6	20.6	25.6	35.6	104.4
C. TECHNICAL ASSISTANCE																
PROJECT EXPEDITER		4	-	-	-	-	-	4	720	48.0	-	-	-	-	-	48.0
BUILDING DESIGN /SPECS STUDY		3	-	-	-	-	-	3	720	36.0	-	-	-	-	-	36.0
FINANCIAL CONTROLLER		-	8	12	12	4	-	36	600	-	80.0	120.0	120.0	40.0	-	360.0
ROAD INVENTORY & EVAL STUDY	SUM	-	-	-	-	-	-	-		76.7	38.3	-	-	-	-	115.0
Sub-Total TECHNICAL ASSISTANCE										160.7	118.3	120.0	120.0	40.0	-	559.0
Total RECURRENT COSTS										169.2	142.3	152.6	157.6	82.6	52.6	757.1
Total										264.7	404.8	152.6	157.6	82.6	52.6	1,115.1

November 2, 1987 21:13

UGANDA
SOUTHWEST REGION AGRICULTURAL REHABILITATION PROJECT
Cost Benefit Analysis

Annex 4
Table 1

IMPACT OF ADAPTIVE RESEARCH AND EXTENSION PROGRAM REQUIRED FOR 15% ERR

A) Uptake of Models

Area	Tot Farms	Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7	Yr8	Yr9	Yr10	Yr11	Yr12-15
		.....Cumulative Percentage Adopting Research/Extension.....											
Zone 1	70,000	0.5%	1.0%	3%	5%	7%	7%	7%	7%	7%	7%	7%	7%
Zone 2	200,000	0.5%	1.0%	3%	5%	7%	7%	7%	7%	7%	7%	7%	7%
Zone 3	30,000	0.0%	0.0%	0.5%	1%	2%	2%	2%	2%	2%	2%	2%	2%
		.....Aggregate Numbers.....											
Zone 1		350	700	2,100	3,500	4,900	4,900	4,900	4,900	4,900	4,900	4,900	4,900
Zone 2		1,000	2,000	6,000	10,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000
Zone 3		0	0	150	300	600	600	600	600	600	600	600	600
Totals		1,350	2,700	8,250	13,800	19,500	19,500	19,500	19,500	19,500	19,500	19,500	19,500
Overall Percentage Uptake		0.5%	0.9%	2.8%	4.6%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%

B) Incremental Production (tons)

Bananas	0	184	1,254	3,955	10,763	20,812	34,461	44,564	50,347	50,347	50,347	50,347
Cereals	0	24	109	468	1,030	2,200	3,343	4,247	4,339	4,339	4,339	4,339
Peas/Beans/G. Nuts	0	19	47	143	271	432	522	570	575	575	575	575
Potatoes	0	27	125	324	754	1,242	1,684	1,847	1,931	1,931	1,931	1,931
Other Root Crops	0	0	87	313	828	1,760	2,774	3,438	3,546	3,546	3,546	3,546

C) Phased Incremental Output (Mill USh)

Zone 1	0.0	0.4	1.8	5.8	13.1	24.6	35.8	43.1	44.9	44.9	44.9	44.9
Zone 2	0.0	0.6	2.9	9.8	23.7	46.2	71.3	89.2	95.6	95.6	95.6	95.6
Zone 3	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Total Inc Output	0.0	1.0	4.7	15.6	36.8	70.9	107.2	132.6	140.8	140.8	140.8	140.8

D) Phased Incremental Costs (Mill USh)

Zone 1	0.0	0.2	0.6	1.9	4.0	7.3	10.1	12.0	12.4	12.4	12.4	12.4
Zone 2	0.0	0.3	1.1	3.5	7.6	13.8	19.8	24.0	25.6	25.6	25.6	25.6
Zone 3	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total Inc Cash Costs	0.0	0.5	1.7	5.4	11.7	21.1	30.0	36.1	38.1	38.1	38.1	38.1
Inc Net Farm Cash Benefits	0.0	0.5	3.0	10.2	25.1	49.8	77.2	96.4	102.7	102.7	102.7	102.7
Incr Labor ('000 days)	0	5	25	85	200	387	587	728	774	774	774	774

