



Centre for Coordination of Agricultural Research & Development for Southern Africa  
Centre De Coordination De La Recherche Et Du Développement Agricole De L'Afrique Australe  
Do Centro De Coordenação Da Investigaçáo E Desenvolvimento Aorário Da África Austral

# The Promotion of Science and Technology for Agricultural Development [PSTAD] in the SADC region



[www.ccardesa.org](http://www.ccardesa.org)

## INTRODUCTION

The Centre for Coordination of Agricultural Research and Development for Southern Africa (CCARDESA) is a new not-for profit Sub-regional Organization (SRO) for Southern Africa Development Community (SADC) sub-region. CCARDESA was established by Southern Africa Development Community (SADC) Member states to coordinate the implementation of agricultural research and development (R&D) in the SADC region. CCARDESA's vision is "a prosperous and food secure Southern African region with vibrant rural livelihoods." Its mission is "to promote innovative research and technology generation and adoption for sustainable agricultural development through effective partnerships and capacity building."

One of the projects being implemented by CCARDESA is the Promotion of Science and Technology for Agricultural Development (PSTAD). The project is supported by the Forum for Agricultural Research in Africa (FARA), and implemented Sub-regional organizations (SROs) and National Agricultural Research Systems (NARS) in 34 African countries with funding from the African Development Bank. In the SADC sub region, PSTAD is being implemented in Angola, Malawi, Madagascar, Mozambique, Lesotho and Zambia.

The goal of the PSTAD project is to increase agricultural production and contribute to the achievement of food security and poverty reduction in Africa. Its main objective is to build the African agricultural research knowledge management capacity and support the dissemination and adoption of new and proven agricultural technologies. The project has the following three components.

- Knowledge and Information Management;
- Technology Transfer and Good Agricultural Practices; and
- Project Management and Coordination

Each of the three components has its own specific aim as described below:

**Knowledge and Information Management:** Creating functional African Agricultural Information and Communications Technology Network for access and exchange of agricultural information and knowledge.

### **Technology Transfer & Good Agricultural Practices:**

Facilitating wide-scale adoption of new and proven agricultural technologies.

### **Project Management and Coordination:**

supporting effective and implementation of the two technical components above in order to enable the project to deliver its objectives.

The above two technical components of the project are implemented through two sister sub-projects. The Dissemination of New Agricultural Technologies in Africa (DONATA) which addresses the technology transfer and good agricultural practices, and the Regional Agricultural Information and Learning Systems (RAILS) which addresses the Knowledge and Information Management component.

## DONATA

The DONATA component focuses on the adoption of proven technologies. Platforms were established in strategically selected areas for demonstration of the new technologies.

In the Southern African, the focus is on promoting varieties of maize and sorghum. Seed and technical support were provided to selected farmers who demonstrated the technology in their areas. Initiatives were put in place to make sure that more farmers will recognize the benefits of the new technologies.

In Malawi fields of all participating farmers are located along busy roads for the general community to observe and become motivated to adopt the new technologies and practices. In Zambia, the 'contact farmer' approach is being implemented. Contact farmers have the responsibility of communicating within their respective communities about the new developments and varieties. They also play a critical role in mobilizing farmers for accessing the market.

Mr. Emmanuel Mwelwa one of the contact farmers in Masaiti district feels that the IPTA approach has transformed his view. He now views farming as a business. Linkages, provided by DONATA to the breweries market have transformed him to be a successful sorghum farmer. To him it is not the input support which is necessary but the linkages which the project facilitates that are sustainable and more beneficial to committed farmers. He plans to scale up his sorghum production and is committed to working with extension workers in creating market linkages for his benefit and for the benefit of other farmers who look up to him as a contact farmer.

