## Performance of the Genebanks CRP 2013

The CGIAR Centers have an obligation to the world to conserve and make available the 35 ex situ crop and tree collections under their management according to the provisions of the International Treaty of Plant Genetic Resources for Food and Agriculture (ITPGRFA). The Genebanks "CGIAR Research Program" (Genebanks CRP) provides security in funding for the routine operations of the genebanks and works towards improving individual performance standards and strengthening quality and risk management systems in all genebanks.

A total of 154,894 germplasm samples was provided by the CGIAR genebanks to users in 2013; 67,800 distinct accessions were provided to CGIAR Research Programs (CRPs) and 30,965 accessions were sent outside the CGIAR directly to NARS (51%), advanced research institutes (33%), farmers and the private sector (16%) in 102 countries. These numbers represent an increase of 20% in distribution compared to 2012. This is a unique service and, in many cases, represents the only source of healthy germplasm to researchers, breeders and other users in developing countries.

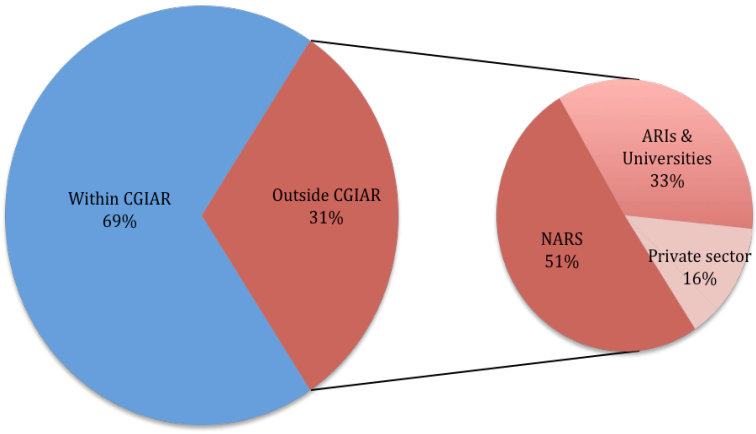


Figure 1. 2013 distribution of germplasm samples from CGIAR genebanks

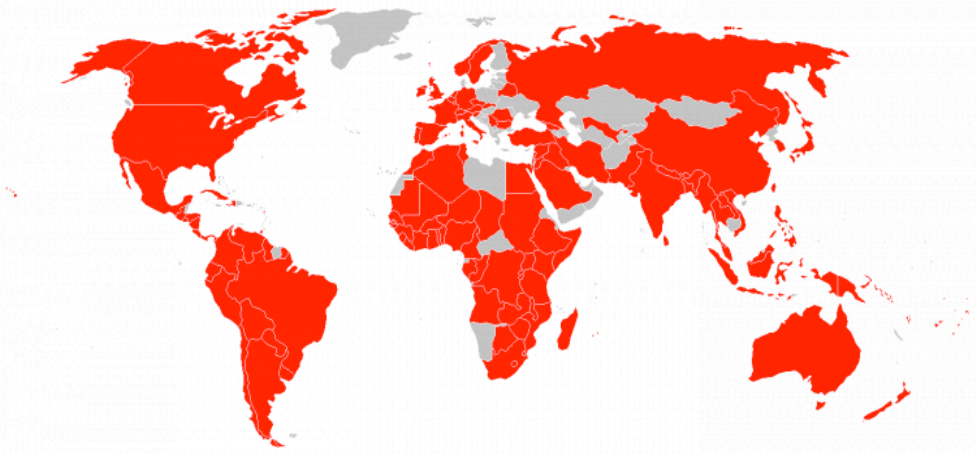

Figure 2 Countries receiving germplasm from CGIAR genebanks in 2013

The CGIAR genebanks presently manage 1.36 million samples of 725,244 accessions, including 27,505 in vitro accessions and 26,374 accessions of crops and trees held as live plants in the field. Approximately 52% of the seed collections are secured in safety duplication at two levels (Figure 3). Currently, of the 725,244 accessions recorded in the genebanks, 68% are immediately available for use as viable, healthy accessions. Figures are lower for clonal crop collections (Figure 3). Currently, 74% of the accessions have passport and characterization data accessible online.