UGANDA
SOUTHWEST REGION AGRICULTURAL REHABILITATION PROJECT
Cost Benefit Analysis

Annex 4
Table 2

E) Economic Analysis of Adaptive Research and Extension

	Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7	Yr8	Yr9	Yr10	Yr11	Yr12-15
	.....US$'000.....											
GROSS INCREM FARM BENEFITS	0	16	78	261	614	1,182	1,787	2,210	2,346	2,346	2,346	2,346
Inc Farm Cash Costs	0	9	28	91	195	352	500	602	635	635	635	635
Econ Value of Inc Labor\1	0	2	11	35	83	161	245	303	323	323	323	323
Component Costs (econ)\2	1,359	614	532	428	430							
Operating Cost Yr6 on\2						303	303	303	303	303	303	303
Av Vehicle Repl Cost\3						83	83	83	83	83	83	83
TOTAL INCREMENTAL COST	1,359	625	571	554	709	900	1,131	1,292	1,344	1,344	1,344	1,344
NET INCR BENEFITS	(1,359)	(609)	(493)	(293)	(95)	283	657	918	1,002	1,002	1,002	1,002
Economic Rate of Return	ERR											

Footnotes: \1 Economic cost of labor estimated at 50% of the wage rate i.e. USh 25/day
\2 Financial costs, including physical contingencies less taxes on fuel etc.
\3 Based on an average vehicle life of 5 years

03-Nov-87

UGANDA

ANNEX 4

SOUTHWEST REGION AGRICULTURAL REHABILITATION PROJECT

Table 3

Cost Benefit Analysis

VOLUME OF TRAFFIC AND BENEFITS FROM ROADS FOR 15% ERR

A) Total Annual Savings Per Vehicle Km Daily (US$)

	Vehicle Op Costs Saved	Value Time Saved	Total per Veh Km Daily	Typical Average Daily Traffic	Savings Per Year
Lt Goods	73.9	2.4	76.3	3	229.0
Medium Goods	147.7	3.6	151.2	2	302.5
Bus	147.7	19.1	166.8	2	333.5
Four Wheel Drive	65.8	2.1	67.9	3	203.7
Motor Cycle	11.4	0.9	12.3		0.0
Bicycle	1.0	1.2	2.3		0.0
					1068.7

B) Economic Costs and Benefits per Kilometer of Roads (US$)

	Yr1	Yr2	Yr3	Yr4	Yr 5	Yr6	Yr7	Yr8	Yr9	Yr10
Benefits From Reduced Costs		1,069	1,069	1,069	1,069	1,069	1,069	1,069	1,069	1,069
Incremental Economic Costs:										
Rehabilitation Cost \1	3,953									
Annual Maintenance \2 \4		162	162	162	162	162	162	162	162	162
Regravelling (50% of Rds) \3						1,721				
Total Costs	3,953	162	162	162	162	1,883	162	162	162	162
Net Benefits	(3,953)	906	906	906	906	(815)	906	906	906	906

Rate of Return (Over 15 Years) 15%

Footnotes \1 Average Cost under project, including physical contingencies but net of taxes.

\2 Based on Grading twice per year - Costs include physical contingencies but exclude taxes

\3 50% of roads have gravel surfaces which need renewing every 5 years

\4 Annual Economic Maintenance Cost:

	Unit	Unit Cost	No of Units	Cost/ Km/Yr
Grader *	Hour	27	2	54.0
Trucks *	Hour	14	4	56.0
Drivers etc.	Hour	0.2	6	1.2
Laborers	Day	1	30	30.0
Contingencies		15%		21.2
Total Economic Cost				162.4

* Figures from Annex 6, Document 5, Table 6 adjusted for depreciation and including the cost of capital at its opportunity cost of 15%

