

Germplasm Assembly

Germplasm was assembled by

Introducing already collected germplasm from various sources

- ❖ 317 organizations/donors from 78 countries have donated 85,131 accessions

Collecting germplasm in priority areas

- ❖ ICRISAT with its partners launched 216 germplasm collection missions in 62 countries and collected 33,377 accessions

From center's own research as genetic stocks

- ❖ Twelve research programs of ICRISAT have contributed 5,413 accessions.



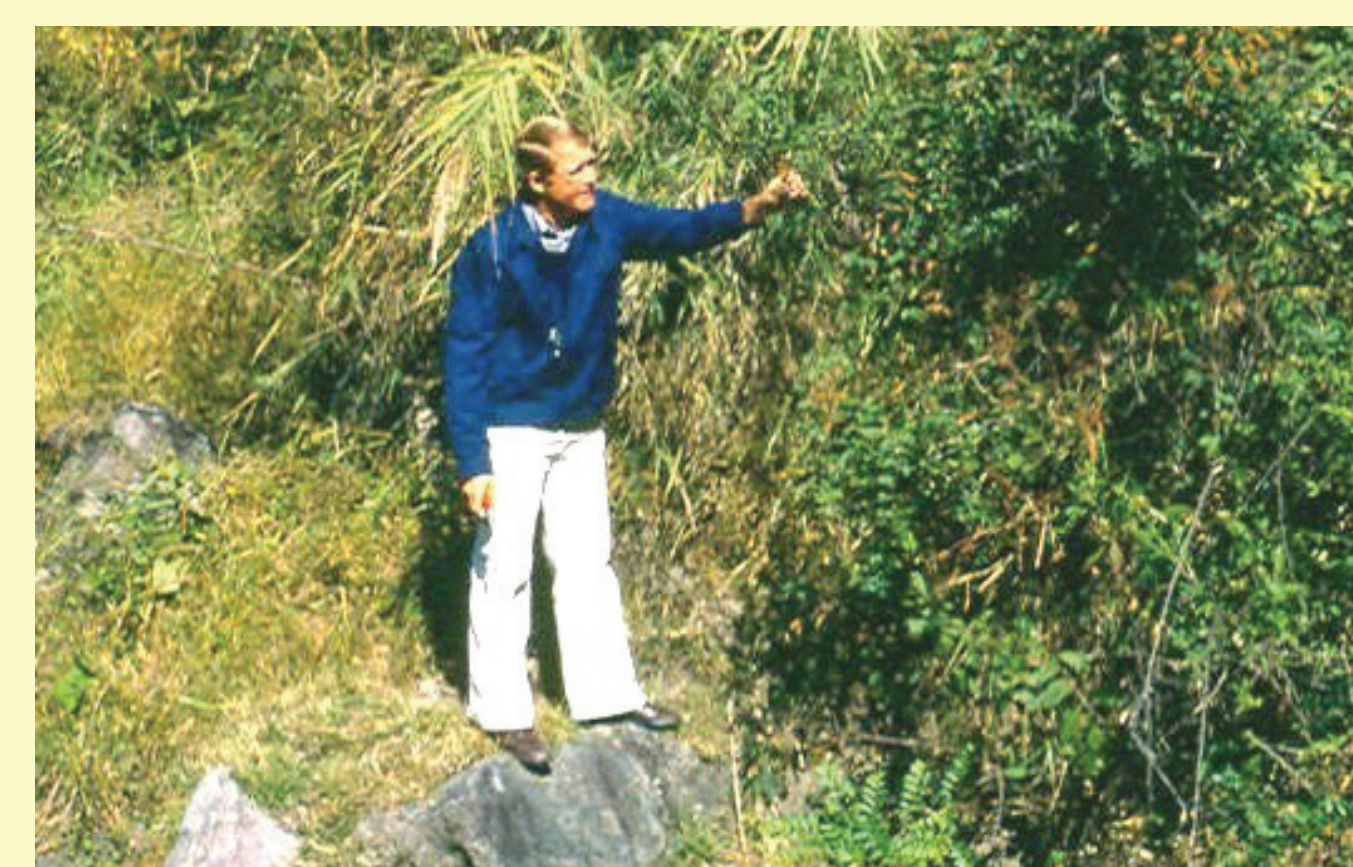
Collecting pearl millet sample in farmer's field in India.



