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PD-AAX-854

MEMORANDUM OF UNDERSTANDING

Between

THE MINISTRY OF AGRICULTURE OF THE SOMALI DEMOCRATIC REPUBLIC

And

THE DEPARTMENT OF AGRICULTURAL ECONOMICS
MICHIGAN STATE UNIVERSITY

And

THE UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT

February 11, 1986 - August 30, 1987

I. PREAMBLE

The Government of the Somali Democratic Republic (GSDR), as part of its effort to improve the food security of the nation, has placed a high priority on identifying ways of increasing domestic production of food and improving the distribution systems for agricultural products and inputs. The Ministry of Agriculture of Somalia has established a Planning Department for the purpose of conducting applied economic analysis to support the design and implemetation of national food security and food policy goals.

The United States Agency for International Development (USAID), concerned about the need to assure the nutritional and economic well being of people throughout Africa, has entered into a Cooperative Agreement, entitled "Food Security in Africa", with the Department of Agricultural Economics of Michigan State University (MSU). The general goal of the Cooperative Agreement is to carry out selected applied research that will aid African governments in devising ways of assuring improved food security. Priority research themes include the following: (see Annex 1)

a. Managing foreign exchange, food imports and food aid to achieve food security goals;

b. Planning and prioritizing research requirements to achieve food security goals;

c. The interaction of technological change, institutional reforms and macro-level policy in overcoming food production and marketing constraints;

d. Data and analysis needs for food security planning.

II. GENERAL PROVISIONS

1. Given that the Ministry of Agriculture of Somalia has established a Planning Department for the purpose of conducting applied economic analysis to support the design and implementation of national food security and food policy goals:

2. Given that the Department of Agricultural Economics of Michigan State University (MSU) is the entity in charge of implementing a Cooperative Agreement (No. DAN-1190-A-00-4092-00) between the United States Agency for International Development (Bureau of Science and Technology, and Africa Bureau) and Michigan State University entitled "Food Security in Africa", and that supplemental funding for work in Somalia under this Cooperative Agreement will also be provided by the USAID Mission in Mogadishu:

3. The Government of the Somali Democratic Republic, USAID and MSU agree by this Memorandum of Understanding (MOU) that the following persons will be designated as official representatives of their respective agencies:

a. The Vice Ministers of the Ministry of Agriculture will be the designated official representatives of the GSDR. The Director of the Planning Department of the Ministry of Agriculture will serve as the program coordinator for the GSDR.

b. Either one or both of the Co-directors of the Food Security in Africa Cooperative Agreement at Michigan State University will serve as the designated representative of MSU. The MSU in-country researcher will serve as the MSU in-country research Director.

c. The "Food Security in Africa" Cooperative Agreement Project Manager will serve as the designated representative of AID in Washington, D.C.

d. The Agricultural Development Officer in USAID/Mogadishu is the designated representative of USAID in Somalia.

III. OBJECTIVES

4. The present agreement entered into by the undersigned is designed to launch a collaborative program of applied research with the goal of determining ways of improving food security in Somalia and to provide a framework for accomplishing the program. A more detailed description of the research program is found in the terms of reference presented in Annex 2.

5. Additional applied research components mutually agreed to and for which funds are made available to MSU will by subsequent amendments be made a part of this MOU. Each subsequent amendment will contain a plan of work and will be submitted for review and approval by all parties to this MOU. The completion date of the research may be extended, if necessary and feasible, through this process of amendments.

IV. OPERATIONAL PLAN

6. MSU through resources made available in the Food Security in Africa Cooperative Agreement with AID/Washington, including incremental U.S. Dollar funding from USAID/Mogadishu, shall provide the financing necessary to cover the following:

a. Salaries of long-term MSU researcher(s) in residence in Somalia. It is proposed that the in-country researcher arrive in January 1986 and work until June 1987 in Somalia.

b. Salaries of short-term MSU researcher(s) and computer support staff working on the project in Somalia. Anticipated short-term participation is as follows:

- Initial research design TDY team.
- 2-4 TDY missions over life of project to assist in research refinement and implementation, and drafting/reviewing research documents.
- 1-2 TDY missions by computer programer/trainer.

c. International travel costs for all MSU researchers;

d. Salaries of MSU on-campus direct support faculty and administrative staff. It is anticipated that over the life of this research some 4-6 months of on campus time by senior research staff, research assistants, and administrative supports will be used to backstop in-country research in Somalia.

e. Financing of selected equipment and vehicle purchase. This includes 2 micro-computers and software, and power stabilizer devices.

f. Access to research results and policy dialogue experience from other African countries participating in the "Food Security in Africa Cooperative Agreement".

g. Development and participation in a food security research and policy network among African researchers.

