PN-AAH-486
70509

Rwanda Farming Systems Research Program
Technical Paper Series

Farming Systems Research Program
(FSRP), Rwanda

TDY Report

Eric J. Wailes
23 April 1987

Report # 59

USAID Contract #696-0110
between
The University of Arkansas, Fayetteville
(International Agricultural Programs)
and
The Rwandan Ministry of Agriculture
Rwandan Institute for Agricultural Sciences (ISAR)

Farming Systems Research Program (FSRP), Rwanda

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TERMS OF REFERENCE

To provide the Farming Systems Improvement Project assistance:

1) to finish budgetary and other input aspects of the annual work plan that will be totally integrated within the framework established for ISAR programs;

2) to assist with the development of a long-term integrated work plan of research, technical assistance and training for the life of the project's first phase;

3) to assist with some of the team dynamics related to an improved orientation toward multi-disciplinary research;

4) to provide some needed relief for the team leader.

SUMMARY OF PROGRESS ACHIEVED

1) Rwerere, March 28-April 5. The work plan budget was developed on the basis of research activity. These activities were identified by both FSRP and ISAR research areas. The budget format followed that used by ISAR in the 1987 ISAR work plan. A total of 24 research and administrative activities were planned and budgeted. Both English and French versions were prepared and distributed to the FSRP team, ISAR and OAR/R.

2) Interaction with the team and Chief of Party candidate, Jim Burleigh, followed during the remainder of the week. On-farm research trials were visited with the team scientists and Station Director.

3) Kigali, April 5-8. Assisted Tom Westing with discussions on the Program Evaluation Statement (PES). Attended meeting with ISAR, OAR/R and FSRP at Rubonna. Held discussions with OAR/R on restructuring of project, especially administrative aspects. Provided input in discussions on unsolicited proposal by Welsch with Fuchs-Carsch and Welsch.

4) Rwerere, April 9-15. Held more discussions with team members on two primary topics, administration and training. Developed proposals on station logistics and management of equipment, procurement, etc. and on a collaborative training program with the National University at Butare. Also had the opportunity to travel with FSRP and CIAT researchers for on-farm planting trials.

5) Kigali, April 16-17. Traveled to Butare to meet with the Dean of the College of Agriculture at the University of Rwanda. We met later that evening with Dean Abdul and reached an accord for active collaboration in the three-cycle training program. Held an exit interview with OAR/R.

6) Rwerere, April 18-19. Discussions held with team members and Station Director regarding proposed changes in administration and training. Additional information solicited from team members regarding gaps left in the work plan and budget for 1988 research year. Reviewed and contributed to the OAR/R implementation statement for Levine.

7) Kigali, April 20. Depart to Fayetteville.

GENERAL OBSERVATIONS

1) The project members have an active research program underway. This applies particularly to the agro-forestry research and the agronomic (varietal and cultural practice) research for certain commodities.

2) While there have been several initiatives in economics, including the bean enterprise budget work and an initiative on market structure, on the whole the economic research has been poorly organized and integrated into the project. The lack of multi-disciplinary research and collaboration among the team researchers is apparent throughout.

3) The achievements and current activities have not been well communicated outside of the project area. Given the intensive focus of the project on a particular area, it is necessary that the approach as well as the particular research achievements, i.e. generation of adapted technologies, be well communicated to the research and government personnel throughout the country.

4) The process of systematic data collection and analysis of the research area has not been implemented, except for specific research trials. Diagnostic and verification surveys of the farm households in the region need to be institutionalized into the research process providing feedback to the researchers to help fine-tune the selection of appropriate technologies for both on-station and on-farm testing.

Just as important for research design and choice of technologies and commodities to be tested is the need for data and analysis on the role or contribution of the Buberuka highland region to the national food and agricultural economy. Following the farming systems approach, the project must attempt to respond to locally defined research needs as identified though diagnostic/verification household survey analysis. However, these research signals have differed and may differ from pressures to respond to nationally declared commodity research needs as identified though economic and political analysis at the national level. It may not be easy to satisfy both pressures when they are not consistent. This poses a problem for the research planning process for the project.

