




Genebank
Platform



Supporting genebanks forever

Nelissa Jamora &
Luigi Guarino

12 October 2018





PRESS RELEASE


The World's Rice Bowl: Protected in Perpetuity


12.10.18

#Endowment #Philippines #PHL001 #RICE

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Massive rice collection to receive permanent financial backing, saving almost all known varieties of rice crops, forever

(SINGAPORE – 12 October 2018) – THE WORLD'S LARGEST rice collection is to receive permanent funding for the conservation and sharing of 136,000 varieties of the staple crop that feeds

Long-term Partnership Agreement (LPA) between Crop Trust and IRRI

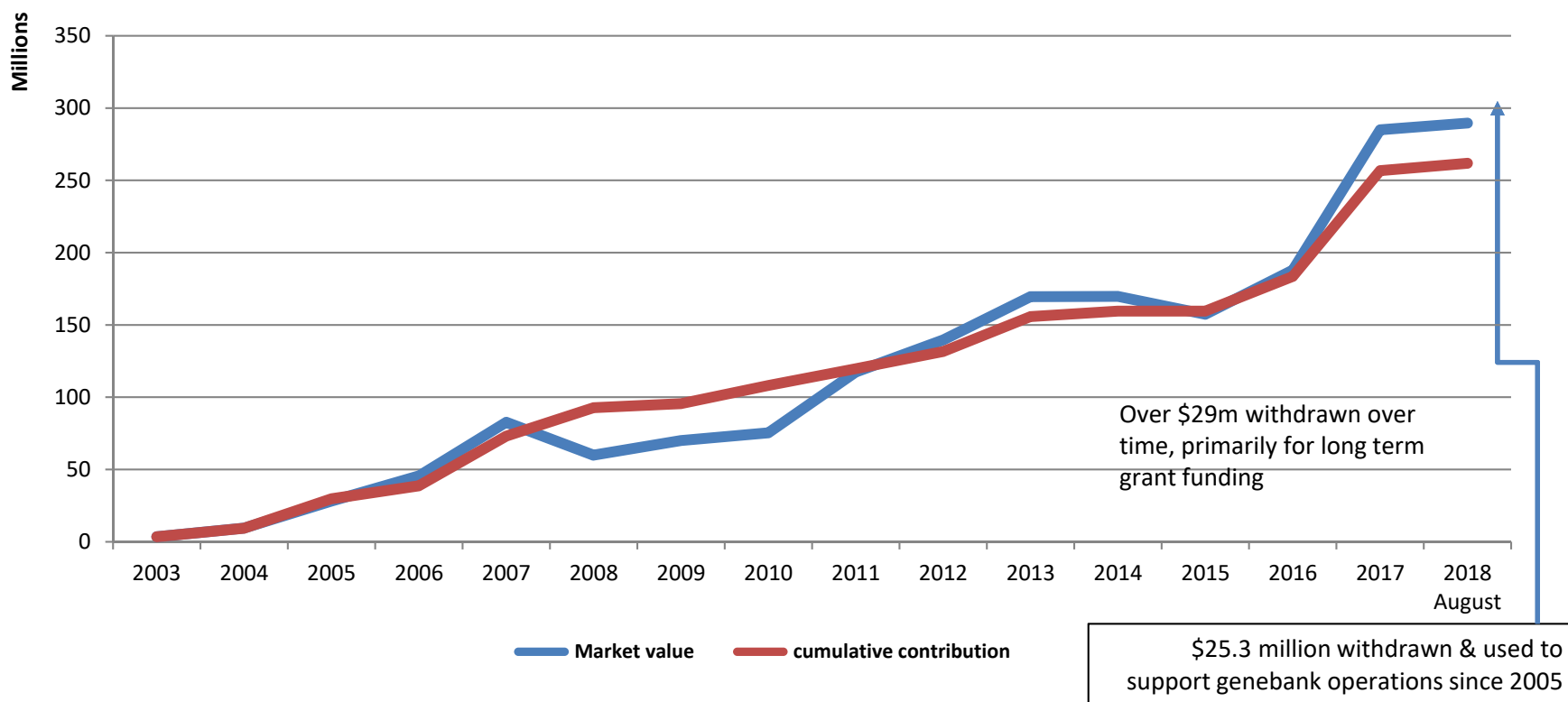


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Endowing genebanks



Portfolio Market Value vs Cumulative Contributions



Three Pillars to a Global System

International
collections



Key national &
regional collections



Svalbard Global
Seed Vault



International Genebanks (Article 15)