7. USAID in Somalia, shall make available the following:

a. Incremental funding for selected Cooperative Agreement expenditures (U.S. Dollar incremental funding) directly to the Food Security in Africa Cooperative Agrement;

b. Assistance in the establishment of a special Somali Shilling Fund (via the CIPL Program in Somalia) to support local currency research expenses. This Fund will be jointly managed by Michigan State University in-country researcher and the Director of the Department of Planning of the Ministry, and will provide for the financing of the field research, including selected equipment purchases, and salary and allowances for mutually agreed upon temporary Somali participants in the research, and incentive allowances for regular Somali personnel;

c. Duty-free purchasing of project vehicles;

d. Duty-free importation of a project computer and accessories, and any other equipment required for the research for which there is approved and available funding.

8. The Ministry of Agriculture shall make available to the project:

a. A program coordinator;

b. Assistance in the establishment of special Somali Shilling Fund (via the CIPL Program in Somalia) to support local currency research expenses. This Fund will be jointly managed by the Michigan State University in-country researcher and the Director of the Department of Planning of the Ministry, and will provide for the financing of the field research, including selected equipment purchases, and salary and allowances for mutually agreed upon temporary Somali participants in the research, and incentive allowances for regular Somali personnel;

c. Personnel management services for both temporary and permanent Ministry research and support staff who will be assigned to work in this research project. Salaries and research stipends (incentive allowances) will be paid by the Ministry with resources provided by the jointly managed Somali Shilling Fund to be established;

d. Office space for research team members located in Mogadishu and in the field research sites.

9. All equipment and cars purchased by MSU with incremental USAID/Mogadishu funding will become the property and legal responsibilities of the Ministry of Agriculture. The principal MSU in-country researcher and/or his designate will have sole authority to determine the use of all equipment and vehicles during the life of project. The MSU in-country research staff and any Somali counterpart staff will have priority use of all equipment and vehicles purchased for the use of the project.

10. The Ministry of Agriculture will act as the employer and disbursing agent to pay the salaries of local personnel specifically designated for research to be conducted under this MOU. Candidates for the various positions will be identified jointly by the principal MSU in-country researcher and the Director of the Department of Planning of the Ministry. The candidates to be hired on contract will be selected by the same process. Candidates selected will be employed by the Ministry of Agriculture through temporary contracts. It is also understood that MSU is not acting as the employer of local project personnel and therefore will in no way carry legal responsibilities relative to payments of benefits, withholding of taxes, etc. from salary distributions.

11. The Director of Planning of the Ministry and the MSU in-country researchers will carry the day-to-day responsibility of assigning and directing the duties of the local project personnel, and will monitor and assess at intervals the performance and quality of their work. At the initiative of the principal MSU in-country researcher, and in agreement with the Director of Planning, the latter will make and implement decisions relative to promotion, actions, and termination of local project personnel.

V. DATA AND PUBLICATIONS

12. All data collected in the execution of this agreement shall be retained at the Ministry of Agriculture. MSU, AID/Washington, and USAID/Mogadishu, if they so desire, will be provided with an identical set of all supporting documentation and data on computer file, tape, cards or alternative formats. All parties have complete access to data collected during the conduct of on-going research. Upon termination of the applied research agreed upon under item 4, each of the parties to this MOU may release original data sets to outside individuals and institutions only after a period of 12 months has elapsed. Any subsequent research agreed to under item 5 is subject to the same restriction for 12 months beyond completion. Alternative distribution and publication arrangements are possible through mutual agreement of all parties.

13. The following procedures will be followed in producing publications from the applied research:

a. All publications shall give due credit to the substantive contribution of all parties, as well as to the financial support of AID in Washington and Mogadishu, unless such credit is not desired by a contributing party.

b. All of the parties to this agreement are free to disseminate working papers and other forms of preliminary working publications without prior review by other parties. None of the parties to the agreement shall publish any final manuscripts or referred journal articles referring to information obtained or developed pursuant to the agreement without giving thirty (30) days notice to the other parties of its intention to publish, together with 3 copies of the proposed publication.

c. All parties reserve the right to disclaim endorsement or disassociate themselves from publication of such data obtained under the terms of the agreement. In the event any party exercises its rights to disclaim endorsement or disassociate itself from the publication, the party publishing such data or article shall be notified in writing. Such notification shall

contain an appropriate statement of disclaimer or disassociation which shall be inserted in the publication. The notification of disclaimer must be receive within thirty (30) days after notification of intended publication.

