



CGIAR Breeding for Tomorrow Science Program (2025-2030)

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Mission

Breeding for Tomorrow aims to transform food systems by **delivering nutritious varieties of crop, livestock and aquatic species** that are climate-resilient, market-preferred, productive, inclusive, and sustainable.



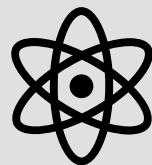
Vision



By 2030, Breeding for Tomorrow will:



Focus on **gender-intentional approaches** empowering women and youth in low- and middle-income countries.



Deliver higher genetic gains in farmers' fields through **genetic innovation**, to address CGIAR's impact areas and megatrend challenges.



Increase **crop diversification** and expand to include food-feed crops, tree species, vegetables, forages, and opportunity crops under the Vision for Adapted Crops and Soils (VACS) initiative.



Enable **sustainable outcomes** and nutritious diets, regenerative soils, and multifunctional landscapes, while fostering livelihoods, reducing inequality, and mitigating conflict and migration.



Develop tools to reduce **livestock and aquatic** breeding cycles and increase trait selection accuracy, supporting systems resilience and diversification.

Partnerships with public, private, and civil society organizations will support the development and deployment of products aimed at improving the quality of life for small-scale, resource-poor women and men farmers in low- and middle-income countries

Areas of Work (AoW)



MARKET INTELLIGENCE
1

Maximise B4T return on investment (RoI) across the five Impact Areas under varying budget scenarios



ACCELERATED BREEDING
2

Accelerate the development of climate-resilient, nutritious, market-preferred varieties while making breeding processes, CGIAR collaborations, and partnerships more efficient, sustainable, and equitable




INCLUSIVE DELIVERY
3

Ensure that CGIAR-improved varieties reach smallholder farmers through robust dissemination systems



BREEDING RESOURCES
4

Centralize the provision of breeding and research services across CGIAR-SME-NARES networks



ENABLE
5

Design an efficient coordination and support system across B4T functions, partners, and priorities within global, national, and regional breeding pipelines

AoW 3: What is Inclusive Delivery?

Inclusive delivery **focuses** on:

- **Accelerating the delivery** of climate-resilient, nutritious, and market-preferred varieties to smallholder farmers in low- and mid-income countries
- **Designing and implementing strategies** focused on scaling innovations to deliver CGIAR's co-designed products: quality seed and related innovations
- **Drawing on decades of durable and inclusive partnerships** to improve access to affordable improved varieties and quality seed for smallholders

Key **goals**:

- **Increase in both the demand for and delivery of quality seed** of climate-resilient, nutritious, and market-preferred varieties to smallholder farmers
- **Engagement with partners** to facilitate the flow of market-intelligent products, emphasizing policy support and the interface between seed providers and farmers

AoW3 - INCLUSIVE DELIVERY: of genetic gains



Objective: Ensure CGIAR's climate-resilient, nutritious, and market-preferred varieties reach smallholder farmers through effective dissemination systems, benefiting both farmers and other food system actors

Primary partners and stakeholders:

- Direct scaling partners (private seed companies, state-owned seed production units...)
- Indirect scaling partners (extension and advisory services, non-governmental organizations...)
- Innovation partners (key ministries, regulatory agencies...)

High-level output 1: Position

Develop co-designed, evidence-based strategies to sustainably integrate quality seed of improved varieties and innovations into inclusive and equitable seed systems

High-level output 2: Deploy

Develop co-designed, cost-efficient, inclusive, context-specific technologies and strategies to facilitate increased production and delivery of quality seed of improved varieties

High-level output 3: Track

Develop co-designed, validated, low-cost methods and tools to assess and share data on varietal adoption, turnover, seed replacement, quality seed use, and information uptake at scale

High-level output 4: Power

Foster innovative partnerships, technical and functional capabilities, policy solutions, and gender and social inclusion interventions to accelerate the delivery of quality seed for improved varieties

Collaboration with other Programs / Accelerators:

- Policy innovations
- Diets and Nutrition
- Scaling for impact
- Digital and Data Accelerator
- CapSha Accelerator

What's new/continued/dropped? Continues the core activities of Seed Equal, improves efficiency by integrating crop archetypes, policy work, and gender/social inclusion

Emerging work: digital seed platform, expansion to more crop types, new technologies for seed health and distribution, emergency seed assistance, women and youth inclusion, and regulatory harmonization

Work on genetic resources policy and causal impact evaluation will be reallocated to ENABLE to better address these cross-cutting issues

Thank you, Any questions?