Collecting seed sample and related information at a farmer's store in Mali.



Collecting sample from a local market in Dhamar, Yemen.



In search of wild relatives in India.

Collaboration for germplasm assembly

- ❖ ICRISAT collaborates with national and international institutes, NARS, universities and NGOs in different countries.
- ❖ In India, collaboration with NARS, is for germplasm assembly, evaluation, and import and export of germplasm.



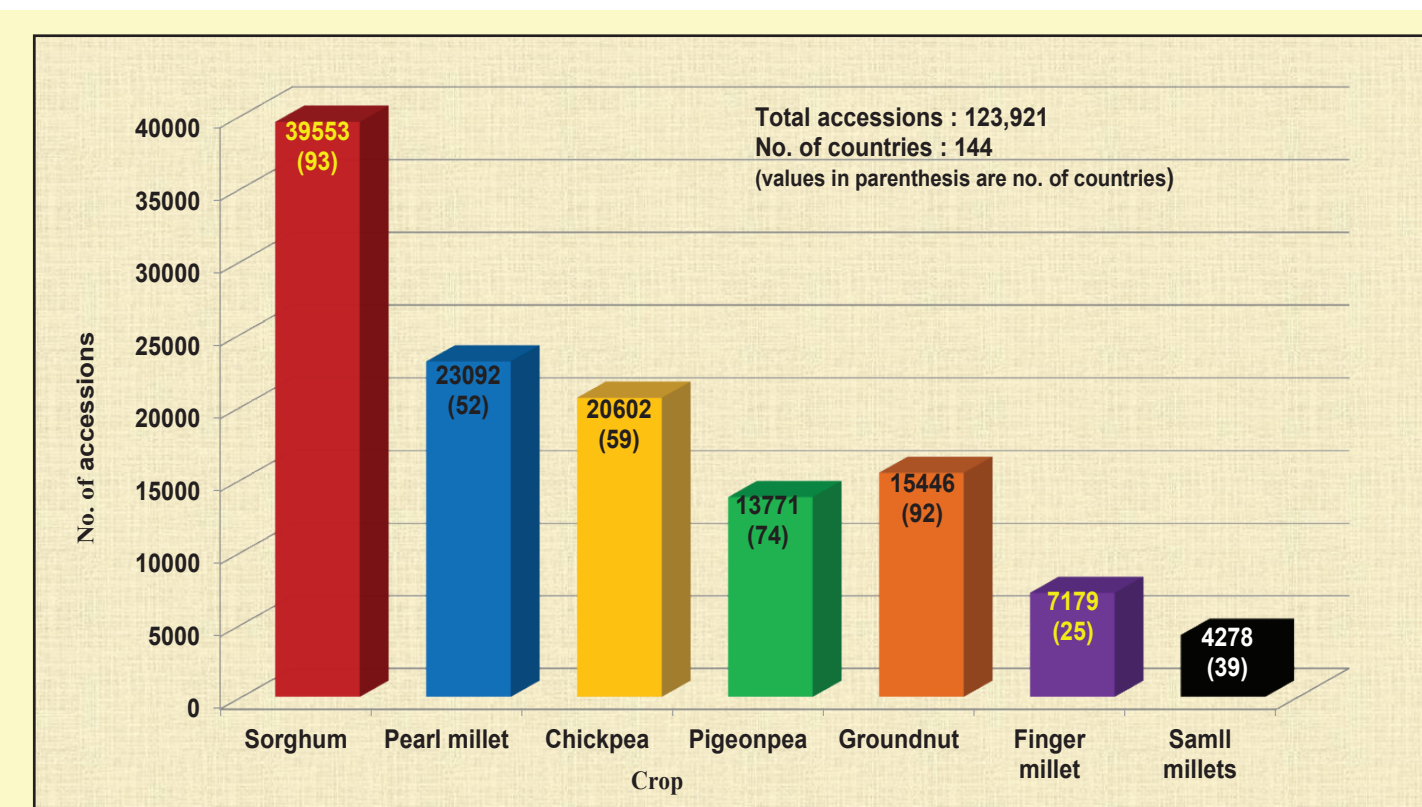
Scientists of ICRISAT and NBPGR, India, collecting chickpea germplasm in field.

