

Genebanks - 2022

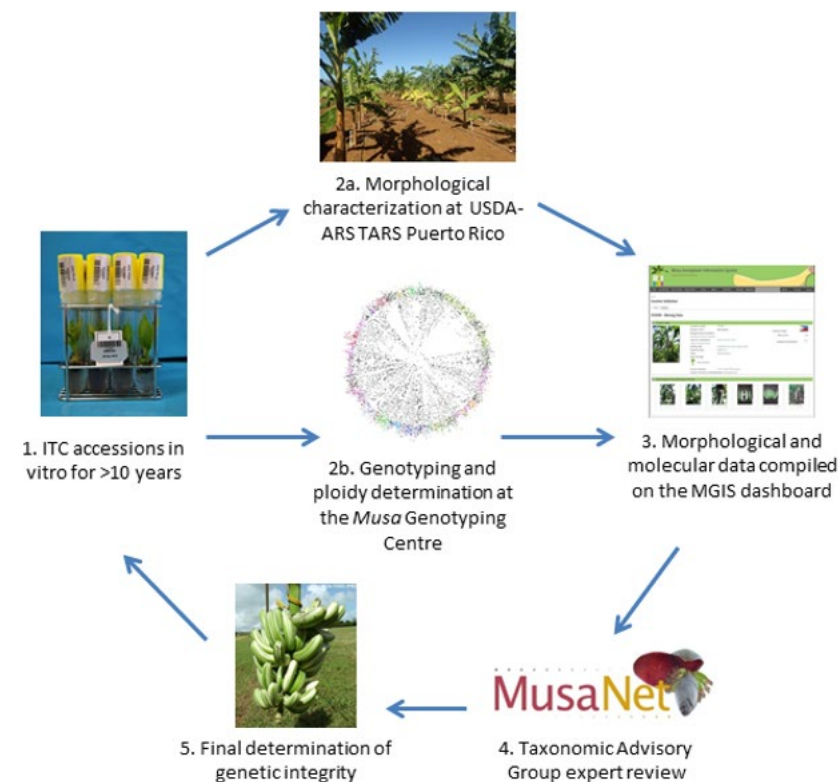
Charlotte Lusty

Science Council Drop-in March 2023

CGIAR Genebanks



Centre	Location	Crops	Conservation form	Species	Accessions in 2022
AfricaRice	Bouake, Cote D'Ivoire	Rice	Seed	1	19,699
Alliance - Bioversity	Leuven, Belgium	Banana	Tissue culture, cryo	2	1,700
Alliance - CIAT	Cali, Colombia	Beans, Tropical forages, cassava	Seeds, field collections, tissue culture, cryo	853 (2,111 combined with ILRI)	65,109
CIMMYT	Texcoco, Mexico	Wheat, maize	Seed, field collection	4	152,089
CIP	Lima, Peru	Potato, sweetpotato, Andean roots & tuber	Tissue culture, field collections, cryo	11	16,318
ICARDA	Rabat, Morocco and Terbol, Lebanon	Wheat, barley, chickpea, lentils, faba, grasspea, temperate forages	Seed, field collections	625	151,979
IITA	Ibadan, Nigeria	Cowpea, various legumes, maize, banana, cassava, yam	Seed, tissue culture, cryo	99	34,883
ILRI	Addis Ababa, Ethiopia	Tropical forages	Seed, field collections	1730 (2,111 combined with CIAT)	9,703
IRRI	Los Banos, Philippines	Rice	Seed	1	132,604
					584,084



Cycle of genetic verification in banana

Genebanks

Diverse users select and access crop diversity more precisely using enriched data and tools from efficiently conserved collections secured in perpetuity



SDG 2.5

WP1



Essential operations to fulfil legal obligations to conserve and make available crop diversity in compliance with international policies and phytosanitary norms.

WP2



Futureproofing - cryopreservation, seed quality management **germplasm health units** and **policy engagement**.

WP3



Enriching accession data and facilitating the use of crop diversity

WP4



Strengthening the global system for conservation and use of plant genetic resources for food and agriculture.

Genebanks

WP1



Essential operations to fulfil legal and moral obligations to conserve and make available **crop diversity** in compliance with international policies and phytosanitary norms.

WP2



Futureproofing - cryopreservation, germplasm health, longevity and policy engagement.