VI. FINAL PROVISION

14. This Agreement can be modified or completed by mutual agreement, upon the request of any of the parties. Any dispute related to the interpretation or application of the present Agreement shall be settled by means of negotiation. The present Agreement shall come into effect upon its signature and it shall remain valid until August 30, 1987 or unless previously terminated.

Authorized Signatures:

FOR THE MINISTRY OF AGRICULTURE

Name: Dr. Mohamud Abdi Nur

Title: Vice Minister

Date: Feb. 12. 1986

Name: Mr. Abukar O. Abikar

Title: Planning Department Head

Date:

FOR MICHIGAN STATE UNIVERSITY

Name: Carl K. Eicner or Michael T. Weber

Title: Project Co-Director

Date: 2/12/86

Name: Yassin Jeyte Wenelie, MSU

Title: In-country Researcher

Date: Feb

FOR AID/WASHINGTON

Name: Tom Mehen

Title: Project Manager
Food Security in Africa
Cooperative Agreement

Date: Feb 12/86

FOR USAID/MOGADISHU

Name: Louis A. Cohen

Title: Mission Director

Date: FEB 11 1986

ANNEX 1

Food Security in Africa Cooperative Agreement

Department of Agricultural Economics
Michigan State University

1. Cooperating Institutions:
   AID/Bureau of Science and Techonology: Contact Person, Tom Mehen , ST/RD
   AID/Africa Bureau: Contract Person, Curt Reintsma, AFR/TR/ARD
   USAID Field Mission
   Host Country Institutions
   Department of Agricultural Economics, MSU

2. Funding Sources:
   a. Core
      1. AID/Bureau of Technology
      2. AID/Africa Bureau
   b. Mission Incremental Funding
      1. USAID/Southern Africa Regional Program
      2. USAID/Mali
      3. USAID/Rwanda

3. MSU Faculty Involvement: Carl Eicher and Mike Weber (Co-directors), Rick Bernsten, Eric Crawford, Harold Riley, Jim Shaffer, John Staatz and others, to be identified as research topics and opportunities arise.

4. MSU Research Assistants: Josue Dione, Stephan Goetz, Thomas Jayne, David Rohrbach, Scott Loveridge and Phil Steffen, and others to be identified as needs and opportunities arise.

5. Applied Research Themes:
   a. Priority research areas:
      1. Managing foreign exchange, food imports and food aid to achieve food security goals.
      2. Planning and prioritizing research requirements to achieve food security goals.
      3. The interaction of technological change, institutional reforms and macro-level policy in overcoming food production and marketing constraints.
      4. Data and analysis needs for food security planning.

6. Operationalizing the Applied Research:
   a. Comprehensive Studies:
      1. Zimbabwe - Southern Africa Regional
      2. Senegal (under discussion)
   b. Focused Studies:
      1. Mali
      2. Rwanda
      3. Uganda (under discussion)
      4. Somali (under discussion)
      5. An additional country in Southern Africa

7. Networking:
   a. Begin first network in Eastern and Southern Africa in collaboration with the University of Zimbabwe, Department of Land Management.

8. Publications
   a. Continue to publish reports and working papers in MSU International Development Paper Series.
   b. Publish in-country specific reports and working papers in collaboration with host institutions in countries where applied research is undertaken.
   c. Other assorted research and policy outlets.

ANNEX 2

Research Terms of Reference

Food Security Planning and Policy Analysis in Somalia: The Case of Maize and Sesame in the Shebelli Regions

February 11, 1986 - August 30, 1987

I. Topic

II. Objectives

III. Research Justification

IV. Research Approach - The Organizing Questions and the Overall Research Perspective

V. Tentative Plan of Work

VI. Anticipated Research Outputs

VII. Preliminary Budget For the Somali Shilling Fund

I. Research Topic:

The research will focus on selected policy and program design issues related to food security objectives and planning for maize and edible oils. This will include an analysis of the relationship of selected domestic and international market and other institutional variables on past, present, and potential decisions of farmers producing maize and sesame in the lower and middle Shebelli regions of Somalia. The implication of alternative farmer decisions on these crops for food security and related policy will also be included.

