

Genetic Resources Center, IITA, Nigeria



Genebank at a Glance

Full name	Genetic Resources Center
Country	Nigeria
Year established	1976
Conservation methods and facilities	Seed, <i>in vitro</i> , field collection, cryo-preservation
Number of staff	56
Total number of accessions	37,806
Number of accessions distributed annually	2,585

Recent Highlights

- The IITA genebank has a diverse collection of more than 6,000 accessions of maize, soybean and cowpea, as well as underutilized legumes, including Bambara groundnut, African yam bean and Kersting's groundnut and cassava aroids, banana/plantain and yams.
- The main focus has been on the development of a program of research on underutilized legumes, particularly Bambara groundnut and African yam bean. This includes an analysis of variation in key traits such as yield, cooking time, nutritional properties, nitrogen fixation and drought tolerance.
- Work on underutilized legumes also includes a genetic diversity analysis based on agro-morphological traits and molecular markers, with the primary objectives of enhancing use for breeding, food, income and nutrition security, and allele mining for climate resilience.
- Farmer participatory evaluation of some of the underutilized legumes in the collection of the IITA genebank is ongoing to identify promising farmer-preferred accessions that could be further developed by breeding programs for future varietal development.
- Unmanned aerial vehicle drones have been used for pilot studies in clonal crops conserved in the field during regeneration. The multispectral camera captures diverse morphological and physiological traits, such as plant height, plant morphological architecture and chlorophyll content of each accession.
- The genebank uses Diversity Array Technology (DARtseq), a next-generation sequencing method, to assess the genetic diversity of yams and cassava and to identify important traits that could be useful for improving these clonal crops.