One of the primary contributions that this project can make in this initial phase is to develop a method of research process that is capable of integrating the farming systems and the commodity research approaches. This development would satisfy items 3 a), b) and d) in the Project Evaluation Summary (PES) statement agreed upon by all project collaborators. The project, in pursuing its objective of implementing farming systems research in Rwanda, must set out a model whereby it neither replaces nor exists in isolation from the commodity research programs.

The experience to date suggests that the research focus and direction recommended by the two approaches can be competitive for the limited research resources available to the project. The complementary contribution of one method to the other must be developed. Farming systems is said to be able to assist commodity research, making it more productive by elucidating the farmers' problems and needs. Commodity research assists farming systems research by providing alternative reductionist solutions of technical inputs and coordination to improve productivity of resources used to produce the various commodities.

A background paper on the research planning process needs to be developed such that national and local research signals are clearly identified. Diagnostic/verification surveys, conducted on a periodic basis, can provide the input on local research needs to the research work plan development. The source of research signals based on national research needs must come logically from two areas. National research planning is ultimately subject to the national economic plan. Implications of the plan for the agricultural sector include its role in food supply, employment, trade, prices and investment. What agriculture's role is set out to be vis a vis these critical national activities bears directly upon the strategy

for agricultural research. Research priorities must take into account the government's development objectives, their order of importance and the resources available.

5) The TDY coincided with the collaborative discussions on the project evaluation. Reorganization of the project management, which was one of the critical issues, has subsequently been implemented. Without question, the appointment of the Rwerere station chief to be the project director and replacement of the expatriate team leader will provide the much-needed management on issues that were ignored or mismanaged earlier. Coordination of the project by a Rwandan on-station will be critical for the institution-building impact of the project. The relationship between the expatriate coordinator and the Rwandan chief-of-party will necessarily be critical for improved administration of the project. Terms of reference need to be written to expressly identify the need for coordination between the two officials.

6) The project has been placed under an unusual amount of pressure due to the expectations by many interested parties. The initial team leadership was unable to respond to these pressures; consequently, the new leadership will have the distinct disadvantage of having to change the image of the project in the minds of many. This will not be an easy task. To meet this challenge in the short run, the project must generate progress reports that focus on the achievements of the project as well as activities and documents that demonstrate achievement of the project purpose. Activities that continue integration with ISAR, the University and other institutions as well as a closer tie with CYMMIT, Nairobi will help meet the project purpose of institutionalizing farming systems research in Rwanda.

SHORT-TERM PROJECT NEEDS

Numerous activities are identified in the 1988 work plan and budget. Of the several recommendations that I have made, three activities have been identified as important for completion in the near term. These include 1) diagnostic/verification survey, 2) station workshop for UNR faculty and students and 3) revision of team members' terms of reference consistent with the reconstitution of the project.

1) Institutionalizing the farming systems approach in Rwanda requires that the project adhere to, test the approach of and train Rwandans in FSR methods. Perhaps most unique to the FSR approach is the focus on the farmer as a source of information for research planning. This is especially based on the need to conduct regular diagnostic/verification surveys. Yet to date only one major survey has been conducted and reported (*Preliminary Diagnostic Survey of Five Communes of Ruhengeri Prefecture, Rwanda*, Franzel et al., 1985). Research begins with an understanding of the farmer's situation. Successful institutionalization of this approach requires that methods for understanding farming systems, including diagnostic, verification, bench-mark and baseline surveys, be implemented on a frequent basis both as a training exercise for Rwandan researchers and as a primary source of information for research planning and evaluation.

It is recommended that the team, with the assistance of a short-term TDY social scientist, conduct a diagnostic/verification survey. The survey should generate information to focus the on-farm and on-station research agenda. It should also generate information to identify and evaluate technologies that are currently being tested on-farm.

In conducting this activity, the cooperation and recommendations of CYMMYT-Nairobi, MINAGRI-SESA and MINAGRI-ISAR should be requested. This effort should be used to update and correct previous diagnostics for the project area and baseline survey work for the Buberuka Highlands.

The results of this activity should be used to demonstrate the implementation of diagnostic/verification survey techniques in Rwanda. The survey data should be organized and reported as early as possible to provide input into the planning for the 1988/89 project work plan. The results should be made available to all appropriate officials in the Ministry of Agriculture as well as to other project personnel.