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Extra Slides if needed

AoW 1 What is Market Intelligence?

Market Intelligence **focuses** on:

- **Maximizing return on investment (RoI)** by prioritizing investments and designing products that meet the needs of farmers, processors, and consumers
- **Institutionalizing product design standards** with processes and targets ensuring products are demand-driven, gender-intentional, impactful, and cost-effective
- **Utilizing tools like GloMIP and the Breeding Portal** to identify market opportunities, guide product design via transdisciplinary teams, and support investment prioritization

Key **goals**:

- **Achieve 50% compliance** with the Product Design Standard by breeding pipeline managers by 2030
- **Increase investment in B4T by 20%** through improved transparency and investor confidence
- **Institutionalize market intelligence tools and frameworks** (e.g., GloMIP and STEER) to empower CGIAR-NARES-SME networks and external partners to develop impactful, scalable products
- **Foster adoption of GloMIP** by seed industries, NGOs, investors to optimize product targeting, design, and delivery, as well as their RoI

AoW 2 What is Accelerated Breeding?

Accelerated Breeding **focuses** on:

- Driving transformative change by **developing climate-resilient, nutritious, and market-preferred crop varieties**
- Making breeding processes more **efficient, sustainable, and equitable**
- Leveraging cutting-edge methods, collaborations, and partnerships to **accelerate genetic gains and scale farmer involvement** in product development

Key **goals**:

- **Optimize breeding pipelines and align resources** with CGIAR's five Impact Areas to maximize benefits for regions and countries
- **Empower breeding networks with novel traits, methods, and partnerships** to address climate change, combat hunger, and enhance food system resilience, sustainability, and diversity
- **Supports breeding network actors** in innovating and strengthening their research and product development

AoW 4: What is Breeding Resources?

Breeding Resources **focuses** on:

- **Developing shared services** for data collection, sharing, and meta-analysis to enhance predictive breeding for complex, multi-trait products
- **Tailoring technologies and services to diverse local contexts**, ensuring scalability, interoperability, and inclusion across CGIAR-SME-NARES networks
- **Addressing adoption barriers** by improving financial literacy, standardized procedures, and experiential learning for breeding programs

Key **goals**:

- **Expand cost-efficient, crop-agnostic shared services globally**, harnessing the comparative advantage of CGIAR and its networks
- **Establish a sustainable organizational structure for the services** to ensure equitable access and financial viability
- **Build globally connected, locally empowered breeding systems** that leverage advanced technologies for maximum impact by 2030 and beyond

AoW 5: What is ENABLE?

ENABLE **focuses** on:

- **Enhancing coordination and support** across global, national, and regional breeding pipelines
- **Making breeding efforts more efficient, effective, inclusive,** and transparent by reducing fragmentation and duplication
- **Developing strategic capabilities that drive innovation and streamline processes** within B4T continuum

Key **goals**:



- **Lower transaction costs** and improve collaboration across teams
- **Strengthen communication** on activities, challenges, and achievements to better engage stakeholders (funders, partners...)
- **Ensure inclusive and equitable breeding outcome** maximizing impact across B4T rather than output in one AoW alone

B4T Theory of Change and CGIAR impact areas

Intermediate outcomes

Breeding networks strengthen research, partnerships, and delivery to accelerate the creation and distribution of transformative products more effectively, efficiently, and equitably



Breeding network actors embrace transformative partnerships to promote equity and sustainability in: 1) Market analysis and opportunity assessment, 2) Product development, and 3) Product delivery and scaling



Breeding network actors focus product development on maximizing benefits across the 5 Impact Areas



Breeding network actors accelerate the development of impactful product that deliver large-scale benefits across the 5 Impact Areas

2030 outcomes

Women, youth, and other marginalized groups in food, land and water systems are empowered by and benefit from improved products in Low- and Mid Income Countries

Breeding network actors increase uptake of quality products in priority market segments



Farmers use improved products that result in transformative benefits for farmers, consumers and society in Low- and Mid-Income Countries

CGIAR Impact Areas

Nutrition, health and food security

Poverty reduction, livelihoods and jobs

Gender equality, youth and social inclusion

Environmental health and biodiversity

Climate adaptation and mitigation