

**FARMER TO FARMER—PROJECT STRATEGY & BACKGROUND****BACKGROUND INFORMATION****GENERAL INFORMATION**

Project Name: Review of the Extension Services
 Country: Guyana
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REGIONAL CHARACTERISTICS**Land**

Average size of arable land per farmer: 1 hectare (in general). However some cattle farmers are landless (they graze animals on a 'let out' system) others may own several hundred acres that are mostly grown in rice.

Altitude range: Low coastal plain. Generally flat lands.

Soil types: Ranging from clay to a mixture of pegasse (high organic matter content) and clay. Talk about sandy soils as well

Climate

Rainfall patterns: Rainfall averages about 2,300 mm (90.55 ins.) in the coastal zone. The seasons are determined primarily by the variation in rainfall patterns. As such, there are two wet seasons from May to July and from November to January, and two dry seasons from February to April and August to October.

Temperature range and patterns: Coastland temperature ranges from 20°C (60 degrees) to 34°C (93 degrees) although it rarely rises above 31°C (88 degrees) or falls below 22°C (72 degrees), due to the stabilizing effect of the ocean and the north-east trade winds. Mean temperature is about 27.5°C (82 degrees).

Humidity: Relative humidity is high with 80 percent or more in the coastal zone. Fog can be widespread.

Sunshine hours: During the rainy season, sunshine averages 5 hours per day but, during the dry seasons, 7 hours or more can be obtained.

Agriculture:

Rice is one of Guyana's major export crops. Some farmers grow a range of vegetables and in addition raise sheep and goats along with cattle. The vegetables may include: cabbage, egg plant, tomato, hot and sweet peppers, ochro, bora, lettuce and pak choy.

'Landless' cattle farmers would generally not own any farm equipment other than the usual farm implements such as cutlasses, hoes, shovels and forks. However, most farmers own at least a tractor. The larger ones could own several tractors and a varied mix of equipment that could include rice harvestors, trucks, hymacs, draglines etc.

Farmers who grow vegetables may own mechanical brush cutters or walk behind land tillers or the



smaller tractors.

Among the most common fertilizers applied by crop farmers in general are the 12-24-12, 12-12-17-2 and 15-15-15, while aphids, white flies, thrips, stem borers and slugs are some of the major pest affecting vegetables. Fungal and bacterial attacks are attributed to causing the major diseases. A range of pesticides as carried by the chemical companies at the time requested is used. However, pesticides from neighbouring countries may also be used by farmers. It has been confirmed that among the pesticides used are some that have been placed on the prohibited list.

Irrigation is usually done by rain or manually using water cans to pour water let in through a system of drains leading to and from the major canals in the area.

Cattle are generally raised on a low-input, low-output system. Specialized dairy farmers who are mostly found in and around Georgetown of course spend significantly more on animal care as they manage improved breeds – the most common being Holstein type animals. Treatment for mastitis is the most common one that is required.

Agricultural Research and Extension Services:

Guyana's agricultural professionals are spread across a number of public and private agencies. The Ministry of Agriculture (MOA), Crops and Livestock Department (CLD) is responsible for the provision of extension services of livestock and all crops, with the exception of rice and sugar. The National Agricultural Research Institute (NARI) is responsible for all research related activities, except for rice and sugar. The Guyana Rice Development Board (GRDB) is responsible for all activities in rice including research and extension services. The Guyana Sugar Corporation (GuySuCo) is responsible for all activities in sugar including research and extension services. The Guyana School of Agriculture (GSA) is responsible for lower level post secondary training, while the University of Guyana (UG) is responsible for tertiary education. In the private sector, companies such as Caribbean Chemicals, AMAZON Chemicals, veterinary supply outlets, large poultry establishment with contracted farmers, feed mills, etc have been marketing agricultural products, while maintaining limited extension services to promote the sale of the said products.

The coordination among and between these agencies over the years has been lacking and of particular interest is the lack of proper and effective communications between the major research institute, National Agricultural Research Institute, and the Crops and Livestock Department. This ineffective relationship has in part greatly affected the ability of these agencies to realize their full potential. As there is a direct relationship between appropriate technologies generated by NARI and the kind and amount of technologies transferred by the CLD. In short the success of extension is tied into that of research.

PROJECT STRATEGY/ DESIGN

PROJECT PURPOSE

To review the status of Agricultural Extension Service of the MOA and to recommend appropriate courses of action for the MOA as it seeks to respond to changing needs of its clients.

EXPECTED RESULTS

Expected results are what the project needs to accomplish in order to achieve the purpose. These are medium-term changes to be achieved over the length of the project.