The research will be based on information to be obtained from the study of farmer food security decisions and farm budgets, combined with information from informed sub-sector observers and market participants. Limited surveys of input and product marketing channels and market prices will also be completed, as well as systematic collection and review of secondary data sources on production, marketing, trade and consumption of maize and sesame.

II. Objectives:

1. To develop information useful for planning and policy decisions related to food security in Somalia.

2. To contribute to a better understanding of the relationship of international trade, food assistance, market policy and performance, specific institutional arrangements and technology to the production and distribution of maize and sesame specifically, and agricultural products in general.

3. To contribute to future capacity for food security planning and policy analysis through development of base line data, analytical methods and in-service training.

III. Justification:

There are a number of important reasons for looking at both the macro and micro food security and planning dimensions of maize and sesame. These are companion products on a large number of farms and are the agricultural products that contribute a major proportion of calories to the diets of Somalis from domestic production. In the relatively short run maize appears to have the greatest potential for expanded production based on existing technology, infrastructure and price relationships. Sesame, is the indigenous traditional small farmer oil seed crop, and generally judged to be an important crop to help close the large and growing edible oil gap. Maize production and marketing also appears to be the most sensitive to input and product markets and policies. Food aid, trade in food and farm inputs, input subsidies and distribution programs, price policy, and technology development and dissemenation

are variables which can have a major consequence on production and marketing of both maize and sesame, and on the total food supply in Somalia. Because of the system of production that uses supplementary irrigation, maize production may be somewhat more reliable than sorghum, the other major grain, which is produced under more uncertain rainfed conditions. Finally, location of the Shebelli Region, potential collaborators (especially extension and technical researchers) and complementary studies will facilitate the proposed research on maize and sesame.

IV. Research Approach - The Organizing Questions and The Overall Research Perspective

For purposes of the Food Security in Africa Cooperative Agreement, food security is defined as the ability of a country or region to assure, on a long-term basis, that its food system provides the total population access to a timely, reliable and nutritionally adequate supply of food. The proposed research focusing on maize and sesame production in the lower and middle Shebelli areas of Somalia is a case study. The objectives of the study are to contribute to the improved performance of the food production-distribution system of which the farmers of the area are a part and to draw lessons from the study which will contribute to national planning and policy, and at the same time contribute to a better understanding of food security policy issues in Africa. Farm inputs and product processing and distribution are considered part of the system.

One of the overall research questions is what is the potential ✓ contribution of this system in meeting food security objectives of the country? What are the barriers to achieving the potential? How would alternative changes in public policy or programs influence performance of the system? How have relatively recent changes in Somali policies and programs influenced performance? What were the results of market-price liberalization?

The primary focus of the study is on maize, but because most farmers who produce maize also produce sesame, the production decisions and market conditions for sesame may significantly influence maize production. The same is of course true of other possible competitive or complementary products. In the case of sesame we propose to rely on the recent study of edible oils by the Industrial Council for Development and other secondary sources to the extent possible, collecting less original data on sesame. Other commodities will be considered as necessary to provide a realistic context for analysis of the policies influencing the performance of the maize subsector.

Preliminary reports indicate that some farmers achieve yields of maize which are 5 times the average. Experiment station yields have been reported at as much as 10 times the average. Maize varieties used in Kenya have reported yields under similiar conditions at even higher levels. The technical possibilities seem to exist for very large increases in output that would make significant contributions to improved food security in Somalia. Yet the economic potential is uncertain. Maize is a staple food in Somalia. It has been imported in large quantities. The quantity of imports and the timing and method of release to the market affect prices and obviously have an effect on farmer production incentives and plans. An important policy question is how can imports and especially food aid be coordinated with local production to best achieve food security?

To achieve the higher yields, technical inputs, including improved seeds, fertilizers and pesticides, are required. Tractor services and water for supplemental irrigation are required, and both must have fuel and other imports. How does the reliability and costs of inputs constrain the system? How can reliability be improved and costs reduced? A question important for longer run planning is what quantities of specific inputs would be required to meet the needs of expanded production of maize?

Food security and the role of agriculture in development involve both production for family consumption and production for marketable surplus. A marketable surplus of products or of labor is necessary to purchase inputs, and these are necessary to increase production. In an uncertain environment decisions are made to control or reduce risks. Using purchased inputs to produce a marketable surplus requires a reliable and profitable market for the production. To the extent that marketing and processing costs can be reduced and the uncertainty of prices reduced, incentives to producers are increased. What are the protentials for improving the performance of these product markets?

