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**CGIAR Technical Reporting 2023**

Each CGIAR Research Initiative submits an annual “Type 1” report, which provides assurance on Initiative-level progress towards End of Initiative outcomes.

The CGIAR Technical Report comprises:

- Type 1 Initiative, Impact Platform, and Science Group Project (SGP) reports, with quality assured results reported by Initiatives, Platforms and SGPs available on the CGIAR Results Dashboard.
- The Type 3 Portfolio Performance and Project Coordination Practice Change report, which focuses on internal practice change.
- The Portfolio Narrative, which draws on the Type 1 and Type 3 reports, and the CGIAR Results Dashboard, to provide a broader view on Portfolio coherence, including results, partnerships, country and regional engagement, and synergies among the Portfolio’s constituent parts.

The CGIAR Annual Report is a comprehensive overview of CGIAR’s collective achievements, impact and strategic outlook, which draws significantly from the Technical Report products above. For 2023, the Annual Report and Technical Report will be presented online as an integrated product.

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[Diagram showing the relationship between Portfolio Narrative Report, CGIAR Annual Report, Type 1 Initiatives, Impact Platforms, and Science Groups, and Type 3 Portfolio Practice Change report]
The CGIAR Gender Impact Platform has adapted the OECD gender marker, splitting the 1 score into 1A and 1B. For gender equality, scores are: 0 = Not targeted; 1 = Significant; and 2 = Principal.

The activity is principally about meeting any of the three CGIAR climate-related strategy objectives—climate adaptation, climate mitigation, and climate policy—and would not have been undertaken without this objective.

Seed Equal plays a facilitative and synergistic role in promoting and scaling gender transformative seed systems through a variety of initiatives, including seed development, dissemination, and policy engagement. These initiatives are carried out with partners across multiple levels of operation. With these achievements, Seed Equal is now accelerating the pace at which CGIAR becomes the go-to partner to move market-oriented, intelligent products from global and regional breeding programs to national research and scaling partners at multiple levels of operation. As a result of progress in these three areas, Seed Equal is positioning CGIAR as the go-to partner to move market-oriented, intelligent products from global and regional breeding programs to national research and scaling partners at multiple levels of operation.
On-track
Off-track
Delayed

EOI 1
Integrated seed systems increase the quantity of quality seed of improved varieties available to farmers for priority crops and in selected countries, geographies, and market segments.

EOI 2
Seed system actors promote the adoption of quality seed of improved varieties by women and men farmers in selected countries, geographies, and market segments.

EOI 3
Seed system actors promoting the adoption of quality seed of improved varieties by women and men farmers in selected countries, geographies, and market segments.

EOI 4
Governments, funders, researchers, extension services, and other seed system actors using new tools for monitoring varietal turnover and quality seed use.

EOI 5
Government partners actively promoting policy solutions to accelerate the adoption of improved varieties, varietal turnover, and quality seed use by women and men in selected countries, geographies, and market segments.

EOI 6
Government and non-governmental actors using new tools for monitoring valueness and quality seed use.

EOI 7
Strengthening resilience through inclusive seed and product value chains.

Work Package 1
Demand-driven cereal seed systems.

Work Package 2
Boosting legume seed through a demand-led seed approach.

Work Package 3
Scaling and Delivery of VMP Crop Seed.

Work Package 4
Partnerships, capacity building, and coordination to ensure uptake of public bred varieties and other innovations.

Work Package 5
Policies for selected turnover, seed quality assurance, and trade in seeds.

Work Package 6
Scaling market access to quality seed: reaching the unreached with quality seeds in markets.

Work Package 7
Strengthening resilience through inclusive seed and product value chains.

Work Package 8
Integrated systems increasing the quantity of quality seed of improved varieties available to farmers for priority crops and in selected countries, geographies, and market segments.

Work Package 9
Seed system actors promote the adoption of quality seed of improved varieties by women and men farmers in selected countries, geographies, and market segments.

Work Package 10
CGIAR partners develop and scale innovations that contribute to the empowerment of women, youth, and other social groups in food, land, and water systems.

End hunger for all and enable affordable healthy diets for the 3 billion people who do not currently have access to safe and nutritious food.

End at least 500 million people living in rural areas above the extreme poverty line of US $1.90 per day (2011 PPP).

Close the gender gap in rights to economic resources, access to ownership, and control over land and natural resources; for over 500 million women who work in food, land, and water systems.

Offer 267 million young people who are not in employment, education, or training.

Turn agriculture and forest systems into a net sink for carbon by 2050, with emissions from agriculture decreasing by 1 Gt per year by 2023 and reaching a floor at 5 Gt per year by 2050.

Lower water use in food production of less than 2500 km3 per year (with a focus on the most stressed basins), zero net deforestation, nitrogen application of 90 Tg per year, phosphorus application of 10 Tg per year.