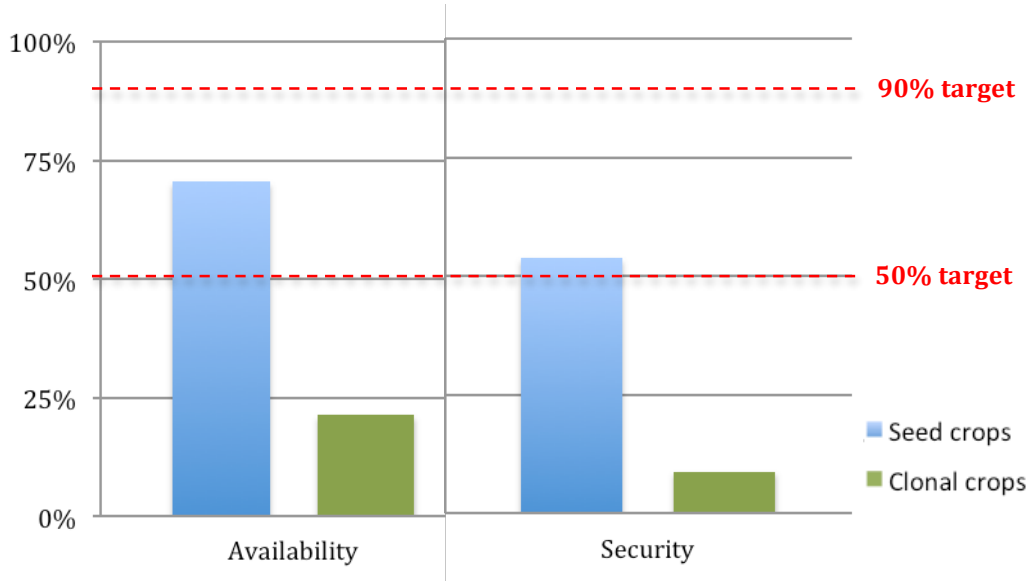

Figure 3 Status of availability and security of CGIAR genebanks

The performance of individual seed and clonal crop genebanks are illustrated in the tables below. The performance targets are quantitative measurements and are described on the next page. All genebanks are actively working towards improving the % availability and security of the collections through seed increase, testing and cleaning, as well as through more strategic acquisition and curation. From 2013, the CRP has also been investing significantly in strengthening quality and risk management systems and developing mechanisms to improve user feedback. Centers are or will be developing individual workplans to address specific weaknesses highlighted in external reviews.

| | Performance Targets | Africa Rice | CIAT seed | CIMMYT wheat | CIMMYT maize | ICARDA | ICRAF | ICRISAT[1] | IITA seed | ILRI | IRRI |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Availability | | | | | | | | | | |
| 2 | Security | | | | | | | | | | |
| 3 | Data availability | | | | | | | | | | |
| 4 | QMS | | | | | | | | | | |
| 5 | Use: diversity | | | | | | | | | | |
| 6 | Use: quantity | | | | | | | | | | |
| 7 | User satisfaction | | | | | | | | | | |
| 8 | Relative efficiency | | | | | | | | | | |
| 9 | Cost efficiency | | | | | | | | | | |

| | Performance Targets | Bioversity | CIAT cassava | CIP | IITA clonal |
|---|---|---|---|---|---|
| 1 | **Availability** | | | | |
| 2 | **Security** | | | | |
| 3 | **Data availability** | | | | |
| 4 | **QMS** | | | | |
| 5 | **Use: diversity** | | | | |
| 6 | **Use: quantity** | | | | |
| 7 | **User satisfaction** | | | | |
| 8 | **Relative efficiency** | | | | |
| 9 | **Cost efficiency** | | | | |

| | |
|---|---|
| | **Meets target** |
| | **> 50% or above average** |
| | **< 50% or below average** |
| | **Data under compilation** |

[1] ICRISAT regional collections not included

| | Performance Targets |
|---|---|
| 1 | **Availability:** % collection which is clean, viable, in sufficient seed number to be made immediately available from medium term storage (90% target) |
| 2 | **Security:** % collection which is held in long term storage conditions in two locations and also in the Svalbard Global Seed Vault or for clonal crops % collection in cryopreservation in two locations (90% target seed collections; 50% clonal crop collections) |
| 3 | **Data availability**: % collection with minimum passport and characterisation data available online (90% target) |
| 4 | **QMS**: Stage of development (from 1 to 5) of quality and risk management system |
| 5 | **Use: diversity**: % collection disseminated over 10 year period (tentative target 10% per year) |
| 6 | **Use: quantity**: number of samples disseminated/year as a proportion of the total collection size (tentative target 20% per year) |
| 7 | **User satisfaction**: overall user satisfaction according to annual surveys |
| 8 | **Relative efficiency**: days between harvest and storage; duration between subcultures for clonal crops |
| 9 | **Cost efficiency:** per accession cost of routine operations (above/below average) |