Under uncertainty farmers also adopt strategies for their family food security first, and then consider the benefits and costs which are associated with purchasing inputs and selling products to produce a surplus. Another important question is how do farmer strategies for food security affect the adoption of productivity increasing technologies? More specifically, what are farmers strategies and decision rules or standard operating procedures in regard to production, investment, storage and marketing? What are the necessary incentives in product and input markets necessary to encourage farmers to adopt economically sound production technologies.

Two additional international trade questions involve: (1) the benefits and costs of importing inputs compared with domestic manufacture and (2) the benefits and costs of importing food compared with importing farm inputs. Related to this is the question of the level of import duties and restrictions (including practical difficulties) on farm inputs and the effect this is likely to have on potential maize production.

V. Tentative Plan of Work:

The research described herein will be planned and implemented in three phases. The timing and work activities in each phase are described below:

1. September-December, 1985 - Preliminary Research Design

During this period the general research topic is being identified and refined. Work will proceed during this period both in Somalia and in Michigan. Two researchers in the planning Department will be contracted to work part time over the period to systematically obtain secondary information and obtain base line data needed to make the sample designs for both on-farm and market-level surveys. Work at MSU will focus on refining the conceptial framework and the specific primary data collection and analysis methods, including reviewing the type of modeling tools which could be useful. A budget for the Somali Shilling Fund will be prepared early in this phase, based on general line items anticipated for the research. This general level of budgeting will permit the Special Fund to be established and assure that resources will be available for use starting January 1. The Ministry researchers involved in phase 1 will be paid from MSU Cooperative Agreement Funds.

2. January-April, 1986 - Final Research Design Phase

During this period the MSU principal in-country researcher will take-up residence in Mogadishu, and work intensively with Ministry researchers to complete the phase of base line and data review, and to finalize the research design. A detailed budget will be prepared at this time showing how the allocated Somali Shilling Funds will be utilized. This budget will assure that before a larger numbers of personnel are employed, a detailed justification for their work will be established. Assistance in the final research design phase will also be available from Cooperative Agreement personnel, and from the USAID Mission agricultural economist. The micro-computer system will also be installed during this phase, and an MSU programer/trainer will travel to Mogadishu to conduct a trainning sesson.

3. May 86 - June 87 - Primary Field Data Collection and Analysis Phase

Additional research and support staff will be employed, and the primary data collection activities described below will be completed. Considerable analysis will begin during the early part of this period, since maximum use is to be made of existing secondary data. A number of working papers will be prepared and circulated throughout this phase, as will be the reports and recommendations that emerge. Periodic informal workshops and meetings will also be conducted to inform policy makers and to obtain feed back on information and recommendations emerging.

A. Review, Critique and Analysis of Existing Data Sets

1. Analysis of Existing Price Series. Four to eight years of retail price data are available from the Ministry of Planning for the Mogadishu market. These data will be obtained, reviewed and used for standard seasonal price analysis. Completing such analysis is one way of establishing the quality of the data series. It is anticipated that the on-going collection of these data by the Ministry of Planning for the retail Mogadishu market will provide a good bench mark in our price analysis. Thus project attention can be focused on collecting price data for other locations and market levels for purposes of spatial price analysis and marketing margins calculations.

2. Ministry of Planning - Household Expenditure Survey for Urban Mogadishu Consumers.

3. Ministry of Agriculture - Extension Service Price Data (especially for Bay Region).

4. Ministry of Agriculture - Early Warning System Reports.

5. World Food Program Data and reports on Food Deliveries to Somalia.

6. USAID - Food for Peace Office.

7. Maize and other Farm Budgets. Somali Consult study and studies of the FAO Farm management specialist working with CARS.

B. Tentative List of Planned Surveys and Original Data Collection Activities

1. Consultations with AFMET and agricultural research experts in Somalia. The objective of these consultations are to identify existing experience and knowledge about farm technologies and the potential for improvements of farm productivity. Furthermore, information will be obtained about major constraints for increasing production and the adoption of new technologies by farmers.

2. A survey of agricultural extension agents in the Lower and Middle Shebelli regions. The purpose of the survey include:

a) Identify current role of agents in collecting price and other market information data.

b) Indentify field extension agents (FEAs) technical recommendations and identify farmers who have adopted productivity increasing practices. FEAs' assessment of production response potential, and farmer production, storage, and marketing strategies will also be explored.

c) Obtain agents' impressions of problems related to the farm input and product markets.

d) Obtain agents' assessment of the factors limiting maize and sesame productivity and output.

This survey will be conducted as early as possible in order to use it in the design of the farm level surveys.