Plant Quarantine

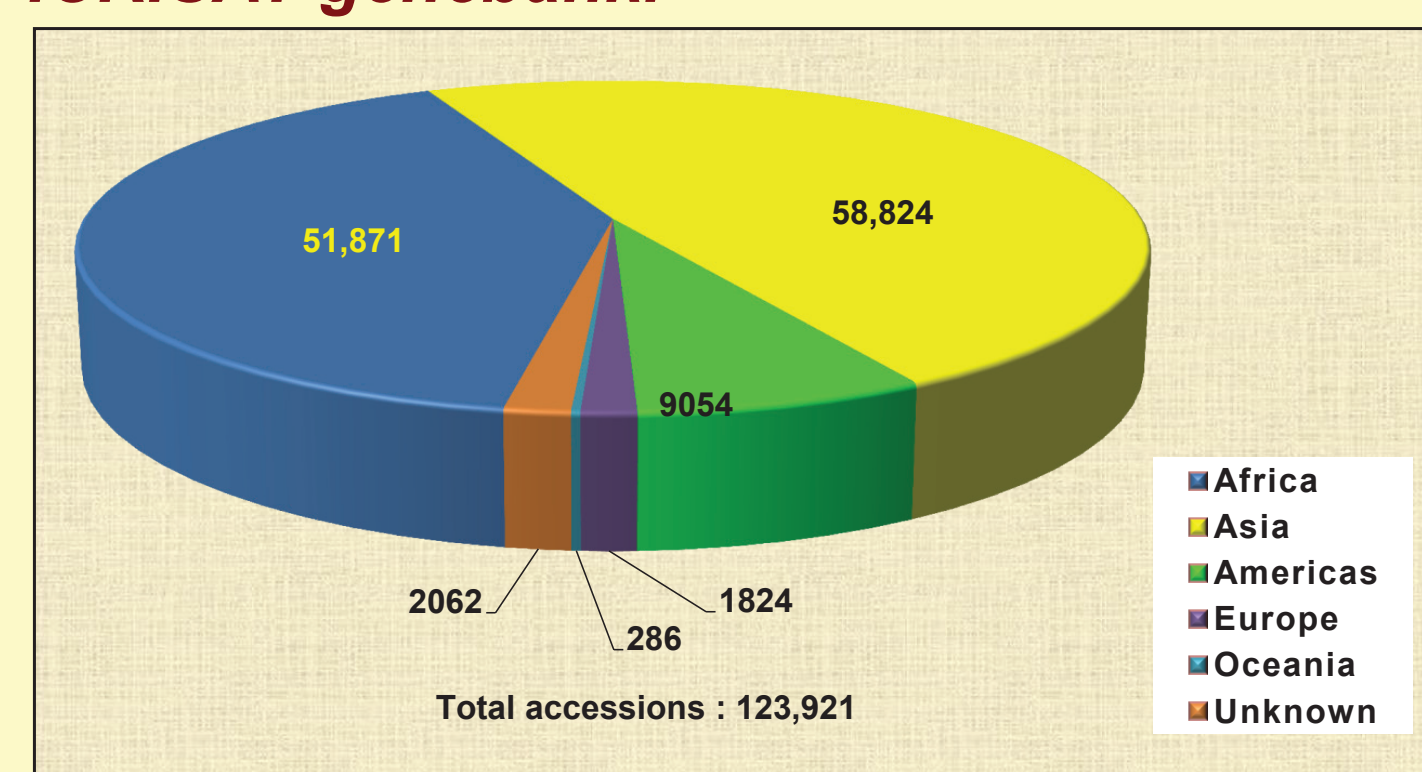
- ❖ Germplasm from outside India will accompany an Import Permit issued by the Director, NBPGR, New Delhi, India and a Phytosanitary Certificate issued by quarantine authorities of country in which germplasm was collected or introduced from.
- ❖ NBPGR Regional Station at Hyderabad, India, grow the germplasm in Post-Entry Quarantine Isolation Area, at ICRISAT, conducts seed health tests, surveillance for new pests and diseases, and release healthy germplasm to ICRISAT.



