

PD. PAR-287  
1. 10. 10

NORTH CAMEROON

LIVESTOCK AND AGRICULTURAL DEVELOPMENT

PROJECT 631-0004

END OF TOUR REPORT

By:

Thomas M. Cahalan  
Project Agronomist

Prepared for:

USAID/Cameroon and the  
Government of the Republic of Cameroon  
Contract AID/afr-C-1566

April 1985



**EXPERIENCE, INCORPORATED**  
MINNEAPOLIS, MINNESOTA 55402

NORTH CAMEROON LIVESTOCK AND AGRICULTURAL DEVELOPMENT PROJECT

(USAID Project No. 631-0004)

End of Tour Report

Period Covered: June 1, 1980 Through April 30, 1985

Thomas Cahalan,  
Project Agronomist  
April 30, 1985

Experience, Incorporated  
Contract AID/Afr-C-1566

## Interorganizational Cooperation

Initial contacts were made with most of the research institutions and projects working in or near the project. Trials and the exchange of information and material were carried out throughout the life of the project. These trials included: Improved Sorghum Variety Trials (SAFGRAD), Regional Improved Cowpea Variety Trials (SAFGRAD), Peanut Variety Trials (IRA), Grass and Leguminous Forage Adaptation Trials (IRZ), and a Crop Rotation Fertility Study (recently initiated with IRA/Project Central North).

Whenever possible attempts were made to coordinate activities with other developmental organizations to work towards the development and extension of an integrated agro/pastoral permanent rotation system. Most of this coordination was directed at the improvement of single crops because there was no effort outside of the Mindif Project to develop complete farming systems in the project zone.

The first project conference was held with many of these agencies to work out a plan of coordination, but conflicting priorities and the lack of coordination outside the influence of the project prevented any real progress.

When the Central North Project began, efforts were made by the project to channel the food crop portion of the rotation system through their extension network; however, varieties best adapted for the project zone were not available through their system. Later, the Central North Project concentrated most of their efforts outside of the project zone where climatic conditions make agricultural interventions less risky. In 1984, the director of research for the Central North Project in Maroua was persuaded to begin a study of the effects of the project rotation system on soil fertility with the Mindif project.

The Seed Multiplication Project was used as a source of seed for the project and the project's 30 cooperating farmers who have been helping to develop the rotation system. Our experience has indicated that the Seed Project needs to be more concerned with quality control and a system of distribution which reaches a greater number of average farmers.

## Project Staffing

Some effort should be made when these projects are set up to have more control over the choice of counterparts and other technical personnel. It is a great waste of resources to bring American technicians into a project and then not provide them with interested and qualified people to work with and train in order to provide for the continuation of a project when the expatriots leave. My counterpart does not intend to stay with the project. There were no mid-level

technicians assigned to the project who could have been trained to provide some continuity. Trials at the Mindif Center were conducted with daily workers who were taught basic skills, such as how to read a scale, but they can not carry out trials without direct supervision of a trained technician.

### Personnel Training

Three agricultural monitors were trained to provide the farmers in the grazing block areas with extension agents having a foundation in the principles of soil and water conservation. The monitors were given a one-week intensive training program at Mindif Center each year. During these training periods, the monitors were given a written set of guidelines and asked to apply them to various farming situations. This approach precluded the monitors parroting a list of recommendations which the farmers should follow without understanding the principles behind them.

### Demonstrations and Tours

In 1981 and 1982, project cooperators and other interested farmers were taken on tours of the cooperator/demonstrators' fields. These tours were very difficult to arrange, since the best times to see the fields coincide with periods when many of the fields are inaccessible. These are also times when farmers are occupied with their own fields. Many of the cultural techniques introduced or promoted by the project could not be demonstrated during these tours.

In 1983, project technicians began taking a video camera along on visits to the project cooperators' farms. Using the video camera, improved cultural techniques were filmed as they were carried out. Cooperators were filmed giving their views on the project interventions which they were helping to evaluate. These films were shown to farmers at the Mindif Center during the dry season when they were less occupied. Training films were also shown at these meetings, such as the proper procedure for planting trees, a film made with the cooperation of IRA, Maroua.

