

SERVING THE WORLD FARM COMMUNITY

Research and Training Develop Mauritanian Agriculture

The Mauritania Agricultural Research Project II (AGRES II), is a multidisciplinary farming systems research and extension program whose goal is to improve the agricultural and farming systems now operating in the Mauritanian portion of the Senegal River Valley. The AGRES II project was initiated and implemented by Mauritania, a country in northwest Africa, to improve and increase the research capabilities of its Centre National de Recherche Agronomique et de Developpement Agricole (CNRADA).

Funded by the USAID, AGRES II operates as a cooperative venture between CNRADA and the UA and is administered by the UA Office of Arid Lands Studies. The primary goal of AGRES II is to improve the standard of living of farm households by increasing agricultural production, especially of staple foods and arresting the deterioration of the valley environment.

The project is emphasizing three main objectives to help achieve its goal during its four and one-half years of operations. Institution building is an objective as CNRADA becomes a credible and regionally recognized research institution. Institutional linkages is another goal as collaborative links are established between the various rural development, agricultural, educational and research institutions and organizations. Finally, the farming systems research and extension methodology and approach to research is promoted by conducting diagnoses; by establishing correlative on-farm trials and experiments; and by extending new appropriate technologies developed by CNRADA.

AGRES II is also providing long-term training to five Mauritanian students. Enrolled in course work at the UA campus, the students are progressing toward bachelors degrees in agricultural fields.

Mike Norvelle
Arid Lands Studies

Irrigated Crop Budgets in Cape Verde

The Cape Verde Islands, 500 miles west of Senegal in the Atlantic Ocean, fall within the Sahelian weather system. They receive limited rainfall, and extended periods of drought conditions are common. The rainfall has been below the historical average for the past 15 years. Per capita income is very low in Cape Verde, and agriculture is a major source of livelihood for most of the population of approximately 300,000 people. Corn and beans are the staple foods and the major rainfed crops grown on the islands. However, domestic production provides only a small fraction of the consumption needs.

Since 1984 the Department of Agricultural Economics has been providing technical assistance to the National Agricultural Research Institute in Cape Verde through a project financed by USAID. A major research activity in the past year was the estimation of costs of production for the major irrigated crops. This information was incorporated into crop budgets, which provide a summary of costs and returns associated with growing a particular crop. Crop budgets were constructed for sugarcane, sweet potatoes, cassava, bananas, Irish potatoes, and several vegetables. These are the major irrigated crops in Cape Verde.

The crop budgets were used to compare the net returns—revenues minus costs—that farmers could obtain by growing the alternative irrigated crops. The budgets indicate that sugarcane generates quite low returns in comparison with the other crops. This finding suggests that there are factors which restrict farmers from growing crops with higher net returns. Identification of these constraining factors is crucial if the desired transfer of irrigated production out of sugarcane and into other food crops is to be implemented.

Preliminary information from interviews with farmers indicates that the major

constraint to shifting production to higher-income crops is the access to water on a timely basis. Sugarcane can withstand periods of several months between irrigations and still produce some output. Bananas need water every couple of weeks, and vegetables need water on an even shorter interval in order to be economically productive. Thus, changes in the way in which water is distributed to farmers could eliminate the constraints that presently lock many farmers into the production of sugarcane.

Research is presently under way to quantify the economic impacts of alternative water distribution patterns. The response of different crops to variations in total water delivered and intervals between irrigations will be measured. This information can be used to identify specific changes in present irrigation practices that could increase the production of food crops.

Dr. Mark Langworthy
Agricultural Economics

Partnership Promotes Lesotho's Development

During the past two years the College of Agriculture has provided technical, research and training assistance to Lesotho in modernizing its agriculture. This assistance is provided under the Lesotho Agricultural Production and Institutional Support Project (LAPIS), a U.S. Agency for International Development (USAID) funded contract. This involves active partnership between the College of Agriculture and private sector corporations, American Ag International (AAI) and the Consortium for International Development (CID).

