PROFEIS–Mali annual summary report 2012

1. INTRODUCTION

In the past year, Mali has been in a serious crisis in terms of security as well as politics.

- March 2012: a military *coup d'état* in Mali
- March–April 2012: invasion of the North of Mali
- January 2013: beginning of the war against Islam extremists with the support of national, sub-regional and international communities to the national army.

However, the agricultural season 2012–13 has been good in terms of a good rainy season and a good harvest in general.

2. PROFEIS

The year 2012 marked the end of Phase 2 of Misereor funding to PROFEIS–Mali. From January to December 2012, the activities conducted were:

2.1. Clay incubator training for wide dissemination

- **Farmers, farmer organisations and schoolchildren**
  Ten training sessions were held including 10 villages to respond to the large demand and for wide dissemination. A total of 155 participants were trained, including 16 schoolchildren, 75 women and 44 men during the period of May–July: on 22–23 May and 28–29 May in Ouelessebougou and Yelekebougou villages, respectively; on 14 May a refresher training of the women's association in Zantièbougou; on 19 May a refresher training of the women's association in Diola; on 7–12 July three training sessions in the rural community of Kemeni involving a women's group, a youth group and primary schoolchildren; and on 4–5 August a women's group in the village de Diakitebougou.

- **University students from Animal Science and Agriculture Department**
  A total of 83 students (58 male, 25 female) and 10 teachers (8 male, 2 female) from the Animal Science and Agriculture Department of the University of Bamako were trained in the use of clay incubators for eggs and improving the survival of guinea fowl chicks. The students were from Chad, Benin, Niger, Burkina Faso and Mali.

2.2. Ongoing farmer-led experimentation

- **Tests on striga at Saye and Sarro**
  - For validation purposes, an experiment was conducted at Cinzana Research Station of the Institut d'Economie Rurale (IER, Malian agricultural research institute) with several treatments and replications. The design used by the men who had been innovating and experimenting on their own farms over the past four years was replicated on station. The scientists are now analysing their data.
  - Wide dissemination in the two districts Mopti and Ségou through training of farmers involved in poultry activities, farmer field visits, local radio and workshops.
  - Technical brochures were made to allow even wider dissemination in 2013.

- **Grafting *npégou* and *ngounan* trees**
  - This experiment is continuing since 2008 because it involves indigenous trees as plant material: *Lannea microcarpa (npégou)* and *Sclerocarya birrea (ngounan)*. The fruits of these trees are eaten directly and can also be made into beer. Both trees provide ingredients for traditional medicines and *ngounan* is also used to dye cotton. The *npekou* tree has a small red fruit. The *ngounan* tree has a larger fruit. The farmer innovator thought that, by grafting the two species, the small fruits of *npegou* will become larger like the *ngounan* fruit. He did this on his own initiative and was recognised as a farmer innovator because he was the first farmer known to have grafted two indigenous forestry species in Mali. In 2009, jointly with PROFEIS-Mali, the farmer started to experiment with grafting the *npegou* from three provenances. After 3–4 years, the grafted trees bore fruits but they were also small. In 2012, PROFEIS–Mali set up collaboration between the innovator and a woman scientist specialised in forest genetics and working with the government Forestry Department. She is advising the innovator on his farm about cross-pollination of the two tree species, which they will try out together during the next rainy season.
  - The innovator has also started a nursery with seedlings of grafted trees to be used for more cross-grafting.

Sclerocarya birea tree

Fruits Sclerocarya birea

Lanea microcarpa tree

Fruits Lanea microcapa

- **Pesticide solution from *"potokolonibo"* plant**
  - Women developed the solution from this local annual plant to reduce the high incidence of insect damage on vegetable crops (tomatoes, okra, cucumber etc). Since 2009, the solution is widely used not only in the village of Todjel, where it was developed, but also in many other surrounding villages within a radius of about 50 km. However, the spraying is time-consuming, as it has to be done every three days during the entire growth period (3 months).
  - PROFEIS–Mali organised collaboration between the women innovators and a woman scientist specialised in entomology from the national agricultural research institute. The women farmers had not been able to describe the insect that was damaging their

vegetable crops. They called it "tiny sand" in their local language. The PROFEIS–Mali Steering Committee suggested bringing in a scientist to help characterise and identify the insect. This scientist is now planning to do research with seven women farmers to see if it is possible to reduce labour inputs by decreasing the frequency of spraying the solution.

- **Improving the survival of guinea fowl chicks**
  The concentration dose of 2.5 kg of ash with 15 litres of water provided to guinea fowl chicks has been retained as recommendation after four years of joint experimentation in the village of Kanouala in Kemeni Rural Commune, Ségou District, by the male farmer innovator and a male scientist from the Poultry Department of the government services. The use of the ash solution decreased the high mortality of the guinea fowl chicks by 30–50% and sometimes even more during the cooler time of the year in July and August.