Rural development projects could easily be equipped with inexpensive video equipment. This could be a valuable extension tool, especially in Cameroon where the television industry is in the developmental stages.

### Technical Inputs

The project set up its own supply of seeds, seed treatment, fertilizer, insecticide and other agricultural inputs to serve the needs of the collaborating farmers. Because many of the varieties and cultural practices were in a trial phase, the project had to become the supplier. However, if the benefits from the use of these crop inputs are to reach the average farmer, locally available sources

are needed. SODECOTON is the only agency with the capability now. Their concentration on cotton production in the department of Kaele inhibits the development of food crop production and soil conservation practices.

### Project Machinery

The Mindif Project was a 'beggar' project during its first three years of field trials. Farm machinery was borrowed from the Seed Project, C.B.L.T., the Onion Project of C.P.L.S., and the Agricultural Technical School in Maroua. Because the period when the fields have been softened by the first rains but before the ground is too soft to be worked by tractors is very short, it was very difficult for the project, without its own equipment, to put in trials on time. Fortunately, C.P.L.S. was able to loan the Mindif Project its tractor indefinitely and Mr. Furgett was able to buy an appropriate disk-harrow so that the project was equipped to begin field work on time in 1982 (with a borrowed tractor).

In 1983, tractors and farm machinery were purchased by USAID from Hamille-Afrique. There were many problems concerning the purchase and servicing of this equipment. The tractors came with inappropriate attachment equipment. The hydraulic systems were defective and not compatible with the farm machinery. The disk-harrow which was specifically requested to be compatible with the tractors is too large. The hydraulic systems were modified but have never worked properly for more than a week after they were repaired. The bush-hog went through two seasons after delivery before parts were furnished by the supplier to make it work.

A maintenance schedule and supply of spare parts have been established with the project chief of maintenance so that the tractors and equipment can be kept operational. A tractor driver was also trained to perform most agriculturally related work.

### Increased Association of Agriculture and Livestock Production

The basic application of the concept of more fully integrated livestock and agricultural activities is essential for the success of rural development in North Cameroon. However, the most effective means of accomplishing this integration and the major benefits which can be achieved through this integration differ in some respects from those outlined in the Mindif Project Reorganization.

The use of leguminous fallow is a technological intervention which cannot be adapted for wide use by the average farmer of Northern Cameroon at the present time because no leguminous forage species has been found which can reliably be established under the variable weather conditions of the region. Leguminous species which have the best chance of being established in North Cameroon are either poor competitors, poor seed producers, shallow rooted, slow growing, toxic, or fibrous and difficult to get rid of. Legumes

always require more nitrogen than they produce. The major benefit from the use of leguminous fallow in industrialized regions of the world is through green manure plow down. This practice is not appropriate for North Cameroon at this time because of the average farmer's limited time and material resources.

The most effective forage species which the project has come up with to use as forage fallow in a rotation system are two grass species, Andropogon guyanus and Hyparrhenia filipendula. The major advantages of using these species are that they are easy to establish, have deep fibrous root systems to build soil structure, and they produce abundant forage.

Because both soil fertility and the soil structure have to be maintained for a permanent crop rotation system to function, the project proposes that greater effort be made to encourage farmers to use manure on their primary fields. The lack of adequate transportation in the villages is a major obstacle preventing the recycling of crop by-products. The need for animal traction contract services is discussed in the project final report.

The major benefits for animals from the rotation system developed by the project is not a great abundance of crop by-products for animal fattening. The best use for these by-products is for animal health maintenance. If the crop rotation system is introduced on a large scale, local livestock could benefit from the protected, high-quality forage which could be grown by each farmer as fallow.

### Conclusion

The project technicians, agricultural monitors and collaborating farmers have all played vital roles in developing a practical system to intensify food production and maintain soil productivity. But this system will probably never have an extension phase. The project has been taken over by the Ministry of Livestock which is not involved in agricultural development. The Ministry of Agriculture has no developed extension services in the project zone. Unless these extension services are strengthened to provide an information and material link to the average farmer, all short-term projects dealing with the management of natural resources will complete a developmental phase, perhaps develop an appropriate system of technical interventions, and fade away.