LAPIS, by its multi-component nature, provides the framework for drawing together production, research, training and management in an integrated development plan. The project focuses on improvement

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of agriculture production at the small farm level involving mostly Lesotho women as farm managers and workers. Currently more than 70 percent of Lesotho's male labor force is working in the mines of South Africa. A large segment of the mine workers is expected to return home in the near future. Thus LAPIS is also charged with the task of expanding employment opportunities in the agricultural sector to provide jobs for these returnees.

LAPIS' major accomplishments since its start-up operation in June 1986 include:

—Preparation of a Five-Year Implementation Plan.

—Setting up of three technical teams each working on education, research and production components of the projects.

—Improvements in physical structures, curricula, faculty and administrative capabilities at Lesotho College of Agriculture.

—Training 16 Lesotho students at undergraduate and graduate levels plus six students in a 15 month special technical range management program at the UA.

—Conducting a number of research projects in soils, agronomy, horticulture and range and animal sciences.

—Working with small farmers in vegetable and fruit tree production to increase market oriented agriculture production.

—Setting up farmer associations and providing marketing, credit and technical services. A major effort is on expanding in-service training of extension agents to provide better service to the district farmers in the production and marketing of their vegetable crops.

LAPIS is a five-year project with a good potential for renewal in 1991.

Dr. Amir Ajami
LAPIS Campus Coordinator

Somali Farmers' Time Use

Somalia has two major industries, agriculture and livestock. Farmers face many problems, among them labor shortages. Therefore, knowledge of how farmers allocate their time may be used to improve agricultural programs.

In an effort to better understand how farmers use their time, a study sponsored by The Consortium for International Development/Women in Development,

USAID, was conducted during the primary agricultural season in 1986. The time use of the adult members of 23 households was observed directly.

Results show that women and men spend four hours per day farming. Women allocate approximately seven hours and men, about 30 minutes per day to household work. Both women and men spend approximately one-half hour per day in craft production, paid work or village government work. Husbands and wives make time allocation decisions semi-autonomously and the decisions are also influenced by social and cultural factors. Because both women and men participate so fully in agriculture it is important to include both women and men farmers in the decision-making processes and activities of development projects in order to ensure programs will meet farmers' needs and will be adopted by them.

Dr. Molly Longstreth
Family and Consumer Resources

Nutrition Awareness in Agricultural Development

During a six-week period in January and February, 1988, a team of social scientists from the U.S. Department of Agriculture, the UA, and the University of Maryland, carried out a food consumption and nutritional status survey in nine villages along the Senegal River in Mauritania's Guidimaka region. The survey villages, which participate in the UA-administered Mauritania Agricultural Research Project II (AGRES II), included five ethnic groups. Survey data will serve as a baseline for monitoring and evaluating the impact of AGRES II on the consumption and nutritional status of project beneficiaries. The survey is to be repeated later in the year to achieve this objective.

The food consumption component of the survey focused at the household level and gathered such information as the quantity of foodgrains (sorghum, millet, and rice) consumed in a 24-hour period, amount of foodgrains in storage, amount of food aid received over the previous six months; existence of a home garden and/or participation in a community garden, and price of foodgrains as well as distance (or time) to market.

A nutritional status assessment component of the survey focused on the women

and children in the surveyed households. Measurements made on children included height, weight, triceps skinfolds, and mid-arm and head circumference. Measurements made on mothers included height, weight, mid-arm circumference, triceps skinfold, and grip strength. Some health data were also collected for each person undergoing nutritional status assessment, such as presence of night blindness; recent illnesses of children, especially diarrhea; and a brief reproductive history of each woman.

In order to classify and compare households, general socioeconomic data on these units were also gathered. Information was collected on the size and composition of households, off-farm employment, and income proxies (e.g., amount and type of agricultural land).

Tim Frankenberger
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Dr. Gail Harrison
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