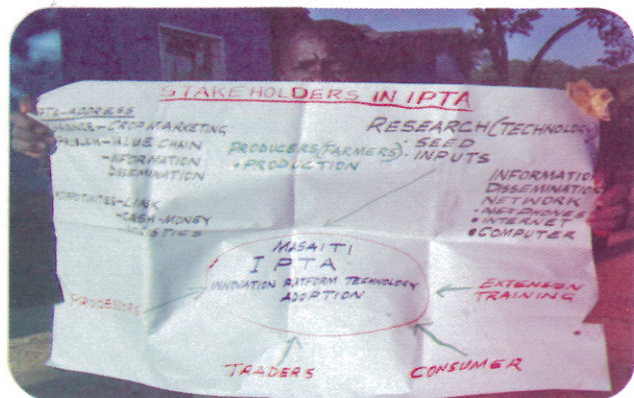


Figure 1 Mr. Mwelwa promoting the IPTA approach

In Lesotho existing co-operatives are being utilized as the starting point for building platforms. Such initiatives make DONATA a flexible project which is suitable to local circumstances.

Whereas such countries like Mozambique and Malawi have increased the number of IPTAs so as to increase the number of beneficiaries, some like Zambia have decided to focus on few IPTAs so as to synthesis the benefits. Madagascar reduced its number of IPTAs from five down to one in order to concentrate the limited resources.

Table 1 DONATA IPTAS in SADC countries

Country	Number of IPTAs	Crop(s)
Madagascar	1	Sorghum
Malawi	4	Maize and Sorghum
Mozambique	7	Maize and Sorghum
Lesotho	1	Sorghum
Zambia	2	Maize and Sorghum

The decisions are dependent on the local administrative and technical circumstances. Table 1 below shows the number of IPTAs established in each participating SADC country.



Figure 2 One of the Sorghum fields in Malawi

DONATA is centred on the ideology of innovative Platforms for Technology Adoption (IPTA). An IPTA is a combination of stakeholders that are actively involved in a given value chain. Therefore an IPTA would comprise several actors from breeders, seed multipliers, farmers, transporters, processors etc. The concept of an IPTA in DONATA involves bringing these stakeholders of a given value chain together in a bid to foster mutually beneficial and sustainable business relationships.