Annex 5

UGANDA
Southwest Region Development Project

Table 1

Project Area Data

District Characteristics

District	County	Sub-Counties 2/	Parishes 2/	1980 Population 2/	%/Annum Growth 1/	1987 Projected Population 1/	Area (sq km) 3/	Population per Sq Km
Mbarara	Rwampara	4	26	91,010				
	Ruhama	4	26	89,150				
	Isingiro	3	19	112,430				
	Bukanga	3	12	63,860				
	Ibanda	6	26	127,590				
	Kashari	5	26	94,760				
	Nyabushosi	6	30	77,840				
Mbarara Total		31	165	656,640	4.2%	917,886	10,840	85
Bushenyi	Igara	5	36	118,400				
	Sheema	6	31	113,220				
	Buhweju	4	18	34,930				
	Bunyaruguru	3	19	52,850				
	Ruhinda	4	25	87,780				
	Kajara	3	18	69,630				
	Rushenyi	4	23	46,180				
Bushenyi Total		29	170	522,990	2.4%	619,456	5,400	115
Kabale	Bufumbira	6	31	126,660				
	Rubanda	5	34	106,750				
	Ndorwa	8	47	154,660				
	Rukiga	4	25	67,490				
Kabale Total		23	137	455,560	1.2%	495,059	2,490	199
Rukungiri	Kinkizi	7	36	118,660				
	Rujumbura	6	35	95,770				
	Rubabo	4	23	83,280				
Rukungiri Total		17	94	297,710	1.9%	338,369	2,750	123
S.W. Region Total		100	566	1,932,900	2.7%	2,370,770	21,480	110

03-Nov-87

1/ World Bank 'Uganda: Progress Towards Recovery and Prospects for Development'. June 5, 1985.
2/ Regional Agricultural Office, Mbarara, June 1987.
3/ MAF, Planning Division, June 1987

Annex 5

Table 2

UGANDA
Southwest Region Development Project

Project Area Data

District Characteristics

District	Counties	Sub-Counties 2/	Parish 2/	Total Population 1980	%/Annum Pop'n Growth 1970-80	Urban Pop'n 1980	%/Annum Urban Growth 1970-80	Rural Pop'n 1980	Projected Urban Pop'n 1987	Projected Rural Pop'n 1987	Projected Total Pop'n 1987
				1/	1/	1/	1/		6/		6/
Kabale	4	23	137	455,400	1.2%	21,500	9.6%	433,900	40,843	454,216	495,059
Rukungiri	3	17	94	296,600	1.9%	1,400	7.0%	295,200	2,248	336,121	338,369
Mbarara	7	31	165	688,200	4.2%	23,300	3.6%	664,900	29,845	888,041	917,886
Bushenyi	7	29	170	524,700	2.4%	2,100	7.0%	522,600	3,372	616,084	619,456
S.W. Region	21	100	566	1,964,900	2.7%	48,300	6.5%	1,916,600	76,308	2,294,462	2,370,770
UGANDA				12,636,200	2.7%	1,100,000	3.8%	11,536,200	1,428,151	13,798,682	15,226,833
S.W. Region as % of Uganda				16%		4%		17%	5%	17%	16%

1/ World Bank 'Uganda: Progress Towards Recovery and Prospects for Development'. June 5, 1985. Results of 1980 Census (pp 121-122)
2/ MAF,Regional Agricultural Office, Mbarara, June 1987.
3/ FAO/IFAD CP Preparation Report for SW Region Project.
4/ MAF, Planning Division, June 1987.
5/ Excluding coffee, tea and tobacco.
6/ Projected using 1970-1980 actual growth rates for urban and total population.