3. As much as possible prices of maize and other grains, sesame and other edible oils and of farms inputs used or potentially useful on study area farms will be obtained from secondary sources. Available price data for the above items in other regions of the country other than the immediate study area will be obtained. After assessing available price data, a price collection activity will be initiated. Prices will be collected at different points in the distribution channel as a means of estimating margins and returns for performing particular functions, such as storage. Price data provide the least expensive means of obtaining information about the performance of the subsector and reveal an important component of the farmers opportunity set. A well designed set of price data is needed for monitoring the system and assessing the consequences of important policies.

4. A broad identification of the universe of market channel participants will be carried out, as will a survey of a purposive sample of participants involved in maize product and farm input marketing and distribution. The purpose of the survey is to identify marketing channels, to obtain information on past price policy reforms and to anticipate response to particular policy changes in the future, to identify percieved problems of these market agents, and their views about policies which would improve performance. Special emphasis will be given to understanding the factors that affect traders decisions to store commodities. No general attempt will be made to obtain costs, margins, or profit information from the marketing firms although selected market functions, such as storage may be costed out. The Planning Department of the Ministry of Agriculture in cooperation with the FAO plans a marketing survey. The data from this survey and any other recent studies of marketing will be utilized as appropriate.

5. A purposive survey of government officials and managers of parastatal organizations involved in the production or distribution of farm inputs used in maize production or in the processing or distribution of maize and sesame (including importing and distribution of food aid) will be undertaken to provide a record of past government action, information on current policy and programs, and future plans. This will include close and careful contact with analysts in the World Food Program, the MOU early warning office, and the USAID Food For Peace Program. The purpose of these contacts is to develop a careful record of food trade and aid over the period of analysis.

6. Farm level data will be obtained from (a) researcher and extension specialists, (b) an intensive study of a small sample of farms using different technical packages and (c) a study of a randomly selected and representative sample of farmers using an extensive one-time survey.

The basic concept is to build models of farm budgets representative of different types of farms in the region and analyze the likely responses of these models to changes in the economic and environmental conditions. The representative sample survey will be designed to provide estimates of the region wide distribution of types of farms, resource availability, standard operating procedures and other information which can inform the research about possible responses to changes in the economic and physical environment. With the estimates of the distribution by type of farm, it will be possible to draw inferences for the region by extrapolating the results from the farm budget models. These models will be constrained to reflect behavioral information from the farmer interviews within the limits of simplified formal modeling techniques. In addition the behavioral data, that is standard operating procedures and decision rules, will be used directly to draw inferences about probable farmer responses.

The farm level data collection activities are elaborated below.

a. Working with technical and farming systems researchers, and extension specialists, the best estimate of the maximum technical relationships between inputs and output of maize and sesame will be estimated for ideal resource conditions representative of the Shebelli areas. Based upon this data, profit maximizing farm budget models will be developed and tested for response to different levels of prices of maize and sesame and technical inputs, particularly urea, improved seed and insecticide, and input constraints. These models assume farmers have the knowledge of the technical coefficients, prices etc. Given existing technical knowledge and certainty in prices these models would provide estimates of the maximum responsiveness to prices and input availability for ideal farms in the area. This might be called the experiment station model.

b. A small sample of farms will be selected based upon differences in actual technological packages used and resulting productivity. Several farms in each of perhaps 5 types of farm classes will be identified through the extension agents, Ministry of Agriculture etc. Particular emphasis will be placed on identifying the most representative farms in each class. Farms in this samples will be studied intensively to identify production coefficiens and decision processes. This information will be augmented by applied research results from various on-going farming systems research studies. These data will be used to develop what might be called practical farm budget models.

c. The proposed major extensive farm level data collection activity involves surveys or a random selection of farms from a random sample of villages from the two Shebelli regions. The sampling procedure and numbers will await collection of more information about the diversity of the region based in part on the returns from the extension agents and farming system researcher survey. For planning purposes we are consider approximately 30 villages and an average of 12 farms per village. In order to reduce respondent fatique questionaires would be designed with a set of basic information from all respondents, and three different in-depth sections providing a sample of approximately 120 for each of the in-depth questionaires.

This one time survey will be designed to provide base line data on farmers resources, use of inputs and practices, rough estimates of yields and marketings, purchases, strategies in respect to food security, production, investments, marketing, storage, etc. Included will be an identification and review of standard operating procedures in decision making under conditions of uncertainty. Retrospective and prospective information will be requested about past responses to changing condition, market liberalization for example, and the calculations they would undertake in making decisions regarding adjustments to changes in prices of products and inputs in the future. In addition enquiry would be made into these farmers perceptions of the limiting constraints on their output and adoption of new technology as well as their perceptions of the input supply system and product markets in respect to expectation, reliability etc.

