

Farmers select their preferred varieties from user evaluation nurseries at Lusitu Bridge Camp, Chirundu, southern Zambia. (Photo: Neil Palmer/Crop Trust)



The Seeds for Resilience Project

Strengthening National Genebanks for Climate-Resilient Agriculture in Africa

Smallholder farmers in Africa produce about 35% of the food consumed in the region, but they face mounting challenges. Climate change is reducing their yields at a time when population growth and increasing urbanization are driving up demand for food.

African farmers urgently need more resilient, productive and nutritious varieties — of crops both old and new — that will help them feed their families and produce a reliable surplus to take to market.

Africa’s national genebanks conserve myriad samples of traditional varieties that could help smallholders, when used either directly by farmers or as raw materials by plant breeders to develop the crops of the future. Some of these, including different leafy green vegetables and other local crops such as the African eggplant, are not found in genebanks anywhere else in the world.

But many of Africa’s genebanks are facing their own challenges of underfunding and staff shortages, putting their collections of crop diversity, and thus future food and nutrition security, at risk.

Safeguarding Key Crops

Seeds for Resilience is a five-year, EUR 20 million project funded by the Federal Government of Germany through the German Development Bank (KfW), and managed by

the Crop Trust. It provides national genebanks in Ethiopia, Ghana, Kenya, Nigeria and Zambia with financial and technical support to improve the way they conserve and share their collections of key crop diversity. The partner genebanks are upgrading equipment, improving internal processes, including data management, and enhancing the technical skills and knowledge of staff.



Mathias Tembo, pathologist at the Zambia Agriculture Research Institute (ZARI), checks the cassava field genebank at ZARI's Mt Makulu Central Research Station, Lusaka. (Photo: Neil Palmer/Crop Trust)

The project is also helping the partner genebanks strengthen their linkages with user communities. This ensures that the diversity in the genebanks is available to all those who can put it to use in delivering more, and more nutritious, food to Africa's growing population.

In each country, the project is focusing on crops (see below) that are important components of small-scale farming systems and that have the potential to transform national food and nutrition security.

"National genebanks in sub-Saharan Africa are integral to the future prosperity of the region. They provide scientists and farmers with options, including the raw material needed to breed improved crops, that can be more resilient to drought and high temperatures, and more nutritious and productive than those currently grown."

NORA CASTAÑEDA, *Seeds for Resilience Project Leader*



Yam from regeneration sites at the National Centre for Genetic Resources and Biotechnology (NACGRAB) in Nigeria. (Photo: Neil Palmer/Crop Trust)

Seeds for Resilience provides financial and technical support to ensure these five national genebanks will reach the standards necessary to ensure their collections will be safe and widely available in the long term.

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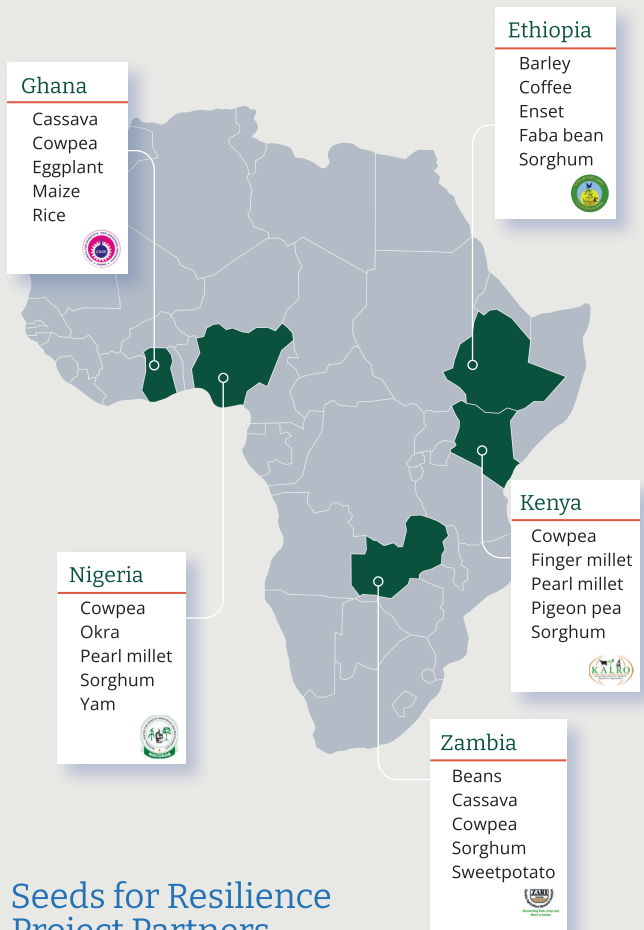
Asking Farmers What They Need

One of the central pillars of the project is participatory evaluation of the diversity in the genebanks. Seeds for Resilience supports the partner genebanks in working with diverse groups of farmers to evaluate their collections and identify the samples that have the characteristics the farmers are looking for. Often, women prioritize nutrition and taste, whereas men seek the varieties that give the highest yields and need least inputs. The project ensures that both groups are heard.

This participatory approach engages a wide range of stakeholders, from farmers and plant breeders all the way to the consumers who generate the demand for farmers' produce, and has proven to be successful in generating new crop varieties that are rapidly taken up by farmers and truly have an impact.



Seed conservation at the National Centre for Genetic Resources and Biotechnology (NACGRAB) in Ibadan, Nigeria. (Photo: Neil Palmer/Crop Trust)



Seeds for Resilience Project Partners

Project Priority Crops for Conservation



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