Farm family 7 (in 1980)

03-Nov-87

Annex 5

Table 3

UGANDA
Southwest Region Development Project

Project Area Data

District Characteristics

District	Total Area 4/	Cultivable Area 4/	Rural Pop'n per Sq Km	1980 Persons p/Farm	1980 Total Farms	1980 Culti-vable Area/ Farm	1985 Cropped Area/ Farm	1987 Proj. Persons p/Farm	1987 Projected Farms 1987	1987 Culti-vable Area/ Farm	1987 Cropped Area/ Farm
	(sq km)	(sq km)				(ha)	(ha)			(ha)	(ha)
Kabale	2,490	1,990	174	7	61,986	3.2	1.9	7	64,888	3.1	1.8
Rukungiri	2,750	2,120	107	7	42,171	5.0	2.4	7	48,017	4.4	2.1
Mbarara	10,840	10,390	61	7	94,986	10.9	1.6	7	126,863	8.2	1.2
Bushenyi	5,400	4,120	97	7	74,657	5.5	2.2	7	88,012	4.7	1.9
S.W. Region	21,480	18,620	89	7	273,800	6.8	1.9	7	327,780	5.7	1.6
UGANDA	241,140	164,450									
S.W. Region of Uganda	9%	11%									

1/ World Bank 'Uganda: Progress Towards Recovery and Prospects for Development'. June 5, 1985. Results of 1980 Census (pp 121-122)
2/ MAF,Regional Agricultural Office, Mbarara, June 1987.
3/ FAO/IFAD CP Preparation Report for SW Region Project.
4/ MAF, Planning Division, June 1987.
5/ Excluding coffee, tea and tobacco.
6/ Projected using 1970-1980 actual growth rates for urban and total population.

Farm family size: 7

03-Nov-87

Annex 6

UGANDA

SOUTHWEST REGION REHABILITATION PROJECT

List of Documents Available in the Project File

A. Documents Relating to Project Appraisal

1. Adaptive Research and Extension
2. Input Supply
3. Rural Roads
4. Monitoring and Evaluation
5. Detailed Project Cost Tables
6. Project Impact
7. Draft Terms of Reference for Technical Assistance Positions and Studies

B. Project Preparation Documents

1. Preparation Report - FAO/IFAD Cooperative Program Investment Center, 116/85 IF-UGA 8, Sept. 1985
2. Uganda Commercial Bank - UCB Rural Farmers Scheme, May 1987

