

# DIFFUSION OF DIRECT PLANTING ON PERMANENT SOIL COVER THE DIRECT SEEDING GROUP OF MADAGASCAR (GSDM)



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Working zones of GSDM  
in Madagascar.

**A**griculture in Madagascar has to face tremendous constraints: very low investment capacity, poor infrastructure network, low availability and high prices of inputs, uncontrolled bush fires and deforestation leading to severe erosion, loss of arable land and destruction of downstream infrastructures. As a consequence, yields are low and farmers' condition very precarious. Techniques of direct planting on permanent soil cover (DPPSC) can lead to solutions for sustainable and profitable agriculture.

## A wide range of cropping systems adapted to various conditions

A wide range of cropping systems was developed with farmers and can now be proposed for extension (Charpentier et al, 2001; Rakotondralambo and Razanamparany, 1998), covering 5 agro-ecological zones, and the major soil types, crops, socio-economic situations and a wide range of intensification levels.



Farmers conducted experiments in  
Antsapanimahazo, Central Highlands.

## Extension of Direct Planting on Permanent Soil Cover

- Organised extension of these systems started in 1999, with very limited means
- Over a thousand farmers in each working zone, covering hundreds of hectares

Due to lack of human resources, only the simplest systems (not always the most suitable for each specific situation) were proposed for extension and the increasing demand from farmers for advises and training on these systems could not be adequately fulfilled.

## The GSDM and the "Support to diffusion of Agro ecological techniques" Project

In 2000, the GSDM (Groupement Semis Direct Madagascar) was created, associating the main organisations involved in DPPSC in Madagascar:

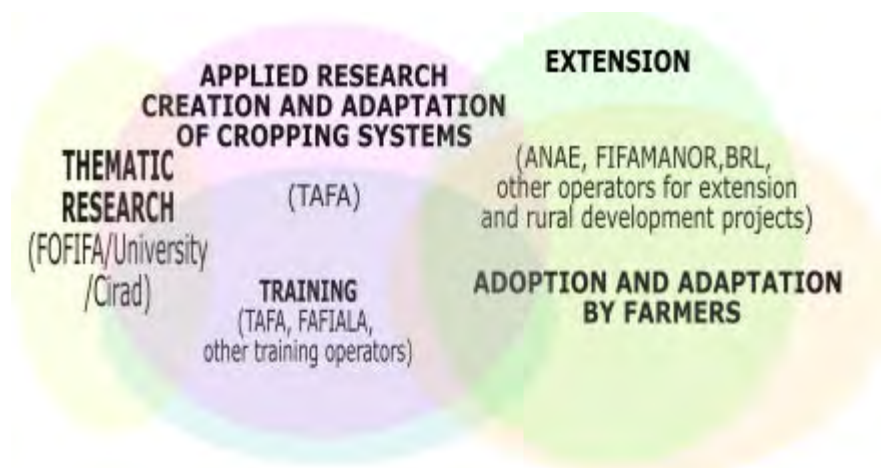
- TAFA, a NGO conducting applied research on DPPSC;
- FOFIFA, the National Centre for Agricultural Research for Rural Development;
- FIFAMANOR, a public organism for research and rural development;
- ANAE, the national agency for environmental action; and
- FAFIALA, the Centre for experimentation and extension for farmers' management of the tanety (hillsides).



Adoption of direct planting on permanent  
soil cover at village level. Alaotra lake.

Other organisations then joined the group and a 5 years project funded by AFD (French Agency for Development), FFEM (French Fund for World Environment) and CIRAD began in 2003. This project entitled "Support to diffusion of Agro-ecological techniques in Madagascar" aims at strengthening the GSDM and its activities, especially regarding:

- Coordination of activities: Research, training and extension activities are closely linked in a continuum.
- Training and capacity building.
- Extension.



## Knowledge generation and transmission of information

### References

- Charpentier H., Razanamparany C., Rasoloaelanana D. and Rakotonarivo B., 2001: Projet de diffusion de systèmes de gestion agrobiologique des sols et des systèmes cultivés à Madagascar: Rapport de campagne 2000/2001 et synthèse des 3 années du projet, ONG TAFA, Antsirabe, Madagascar, 152 p.
- RAKOTONDRALAMBO, P. and RAZANAMPARANY C., 1998. Adaptation du semis direct dans les régions de Madagascar. In Actes de l'atelier international Gestion agrobiologique des sols et des systèmes de culture, pp 257 - 263, 23 - 28 mars 1998, Antsirabe Madagascar. Eds Rasolo F., Raunet M., 1999 ANAE, CIRAD, FAFIALA, FIFAMANOR, FOFIFA, TAFA, Montpellier 658 pp.



Training in farmer's fields. Central  
Highlands Direct planting (soybean and  
maize) on crop residues.

## Conclusions

The grouping of the main organisations involved in DPPSC in a single association should allow better coordination of the activities required in the long process of creation-training-extension.

The priority given to capacity building prior to extension activities, the support of the government, the interest shown by farmers and the overall approach adopted by GSDM should allow large scale diffusion of these systems in various regions in Madagascar.



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