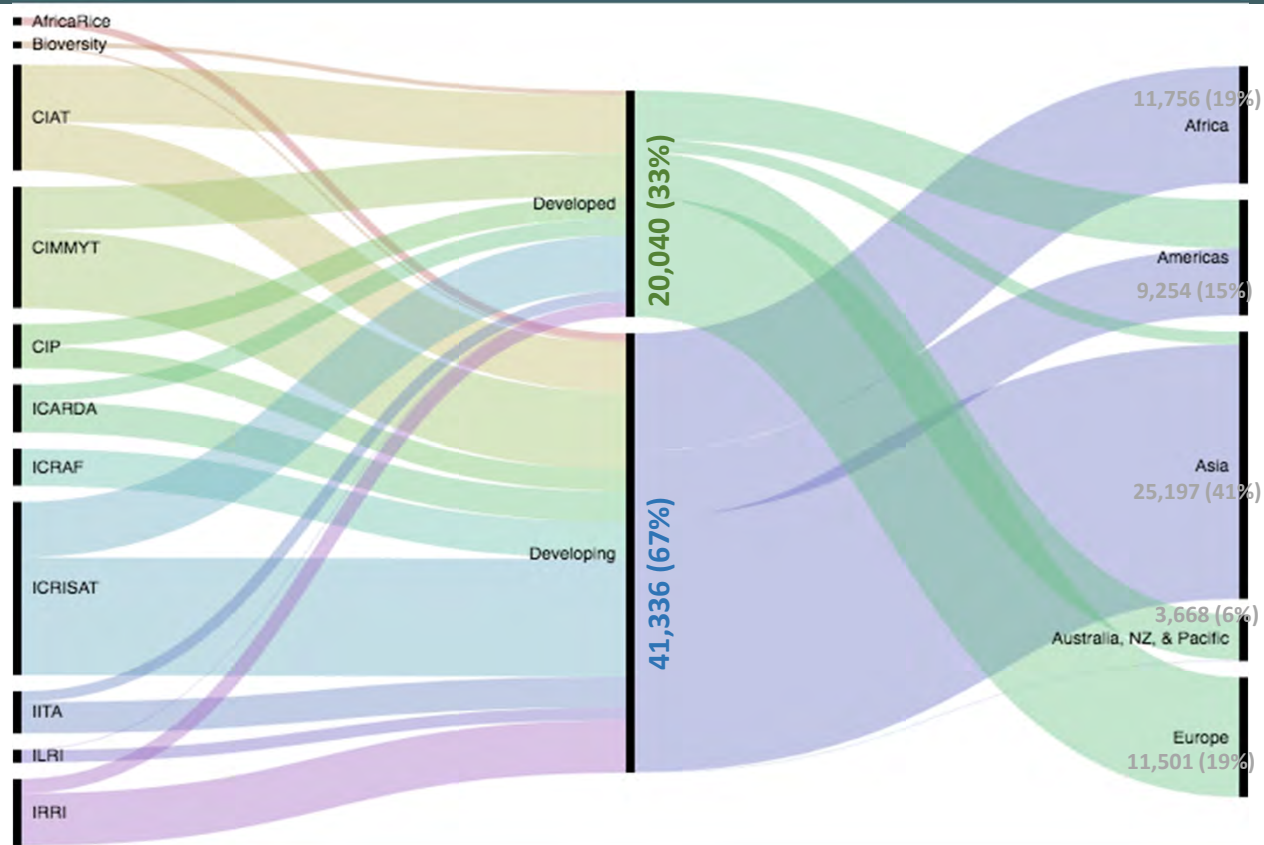


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A global service





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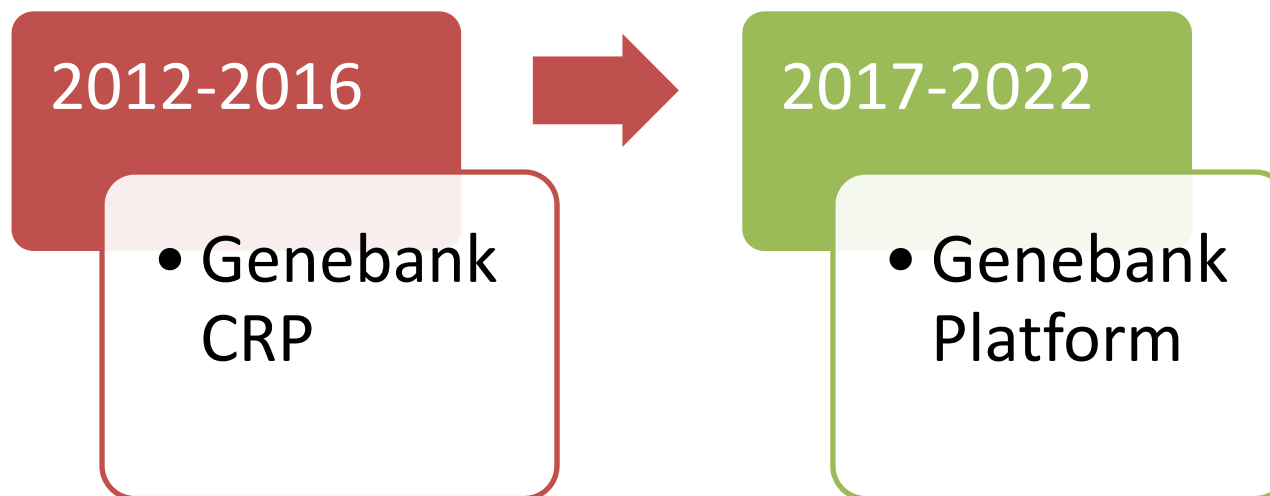


- Hawtin et al. 2010 – CGIAR genebanks – \$500M endowment target
- CePaCT costing study – €30-40M endowment target
- Another CGIAR costing study underway
- Costing 5 African genebanks



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The Genebank Platform



www.genebanks.org



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The Genebank Platform



- **The Genebank Platform supports the core activities of the CGIAR genebanks.**
- **Day-to-day management of the genebanks is the responsibility of the Center.**

Agreements between the CGIAR Centers and the International Treaty on Plant Genetic Resources for Food & Agriculture (ITPGRFA) oblige the CGIAR genebanks to:

- **make collections & data available under the terms of the ITPGRFA**
- **manage their collections following the highest standards of operation**

Report to 1 sub-IDO 1.4.4: Increased conservation & use of PGRFA



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Objectives



Conservation Module

- To sustain core genebank operations and ensure germplasm is secure and available
- To improve core genebank operations and management

87%

Use Module

- To facilitate more effective access and use through targeted delivery of germplasm that better meets the needs of users

3%

Policy Module

- To ensure Centers comply with international policies and laws, increase their influence in policy-making processes and strengthen capacity of national programs

3%

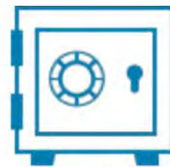


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“Essential operations”



- Acquisition
- Characterization
- Cryopreservation
- Distribution
- Germination testing
- Germplasm health testing
- Information and data management
- In Vitro subculture
- Live Plants
- Long-term storage
- Medium-term storage
- Regeneration /Multiplication
- Seed processing



Long-term
storage



Safety
duplication



Regeneration &
characterization



Information
management



Disease
testing



Distribution



- 11 CGIAR genebanks
- 11 CGIAR Germplasm Health Units (GHUs)
- 8 System activities – Quality Management, GRIN-Global, Genesys, Gap analysis, Policy, Use, Seed Quality, Regional collections
- 11 CGIAR Center Finance

