

# DIRECT-SOWING, MULCH-BASED AND CONSERVATION AGRICULTURE INTERNATIONAL INITIATIVE



## Involved stakeholders

### GFAR

Secretariat of FORA at FAO Headquarters

### CIRAD

Host of the animator from March, 2002 until August 2003  
Logistics for the animator, creation - maintenance of the Web site and the technical support for the network,

### IAPAR

Mrs F. Ribeiro salaries, host of the animator after September 2003.

### CIMMYT

Rice Wheat consortium  
Partner for the 1st case study

### ANAPO

The National Association of Oil-Seed Producers) Partner for the 1st case study

### FAO

Partner for the 2nd case study

### IFAD

Funding for the 2nd case study

### ICRA

(International Centre for Research oriented to development in Agriculture - Wageningen) /GTZ  
Partner for the 3rd case study

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In DMC, systems are composed of the use of cover crops...

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... and soil plowing is replaced by cover crop management.



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Crops are sown and develop on a mulch.



## The DMC Initiative: Linking Local Initiatives in a Global Program

The DMC (Direct sowing Mulch-based systems and Conservation agriculture) is a GPP under GFAR, an international initiative of the following stakeholders : CIRAD, CIMMYT, IAPAR, FAO, ICRA/Wageningen, IFAD, Anapo, GTZ ... Its aims are to strengthen the capacity of key stakeholders to develop suitable DMC systems and to accelerate their wide adoption. The proposed program features a process of learning and synthesis. By analyzing and comparing experiences from decentralized initiatives, by synthesizing and systematizing lessons learned, and by identifying and filling gaps - not only on technologies, but also on processes - DMC practices can be harnessed by a wider range of stakeholders.

Since March 2002, this Program is being implemented by a facilitator from IAPAR, Ms F.Ribeiro hosted by CIRAD. A DMC Website and case studies have already been implemented with the aim at better understanding of factors that can constrain the adoption of DMC systems. By comparing experiences from decentralized initiatives, by synthesizing lessons learned, identifying and filling gaps, DMC practices can be harnessed by a wide range of stakeholders. In 2004, the DMC coordination will be proposed to IAPAR.

**DMC for AFRICA: a side event during the II Conservation Agriculture Congress at IGUACU . A perspective for associating Act now, DMC, FAO, GTZ...**



## Biodiversity and conservation Agriculture in Mid Zambezi Valley after tsetse flies eradication

CIRAD, FFEM and French Ministry of Foreign Affairs are involved helping a conservation agricultural project located in Gurube district - Zimbabwean: there, cotton fields are cultivated to insure financial incomes. But they use unsustainable practices which are destroying their soils. More, HIV virus is annihilating the labour capacity of the youngest population. DMC (Direct sowing, mulch based systems and conservation agriculture) reduce the laboriousness of farming and farmers can find solutions with this methods. Most of farmers found benefits using DMC methods and expect more initiatives. This project showed that it is advisable to analyse, from the beginning, and with the farmers, the way to the process of innovation (the problem of the AIDS was so raised by families and not by the research). DMC methods will soon be promoted with a permanent team in a new cross-border project implying Zimbabwe, Mozambique and Zambia (Dryland Bio Project - projet GEF). CIRAD Zimbabwe will also soon be integrated in actions relative to the fight against HIV propagation and consequences on population capacity.

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## "La maison des paysans de Tuléar", a tool for farmers : The perspective for Conservation Agriculture and environment management in South West Madagascar

Western South of Madagascar is a semi-arid region with traditional breeding in which the agriculture is a risky activity due to climatic, economic and phytosanitary characteristics. Agricultural practices are unsustainable but there is an increasing interest of concerned stakeholders for DMC innovations and healthy use of inputs. These findings were obtained by "La maison des paysans de Tuléar" a Malagasy-French Cooperation Project collaborating with NGOs, national institutions and private sector).

This project works out in half controlled environment, technical training with involved farmers, systems adaptation, improving partnership to resolve tensions between farmers and livestock owners. Reference farms contribute to improve the local answering capacity to close the gaps. Findings extension is engaged and research continue working on identifying more compatible solutions for sustaining biomass during the dry season.

Long term conservation agriculture is promoted facing short term performance is a long and difficult process. It implies : Training, sensitization, and consideration of all the environment of the production. The learning step by step of the skill is a mastering process of these systems by the farmers themselves, through a precise and comprehensive process of training and information sharing.