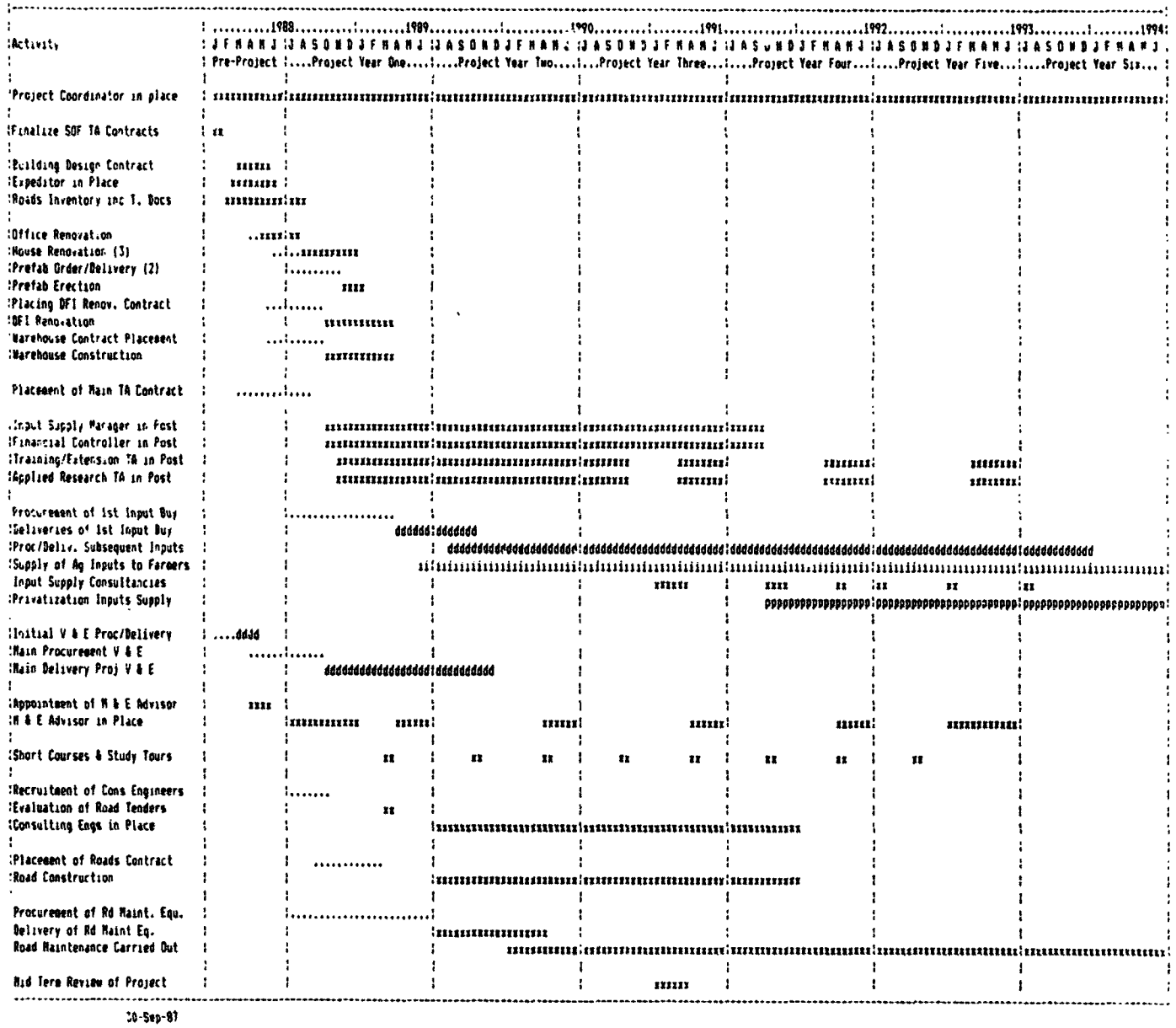
C. Sector Related Documents

Agricultural Task Force Reports, 1987

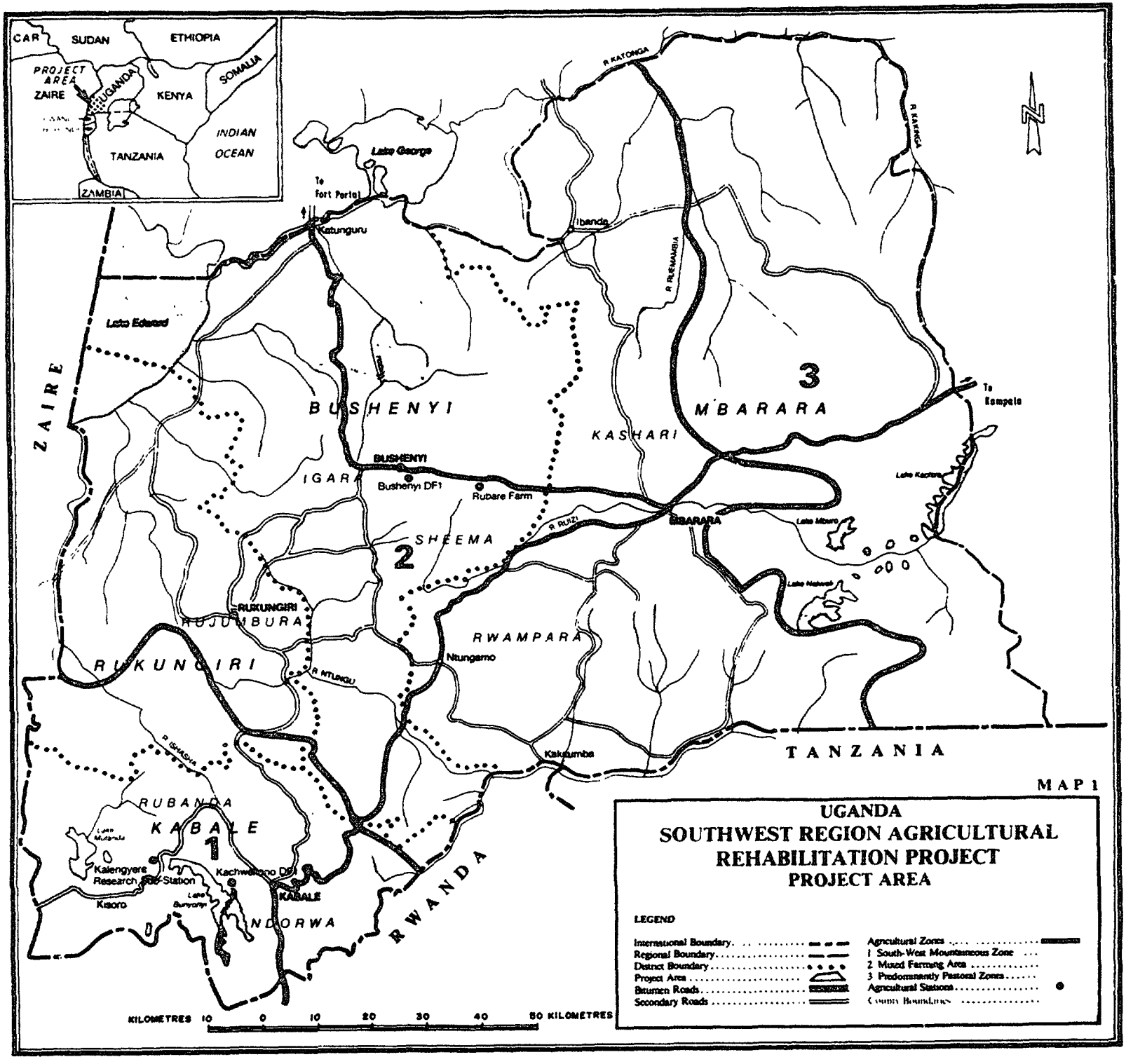
- Marketing, Storage and Processing Food Crops
- Agricultural Credit
- Organization, Manpower and Training
- Agricultural Inputs
- Comparative Advantage of Cotton and Competing Crops
- Agricultural Research
- Land Tenure and Soil Conservation

