

CIMMYT in Africa

Maize is the most important food crop in sub-Saharan Africa, while wheat consumption is high in northern Africa and on the rise throughout the continent. CIMMYT works with partners such as farmers and seed companies to sustainably improve the productivity of these staples, which has a direct impact on poverty reduction and food security.

- Over 50 CIMMYT projects in Africa covering 32 of the 50 countries in Africa
- Over 180 CIMMYT staff

CIMMYT has offices in Ethiopia, Kenya, and Zimbabwe, but also has staff in Malawi, Mozambique, Rwanda, Tanzania, Uganda and Zambia.

Maize



- Of the 22 countries in the world where maize forms the highest percentage of calorie intake in the national diet, **16 are in Africa**.
- Over **300 million African smallholder farming families** grow and consume maize as a staple crop.
- Maize is the most important food crop in sub-Saharan Africa where it is consumed by **50% of the population** and is the preferred food in areas where one-third of all malnourished children live, making the case for increasing production of nutritious maize.

Wheat



- **People in Africa consume nearly 47 million tons of wheat a year.** More than 80% (39 million tons) of that is imported and used for human consumption, costing the countries billions of US dollars.
- **Demand for wheat in Africa is growing 5% annually,** driven largely by the expansion of urban areas, increasing incomes and increasing populations.



Fall Armyworm



Alongside promoting integrated pest management for Fall Armyworm (FAW), scientists are investigating the use of **innovative breeding techniques** to accelerate the development of **improved maize hybrids** that have FAW resistance alongside other adaptive traits useful in Africa, such as drought-tolerance and disease resistance, including maize lethal necrosis (MLN).

Rapid response to emerging threats



CIMMYT has a history of **rapid response to new and emerging constraints** to maize and wheat production, especially migrant transboundary **diseases and pests**. This has led to development of maize varieties tolerant to **MLN**, wheat varieties resistant to **UG99**, as well as availability of information on integrated pest management technologies to control **FAW** in record time.

Farming innovations



Researchers work with farmers to tailor **sustainable intensification** practices, such as **conservation agriculture**, that boost food production while limiting environmental impact.

Gender responsiveness



CIMMYT aims to reduce the gender gap in agriculture by **applying gender-aware approaches** to ensure that both male and female farmers have equal access to the Center's innovations in improved seed, machinery and agricultural techniques. In 2017, **GENNOVATE**, a global comparative research initiative involving more than 7,500 rural men and women in 26 countries (14 in Africa) made available a suite of tools and resources for scientists **applying gender-aware approaches**.

Healthy crops



Nearly **300 varieties of maize** have been released in the last 10 years. In 2017 alone, **36 new maize and 17 wheat varieties were released in Africa** – representing 50% and 34% of the Center's global seed production and dissemination efforts, respectively – with crucial traits including drought and heat tolerance to help farmers adapt to climate change. Some varieties offer enhanced levels of provitamin-A and micronutrients, such as zinc and iron through biofortification to fight hidden hunger.

Mechanization



CIMMYT creates and promotes the use of small-scale mechanization to reduce farmers' workload, **save time** and **increase productivity**. Farmers in Malawi are saving 35-45 days of labor with direct-seed machinery in conservation agriculture systems, compared to conventional methods.