  Effect: The farmer innovator has now set up his own business to sell guinea fowl chicks. In 2012, he found that there was demand in his village for chicks, which he sells to local clients. He also sells some chicks to other farmers coming from neighbouring villages and sometimes even further away. Farmers have found that the local guinea fowls perform better when they have freedom of movement in rural areas instead of being in confined environments in urban areas. The farmer innovators sell:
  - 1 chick aged 1–15 days for 250 FCFA (USD 0.50)
  - 1 chick aged 16–30 days for 500–600 FCFA (USD 1.00–1.10)
  - 1 chick after 1 month of age for 750–1000 FCFA (USD 1.50–2.00).

  His service provider for egg incubation costs 2500 FCFA (USD 5.00) for 21 days (excluding kerosene).

- **Improving seed germination of local tree *Piliostigma reticulatum* ("*niama*")**
  The male farmer innovator and a male scientist in forestry from the national agricultural research institute are working together on the local innovation to increase the germination rate of the hard-seeded *Piliostigma reticulatum* tree. They have decided to continue the experiment in 2013.

2.3. Training in Participatory Innovation Development (PID)

A total of 77 participants (71 men and 6 women) were trained in PID in four sessions: 24–26 May, 26–28 June and 23–25 July in Ségou and 27–28 July in Mopti.

2.4. PROLINNOVA International Partners Workshop (IPW)

On 12–14 March, PROFEIS–Mali – coordinated by ADAF-Galle – organised the 13th PROLINNOVA International Partners Workshop (IPW 2012) in Bamako. More than 100 people, including 20 farmer innovators and experimenters from two districts, Mopti and Ségou, participated in the opening ceremony. The IPW participants (23, including 7 women) came from PROLINNOVA and PROFEIS Country Platforms in Burkina Faso, Cambodia, Ethiopia, Ghana, India, Kenya, Nepal, Senegal, South Africa and Uganda; the PROLINNOVA Oversight Group; the PROLINNOVA International Support Team from the Netherlands, the Philippines and Belgium (the PROFEIS backstopper Jean-Marie Diop) and, during the opening ceremony, also from ICRISAT (International Crops Research Institute for the Semi-Arid Tropics), Caritas and other partners of PROFEIS–Mali.

2.5. Agricultural fair

At the agricultural fair in Sikasso District called Foire Agricole de Sikasso (FASKO), held on 12–15 December 2012, four male farmer innovators exhibited the following innovations: two men showed how they graft *npégou* and *ngounan* trees, one man showed his clay incubator for poultry eggs (guinea fowl eggs for 27 days of incubation, chicken eggs for 21 days) and

one man showed how he improves the survival rate of chicks by giving them a solution of ash in water.

2.6. Farmer visit

On 25–27 September, 19 farmers (including 3 women) from two districts (Sikasso and Koulikoro) visited some innovations and innovators: two men who graft *npégou* and *ngounan* trees, one man who improves survival of guinea fowl chicks, and a group of women experimenting with a pesticide made from the *potokolonibo* plant.

2.7. Information and communication

Mass media (TV, local radio and newspapers) covered the first day of IPW 2012. In addition, PROFEIS–Mali developed three new posters with latest data from experiments to combat striga, the latest data from the *potokolonibo* experiment and data on diffusion of the clay incubator. It finalised two catalogues of farmer innovator and their innovations – one for Mopti District and one for Ségou District – and produced four technical fiches (clay incubator, ash solution for survival of guinea fowl chicks, latest data on the *potokolonibo* experiment, and the innovation to reduce striga damage in millet and sorghum fields) to allow wide diffusion through the national extension service.

2.8. Backstopping

Support and input on activities were provided by Jean-Marie Diop, especially leading up to and during the IPW 2012 (information by e-mail, Skype and phone).

IED–Africa (Innovation, Environment et Development in Africa) in Dakar, Senegal, provided the service of publishing a three-monthly bulletin and maintaining the website for PROFEIS–Mali and PROFEIS–Senegal.

2.9. External evaluation

In the period 7–22 October, the first two phases (2007–09 and 2010–12) of PROFEIS–Mali were evaluated by Roch Mongbo, a consultant from Benin, and Iris Paulus, a consultant from Germany. The evaluation team recommended a third phase focused on institutionalising PID.

3. OTHER ACTIVITIES

- On 20–24 May, the coordinator participated in the 28th annual conference of AIAEE (Association for International Agricultural Extension and Education) at Bangkok, focused on local innovations.
- In March 2012, the Fondation Yves Rochers awarded the Terre de Femmes prize to the PROFEIS–Mali coordinator for supporting the local innovation involving grafting of the *npégou* and *ngounan* trees. The funds were used to finance some joint experimentation by the scientist in forestry and the farmer innovator. Part of the funds is also for the training in grafting that the innovator is giving to 20 rural women up to March 2013.