27 CGIAR crops

Andean roots & tubers	legumes
banana	lentil
barley	maize
beans	multipurpose trees
cassava	pea
chickpea	pearl millet
cocoyam	pigeonpea
cowpea	potato
faba bean	rice
forages	small millets
fruit trees	sorghum
grasspea	sweet potato
ground nut	wheat
	yam



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Welcome to the Genebank Online Reporting Tool

The ORT is an online platform to support the CGIAR genebanks in their results-based planning and reporting of activities, outputs, and outcomes. It covers the coordination and monitoring of the Genebank Platform and captures relevant performance indicators for programmatic reporting to the Platform Management Team, the CGIAR System Management Board, and the Crop Trust's Executive Board.

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Key performance indicators

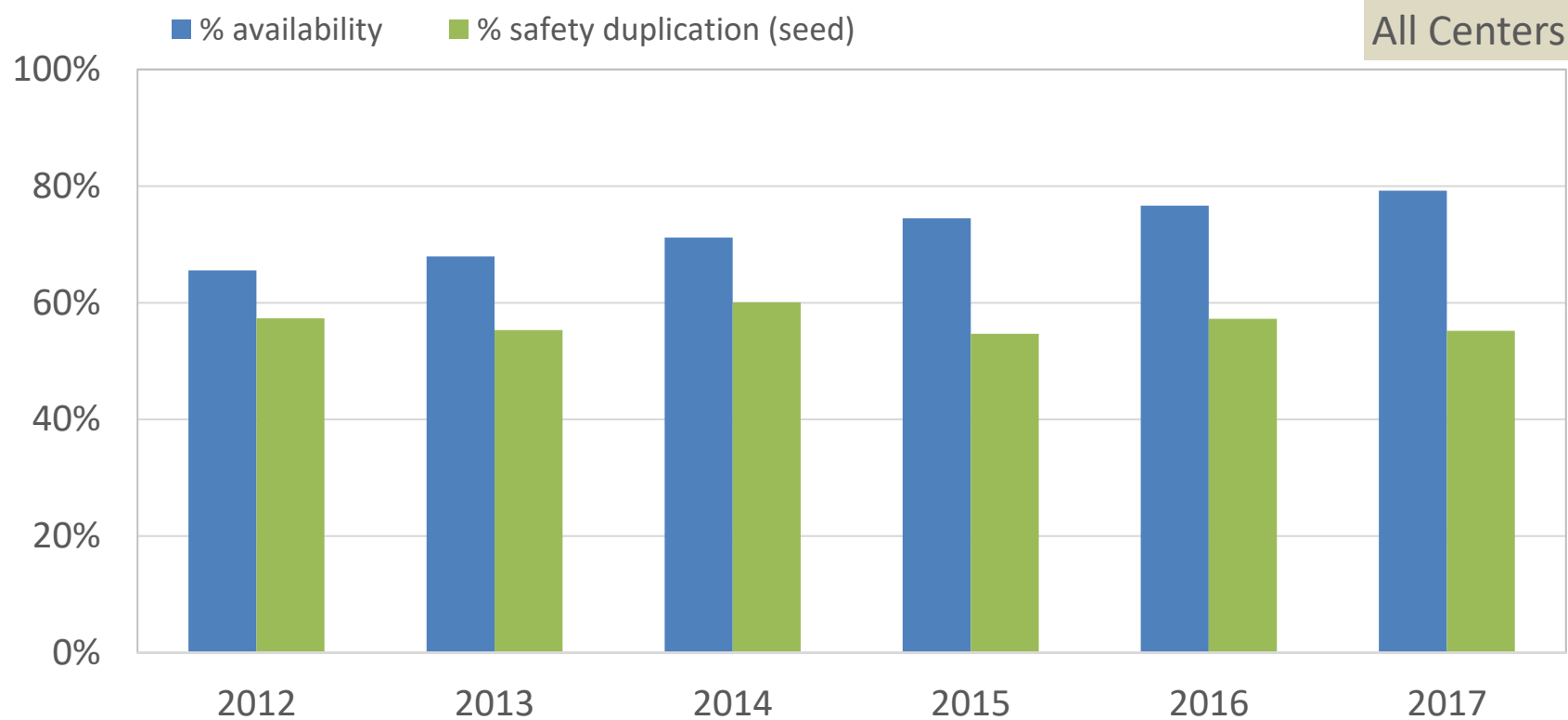


1. **Availability:** 90% accessions legally available – 79%
2. **Security:** 90% accessions safety duplicated – 55% seeds, 79% clonal
3. **Data availability:** 90% accessions documented and available online – 95% uploaded, 67% DOI, 6.04 PDCI
4. **QMS:** Agreed elements of QMS/ISO are in place – 41 SOPs drafted (107 mapped), 8 risk management, 11 capacity building, 3 succession planning, barcoding, 6 security. [2 with ISO]
5. **Use:** Germplasm distribution – >109k samples, 95 countries in 2017



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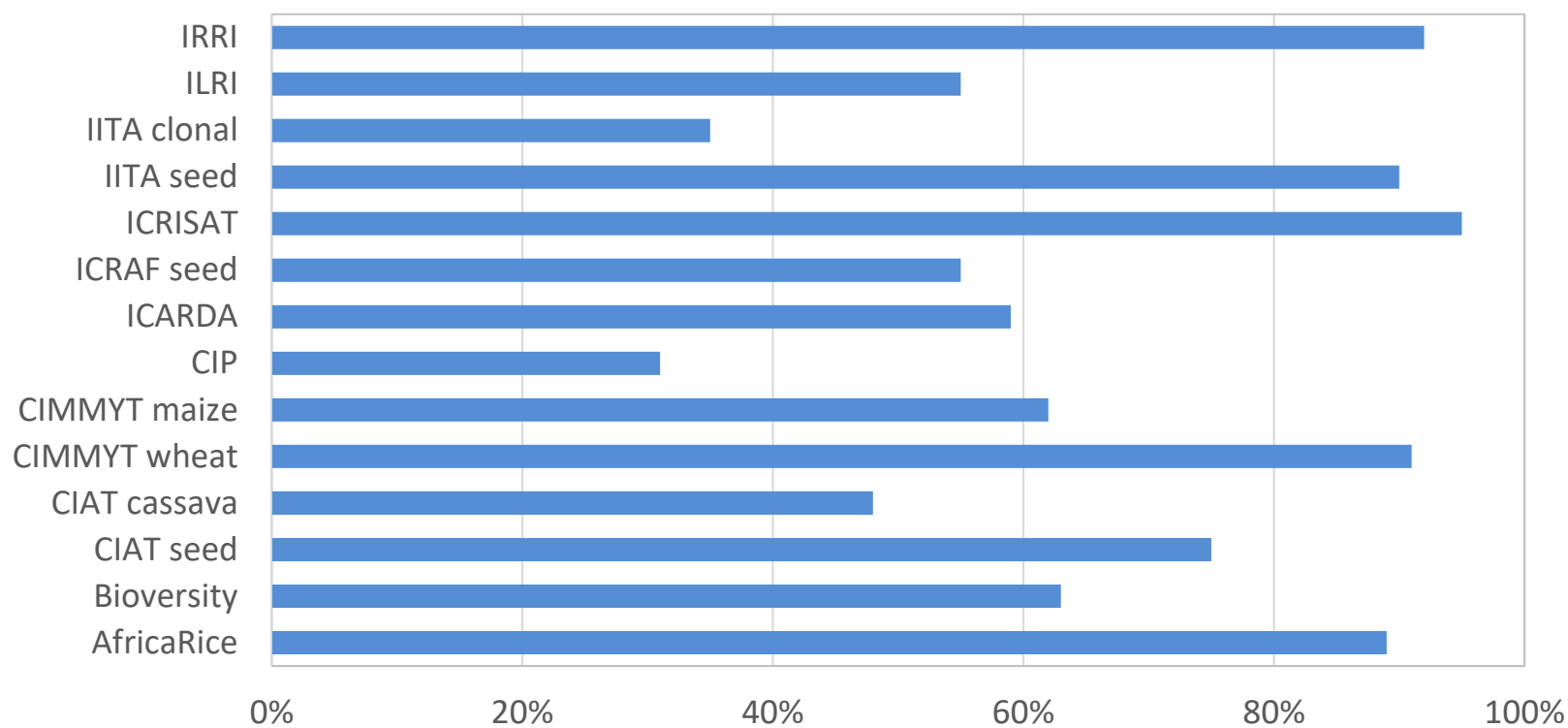
2012-17 Performance