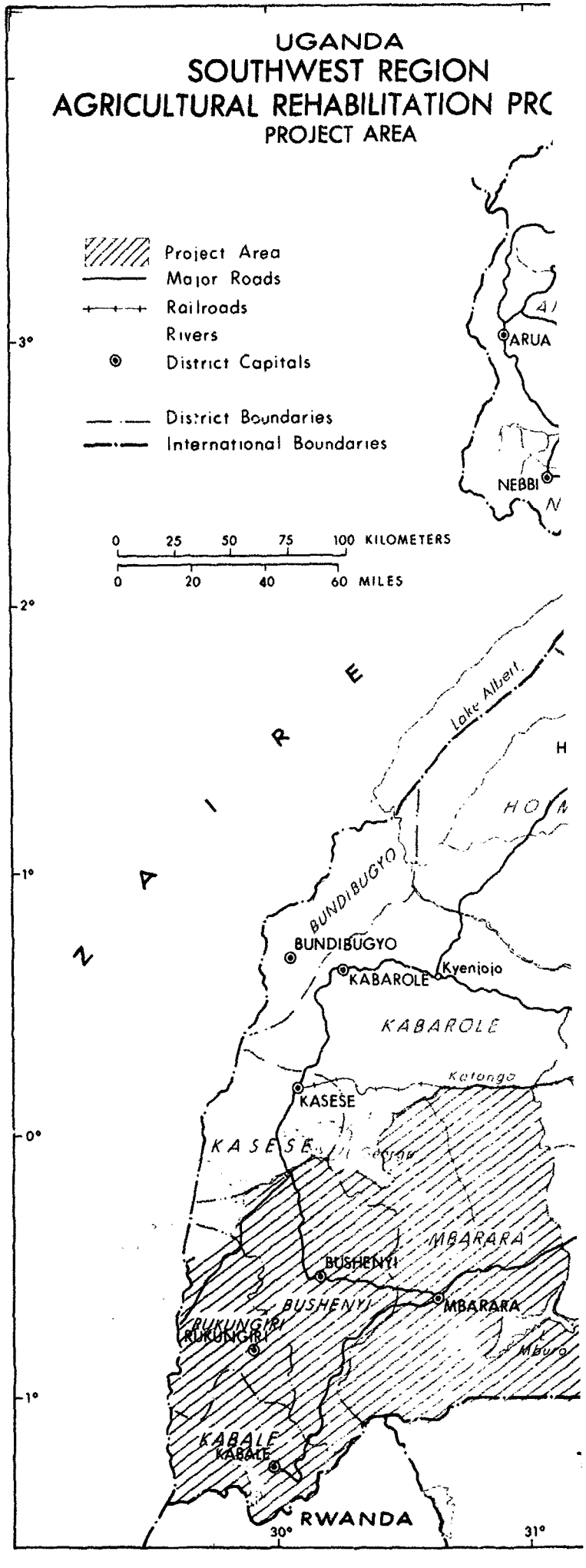
Annex 7

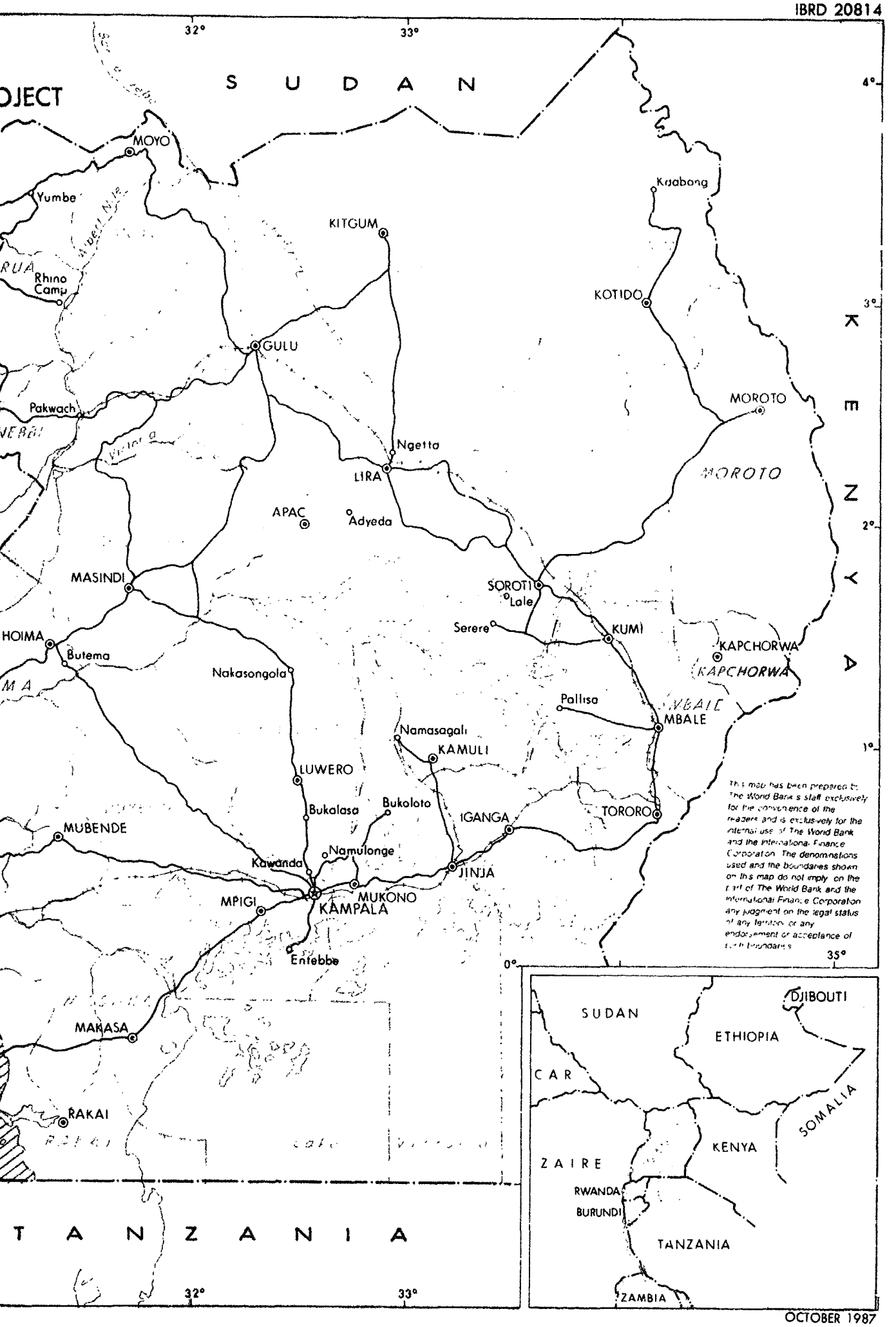
UGANDA
SOUTH WEST REGION AGRICULTURAL REHABILITATION PROJECT
IMPLEMENTATION SCHEDULE