Finally, this exercise should be viewed as a component of the research planning/evaluation process. What does the survey indicate about whether farmers are sufficiently alike to allow a common set of experiments and recommendations? How distinct are the micro-ecological zones within the project? What are appropriate differential criteria for delineating these zones?

2) Station workshop for University of Rwanda faculty and students. The objective of this activity is to initiate the integration of the UNR faculty and students into the farming systems research methods at Rwerere. The workshop should be organized by the research team and University faculty with the assistance of the on-station training coordinator. This activity should be implemented under activity 19 but recognized as laying the groundwork for activity 22, special studies, to be developed with the University of Rwanda. The recommended cycle of student (memoir) research to be funded by the project is developed in the work plan under activity 22.

3) The final pressing activity for the project is the need to reconstitute the team with personnel and terms of reference to reflect the project evaluation recommendations agreed upon by all collaborative parties to the project. This includes the following:

a) terms of reference for the Rwandan chief-of-party;
b) terms of reference for the expatriate team coordinator/senior advisor to the Rwandan chief-of-party;
c) review of terms of reference for other team members;
d) review and development of terms of reference for team support personnel;
e) hiring of team position vacancies including (1) Rwandan soils/agro-forestry agronomist, (1) Rwandan information/extension scientist and (1) expatriate socio-economist;

POSITION DESCRIPTION

TEAM COORDINATOR AND SENIOR ADVISOR TO STATION CHIEF

A. NATURE OF THE JOB

The expatriate team coordinator and senior advisor to the Rwerere station chief will be the administrative leader and coordinator for the expatriate team and support staff. As senior advisor, the person will be the counterpart to the Station Chief and principal liaison to ISAR and the Ministry of Agriculture, Livestock and Forestry (MINAGRI), and other GOR officials.

B. DUTIES AND RESPONSIBILITIES

1. In collaboration with the GOR Project Director, is responsible for implementation of the project, including preparation of annual work plans, semi-annual progress reports, assignment of expatriate research and support personnel, supervision of commodity procurement and general logistics and financial monitoring.
2. Establishes and maintains collaborative relationships with the GOR (principally ISAR and MINAGRI), OAR/R and other donor agencies.
3. Provides leadership in the development of the linkages essential to the farming systems approach to be institutionalized. With the collaboration of the GOR Project Director, the Senior Advisor will coordinate the project research and training activities so that they are compatible with ISAR's mandate and direction. This collaboration will work to build long-term research and training linkages among ISAR, UNR and IARC's so that a comprehensive and coordinated network of agricultural research can be established in Rwanda with ISAR, UNR and other farming systems projects in Rwanda.
4. Conducts research on plant diseases and their interactive role with other biological stresses and socio-economic constraints in limiting crop productivity.
5. Identifies and implements needs for training. Assists in selecting participants for long-term academic and short-term technical/non-degree studies abroad. Organizes and provides on-station and on-farm instruction and training in farming systems research methods.
6. Advises the GOR Project Director in coordinating the activities of Rwandan research personnel assigned to the Project.
7. In consultation with the GOR and OAR/R, arranges for short-term consultant assistance.
8. Assigns AID-financed commodities, equipment, vehicles and other resource materials to expatriate team members.
9. Serves as the liaison person between the project team and OAR/R and the GOR.
10. Represents the participating U.S. universities to the GOR.
11. Represents the contractor in all policy and administrative decisions and in negotiations with the GOR, OAR/R and other parties, such as sub-contractors, other donor agencies, etc.

C. QUALIFICATIONS

The Team Coordinator/Senior Advisor must have administrative experience at the level of university department head or equivalent. Fluency in French (FSI S-3, R-3) is required. The person should also have adequate overseas experience in agricultural development in developing countries, ideally working on or with an interdisciplinary research team. This professional experience must include working in a French-speaking environment. S/he should have a Ph.D. degree in an agricultural discipline.

D. DURATION OF ASSIGNMENT

Three years.