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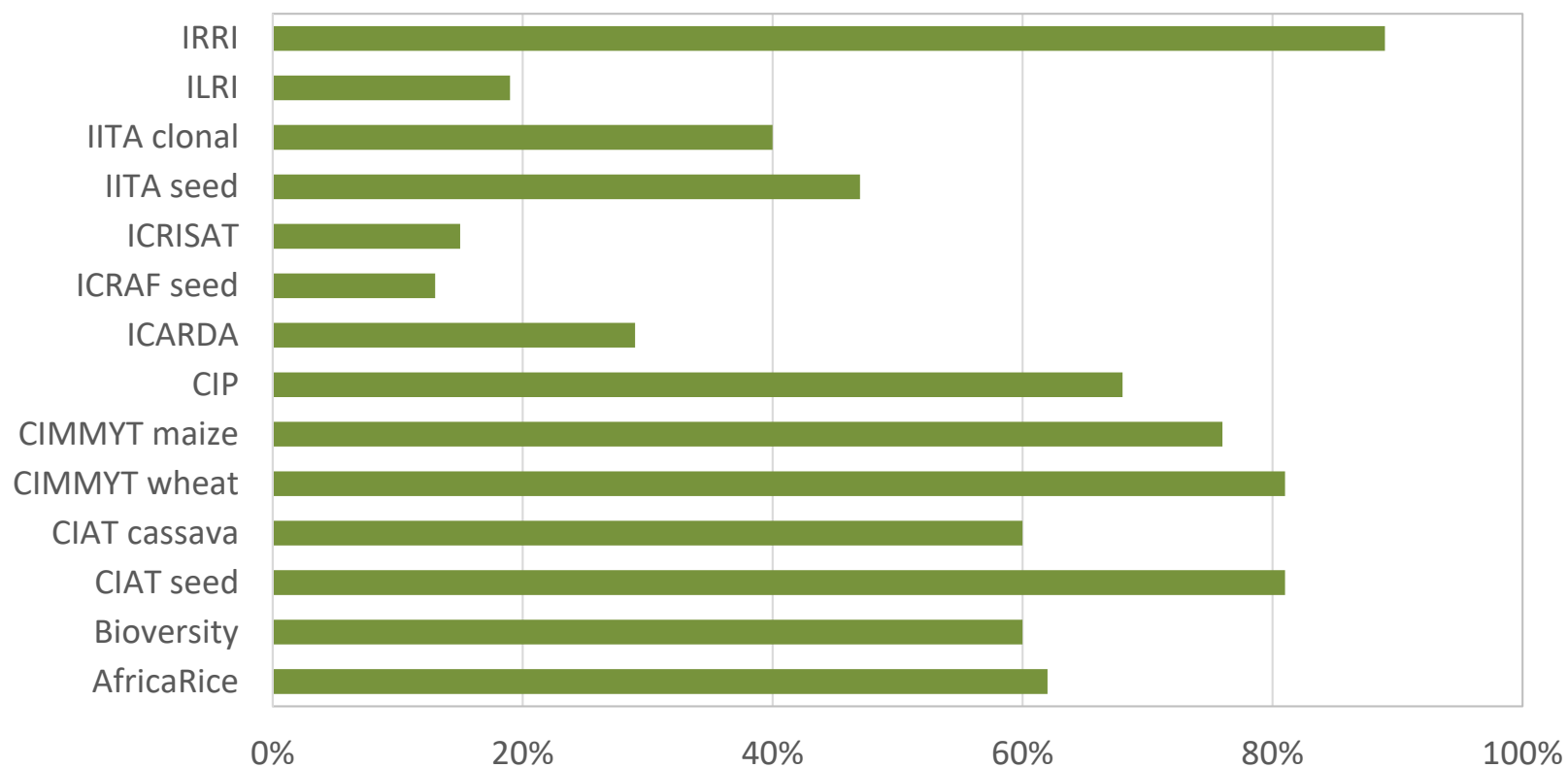
2017 % Availability





