Accelerated Breeding (ABI): Meeting farmers' needs with nutritious, climate-resilient crops

How will 1CG work with the breeding community 2022 onwards?

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CGIAR

ABI targets the following key outcomes

In collaboration with the other GI Initiatives, to:

- Strongly increase the rate of genetic gain delivered to farmers in the form of preferred varieties to 1.5% per annum by 2030 for productivity while other targets will be used for other traits.

- Reduce the area-weighted average age of varieties in farmers' fields to less than 15 years by 2030.

GI Initiatives: Genebanks, MIPP, N4ETTSS, PGT, SeEdQUAL

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ABI Work packages

ReFOCUS *Refocused products*	Based on insights from Market Intelligence, focus breeding pipelines **on most relevant market segments**.
ReORGANIZE	Establish coordinated approaches to **trait discovery, trait deployment, population improvement, and variety validation**. Define and implement clear stage gates and handover criteria between teams.
TRANSFORM *Transformed partnerships*	**Establish CGIAR-NARES-SME genetic gains delivery systems**. Increase funding flowing to NARES as well as their level of ownership/accountability.
NOVEL *Novel traits*	Identify and deploy novel sources and haplotypes for highly valuable and demanded traits, **guided by product profiles.**
ACCELERATE *Accelerated variety development and identification*	Optimize breeding pipelines (genetic tools, traits, environments, and safety), throughout CGIAR-NARES-SME**, leveraging tools and services developed by Breeding Services**

ABI principal outcomes (2024)

- ✔ Breeding pipelines are oriented towards specific market segments.
- ✔ Breeding pipelines use a revised organizational framework that provides operational clarity and effectiveness.
- ✔ Breeding networks implement stronger partnership models between CGIAR, NARES and SMEs.
- ✔ Breeding pipelines are supported by a dedicated discovery and trait deployment (TD&D) program.
- ✔ Breeding pipelines have increased the rate of genetic gain in the form of farmer-preferred varieties.
- ✔ Breeding pipelines provide candidate varieties with a step change in performance under farmers' conditions, to seed systems actors or the variety release system.

Priority setting – together with MIPP

- Each individual breeding pipeline to pursue 1-2 very specific impacts, well-defined target group of growers and/or consumers

- Collectively: Breeding pipelines (crops and regions), constitute a breeding portfolio with the greatest total benefit across the five Impact Areas
  - Improving nutrition
  - Poverty reduction
  - Gender equity
  - Climate adaptation or mitigation
  - Environmental sustainability

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In the new GI structure, EiB functions will join up with centre and NARES breeding activities

EiB: Five interlinked modules:

Product design & management	Optimizing breeding schemes	Genotyping / sequencing	Operations & phenotyping	Breeding informatics

+ Cross-cutting: CGIAR-NARES Engagement, Tech. Adoption, Toolbox, CtEH etc.

All existing EiB functions will continue within GI Initiatives, specifically;

- Accelerated Breeding Initiative (ABI)
- Network for Enabling Technologies, Tools and Shared Services (N4ETTSS)
- Market Intelligence and Product Profiles (MIPP)

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Thank you