POSITION DESCRIPTION

FSR SOCIAL SCIENTIST/SOCIO-ECONOMIST

A. NATURE OF THE JOB

This researcher will be responsible for providing socio-economic analysis and specific technical skills (see below) as a member of the farming systems project. S/he will participate in formal and informal surveys, assist in the design, management and evaluation of on-farm and on-station experiments and demonstrations and advise on the improvement of linkages among farmers, extension personnel, researchers and institutions involved in rural development. While the position calls for an agricultural economist, it is hoped that the person selected will have experience in both agricultural economics and sociology/anthropology. Short-term advisory support will be provided to supplement the skills of the person appointed.

B. DUTIES AND RESPONSIBILITIES

In collaboration with the other members of the FSR team, including the Rwandan counterpart:

1. Identifies and explains farmer attitudes, incentives, constraints, practices and objectives in relation to the farming system;
2. Designs and administers survey instruments as needed;
3. With the FSR team, analyzes and interprets data from surveys and on-farm experiments and demonstrations;
4. Trains counterparts and other team members (Rwandan and expatriate) in survey methods;
5. Pre-screens proposed agronomic strategies and technologies for their social and economic feasibility and acceptability;
6. Participates in the design, implementation and evaluation of on-farm experiments and demonstrations, especially as they relate to farmer participation;
7. Supports Rwandan participants and UNR students in field research for their theses/dissertations or memoirs;
8. Participates in evaluating the effectiveness of the farming systems approach, including the diffusion effects though informal social networks;
9. Performs other tasks that may be assigned by the Expatriate Team Coordinator/Senior Advisor.

C. QUALIFICATIONS

The socio-economist should have a Ph.D. in agricultural economics with experience in agricultural and/or rural development. The person should also have experience in interdisciplinary research and field experience in a developing country doing research at the farm/household level. The person should have skills in both quantitative and qualitative data collection and analysis. Fluency in French (FSI R-3, S-3) is required; a willingness to learn Kinyarwanda is highly desirable. Experience with, or willingness to learn about, agricultural production processes is also required.

Additional desirable qualifications include experience in the use of microcomputers for data analysis and in economic analysis and social impact studies of projects and innovations.

D. RELATIONSHIPS

On technical and GOR policy matters, the social scientist is responsible to the GOR Project Director; for job performance and adherence to AID and university policies and regulations, s/he is responsible to the Expatriate Team Leader.

E. DURATION OF ASSIGNMENT

Three years.

POSITION DESCRIPTION

PROJECT STATION MAINTENANCE MANAGER

A. NATURE OF THE JOB

The general service needs of a regional research station with a significant number of on-farm trials requires a special commitment to maintaining a well-functioning transportation fleet and general service support. The manager responsible for this activity also must train Rwandans to provide technical support for the research station. The two primary responsibilities are maintenance and training.

B. DUTIES AND RESPONSIBILITIES

Maintenance Activities:

1. Maintenance and repair of a fleet of eleven vehicles and five motorcycles
2. Maintenance and repair for nine station residences.
3. Maintenance and repair of station offices and storage facilities.
4. Maintenance of station utilities (electrical and backup water systems)
5. Maintenance of station compound, including security, roads and station appearance.

Training Activities:

6. Vehicle maintenance and utilities management

Trains four employees per year in the following areas:

a. Preventive vehicle maintenance/trouble-shooting;
b. Major vehicle repair (engine overall, transmissions, brakes, electrical systems, etc.);
c. Body repair (including welding, electrical/acetylene);
d. Shop maintenance (organization, scheduling, parts inventory management, supply and procure ment);
e. Utilities management.

7. Building/Compound maintenance and management

Trains two employees per year in the following areas:

a. Plumbing;
b. Home electricity and gas appliances;
c. Masonry;
e. Carpentry;
f. Security systems.

8. Provides logistical support for the FSR team in helping to carry out research and training missions of the project. Performs other tasks that may be assigned by the agreement of the Project Director and Technical Team Coordinator/Senior Advisor.

C. QUALIFICATIONS

The Project station maintenance manager must have broad knowledge and experience with maintaining a vehicle fleet and physical plant. Fluency in French is required. The person should have demonstrated teaching experience and skills.

D. DURATION

One year.