Figure 3 One of Maize fields in Malawi

## RAILS

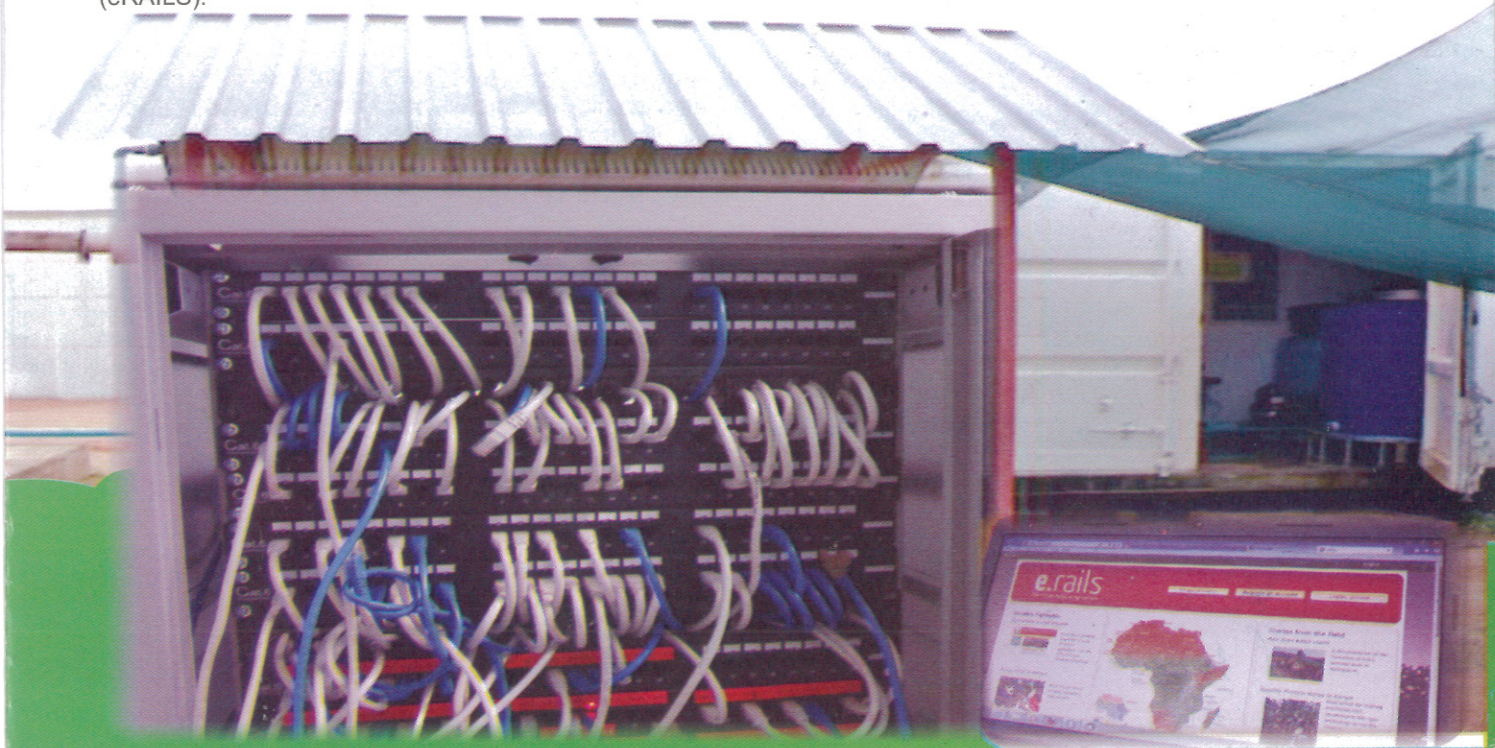
The RAILS seeks to address challenges posed by poor communication among National Agricultural Research Systems and limited capacity of researchers in using Information and Communication Technologies (ICT) to access and effectively disseminate information on agricultural technology and innovation. In the SADC region participating countries are Angola, Malawi, Madagascar, Mozambique, Lesotho and Zambia.

Through the project countries were provide with support to establish or enhance their ICT infrastructure. The support included the supply and installation of servers and internet connectivity in the participating countries. In addition, each country received at least ten net-books and two digital cameras. These tools have improved the capacity for information capturing sharing among stakeholders.

The net-books and mobile internet connectivity were provided to selected individuals. The individuals form part of a team which is responsible for information sharing from the fields and for ensuring that the benefits of internet connectivity and information sharing cascade down to the farmers. These are largely extension people who interact with farmers on a daily basis. These groups of people form what are called 'RAILS learning teams'. They are tasked with the responsibility of collecting, analyzing and sharing information among stakeholders.

Through the established communication and relevant training which is provided at both sub-regional and national levels, learning team members are now capable of following and taking part in online discussion groups. (Dgroups) which were established as part of the project as well as to access and share agricultural information through the eRAILS portal.

Another key achievement of the RAILS is the establishment of an online portal through which stakeholders can request for accounts to establish their own websites to share and access agricultural information. This portal can be accessed at [www.erails.net](http://www.erails.net). The platform is known as the electronic Regional Agricultural Information and Learning System (eRAILS).



# The IPTA approach bringing stakeholders together in Zambia

By D. Zengenene

Mr Lloyd Mbulwe, a sorghum breeder, Mr. Katongo an entrepreneur in the breweries industry, and Mr. Mwelwa a sorghum farmer from Masaiti met at Mr Katongo's 'Kapiri breweries' which is located in Kapiri Mposhi in central Zambia. The meeting was arranged to discuss possible synergies in their businesses. Their discussions included operational challenges faced by each of them in their work and ended with setting promises for each part to meet so as to improve each other's income.