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## DMC web site

DMC asked Cirad/MEDIACOM to realise its Web Site temporary hosted at the following address:

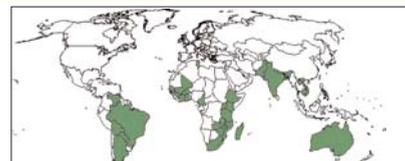
<http://agroecologie.cirad.fr/dmc/index.php>

This web site helps on referencing and listing well advanced southern experiences concerning DMC systems. It is available in english, french, spanish and portuguese to meet most of the projects all over the world. It presents and provide available synthesis or web links facilitating document exchanges and will be a portal to disseminate the results of DMC case studies.

A form to fill is available on line at the same address to give an opportunity to any concerned project to become a member of DMC presenting its results to other members and a large public.



Webmaster information: MEDIACOM  
agroeco@cirad.fr



Involved countries in DMC projects - 2002

## Teams contributing to DMC

- Transferencia de tecnologias referentes a equipamentos agrícolas que automatizem processos de cultivo em pequenas unidades produtivas - Embrapa - Brasil -
- Adequação do Sistema de Plantio Direto para as condições edafoclimáticas da região de Londrina, PR. - Uel - Brasil
- Broadening Agricultural Services & Extension Delivery (BASED) GTZ - South Africa
- Sedentary Farming Systems Project Brong Ahafo Region - German Technical Cooperation, MOFA, CRI, SRI, University of Kumasi - Ghana
- Rice-Wheat Consortium for the Indo-Gangetic Plains (RWC) - CIMMYT, ICRISAT, IPM CIPm IWMIrr IRI - Parts of India, Nepal, Bangladesh and Pakistan in the Indo-Gangetic Plains (IGP)
- Development of No-Tillage systems without herbicides for family farms at Central-Southern Parana - IAPAR, Forum of Unions of Small Farmers of the Central-Southern Region, ASPTA - Brazil
- Acacia auriculiformis woodlots in southern Benin: Nutrient cycling and response of maize to fertilizer - UNIHO, IITA, GREPIDM IFDC- Benin
- Accelerating adoption of reduced and zero tillage in rice-wheat systems in the Indo-Gangetic Plains - Nepal and Pakistan NARIs, NGOs, CIMMYT/ RWC, CGIAR, PRGA- Indo-gangetic Plains (IGP)
- Systèmes de culture sur couverture végétale en zone cotonnière - Cirad - SODECOTON - Cameroun
- Amélioration des systèmes de production grâce à une gestion agroécologique des sols sur les Hautes Terres Malgaches. NGO TAFA, GSDM, ANAE, FIFAMANOR, AFD, MAE, CIRAD
- Systèmes cotonniers en semis direct, depuis le tropique sud jusqu'à 12° S (pluviométrie de 1 000 à plus de 3 000 mm) - Etats de São Paulo, Goiás et Mato Grosso - MAEDA group, CIRAD- Brasil
- Systèmes de culture en semis direct, intégrant production de grains et élevage en ZTH, au sud du bassin amazonien - CIRAD, Agronorte - Brasil
- Mise au point des systèmes sous couverture végétale en Haute, Moyenne et Guinée Forestière - IRAG, CIRAD - Guinée
- Projeto APASA - Associação de Pequenos Agricultores do Serra-Abaxio. Universidade Federal de Goiás - Brasil
- Appui à la diffusion des techniques agro-écologiques à Madagascar - Cirad, TAFA, ANAE, FOFIFA, FIFAMANOR, FAFIALA, BRL, GSDM, FERT, Vétérinaires sans frontières, Interaid, CIRAD

## Case studies

DMC is envisaging a synthesis of 20-30 case studies, distributed across different agro ecological and socio-economic environments and different organisational settings. Not only successful experiences will be investigated; we also want to learn about the main challenges that must be tackled.

Together with the documentation already available, the case studies facilitated by the Direct-sowing, Mulch-based and Conservation agriculture (DMC) Global Program will be used as a basis of a synthesis work that should answer the question:

"Why in some cases farmers do adopt DMC systems and why in other cases they don't?"

So far, three case studies have been carried out: in Bolivia (ANAPO, CIMMYT), in Tanzania (FAO, IFAD, SARI, NORA, Japanese Government) and in Ghana (S.F.S Project, GTZ, ICRA). As immediate output, these studies are being valuable to help the improvement of the projects at local level.

As next steps, DMC intend at proposing more case studies to the call of the DURAS Project to be launched at the GFAR Conference in Dakar where DMC will be represented by F. Forest (CIRAD).

In Bolivia, ANAPO and CIMMYT launched research and development activities aiming at increasing the profitability of wheat-soybean systems, through technologies such as No-tillage. This systems has been increasingly adopted, and estimates show that almost half of the agricultural area in Santa Cruz de la Sierra.

However, the adoption has occurred only among the medium and large-scale farmers, and the current efforts of ANAPO aims to foster the adoption by small-scale farmers.

Cover of the Boliviana case study elaborated by Mrs. Agr. Teresa Balderrama Paredes for DMC

