

Working towards 'Vision 2030'



Farmers Ngunya Phiri and husband Daniel heads for home with a full load of cobs on their ox cart after harvesting maize cultivated under conservation agriculture in their field in Chipata district, Zambia. Photo: CIMMYT / Peter Lowe

Overview

For over two decades, CIMMYT has been collaborating with the Ministry of Agriculture (MoA), Zambia Agricultural Research Institute (ZARI), as well as public and private partners in Zambia to diversify maize-based farming systems, improve agricultural productivity and production, and address climate change, food security, and agricultural export goals in the region. Additionally, CIMMYT is working closely with the Zambian government to roll out new innovations targeting smallholder farmers and agriculture based value chain actors in the country.



CIMMYT's research and innovation efforts align with Zambia's medium-term goal of "Socio-Economic Transformation for Improved Livelihoods" and its vision of becoming "A Prosperous Middle-Income Nation by 2030."

Key CIMMYT projects

Southern Africa Accelerated Innovation Delivery Initiative (AID-I) Rapid Delivery Hub:

AID-I, a CIMMYT-led project funded by the United States Agency for International Development (USAID), focuses on strengthening seed systems and scaling up innovations in the maize and legume value chains within the southern African region, particularly in Zambia, Malawi and Tanzania.

Sustainable Intensification of Smallholder Farming Systems in Zambia (SIFAZ):

The SIFAZ project cycles I and II, implemented by the Food and Agriculture Organization (FAO)

in partnership with CIMMYT and MoA Zambia funded by the European Union (EU), strives to empower Zambian smallholder farmers with the knowledge and tools to become more food secure in the face of evolving climate challenges.

Innovation Centers: CIMMYT has partnered with German development agency GIZ and the University of Hohenheim to identify key barriers and sustainable pathways for smallholder farmers. This collaboration is part of Green Innovation Centers for the Agriculture and Food Sector (GIC) launched in 15 countries by the global initiative One World No Hunger. In Zambia, the GIC works

with 22 cooperatives to provide training to 10,000 smallholder farmers on topics such as land fencing to grow grass, climate smart breeding, irrigation and more.

Adoption of Conservation Agriculture in Smallholder Farming Systems of Southern Africa (ACASA):

Funded by the Norwegian Agency for Development Cooperation and implemented by the International Institute of Tropical Agriculture and CIMMYT, ACASA is a three-year project implemented in Zambia, Malawi, and Zimbabwe. The aim of the project is to mainstream conservation agriculture (CA) for sustainable intensification of smallholder farming systems of southern Africa.

CIMMYT partner harvests experimental lines of provitamin A-enriched orange maize, Zambia. Photo: CIMMYT.



Areas of focus

Strengthening seed systems:

The AID-I project enabled the production of nearly about 9,000 metric tons of certified maize and legume seed, during the 2022/2023 season by Zambian seed companies and community-based seed organizations, directly benefiting about one million smallholder farmers.

CIMMYT works with more than 10 seed companies in Zambia. Annual more than 20,000 tons of maize seed is produced by these companies.

Climate adaptation and mitigation:

El Niño has contributed to starkly different weather patterns in northern and southern Zambia. CIMMYT aims to strengthen farmers' resilience to climate change in Zambia by strengthening seed delivery and promoting in conservation agriculture practices that are drought tolerant and

resistant to crop diseases such as soybean rust and FAW. For example, SIFAZ is working to improve cassava farming in northern Zambia by adopting planting on flat land as opposed to traditional ridges; in resource-deficit southern Zambia, fodder crops such as mucuna and lablab intercropped or rotated with maize, offer a lifeline to farmers.

To boost farmers' resilience to climate change and to emerging pests and diseases, CIMMYT supported production of over 170,000 tons of certified stress-tolerant maize seeds, covering around 7 million hectares of land in sub-Saharan Africa, including Zambia. This reached an estimated 7.2 million households and benefited 44 million people in sub-Saharan Africa.

Integrated Pest Management:

Zambia is the second largest soybean producer in the Southern African region. Soybean production in the region is threatened by soybean rust which can cause large yield losses of up to 90%, depending on crop stage and disease severity. AID-I is currently assessing farmers' demand and willingness to pay for rust-tolerant varieties in Zambia and Malawi and has a plan to create awareness about new varieties that show some tolerance to rust. Moreover, using funds from the AID-I project, Zamseed is producing a FAW-tolerant hybrid maize variety. The company plans to produce 200kg of this hybrid for commercialization and launch in 2024. CIMMYT is also engaged in research on weed control alternatives to herbicides in Southern Africa.

