REPORT ON A VISIT TO KENYA, TANZANIA, RWANDA AND UGANDA
19 September – 8 October 2002

FRP Research Scheme R6549, Phase II:
Scaling up the promotion of calliandra in East Africa

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ACRONYMS

ARDC Agricultural Research and Development Centre, Uganda
CBO Community Based Organisation
FORRI Forest Resources Research Institute, Uganda
HEM Trust Himo Environmental Management Trust, Tanzania
HPI Heifer Project International (international NGO)
ICRAF International Centre for Research in Agroforestry
ISAR Institut des Sciences Agronomiques du Rwanda
NGO Non-Governmental Organisation
RELMA Regional Land Management Unit (East Africa, funded by SIDA)
SARI Selian Agricultural Research Institute, Arusha, Tanzania
UNR Universitaire Nationale du Rwanda, Butare

INTRODUCTION

The project has now been operational in Africa for nine months, and activities are currently much further advanced in Kenya than in any of the other countries participating in the project (Uganda, Rwanda and Ethiopia). In Uganda and Rwanda, there have been delays in developing work plans and budgets for promotion activities under Output 4, although there has been good progress with an adoption study (Output 2) in Rwanda, and studies on farmers’ experiences (Output 1) and impact of calliandra (Output 3) are under way in Uganda (see June 2002 trip report). In Ethiopia, a training workshop on fodder tree establishment and management was held in March, but since then little information on progress has been forthcoming. The overall situation and farming system in Ethiopia (Amhara Region) is also very different from that in the other three countries: land tenure issues are problematic, domestic livestock are generally free-ranging rather than zero-grazed, and there is no significant market for dairy products.

The original plan for the visit had been to visit Amhara to re-assess the potential for the project to have real impact there; but we were unable to get confirmed internal flights and therefore had to cancel the trip at short notice. Instead, Charles Wambugu (the project’s Dissemination Facilitator) and I went to Tanzania (Arusha/Moshi) to explore the possibility of starting activities in the Chagga home gardens on the slopes of Mt. Kilimanjaro.

During the second week of the trip, I visited Rwanda (Butare) with Steven Franzel (Principal Agricultural Economist at ICRAF) and Charles Wambugu, to discuss the project’s activities there with Christophe Zaongo (ICRAF, Rwanda) and colleagues from ISAR. Charles Wambugu and I also visited Kabale, S.W. Uganda, to discuss the activities planned there.

A total of four days was spent at ICRAF HQ in Nairobi, mainly in discussions about the progress of the project in Kenya, particularly the study on seed marketing mechanisms (Output 5); development
of a proposal for RELMA to fund certain activities under Output 4 in 2003; and financial/administrative aspects.

**TANZANIA**

**Selian Agricultural Research Institute (SARI), Arusha**

Staff met: Dr Mbwana (Station Director), Charles Lyamchai, Margaret Kingamkono.

SARI has had strong past collaboration with ICRAF through the AFRENA network. For a short period in the late 1990s, SARI was involved, through an EU project, in promotion of calliandra as fodder for small scale dairy production in the Chagga home garden system practised on the slopes of Mt. Kilimanjaro. However, this funding ended in 1999 and since then there have been no resources for follow-up visits or any other further activities with these farmers. Our visit with Margaret Kingamkono to some of the farmers was the first time they had been visited since 1999. It was extremely encouraging to see the extent to which calliandra had been adopted by these farmers, even in the absence of any external support. The farming system (small, intensively managed holdings with one or two zero-grazed dairy cows) has many similarities to that in Embu, Kenya, and calliandra fills a similarly useful niche in boundary plantings and hedgerows. The farmers sometimes have problems marketing their milk, but recently a collection point has been set up at the local market where milk is collected daily and transported to Dar-es-Salaam.

The farmers we spoke to had a clear perception of the benefits of calliandra. For instance, one told us that milk production increased by 1 litre for every week that calliandra was fed to a cow; another that her cow’s daily production had increased from 4 litres to 10-12 litres. However, they lacked information on the best ways to manage the plants for optimum production, and on options for feeding (e.g. optimum supplementation rate, scope for drying leaves for dry season feeding) and seed multiplication. Several of the farmers had wanted to expand the planting on their own farms but had been unable to do so because of shortage of seed. It was clear that a relatively small input from the project would allow SARI to restart activities with these farmers, in particular with training, provision of seed, and scaling up to other farmers, both within the same area and in other sites on Mt. Kilimanjaro (and possibly also on Mt. Meru, where HPI is active).

The first activity proposed by SARI was to carry out a survey of the current situation with respect to tree fodder, in particular calliandra, on the slopes of Mt. Kilimanjaro. This would provide important baseline information for planning future interventions. Apart from this, training of ‘old’ and new’ farmers at the original site, and provision of seed, were seen as the first priorities. We agreed that the project should start funding these activities with immediate effect. Next year, the activities could expand to new sites, and could also include farmer exchange visits to Kenya. A study of the milk market and of ways to improve it was also proposed. These are areas that RELMA is likely to be interested in co-funding.