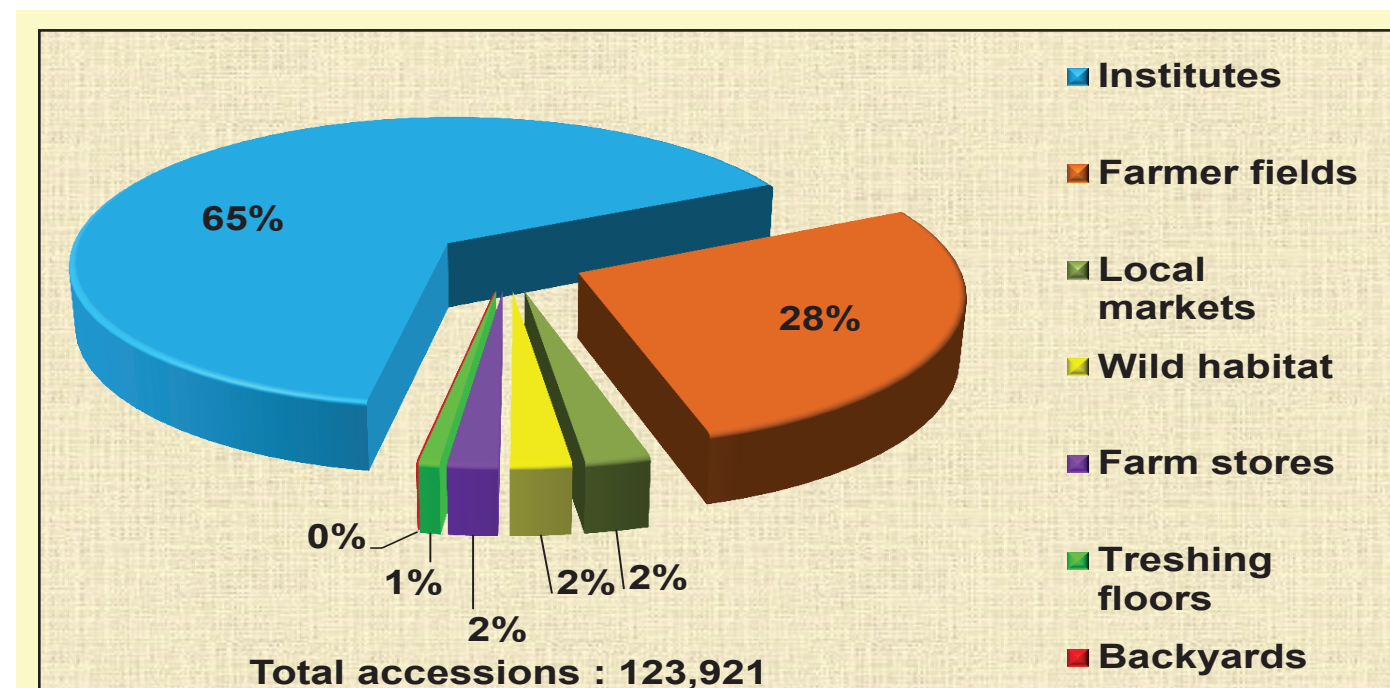
Field diagnosis of diseases in PEQIA.