WP3



Facilitate the
Genetic Innovation, RAFS, Systems transformation, Regional Initiatives and diverse partners

WP4



Strengthening the global system for conservation and use of plant genetic resources for food and agriculture.

Diverse users select and access crop diversity more precisely using enriched data and tools from efficiently conserved collections secured in perpetuity



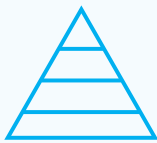
Genebanks key results in numbers - 2022



4 out of 9 CGIAR genebanks with collections at performance targets.
3 negotiated long-term partnership agreements from Crop Trust.



38 capacity development events with **625** participants from **> 50** countries



49 standard operating procedures newly drafted or improved



Georeference, genotypic and morphological data improved for **30** crop collections



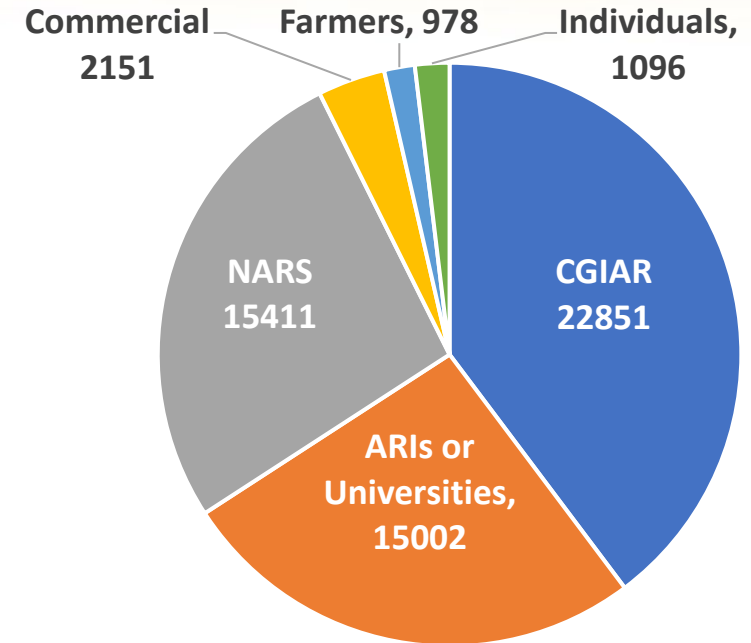
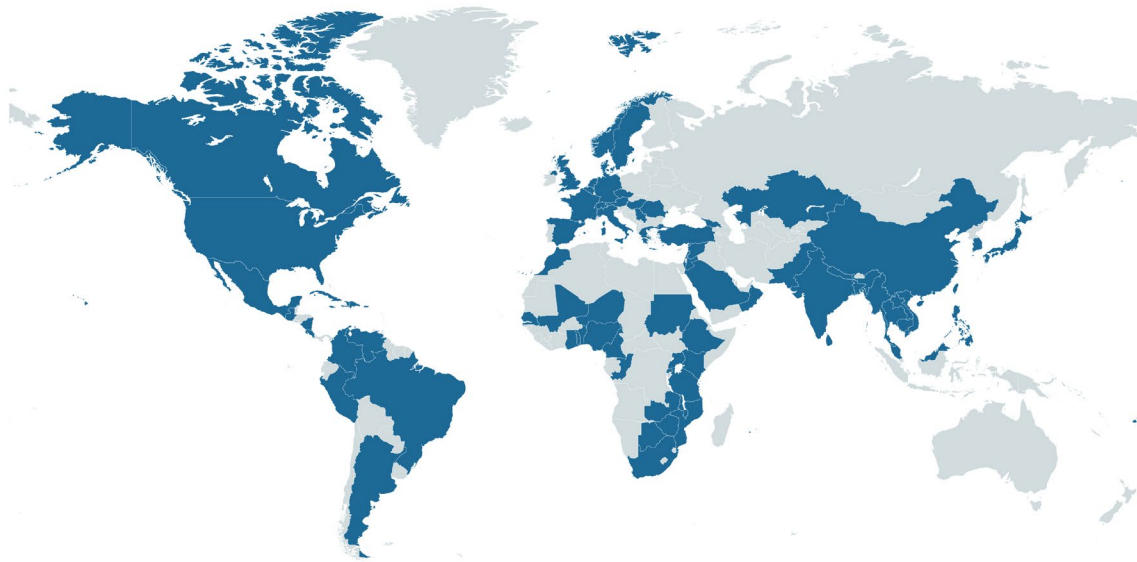
57,518 germplasm samples distributed.
60% in response to external requests from users in **86** countries



