

PARTNERSHIPS, FARMER PARTICIPATION AND CONSERVATION AGRICULTURE

INITIAL EXPERIENCES AND LESSONS FROM THE BAJIO (MEXICO)

Is it possible to coordinate the strategies and actions of multiple actors around the common goal of developing and diffusing Conservation Agriculture (CA) practices? How crucial is farmer participation in these efforts? How much of an emphasis should be placed on CA technologies vs. other types of innovations?

The initial steps of the ASOSID project provide partial answers to these questions in the context of the Bajío, a semi-arid, subtropical region of Central Mexico dominated by post-green revolution, highly productive irrigated small-scale farming, presently facing decreasing profitability of cereal production, dwindling availability of irrigation water and soil fertility degradation.

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Pre-2001 efforts to foster No-Tillage adoption

- Started in the 70s (FIRA, 1997), efforts included development and evaluation of No-Tillage technological packages, demonstration plots in farmers' fields, training of extension staff, creation of a manufacturing capacity for No-Tillage seed drills, and government subsidies for purchase of these drills, among others.
- By 2000, No-Tillage adoption had reached 40% of Bajío farmers (Jourdain et al., 2001). Adoption was partial since No-Tillage was being used only for summer crops, and residue burning or baling remained the norm.
- Obstacles for further adoption included inadequate residue management, poor access to No-Tillage seed drills, lack of training / technical assistance to farmers, lack of coordination among entities promoting No-Tillage and low levels of involvement of farmers and farmers' organizations.

Launching of ASOSID

ASOSID: Agricultura SOstenible en base a Siembra Directa (No-Tillage based Sustainable Agriculture)

Initial objectives of ASOSID:

Get Bajío farmers to develop, adapt and adopt NT-based technologies, with the active support of external institutions.

Principles:

Inter-institutional (Table 1), Research and Development, Participatory Development of Innovations (PDI).

Initial activities of ASOSID

Training of project staff, establishment of commercial / demonstration plots, experiments with farmers-innovators, launching of on-station "mega-experiment" on NT systems.

Difficulties & Problems

Informality, high transaction costs, low staff motivation, unequal appropriation by the various institutions, geographic dispersion, insufficient funding.

Table 1: Key No Tillage (NT) actors in the Bajío.

Entity	Main mandate	Formal member ASOSID AC?	Present role in ASOSID AC	Assigned full-time staff
SDA (MoA Guanajuato State)	Ag. Development, Ag. policies	No	Program leader, funding	1 (ASOSID manager)
SRL -DR 011 & Water Users Associations	Dam water management, various services to members	Yes	Extension, NT promotion, lending of NT seed drills	9
CIRAD-CIMMYT	International agricultural research	Yes	Participatory development of NT technologies	5
INIFAP	National Agricultural Research	No	Crop rotations, eval. biophysical processes	0.2
FIRA	Ag. Loans, Subsidies & Technology development	No	Subsidies to SRL for hiring of extension staff	0
Fund. Guanajuato Produce	Funding of Ag. research & Transfer of Technology	Yes	Funding	0
Monsanto-Mexico	Ag. Inputs & technical assistance to farmers	Yes	Co-sponsoring of diffusion events	0



Typical Bajío landscape before the winter cycle.

General principles

- Creating a common platform and vision among diverse stakeholders.
- Active involvement of farmers and their organizations.
- initial role and need for a "neutral" catalyzer
- CA technologies must provide genuine solutions to priority, explicit needs of farmers.
- Innovation has to go beyond the usual technological agenda and include socio-organizational aspects



Burning of crop residues is still a common practice.



NT maize planted on standing barley residues.



A key step in NT adoption is getting over the fear of leaving crop residues on the soil surface.

Institutionalization

- Formal non-for-profit NGO created 11/2002 (Table 2):

- Strong leadership of state government;

- Hiring of full-time manager and technical staff, increased public funding, major priority given to large-scale NT diffusion, restricted space given to research & PDI, all research conducted on-farm and linked functionally to diffusion activities.

- Major role for Farmers' organizations:

Hiring & assigning staff to ASOSID, buying NT seed drills & contracting them out, playing an active role in diffusion, member of the Directing Board of ASOSID.

- New, modest role for research organizations:

Simple service providers of applied & adaptive research.

Table 2: Phases of the ASOSID project

Phase	1. Transfer of NT technology	2. Birth of ASOSID	3. ASOSID institutionalized
Duration	End of the 80s - 2000	2-2001 to 10-2002	10-2002 to present
Leader	FIRA	CIRAD-CIMMYT	SDA
Other key actors	INIFAP, SDA, Private Sector	SDA, SRL, INIFAP, FIRA, Monsanto	SRL, FIRA, (CIRAD-CIMMYT)
Relationships among actors	None or bilateral, based on convenience & personal contacts	Informal through periodic stakeholder meetings	Formal (creation of a formal NGO among key stakeholders)
Main focus	Technology development & evaluation, Training of NT advisers, demonstration plots	Participatory Technology Development, Staff Training, Project structuring	Large-scale diffusion of existing NT technologies, NT technology adaptation
Model of diffusion	Top-down transfer of Technology	Participatory, farmer-to-farmer	Hybrid / farmer-to-farmer
Impact	40% partial adoption of NT (see text)	Organizational Innovation	Incipient (one cycle only)

Concluding Comments

ASOSID is still very young and will keep evolving over the next few years until it finds its niche in the region.

Research can and should play a key role in the development and eventual success of CA, and also in strengthening the capacity of other regional actors to innovate in a fast-changing environment.

Inter-institutional collaboration is complex; it can be successful if and when key stakeholders accept to engage in constant, frank, mutually beneficial negotiations to overcome unavoidable conflicts.

There is a need for farmers to be given (or to size) from the beginning a leading role in the design and implementation of such programs.

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