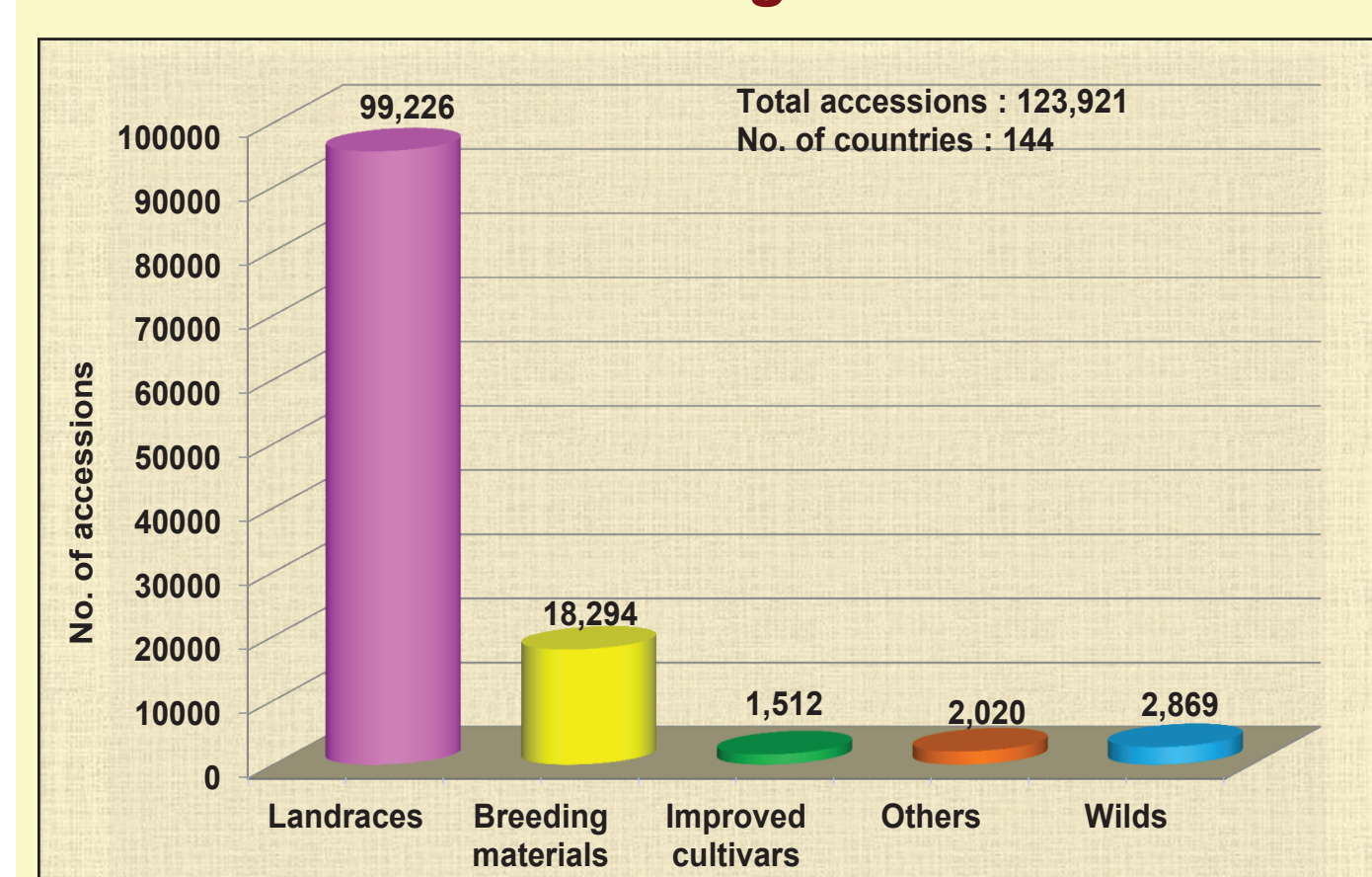
Mandate crops germplasm assembled at ICRISAT genebank.



