

EXECUTIVE SUMMARY

Grain South Africa
**Farmer Innovation Programme for
Conservation Agriculture**

Compiled by:
Hendrik Smith
Contributions by:
Marinda Visser

Background

In Grain SA's annual report and strategic plan Conservation Agriculture (CA) is highlighted as one of the main focus areas. In that respect, it was decided to develop a comprehensive strategy that will serve as a framework for accessing and managing funding (and projects) over the short, medium and long term.

Traditional and conventional soil cultivation systems, with intensive and continuous soil tillage, will generally lead to soil degradation and loss of crop productivity. This situation has led to excessively high soil degradation rates in South Africa. If we have to offer farmers a chance to survive on the farm and if sustainable and economically viable agriculture is to be achieved, then the paradigms of agriculture production and management must be changed and new farming practices must be implemented.

CA is universally accepted as a more sustainable and environmentally responsible way of producing crops. Although CA has been adopted as the preferred practice when producing crops in many countries, adoption of CA in South Africa has been relatively slow, despite some indications that the number of cultivations or field operations used have generally been reduced and the use of herbicides to control weeds have increased. Full implementation of CA at farm level, however require a systems approach which includes viable crop rotation systems, reduced or no tillage and successful integration of the livestock component. Research and development to support adoption of CA in South Africa has thus far been very specific and/or fragmented and have not yet been able to produce clear guidelines and support to producers of how to implement CA with all its components and principles successfully.

CA systems, as defined by FAO (2001), include the following principles that need to be applied simultaneously: a) Minimum mechanical soil disturbance using specialised implements; b) Diversified cropping; and c) Permanent organic soil cover. Other principles and technologies, or so-called Good Agricultural Practices (GAP's), applied to compliment CA systems are: a) Integrated soil fertility and acidity management; b) Integrated pest management c) Integrated weed management; and d) Integrated livestock management.

CA Farmer Innovation Systems

There is now increasing understanding that development of agriculture and natural resource management does not follow a linear process. An innovation systems (IS) perspective to development reveals that the actual change and learning processes are much more complex and diverse. An IS can be defined as a network of organisations, enterprises, and individuals focused on bringing new products, new processes, and new

forms of organisation into economic use, together with the institutions and policies that affect their behaviour and performance. The IS concept embraces not only the science suppliers but the totality and interaction of actors involved in innovation. It extends beyond the creation of knowledge to encompass the factors affecting demand for and use of knowledge in novel and useful ways.

Adopting the IS perspective to agricultural research and development (R&D) enables us to investigate issues traditional technology transfer theory and natural sciences could not deal with. An important perspective from IS, is that land-users are not merely recipients of new knowledge but also potential sources and/or partners in its generation, i.e. they are researchers and innovators in their own right. Local (farmer-led) experimentation, adaptation and ingenuity are vital for finding locally effective practices. The inescapable consequence of this is that farmers have to function as applied ecologists who have to fine-tune (construct) universal principles to their own social, economic and ecological circumstances. Accordingly, and at the very least, the emphasis has to be on on-farm research and the inescapable experiential and discovery learning that this generates; both of which critically place the farmer in the central role.

CA Farmer Innovation Fund

Many of the current R&D funding mechanisms are intended to encourage so-called 'participatory research and extension', however, few give real attention to stimulating and supporting local innovation through the innovation systems approaches mentioned above. The resulting pressure on resources calls for alternative financing mechanisms to generate incremental funds and to use these more effectively. Stakeholders from both the supply and demand sides must have the capacity to participate meaningfully in the IS, in general, and in its funding mechanisms, in particular, in order to gain the desired effectiveness and efficiency. Specific grant programmes—referred to here as “Farmer Innovation Funds” (FIF) —can be designed to provide direct, fairly simple competitive access to (small) grants or loans for individual farmers or farmer groups, businesses, or other stakeholders who wish to adapt, develop, or adopt innovations and business initiatives on topics and issues focused on CA. Access to such funding allows a wide range of innovations to be tackled, and under proper conditions may expand enthusiasm and innovation capacity among farmers, other rural stakeholders, and those who support them. The principle practices of the CA-FIF as part of the Grain SA CA programme are:

- a) It must be easily accessible to farmers (small-scale, emerging and commercial) and other stakeholders through simple application forms and procedures, simple fund disbursement modalities, support provided to farmers to fill in application forms and meet eligibility criteria, and the possibility of applying as individuals or groups.
- b) It should solve problems and test innovations defined and chosen freely by the applicants themselves.
- c) Strives to give farmers (or their structures, or the community) a prominent role in fund governance, including setting up criteria for selecting applicants, screening proposals, and M&E.
- d) Should have a relatively light administrative structure, so that over time the corresponding costs are reduced and bureaucracy is minimized, allowing timely response to applicants and disbursement of grants.

From international and local experience, it is envisaged that the best results will be observed when funds are set up to target pre-existing and successful organizations, farmer groups, and institutions that have prior experience with IS approaches, and when good support institutions or service providers are selected. The funds can be used for various purposes and types of innovations, including technical ones (natural resource management, for example, or improved production, processing, or transformation of produce), organizational ones (such as better access to input, service, and produce markets), and institutional/social ones (such as creating new social structures/networks and rules or transforming existing ones). To fulfil this purpose, funds may be used for implementing diverse types of activities: experimenting on a farmer's own farm, engaging in joint experimentation and other activities by farmers and other stakeholders (researchers, extension agents, facilitators, brokers, and so on), sharing existing knowledge and information, or sharing and disseminating successful experiences and technology. In doing so, the aim is also to strengthen the individual and collective.