30-Sep-87


CAR
SUDAN
ETHIOPIA
PROJECT AREA
ZAIRE
UGANDA
KENYA
SOMALIA
INDIAN OCEAN
TANZANIA
ZAMBIA
Lake George
To Fort Portal
Katunguru
Ibanda
R. KATONGA
R. RWENAMBIA
R. RAYENGA
Lake Edward
ZAIRE
BUSHENYI
KASHARI
3
MBARARA
To Kampala
BUSHENYI
Bushenyi DF1
Rubare Farm
IGARA
SHEEMA
2
R. RUIZI
MBARARA
Lake Kachera
Lake Mburo
Lake Nakivali
RUKUNGIRI
RUJUMBURA
RWAMPARA
Ntungamo
R. NTUNGU
RUKUNGIRI
R. ISHASHA
Kakoumba
TANZANIA
RUBANDA
KABALE
1
Lake Mutanda
Kalengyere Research Sub-Station
Kachwekano DFS
KABALE
Kisoro
Lake Bunyonyi
MUHORWA
RWANDA
KILOMETRES 10 0 10 20 30 40 50 KILOMETRES
MAP 1
UGANDA
SOUTHWEST REGION AGRICULTURAL REHABILITATION PROJECT
PROJECT AREA
LEGEND
International Boundary
Regional Boundary
District Boundary
Project Area
Bitumen Roads
Secondary Roads
Agricultural Zones
1 South-West Mountainous Zone
2 Mixed Farming Area
3 Predominantly Pastoral Zones
Agricultural Stations
County Boundaries


UGANDA
SOUTHWEST REGION
AGRICULTURAL REHABILITATION PRC
PROJECT AREA
Project Area
Major Roads
Railroads
Rivers
District Capitals
District Boundaries
International Boundaries
0 25 50 75 100 KILOMETERS
0 20 40 60 MILES
ARUA
NEBBI
3°
2°
1°
0°
1°
Lake Albert
BUNDIBUGYO
BUNDIBUGYO
KABAROLE
Kyenjojo
KABAROLE
Katonga
KASESE
KASESE
MBARARA
BUSHENYI
BUSHENYI
MBARARA
RUKUNGIRI
RUKUNGIRI
Mburo
KABALE
KABALE
RWANDA
30°
31°



OCTOBER 1987