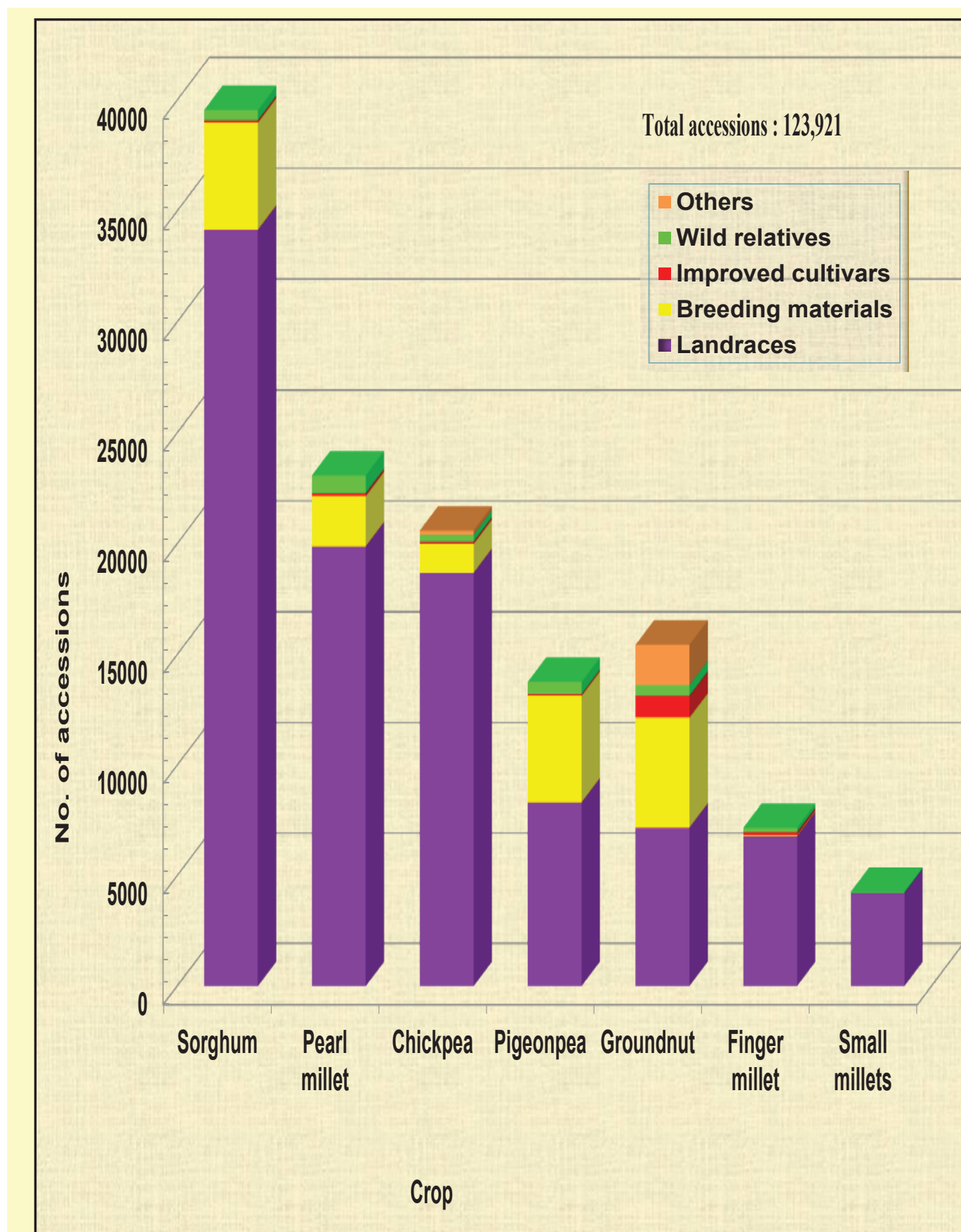
Regionwise germplasm assembled at ICRISAT genebank.