Eligibility criteria should not be too strict. Given the diversity of organizations focusing on CA innovations and the difficulty in knowing an organization's true potential for change beforehand, any applicant should be eligible for support as long as it: (1) is recognized as useful by farmers; (2) has an identity—in other words, a history and effective operating rules that, even if they are informal, regulate relations between members and between members and the outside world; (3) has governing bodies that function effectively; and (4) has demonstrated its willingness to develop its innovation capabilities.

Some farmer organizations do not need special (e.g. financial) support, while others, especially small-scale farmers, usually require substantial technical, institutional and financial support. Within the South African context, it is envisaged that many CA farmer innovation initiatives will be initiated without any financial support from the FIP (the primary reason be a lack of sufficient funds and external capacity to support all CA initiatives). However, the Grain SA CA secretariat will assist these initiatives as much as possible through technical inputs, guidance and facilitation, especially during the initiation phases.

Funds are typically administered by small multi-stakeholder committees or secretariats (usually with 5–10 members but no more than 2 or 3 in some cases) in charge of organizing the calls for proposals and creating sufficient awareness about the fund, clarifying the funding modalities (grant size and co-funding share, interest rate if a loan is involved, and so on), screening applications in a formalized and transparent way, and overseeing the effective disbursement of funds (adapted to the financial services and circuits available to the applicants).

Funding Process Overview

Although the Grain SA FIF funding is currently mainly sourced from the Commodity Trusts (such as the Maize Trust), diversification of income sources will be developed in future, with possibilities of other sources of income derived and managed on behalf of specific sponsors and donors.

Proposals will be invited on an annual basis in the following categories, in accordance with the FIF annual funding cycle: a) *Solicited Funding* - the purpose of soliciting funding

is to proactively and strategically direct initiatives and/or projects into areas of greatest need or greatest potential impact. b) *Non-solicited Funding* - non-solicited proposals provide the opportunity of accommodating, within OR outside the key strategic areas or preferred programme themes, promising and relevant ideas/initiatives based on innovative thinking and with the potential to yield applicable and beneficial results. c) *Consultancies* - refer to short-term investigations (6-12 months maximum) which are crucial, urgent or exploit windows of opportunity and which have total budgets not exceeding R200 000. d) *Small Innovation Grants* - are a small grants component of the CA FIF that aims to help local farmer groups take action to conserve and protect their natural environment using CA. The grants are targeted towards established farmer networks and/or local community-based organisations that are successfully delivering projects to support sustainable farming.

The CA facilitator at Grain SA will fulfil the role and responsibility of the secretariat or administrator, which is to govern and implement the FIF. The capacity within the secretariat and Grain SA will significantly affect the scheme's success. After prioritisation of key strategic areas and themes by key stakeholders, the application process for funds is initiated through a call for proposals and for small innovation grants. These will kick-start the process of proposal screening, review, development, endorsement, contracting, disbursement of funds, implementation and M&E (action learning). The whole process will be administered by the CA FIF secretariat at Grain SA.

The above process encourages, allows or aims to match-make applicants (researchers, NGO's, brokers, etc.) with interested farmers to design projects together, and involves other farmers alongside scientists in reviewing research proposals (i.e. as members of the reference group). This extended peer review in no way dumbs down the science – the winning research will need to be top-notch scientifically (either natural and/or social sciences) and practically relevant to people at the sharp end.

The use of participatory monitoring and evaluation (PM&E) within the CA FIF is considered as a form of collective action, which enables project teams and organisations to analyse and interpret innovation in technologies and farming practices, to learn from their experiences, to adjust strategies accordingly, and to participate more in CA FIF decision making and control.

With all approved projects, "contracts" need to be signed formally as basis for fund disbursement. These contracts are either between the FIF disbursing the funds and the farmer grantees (i.e. an official farmers association or club), or between the FIF and the coordinating organisation implementing the project. In the latter case, the contracted organisation would sign again own agreements with farmer grantees or participants.

FIF beneficiaries are obliged to manage and share any knowledge and information derived from Grain SA funding according to IP Policy of The Maize Trust which is equivalent to the 'Attribution-Non-commercial-Share-Alike Global Public Licence.

CA FIF strategic goals

The overall goal of the Grain SA CA Farmer Innovation Programme is the mainstreaming of Conservation Agriculture by grain farmers to ensure sustainable use and management of natural resources while enhancing national and household food security and income.

The long-term outcomes are: a) Increased farming production and profitability (*Financial capital*); b) An improvement of the natural resource status and quality allowing sustained production (*Natural capital*); c) Empowerment of primary stakeholders with knowledge and skills allowing them to pursue different livelihood strategies (*Human capital*); d) Strengthening of social institutions (innovation platforms & networks, groups, memberships, facilitators, brokers, etc.) for sustained collective action (*Social capital*); e) Development of appropriate infrastructure (e.g. implements) that enable farmers to pursue with CA technology (*Physical capital*).

CA FIP Key Strategic Areas

The CA FIP secretariat has listed the following **Key Strategic Objectives (KSO's)** and themes, which will be reviewed and or improved on every three to five years: a) Diagnosis and documentation of CA systems; b) Awareness, Marketing and Access to Information; c) Farmer-centred Innovation Systems Research; d) Incentive and Market Based Mechanisms (IMBMs); e) Education and Training; and f) Innovation Platforms, Networks, Social learning, Brokering and Facilitation.