Among the data collected would be farmers assessments of the extent of land under cultivation and the farmers perception of the land yet available to them for expansion, their estimates of the costs of bringing the land under cultivation, and the input and product price expectation required to entice them to made the investments.

VI. Anticipated Research Outputs

Working papers will be prepared throughout the life of the project. Final reports will be developed based upon refinement and synthesis of working papers and further analysis. The preparation of working papers and their discussion with those who influence policy is an important step in the research process; it is a means of disseminating research results in a timely manner and provides an opportunity for comments and helps identify additional questions for consideration in further research and presentation of results. The following is a tentative list of anticipated topics for working papers and reports. It is intended to be suggestive of the anticipated subject matter of papers and reports - not definative. Research, like farming, involves a good deal of uncertainty.

1. Adjustments to market-price liberalization in Somalia, with a focus on maize.

2. Maize farmer strategies to deal with economic and environmental uncertainty: implications for policy.

3. The changing market performance and problems in the distribution of farm inputs for maize.

4. Factors influencing the production and marketed surplus of maize and sesame.

5. Potential contribution to maize output from solving the supply problem for improved maize seed and fertilizers in the Shebelli area.

6. The potential for expanding production and marketing of maize and sesame in the Shebelli: implications for the demand for inputs.

7. The relationship of food aid management to the economics of maize production, storage, and marketing in the Shebelli areas.

8. International Trade and the Economics of Maize in Somalia: Benefits and costs associated with importing technical inputs, increasing maize outputs, import substitution, etc. The estimated effects of tariffs and restrictions on the maize subsector.

Funds from USAID/Somalia and AID/Washington are to be contributed to the MSU Cooperative Agreement "Food Security in Africa". Overall Project Funding is budgeted at $4.0 million with applied research in 6-8 African countries. Estimated expenditures to directly support the Somalia research are as follows, with USAID/Somalia providing $70,000 of incremental funding:

U.S. DOLLAR BUDGET - Somali Focused Study
(Summary - Life of Project)

Salaries and Fringe of MSU Staff	
Training (24 P.M.)	20,000
Short & Long-term Researchers (21 P.M.)	41,140
Computer support staff (1 P.M.)	5,000
On-Campus direct research support staff (6 P.M.)	30,000
On-Campus administrative support staff (2 P.M.)	15,000
Sub-Total Staff:	111,140
International Travel costs for all MSU Staff	40,000
General In-Country Research Support	8,000
Research Equipment (Computer, Memo Equipment)	22,000
Sub-Total:	182,068
Overhead (23% everything but equipment)	36,816
TOTAL:	218,884

Somali Shillings Account Budget

SUMMARY

		Local Currency Budget		
		1st Year 1986	2nd Year 1-6/1987	Total
A.	Research Counterparts & Staff	2,956,000	1,478,000	4,434,000
B.	Housing for MSU in-country Researcher	906,000	198,000	1,104,000
C.	Office Supplies & Stationary	1,395,000	120,000	1,515,000
D.	Vehicles & Motorcycles	3,500,000	-	3,500,000
E.	Vehicles & Motorcycles Operating Expenses	1,541,388	770,694	2,312,082
F.	Research Workshops and Extention Seminars	700,000	350,000	1,050,000
G.	Miscellaneous	1,000,000	500,000	1,500,000
H.	Contingencies (20%)	2,400,000	683,339	3,083,339
	Grand Total:	So.Sh.14,398,065	4,100,033	18,498,421