Frequency of sample sources in germplasm assembled at ICRISAT genebank.



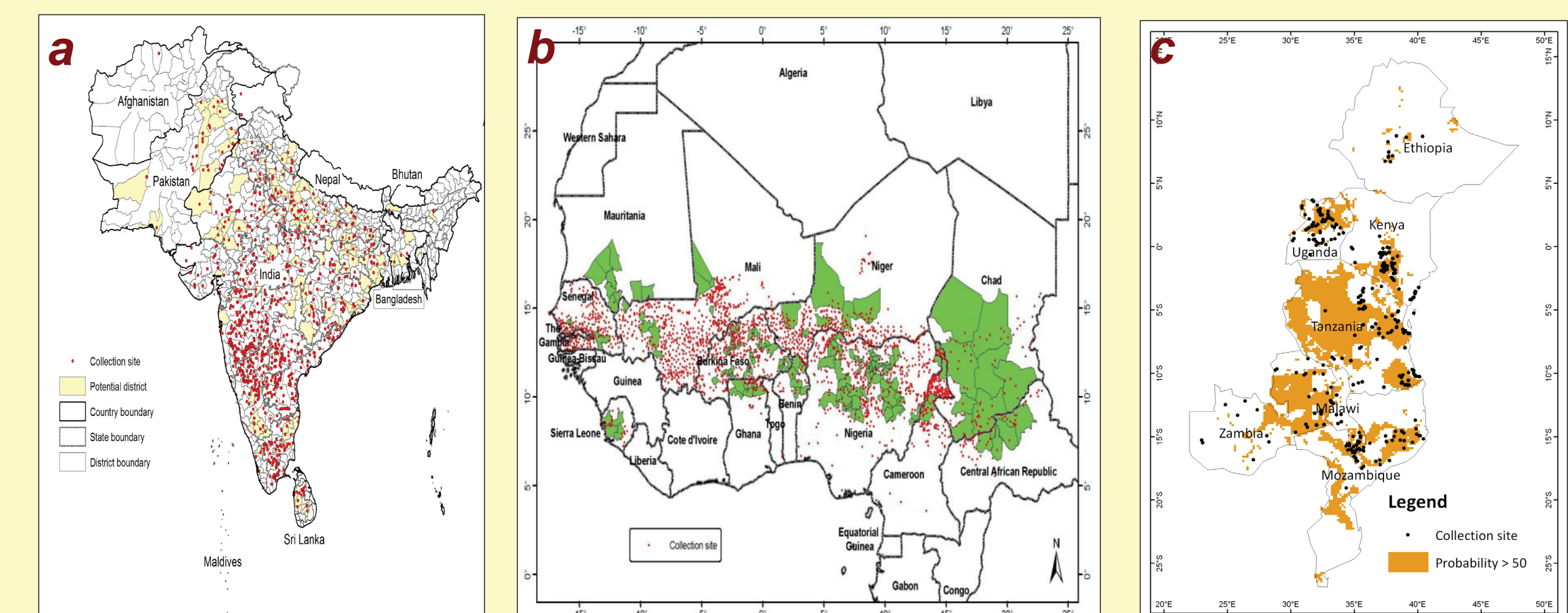
Biological status of entire germplasm assembled at ICRISAT genebank.



Crop wise biological status of germplasm assembled at ICRISAT genebank.

Identification of gaps in collections

- ❖ Geographical, trait-diversity and taxonomic gaps were identified in sorghum, pearl millet, and pigeonpea collection, using GIS tools such as Floramap, DivaGIS, ArcGIS and remote sensing.
- ❖ High probability districts for crop occurrence with no or few collection sites were considered as gaps.



Geographical gaps identified (in color) in sorghum (a), pearl millet (b), and pigeonpea (c).