Introduction to OneCGIAR Genetic Innovations Action Area & the Accelerated Breeding Initiative

Biswanath Das, WP3 (Transform) lead
OneCGIAR Transformation

• Initiated in 2019 and 1st phase implementation 2022-2024

• Urgent need to have more impact in the face of unprecedented global challenges (in breeding = GG and variety turnover)

• Closer integration of CGIAR centers for faster, more coordinated response - avoid duplication, share technical and human capacity

• Attract more funding for CGIAR and it’s partners

• Alignment with partner strategy (national and regional), clear roles and responsibilities in research pathways, targeted capacity development and augmented roles of partners for long term sustainability
Structure of the new OneCGIAR

Three Research Action Areas

1. Systems Transformation (Dr Johan Swinnen)
2. Resilient Agri-Food Systems (Dr Martin Kropff)
3. Genetic Innovations (Dr Sonja Vermeulen)

32 individual initiatives spread across the 3 Action Areas
CGIAR Genetic Innovation Initiatives: working tightly together, with partners, for broad-based impact

Six closely integrated initiatives co-delivered with partners working across CGIAR’s three action areas to achieve systems change in five impact areas:

- Nutrition, Health & Food Security
- Poverty Reduction, Livelihoods & Jobs
- Gender Equality, Youth & Social Inclusion
- Climate Adaptation & Mitigation
- Environmental Health & Biodiversity
GI Initiatives: from customer demand to farmers' fields
GI Initiatives: integrated into whole CGIAR portfolio and theory of change

- Resilient Agrifood Systems Initiatives, e.g.
  - PLANT HEALTH
  - HER+
  - EXCELLENCE IN AGRONOMY
  - NATIONAL POLICIES & STRATEGIES
  - GENETIC GAIN IN FARMERS' FIELDS
  - IMPACT AT SCALE

- Systems Transformation Initiatives, e.g.

GI Initiatives include:
- Gene banks
- Market intelligence
- Accelerated breeding
- Breeding resources
- Seed equal

NARES-CGIAR Networks

Better Genetic Innovation Systems
Accelerated Breeding Initiative (Michael Quinn and Claire Mukankusi)

Work Packages

1. Refocus – aligning to markets
2. Reorganize – pipeline organization
3. Transform – stronger breeding networks
4. Discover – targeted prebreeding
5. Accelerate – optimized breeding schemes
There is no alternative to collaboration and partnerships

No Single public entity can handle all aspects of the breeding chain
- CGIAR does not have mandate for delivery or universal presence
- NARES & SMEs often lack resources, germplasm and modern technology at scale
SSA NARES-GI Leadership Meeting – Nairobi
June 2022
- CGIAR remains an important technical and capacity development support partner

What is needed:
- Stronger alignment needed with national and regional priorities
- Recognize the comparative adv (roles) that NARES have – mandate for delivery, knowledge of market, ability to scale
- Recognize NARES contributions
- Avoid competition for resources and duplicated efforts
- Sustainable capacity development at NARES required
- Ensure NARES participation in priority setting and key decisions
Regional Customization

Each region will have its own dynamics – different priorities and roles of partners

A collaborative model needs to be customized for local needs
Establishing Breeding Networks

1. Identifying regional market segments and target product profiles
2. Identifying network partners
3. Assessing the capacity of each network partner in order to:
   1. Assign roles in the breeding network
   2. Develop capacity development plan
4. Network Ensures:
   1. Capacity Dev support provided to partners
   2. Funds flow through to partners to execute their roles
   3. Coordination of activities (germplasm movement
   4. Annual review of network / partner performance
Transform: Building Effective CGIAR-NARES Breeding Networks

Market Intel
Trait Mining, TI
Population Improve.
Early Stage Testing
Late Stage Testing
Registration and Seed Systems
Commercial, PLC

CGIAR
NARES 1
NARES 2
NARES 3
Effective CGIAR/NARES/SME Breeding Networks: Roles & Responsibilities

- Donor Dev and Trait Intro
- Trait Mining
- CGIAR-NARES Population Improvement
  - CGIAR Early Stage Testing
  - Late Stage Testing
  - OFT-Tricot, Release, License
  - Seed Systems: Prod and Delivery
  - Market Intel, Product Management.
- NAREs / SMEs Population Improvement
  - NAREs/SMES Early Stage Testing
- NAREs/SMEs Population Improvement
  - NAREs1 Product Profile
  - SME1 Product Profile
  - NAREx Product Profile

Function Led By:
- CGIAR
- NAREs / SMEs (private Sector)
- Joint CGIAR-NAREs

Model Ensures that partners contribute to product design and have ownership for delivery.

As roles are defined, partners need technical and financial support to execute.