Mr Katongo is an upcoming entrepreneur who has been in the beer brewing industry for the past 3 years. He uses at least two tonnes of sorghum every week. To produce his unique product, he mixes white sorghum with red sorghum. Prior to grinding the sorghum, he germinates it and dries it in the sun to improve the enzymes. challenges to improve the enzymes. His main challenge is in accessing the sorghum which he needs as his primary raw material. Sorghum farmers in Zambia are few and scattered because people prefer maize meal to sorghum meal as their staple food. Since farmers are scattered and each produces a small quantity of sorghum, it is expensive for processors to source and deliver to the industries that use it for production of other products.



Figure 1 From right, Mr Samuel Muwowo, Mr Katongo, Mr Mwelwe and Mr Mbulwe

Mr Mbulwe, a sorghum breeder is there to reverse the myth that Sorghum is inferior to maize. He argues that sorghum is better than maize in many ways, especially in the current situation of climate change and shifting seasons. To prove his point, Mr Mbulwe works hard to develop varieties of sorghum which suit the demands of farmers and the market. For breweries, Mr Mbulwe is concerned with varieties which meet the quality of beer which they want. For farmers, he needs varieties which produce maximum yield with minimum labour especially bird scaring. It is apparently a challenging task which he can only do best if he listens to the concerns of all involved players.

Mr Mbulwe, a contact farmer, is interested in producing a product that fetches a high price at the market with minimum investment. Motivated by the demand for sorghum, he works closely with extension officers to produce the best that he can. As a contact farmer, he has a responsibility of mobilizing and motivating fellow farmers to produce the crop and bring their produce together in one place so as to access the market easily.

The meeting of these stakeholders created a link that left all parties motivated to hard in a collaborative manner in order to improve their incomes. These are the linkages being promoted by the Innovative Platform for Technology Adoption (IPTA) approach under the Promotion of Science and Technology Adoption (PSTAD) project in Southern Africa. An IPTA is a platform that brings together different stakeholders in a given value chain in order to create sustainable mutually beneficial operational synergies. Through PSTAD, seed breeders, seed multipliers, farmers, transporters, processors and other key stakeholders are encouraged to collaborate and work towards improving their operational processes. This is the concept which Mr. Mwelwa (an active participant within the sorghum value chain) acknowledges to have changed his way of thinking and has led to improvements in his yearly income from sorghum production. His experience in the sorghum value chain has turned him into a key advocate of the IPTA concept to other farmers and people he associates with.

Other key players in advocating for the IPTA approach in asaiti are: Samuel Muwowo a senior Agricultural Officer-Extension and Mr Lusitu who are both working with the Ministry of Agriculture and Livestock (MAL).

# Farmers in Dowa request for the continuation of the PSTAD project in their area

By D Zengenene

In Mndolera Agricultural Extension Planning Area which is under Dowa District, PSTAD is promoting the Open Pollinated Maize Variety (Zm721).

Mndolera Agricultural Extension Planning Area lies about 60 km away from the capital city of Malawi, Lilongwe and about 65km away to the west of Dowa district Headquarters. PSTAD farmers in Dowa district live in Chitanga village, very close to their fields. It is therefore easy to gather the people together when there is need to. A team of PSTAD stakeholders which visited the IPTA took advantage of the easiness of gathering farmers and organized a quick meeting with villagers before visiting the fields.

Farmers were requested to express their experience and views about PSTAD. They appreciated the coming of the project to their area. They welcomed the project with so much zeal that they had to uproot some of the

varieties which they had planted before the coming of ZM721 , variety which is being promoted through PSTAD. By following the husbandry practices which were readily provided by extension workers, farmers reported that they were expecting higher yields than the previous year. They do not regret having uprooted their previous varieties.

The farmers expresses willingness to give seed to other farmers who were not involved in the project during the previous season. They also expressed joy that they will cut on input costs because with ZM721 there is no need to buy seed every year. Their request was that such support be continued in their area so that more and more people can benefit from the initiative. The fact that their fields are located along a busy road, PSTAD farmers in Dowa are convinced that other neighboring farmers admire their fields and are willing to be part of the PSTAD project in future.



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