SARI has close links with several NGOs, CBOs and projects relevant to calliandra promotion. The UNDP-funded COMPACT project, based at Himo, promotes conservation and community development in and around the buffer zone surrounding the Mt. Kilimanjaro National Park. This project has close links to the HEM Trust, also based at Himo. We visited the Himo Project’s central training nursery, which reported high demand for calliandra seedlings from local farmers, for planting on terrace risers and boundaries for feeding to dairy goats and cows. Seedlings are sold for 70-100 TZS (0.08-0.12 USD). SARI has worked in the past with these projects, with Government extension agents, and with other NGOs and CBOs in the area. This network of contacts will help to increase the impact of any activities on tree fodder.
The activities proposed for Tanzania will contribute to the project’s Output 4. In addition the survey of farmer’s practices and experiences with calliandra will contribute to Output 1.

**Rwanda**

**Institut des Sciences Agronomiques du Rwanda (ISAR)/ICRAF, Butare**

Staff met: Christophe Zaongo (ICRAF-Rwanda), Prof. S. Déo Mbinyinkebe (UNR), Léonidas Dusengemungu (UNR student intern), Césarie Mukaruziga, Gilbert Ndizeye.

Project activities in Rwanda contribute to Outputs 2 (adoption study) and 4 (promotion).

**Output 2**

An adoption study is being carried out by Léonidas Dusengemungu at the University of Rwanda. At the time of the visit a draft had been completed; the final version is due for submission in December. Data have been collected from three agro-ecological zones: Butare (Central Plateau), Gikongoro (uplands of the Crête Congo-Nil), and Umutara (Eastern Savanna). Despite considerable differences between them, the data from the three areas have been analysed together. We discussed a number of improvements in the analysis and presentation, of which the most important were:

- Stratify the data by agro-ecological zone and analyse each separately, except in cases where results are the same for all three zones.
- Some re-analysis using appropriate statistical tests (t-test, chi-squared).
- More emphasis on gender and wealth status.
- Hold a workshop with partners (farmers, extension staff, NGO staff who assisted, etc.) to present the results to them and to get their feedback, which might lead to some modifications to the report.

Notwithstanding these recommendations for improvements, Léonidas Dusengemungu is a very capable and motivated student who has done a serious and well-constructed piece of work.

**Output 4**

Plans for promotion activities in Rwanda have been being developed for several months, but owing to delays in finalising the work plan and budget they have not yet been put into practice on the ground. The situation in Rwanda is different in several respects from that in the project areas in Uganda, Kenya or Tanzania. There are few dairy animals (many were slaughtered during the genocide), and although calliandra is used in some parts of the country, its principal uses are to provide stakes for climbing beans, and for soil conservation (contour hedges).

ISAR/ICRAF proposes to work with calliandra in two areas: Gisenyi, in N.W. Rwanda, and Byumba, in the north of the country near the Ugandan border. Both sites were visited with Christophe Zaongo during the visit. In Gisenyi, there is limited use of fodder and the main objective of the proposed promotion activities is for contour hedges. In Gisenyi the project will work with a CBO, Urunana (“We are together”), which is an umbrella organisation for 31 small common interest farmer groups, including women’s, youth, and dairy goat groups. Urunana, in turn, is one of eight CBOs supported by BAIR, an NGO based in Gisenyi and supported by the Dutch Government. Urunana has been given a 15 ha area of severely degraded forest land on a steep slope, and the aim is to set up a demonstration site using calliandra and other leguminous species (mainly *Leucaena trichandra*). An ISAR technician, based in Gisenyi, provides technical backstopping. Seed has already been supplied through ICRAF and a large nursery has been established at the bottom of the demonstration site. The seedlings will be planted out in March 2003.
The situation in Byumba is quite different. HPI is active in this area, and planting of fodder shrubs is a pre-condition for receiving a dairy cow. 265 heifers have already been distributed, and there has therefore also already been substantial uptake of calliandra and other fodder trees, using seed provided by ISAR/ICRAF. So far, however, there has been a lack of training and other associated capacity-building such as farmer exchange visits. This is the area where the project could make a substantial and cost-effective contribution.

The immediate priorities for calliandra promotion activities in Rwanda were identified as (i) training workshop for field technicians and selected farmers from BAIR, HPI and the ISAR/ICRAF project (Charles Wambu to participate in addition to staff from Rwanda); (ii) planning and layout for demonstration site in Gisenyi; and (iii) provision of technical support and germplasm for individual dairy farmers in Byumba.

UGANDA
FORRI/ICRAF project, Kabale
Staff met: David Siriri, Dickens Sande, Rhona Aseyiga.