A. Somali Counterparts & Staff

	Monthly	1st Year 1986	2nd Year 1-6 1987	Total
1) Research Stipend				
- 1 Project Coordinator (Part-time)	10,000	120,000	60,000	180,000
- 5 Researchers	8,000	96,000	48,000	144,000
- 2 Data Processors	7,000	84,000	42,000	126,000
- 1 Accountant	7,000	84,000	42,000	126,000
- 1 Secretary	7,000	84,000	42,000	126,000
- 10 Enumerators	6,000	72,000	36,000	108,000
- 2 Drivers	6,000	72,000	36,000	108,000
- 2 Watchmen	3,000	36,000	18,000	54,000
- 1 Postman	3,000	36,000	18,000	54,000
- 1 Office Messanger	2,000	24,000	12,000	36,000
		708,000	354,000	1,062,000
2) Research Travel Per-diems and Allowances				
- 1 Senior researcher 20 days/month/1500 Shs.	30,000	360,000	180,000	540,000
- 1 Project Coordinator 10 days/month/800 Shs.	8,000	96,000	48,000	144,000
- 5 Researchers 15 days/month/700 Shs.	52,500	624,000	312,000	936,000
- 2 Data Processors 30 days overtime/ 300 Shs.	18,000	216,000	108,000	324,000
- 10 Enumerators Field Allowances 200 Shs. per day	60,000	712,000	356,000	1,068,000
- 2 Drivers 20 days/month/500 Shs.	20,000	240,000	120,000	360,000
		2,248,000	1,124,000	3,372,000
Sub-Total (A)		2,956,000	1,478,000	4,434,000

B.	Housing For MSU In-Country Researchers				
1)	Rent	30,000	360,000	180,000	540,000
2)	Utilities	3,000	36,000	18,000	54,000
3)	Furniture		510,000	-	510,000

- 1 bedroom/70,000 Shs.
- 1 sitting room/120,000 Shs.
- 1 dining room/100,000 Shs.
- 1 refrigerator/70,000 Shs.
- 1 gas stove/50,000 Shs.
- 1 airconditioner/60,000 Shs.
- Others/40,000

	Sub-Total (B)	906,000	198,000	1,104,000
C.	Office Supplies & Stationary			
1)	Equipment	- 1,155,000	-	1,155,000

- 3 typewriters/70,000 Shs.
- 3 filing cabinets/100,000 Shs.
- 3 desks/40,000 Shs.
- 3 chairs/20,000 Shs.
- 2 chairs/15,000 Shs.
- 10 pocket calculators/15,000 Shs.
- 1 photocopy machine/80,000 Shs.
- 2 airconditioners/60,000 Shs.

2)	Stationaries	20,000	240,000	120,000	360,000

- Paper, pens, pencils, files photocopy paper, stencils etc. at 20,000 Shs/month

	Sub-Total (C)	1,395,000	120,000	1,515,000

D. Vehicles & Motorcycles

1) Vehicles		2,250,000	-	2,250,000
- 1 4-WD new vehicle/ 1,500,000 Shs.				
- 1 4-WD used vehicle/ 750,000 Shs.				
2) Motorcycles		1,250,000	-	1,250,000
- 5 motorcycles/250,000 Shs.				
Sub-Total (D)		3,500,000	-	3,500,000

E. Vehicles & Motorcycles Operating Expenses

1) Petrol & Oil				
a) Local-Run	15,267	183,204	91,602	274,806
- Petrol: 2 cars x 10 days x 30 liters x 19 Shs. 1 motorcycle x 26 days x 5 liters x 19 Shs.				
- Oil & Lubricants: 10%				
b) Research Travels	83,182	998,184	499,092	1,497,276
- Petrol: 2 cars x 16 days x 100 liters x 19 Shs. 6 motorcycles x 26 days x 5 liters x 19 Shs.				
- Oil & Lubricants: 10%				
		1,181,388	590,694	1,772,082
2) Maintenance	10,000	120,000	60,000	180,000
- Routine maintenance of 10,000 Shs/month				
		120,000	60,000	180,000

3)	Repairs Average 120,000 Shs. every 6 months for the 2 cars and 7 motorcycles	240,000	120,000	360,000
		240,000	120,000	360,000
4)	Insurance - Average 6,000 Shs/year x 2 cars - Average 1,000 Shs/year x 7 motorcycles	19,000	19,000	38,000
	Sub-Total (E)	1,194,420	606,710	1,801,130
F.	Research Workshops and Extension Seminars			
1)	Audio Visual Materials	200,000	100,000	300,000
2)	Per-diem for participant	250,000	125,000	375,000
3)	Administrative Support Assistance	250,000	125,000	375,000
	Sub-Total (F)	700,000	350,000	1,050,000
G.	Miscellaneous - Custom clearance, invitations, office maintenance, stamps, telephone charges, telex, etc.	1,000,000	500,000	1,500,000
	Sub-Total (G)	1,000,000	500,000	1,500,000

ATTACHMENT No. 2

BUSGET

Salaries	18,000
Benefits	4,140
Transportation and Air Freight	12,000
Equipment	22,000
Other Direct Costs	4,884
Overhead (23% on everything except equipment)	8,976
Total	$70,000