



**– International Fund for Agricultural Development –
– Identifying and sharing innovation in Western and Central Africa –**

– Bird-bait crop and NERICA 4 rice –

I- Contexte :

1. Name of the innovation

Bird-bait crop and NERICA 4 rice

2. Country – Region

Democratic Republic of the Congo: Equateur Province

3. Organization

Agricultural Revival Programme in Equateur Province (PRAPE)

4. Who is the innovator?

Marcellin KOBONGO MBOMA.

5. Actors involved

Agricultural technical assistants and farmers

6. Starting date

January 2007 (with preparation of the ground)

7. Type of innovation

Technological and indigenous practices

II. Key concepts

8. Summary

Keeping birds away is a vital operation for a rice farmer, for the slightest dropping of his guard is enough for him to lose his entire investment. However, this takes all his time and stops him from doing other things, a situation that can lead to food insecurity in a purely agricultural household. To feed his family during this period of about a month, the family head therefore often asks his wife and children to take over the task of scaring away birds while he undertakes other activities such as hunting, fishing or collecting caterpillars – or they carry out these activities while he guards the fields. Children's involvement in bird scaring means in particular that they miss their schooling. In 2006, it was noted that the NERICA 4 variety sown alongside other varieties of rice was attacked less by birds. On the basis of this observation, it was decided to carry out tests to obtain some concrete results. It is also important to note that study of the migratory patterns of birds will quickly affect the results of this innovation. In the Bumba zone of the Democratic Republic of the Congo, for example, March-sown rice coincides with the arrival of flocks of birds. On the other hand, May-sown rice suffers very little from attacks by birds. Parallel with this innovation and during the growing phase, we observed that leaf and twig miner caterpillars were resistant to chemical treatment (Thiodan insecticide), since they are so well wrapped in the leaf that it prevents contact with the product. The use of broken palm nut spread over the field as bait attracted sufficient numbers of ants, which attacked the caterpillars, even in their hiding places. With this trial, we achieved good results while eliminating the high cost of treatment, risks of human poisoning and environmental pollution.

9. What problems does this innovation seek to solve?

The innovation seeks to reduce (i) the number of person-days and especially the hours spent guarding rice (especially for children and women), so that the time saved can be dedicated to other activities; (ii) the costs and risks of using chemical plant protection products. While guarding 1 ha of rice requires 60 person-days of 8 hours per day, this innovation would reduce it to 30 person-days of 5 hours. The 30 person-days saved would be devoted to other activities (schooling, in the case of children). Similarly, the use of palm nuts instead of expensive, toxic pesticides eliminates all expenses and risks and improves the farmer's income.

10. Factors for successful replication

- The value for farmers of seeing a reduction in the time spent guarding their rice fields
- An increase in rice marketed and an improvement in farmers' income

11. Main results

- In social terms, children go to school full-time and women's tasks are eased
- Household food security is ensured
- Confirmation of the results of the bird-bait crop innovation needs a trial period of three years

12. Target group(s)

- Poor farmers
- Women
- Children

13. Difficulties encountered

- Climatic disturbances, affecting development of bait crops this season
- Crops (two varieties) having different growing cycles from NERICA 4

14. Financial aspects

In financial terms, this innovation will enable a rice farmer to save US\$60 on surveillance (30 person-days x US\$2) and US\$50 that he would have spent on a litre of Thiodan to control leaf miner caterpillars.

III. Technical aspects

15.

The cropping technique entails the following stages:

- Choice and marking out of the land
- Clearing of the undergrowth
- Felling and cutting back (forest zone)
- Removal of timber
- Sowing (in line and drill seeding with three seeds)
- Weeding (at least twice)
- Guarding
- Harvesting and processing

IV. Further information

16. Key Contacts

Name	Organization	E-mail
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17. Internet link

18. Key documents

- Mémento de l'agronome (= Agriculturalist's diary), 2000.
- La Technique de Production de Semences au Zaïre "Culture vivrières" (= Seed production technique in Zaïre, food crops), vol. I by Elias Vanounou.
- Les ennemis de cultures en Afrique Centrale (= Crop enemies in Central Africa).