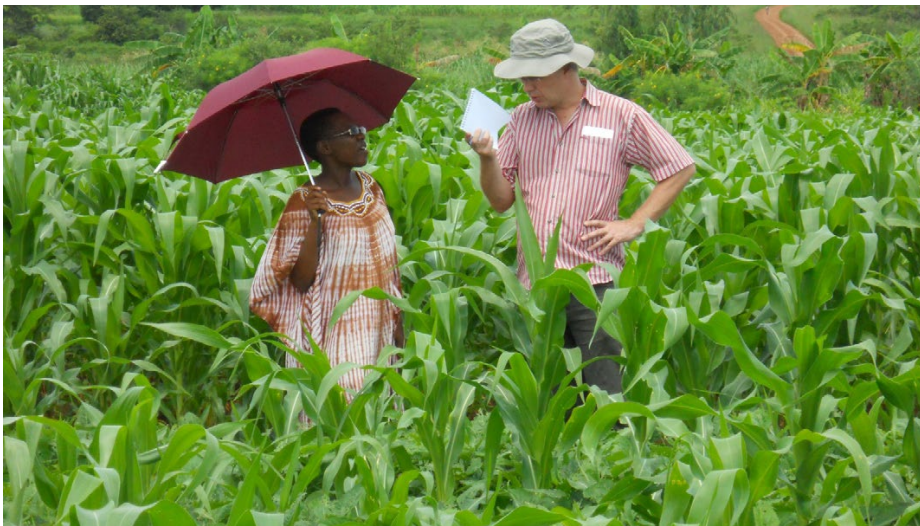
Capacity development: CIMMYT has been reaching farmers in rural areas of Zambia to disseminate agricultural and climate data through mobile networks. Tools such as BACKFEED on the VIAMO interactive voice response (IVR) were introduced to provide agronomic information, weather data, and soil information in local languages. Furthermore, in collaboration with the country's national seed authority, contracted farmers receive training on climate-smart agricultural techniques and seed production guidelines. CIMMYT also helped Afriseed accelerate market penetration strategy through intensive capacity building programs. CIMMYT has also partnered with the Alliance of Bioversity and CIAT to support the Munda Make Over TV show on national TV that provides information to farmers on various topics including climate change, pest management and marketing.

Farmer Amose Banda carries maize to a stook while harvesting maize in Mnkhambwa village, Chipata district, Zambia. Photo: CIMMYT / Peter Lowe.



Promoting scale-appropriate mechanization: CIMMYT has helped in the formulation of a national mechanization strategy for Zambia, which will serve as a blueprint on how to sustainably promote agricultural machinery and equipment across the value chains. Proposed initiatives include regional centers of excellence, a national mechanization association, and the use of information and communication technologies to promote mechanization.

Genetic Tools and Approaches: CIMMYT, in collaboration with the Excellence in Breeding (EiB) platform, works to mainstream genetic tools, approaches and technologies to improve the effectiveness of the breeding programs. Genetic tools such as doubled haploid technology, marker-assisted breeding, genomic selection and statistical indexing methods help to shorten the breeding cycle time and improve selection of the best varieties from generation to generation.



About CIMMYT

CIMMYT is a cutting edge, non-profit, international organization dedicated to solving tomorrow's problems today. It is entrusted with fostering improved quantity, quality, and dependability of production systems and basic cereals such as maize, wheat, triticale, sorghum, millets, and associated crops through applied agricultural science, particularly in the Global South, by building strong partnerships.

CIMMYT is a core CGIAR Research Center, a global research partnership for a food-secure future, dedicated to reducing poverty, enhancing food and nutrition security and improving natural resources.

Our partners

- US Agency for International Development (USAID)
- Bill & Melinda Gates Foundation (BMGF)
- International Fertilizer Development Center (IFDC)
- Grains Research and Development Corporation (GRDC)
- Context Global Development (CGD)
- AMAZONE-Stiftung
- Alliance Bioversity-CIAT
- African Agricultural Technology Foundation (AATF)
- Penn State University
- CAB International
- Purdue University
- TUFTS University
- HarvestPlus
- US Department of Agriculture (USDA)
- Agencia Mexicana de Cooperación Internacional para el Desarrollo (AMEXCID)
- Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA)
- Engineers Without Borders (EWB)
- Rwanda Agriculture Board (RAB)
- Syngenta Foundation for Sustainable Agriculture (SFSA)
- One Acre Fund (OAF)
- Australian Centre for International Agricultural Research (ACIAR)
- Swiss Agency for Development and Cooperation (SDC)
- University of Nairobi
- IFAR
- International Food Policy Research Institute (IFPRI)
- Deutsche Gesellschaft für International Zusammenarbeit (GIZ, Germany)
- Howard G. Buffett Foundation (HGBF)

Location

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