- Agricultural extension policy reviewed within the context of agriculture sector policy and macro-economic policies
- Agricultural extension activities reviewed
- Roles of the MOA, NARI and other public sector agencies as well as the private sector in the provision of agricultural extension services analyzed

ACTIVITIES AND INPUTS

The project will take a be comprised of three phases:

Phase I

Initially a team of two volunteers, a Senior Extension Specialist and a Senior Extension Administrator should be sent to do the ground work of:

- Contacting appropriate agencies, organizations and individuals to explain the purpose, scope and expectations of the project,
- Identifying potential focus group partners, participants and expectations,
- Coordinating the logistics of in-country meeting facilities, travel reimbursements, etc., and
- Establishing a realistic timeline for the project team pre-trip planning, in-country travel and field work, discussion, follow-up and developing the team report.

Phase II

Second, a project review team that includes extension staff addressing the identified subject matter areas will conduct the evaluation and make recommendations to modernize the system. Six possible subject matter areas are listed below. Additional volunteers with expertise in natural resources, business and community development, and group processing skills may also be added to the team.

Agriculture Extension Policy / Extension Management Specialist [Team Leader]

- Examine the past and existing policies related to Guyana's extension services inclusive of the linkages to the rest of the agricultural sector / agri-sector policy and the achievement of national objectives and other macro-level policies
- Recommend policy changes based on perceived needs, future goals of the MOA etc.....
- Recommend on how best to manage the extension services inclusive of research / extension linkages

Crop Production Specialist

To review production-oriented areas such as soils, pathology, weeds, IPM-insects, cultural practices

Livestock Production Specialist

To review production-oriented areas such as health, nutrition, breeding, management, meat hygiene and slaughter practices and cultural practices

Farm Management Specialist

To review aspects of economics, cost of production, economy of scale etc

Agricultural Marketing, Trade and Information Specialist

To review areas such as marketing capacity, market development, value-added / processing, export markets; collection, storage, retrieval, dissemination and management of statistics and information within and outside of the institutions

Sociology / Anthropology / Group (Cooperative) Development Expert

- Observe the functioning of Farm Organizations
- Observe the roles being played by farm organizations and the possible roles
- Observe and analyze issues pertaining to the functioning of extension staff of MOA and other institutions as well as private sector extension-oriented workers

Phase III

Third, additional assignments will be developed based on the findings of the project review team to address teaching extension delivery systems and skills, specific productions needs, etc. In addition, short and long-term extension agent exchange programs would be desirable.

Program Development Model

A program development model would include a coordinated, systematic approach to;

- Focus on the agricultural enterprises, but also look to include other potential audiences including youth, families, small businesses, and local governments.
- Assess the educational needs of agricultural community as well as new extension audiences. The focus would also be on appropriate Extension program delivery methods.
- Assist the Extension staff in identifying professional development needs, and in developing solutions and strategies to the issues of Extension program delivery, given the financial restraints.
- Identify opportunities to help build linkages and partnerships with the public and private sectors of Guyana society, including NGO's, educational institutions, Guyana Peace Corps, agricultural commodity groups and grassroots organizations.
- Help identify the assets and strengths of existing potential public and private partners.
- Identify methods to build broader political and financial support for the Extension system.

Suggested Methodology

It is envisaged that the team will utilize mostly secondary data from various sources but will hold strategic discussions with key stakeholders and collaborators. Some specific components of the proposed methodology are as follows:

- Meet with Honorable Minister of Agriculture, Permanent Secretary, MOA, Heads of Departments MOA and affiliated institutions such as NARI, GMC, PRCSSP, NDDP;
- Review documents related to the agriculture sector in general and the Crops and Livestock Department and the agricultural extension service in particular;
- Hold discussions with major collaborating institutions and agencies such as Inter-American Institute for Cooperation on Development (IICA), St. Stanislaus College Farm (SSCF),
- Visit selected farms and hold discussions with farmers individually or collectively;
- Presentation of preliminary findings before departure of team.

HOST RESOURCES

- Collaborating Institutions: Minister of Agriculture (MOA), National Agricultural Research Institute (NARI), National Dairy Development Program (NDDP), Institute for International Cooperation in Agriculture (IICA), Guyana School of Agriculture (GSA), and the University of Guyana. These will

- provide facilities, materials, transportation, data and information on the subsector.
- Individual farmers and Farmer Groups / Cooperatives / Associations – information on the nature, quality of extension services
- Local Partnership chapter – networking / collaboration

IMPACT INDICATOR¹	UNIT OF MEASURE²	DATA SOURCE³	BASELINE VALUE
Extension Service Reform Policy Developed and Implemented	Number of policy proposals adopted by relevant agencies	Volunteer Reports, Minister of Agriculture	
Increase in Number of Trainings/Technical Assistance Provided to Farmers	Number of Group Trainings and Individual Technical Assistance		
DATA COLLECTION Sector data will be provided by the MOA and affiliated institutions.			