253,752 accessions processed by Germplasm Health Units in **930,000** diagnostic tests

Genebanks user

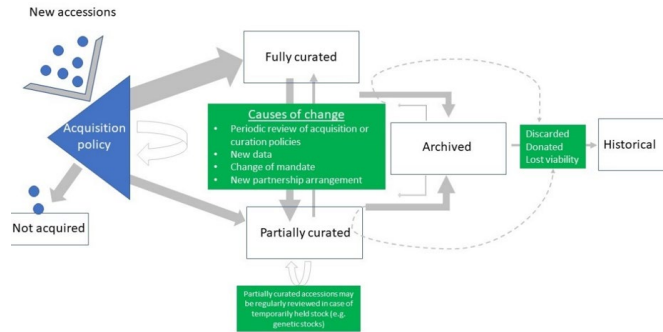
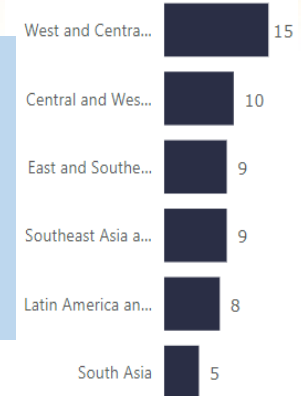
- Digitized plant and seed images
- Refine georeference data
- Genotypic information
- Subsetting tool
- Subsets for specific traits
- Phenotyping where appropriate
- Capacity building



Enabling policy: Convention on Biological Diversity COP15 adopts multilateral mechanism for sharing benefits from Digital Sequence Information

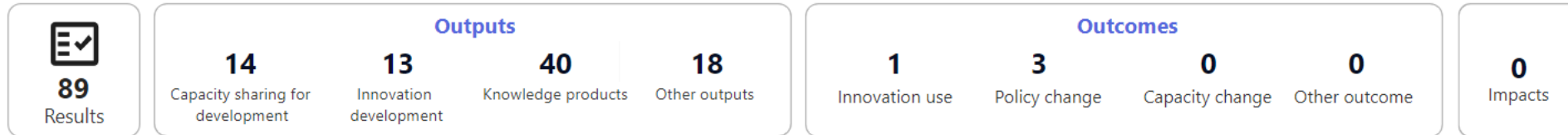
Genebanks – 2022 key results

Results by regions



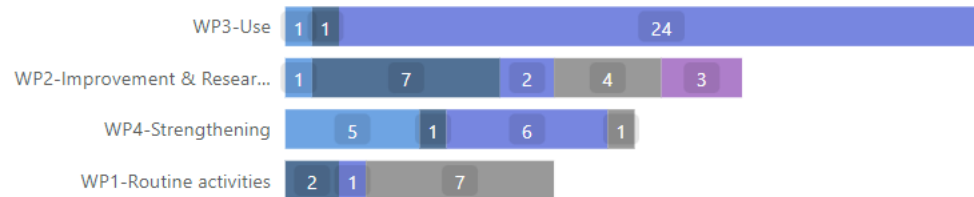
Key result story: Dynamic accession curation policy framework

- 36,000 archived
- 39,000 partially curated

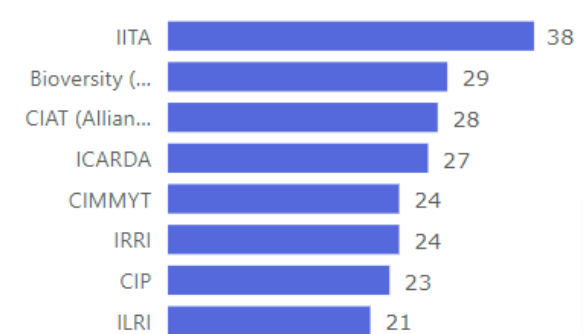


Results by Work Packages

● Capacity sharing for development ● Innovation development ● Knowledge product ● Other output ● Policy change



Contributing CGIAR Centers



Brand New Genebanks



Future Seeds – Cali, Colombia



Seeds for Life – Rabat, ICARDA