

# CIMMYT in Southern Africa

Improving food and nutritional security through science and partnerships



CIMMYT-SARO is focused on the development and deployment of climate-resilient technologies to sustainably increase productivity and profitability, reduce yield variability and lower the impact on the environment.

As part of the world's largest public drought and low nitrogen stress research network, the demand for CIMMYT-SARO maize germplasm extends from Zambia to Afghanistan. Each year 500,000 envelopes of maize seeds are sent to over 70 institutions worldwide.

Improved maize varieties combine traits such as drought and heat tolerance, improved protein or vitamin A content, improved nitrogen use efficiency and resistance to important pests and diseases. CIMMYT works with farmers, extension workers, small- and medium-scale seed enterprises, NGOs and national research systems to scale out the use of improved seed among farmers.

During the past 10 years, sustainable intensification strategies based on the principles of conservation agriculture (CA) have been successfully promoted in Malawi, Mozambique, Zambia and Zimbabwe.

Partnering with other research institutions, CIMMYT-SARO develops projects that address complex food systems involving maize, legumes and livestock.

Making use of the combined benefits of minimum soil disturbance, crop residue retention and crop rotation, CA increases yields when compared to conventional agricultural practices after two to five cropping seasons. Trials on farmers' fields in Malawi, for example, increased yields by 20-60%. In Zambia and Zimbabwe, yields were increased by almost 60% using animal traction CA technologies.

## KEY DONORS:



Australian Government  
Australian Centre for  
International Agricultural Research



The International Maize and Wheat Improvement Center, known by its Spanish acronym CIMMYT, is headquartered in Mexico with 15 regional offices across the world. The CIMMYT-Southern African Regional Office (SARO) was established in Zimbabwe in 1985 as a regional hub serving the Southern African Development Community (SADC). CIMMYT-SARO has a strong network of partners, including national agricultural research and extension services, non-governmental organizations, agro-dealers, manufacturers, and multinational, regional and emerging local seed and input companies.



## Key Achievements

### Improved varieties:

- 823 seed shipments (1.3 million envelopes) sent to 835 institutions worldwide over the last four years.
- 150 improved varieties under commercialization in Africa and Asia.
- 64 legume varieties released in partnership with ICRISAT.
- Eight pro-vitamin A maize hybrids released with 28% more vitamin A content.

## Training in 2015

- More than 250 seed producers, agrodealers and agronomists trained in seed production, seed quality assurance, seed processing, marketing and promotion.
- More than 500 extension agents and researchers from national programs in the southern Africa region trained on the principles and practices of good agricultural practices.
- Training and technical support provided to 40 seed companies on market strategy development and various aspects of seed promotion, including product branding.

## Impacts

- 3.3 million farmers in southern Africa grow improved maize varieties developed by CIMMYT and partners. These varieties yield on average 675 kg more per hectare, which translates to an extra income of US \$368 per hectare.
- Conservation Agriculture (CA) practices improved yield by 20-60% depending on soil types and the seasonal rainfall.
- Combined use of elite drought-tolerant maize with direct seeding systems in conservation agriculture improved performance by more than 80%.
- Farmer to farmer extension, private institutional extension support and improved output market linkage increases adoption of sustainable intensification practices by 33%.