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2017 % Safety duplication



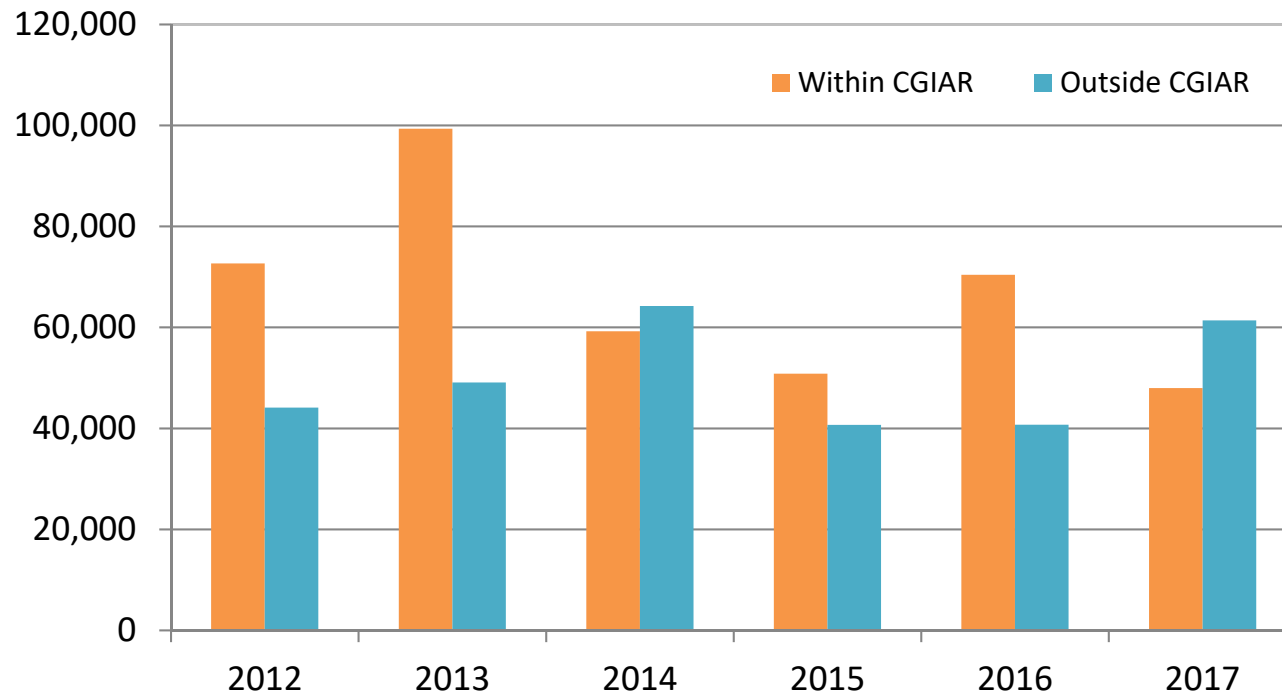


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Distribution



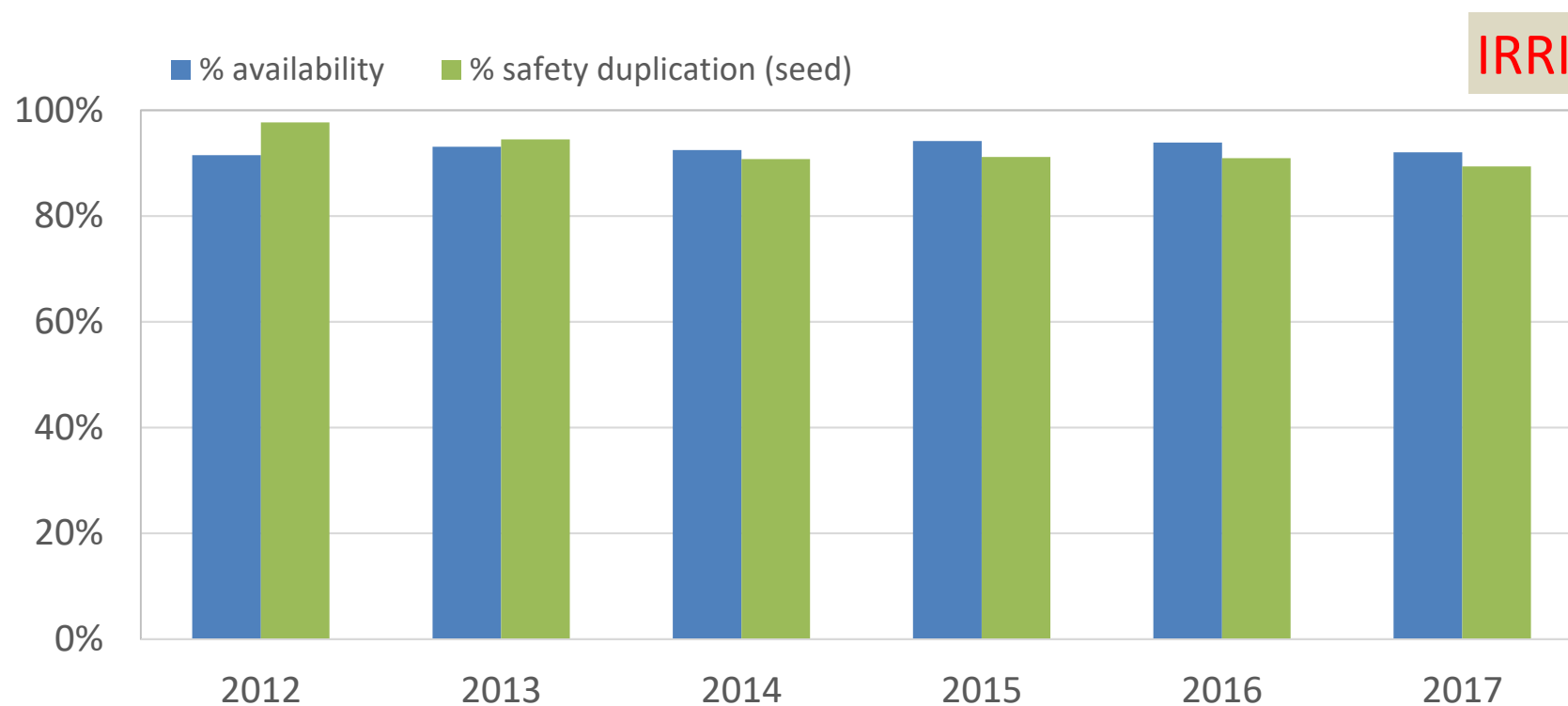
Annual total samples distributed by CGIAR
genebanks from 2012 to 2017





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2012-17 IRRI





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The road to an LPA



1. Clear and transparent costing of an agreed set of essential operations
2. Systematic, regular external reviews
3. Establishment of a *sui generis* quality management system (QMS)
4. Short-term upgrading to reach and maintain agreed performance targets
5. Regular online reporting on an exhaustive set of indicators
6. A 5-year renewable investment and upgrading plan for the genebank in the context of its mother institute


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World's largest rice gene bank secures permanent funding

The International Rice Research Institute is home to 136,000 varieties and aims to develop crops resistant to climate change.

Ewen Callaway

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- Rice genome: A recipe for revolution?
- The resistant rice of the future

What about European genebanks?


Science & Environment

Rice 'safely conserved' in Philippines gene bank

By Helen Briggs
BBC News

12 October 2018

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GETTY IMAGES

Rice being harvested in Northwest Vietnam

Scientists say that more than 100 thousand varieties of rice have been safeguarded for the future.

Samples in the world's largest rice gene bank in the Philippines are being used to help farmers develop rice crops that can survive drought and flooding.

The International Rice Research Institute (IRRI) gene bank has secured permanent funding from the **Crop Trust**.