Project activities in Rwanda contribute to Outputs 1 (farmers’ experiences with calliandra), 3 (impact assessment) and 4 (promotion) – see June 2002 tour report. No further information about progress on the impact study was gathered during this visit, but progress with Outputs 1 and 4 is summarised below.

Output 1
The first step in the study by Dr Philip Nyeko of Makerere University, on farmers’ experiences with calliandra with particular reference to pests and diseases, is an informal survey to use as a basis for finalising the formal questionnaire. This survey was in progress during our visit. On returning to ICRAF HQ, I agreed with Pia Barklund, a senior forest pathologist at ICRAF, that an additional component of the study could be funded by ICRAF Programme 3 to collect and identify any pests and pathogens encountered during the fieldwork.

Output 4
Promotion activities in Uganda are to be focused in two areas: the Lakeshore area near Kampala, and Isingoro County of Mbarara District in south-west Uganda; the latter will be managed from the Kabale station. During the last visit in June 2002, Charles Wambu and I visited the Lakeshore but were not able to go to south-west Uganda.

There has already been widespread promotion (and adoption) of calliandra in the Kigezi Highlands around Kabale. The proposed activities in Mbarara will build on the experience around Kabale and extend it into a new area. Isingoro has been chosen because HPI is active there, distributing both cows and goats. As in Byumba (Rwanda) there is therefore a pre-existing demand for fodder. This ideal entry point is complemented by strong support from the local authorities and in particular from the local Member of Parliament.

The project in Isingoro will be closely associated with an EU-funded project, also managed from Kabale, that is due to start soon in the same area. A technician will be employed, possibly with some support from the calliandra project, which will also contribute to his travel costs. Day-to-day promotion activities will be the responsibility of this technician, with supervision and support from Dickens Sande (based in Kabale). It should be possible for project activities to start almost immediately.
The project will work primarily through farmer groups, initially in about three parishes in Kabuyanda Subcounty, establishing group nurseries and carrying out trainings. There will also be three two-day training workshops will be run in Kabale, for a total of about 20 extension workers from HPI, ARDC and the government extension services (i.e. 6-7 in each training).

KENYA

Current activities in Kenya address Outputs 2 (study of adoption and farmer-to-farmer dissemination), 4 and 5 (study of seed marketing mechanisms). Data collection for the dissemination study is complete and analysis is in progress. Promotion activities (Output 4) in Kenya are much more advanced than in any of the other project countries. Hellen Arimi, employed by the project and based at Maseno, is implementing the project in Western Kenya. She is working with a wide range of stakeholders and making good progress although there are problems with transport. Charles Wambugu is working with a large number of NGOs and CBOs in Central Kenya. It was not possible to visit sites in Kenya on this trip but should be a high priority for the next one.

Output 5

A research NGO, Technoserve Inc., was commissioned by ICRAF to carry out the study on seed markets in Kenya. The first draft of the report was produced shortly before my visit. While in Nairobi I was involved in editing the report and also attended two meetings with the author of the report, Pauline Mwangi, and other Technoserve staff members. The final product promises to be a very useful document to assist the development of more sustainable mechanisms for tree seed.

ITINERARY

Thursday 19 September: Depart London (LHR) on BA 65.
Friday 20 September: Arrive Nairobi. Meeting at ICRAF on Technoserve seed marketing report.
Monday 23 September: ICRAF HQ; meetings with Charles Wambugu & Chin Ong (RELMA); work on Technoserve report.
Tuesday 24 September: ICRAF HQ (a.m.); work on RELMA co-funding proposal. Travel by bus Nairobi – Arusha (p.m.)
Wednesday 25 September: Arusha – Moshi; field visits.
Thursday 26 September: SARI HQ (a.m.); meeting with Charles Lyamchai & Margaret Kingamkono. Travel by bus Arusha – Nairobi (p.m.)
Friday 27 September: Meetings at Technoserve (a.m.) and ICRAF HQ (p.m.).
Sunday 29 September: Nairobi – Kigali by air; Kigali – Butare by road.
Monday 30 September: Meeting with Leonidas Dusengemungu & Steven Franzel at ISAR, Butare (a.m.); visit to Ndora nursery and farmers (p.m.).
Tuesday 1 October: Butare – Gisenyi by road; field visit near Gisenyi; Gisenyi – Kigali by road.
Wednesday 2 October: Kigali – Byumba by road; visit to HPI office & farmers; Byumba – Kabale (Uganda) by road.
Thursday 3 October: FORRI/ICRAF, Kabale; meeting with Dickens Sande and Rhona Aseyiga.
Friday 4 October: Kabale – Kigali by road; Kigali – Nairobi by air; ICRAF HQ (p.m.).
Monday 7 October: Meeting at ILRI HQ (a.m.); wrap - up meetings at ICRAF HQ (p.m.). Depart Nairobi on BA 64.
Tuesday 8 October: Arrive London (LHR).