Maintain the genetic diversity of seeds, cultivated plants, and farmed and domesticated animals and their related wild species, including through soundly managed genebanks at the national, regional, and international level.

A summary of Work Package progress ratings is provided in Section 3.
Seed Equal has progressed along its theory of change (TOC) in 2023, with a focus on innovative scaling models, and stronger organizational capabilities. Partners reported significant gains in their capacity to proactively support scaling partners in the public, private, and civil society sectors. Partnerships have played a key role in spreading knowledge on legume cultivation and management, supporting seed production through field inspections, and leveraging the demand-led approach to expedite the adoption and turnover of new bean, cowpea, and soybean varieties across multiple systems (NARES), private industry, civil society, and CGIAR. Seed Equal has accelerated progress in delivering genetic gain to farmers’ fields in the global South.

Summary of progress against the theory of change

- **EOIO 2: Women, men, youth, and disadvantaged socioeconomic groups accessing affordable, market-led and producer-preferred, high-yielding, resilient seed varieties.**
  - WP5
    - **Co-heads of households related to maize varieties/hybrids, inputs, and management practices.** Findings provided new insights and actionable recommendations.
    - WP5a: OFSP assessments indicated an average yield of 8.4MT/ha, much higher than expected.
    - WP5b: In India, partnerships with local organizations led to the creation or support of 16 farmer producer companies (FPCs), involving more than 500 women in seed production.
    - WP5c: In South Asia, Latin America, and sub-Saharan Africa, involving formal seed providers and informal and semiformal farmer groups. These efforts showed positive returns on investment in potato seed production in Malawi.

- **EOIO 1: Integrated seed systems increasing the quantity of quality seed of improved varieties available to farmers for priority crops and in selected countries, geographies, and market segments.**
  - WP1: The promotion of quality VPC seed derived from breeding programs was enhanced by the development of a systematic planning framework.
  - WP2: Transportation of sweetpotato seed vines on a donkey-drawn cart, Namonge, Geita, Tanzania. Credit: Kwame Ogero
  - WP3: Utilized a demand-led approach to expedite the adoption and turnover of new bean, cowpea, and soybean varieties across multiple systems (NARES), private industry, civil society, and CGIAR.
  - WP4: Working with WFP and NARS, Seed Equal promoted local cultivation and seed access models for women’s empowerment. In India, partnerships with local organizations led to the creation or support of 16 farmer producer companies (FPCs), involving more than 500 women in seed production.
  - WP5: Implemented activities in Karamoja subregion in Uganda and five districts in Malawi. Because OFSP was relatively new in most of the regions, efforts were made to leverage the demand-led seed system (DLSS) model and the Improving Bean Production and Markets in Africa strategy.
  - WP6: Emphasized forming strategic partnerships to multiply quality seed of selected varieties for commercialization, focusing on gender and inclusion to a more proactive strategy and sharing, research, and outreach are advancing from a nominal role in connecting stakeholders, funders, and seed industry partners to the core of the strategy.
  - WP7: Similar efforts were made to accelerate progress in delivering genetic gain to farmers’ fields in the global South.

Progress by End of Initiative outcome

- **EOIO 1: Integrated seed systems increasing the quantity of quality seed of improved varieties available to farmers for priority crops and in selected countries, geographies, and market segments.**
  - WP1: Demand strategies by grain off-takers, leading to variety prioritization, new production frameworks, and increased seed system access and limited seed retailers. Training of Trainers (ToT) sessions aimed at boosting quality seed production of improved varieties, showing positive returns on investment in potato seed production in Malawi.
  - WP2: In Tanzania, we developed a spatial seed demand model for cassava systems and trained NARS partners in demand measurement techniques. Experimental auctions were conducted to assess farmers’ preferences and acquisition, with a focus on sweet potato, cassava, and banana.
  - WP3: In Uganda, transport of sweetpotato seed vines on a donkey-drawn cart. Credit: Kwame Ogero.

- **EOIO 2: Women, men, youth, and disadvantaged socioeconomic groups accessing affordable, market-led and producer-preferred, high-yielding, resilient seed varieties.**
  - WP4: Similar efforts were made to accelerate progress in delivering genetic gain to farmers’ fields in the global South.
EOIO 3: Seed system actors promoting uptake of quality seed of improved varieties by women and men farmers in selected countries, geographies, and market segments.

WP1 collaborated with approximately 100 seed producers across South Asia, Latin America, and sub-Saharan Africa to produce and deliver 5,500 MT of quality seeds, and engage more than 50,000 stakeholders through 700 demonstrations and various awareness programs.

Training on quality seed production aimed at self-sufficiency in product introduction and commercialization.

WP3 developed tools and studies to optimize cassava seed systems, including the weighted average varietal age (WAVA) metric and a seed requirement estimation tool for national seed demand analysis. We also introduced new technologies such as the cassava rapid stem multiplication tunnel and seed potato rooted apical cuttings to enhance EGS production efficiency and affordability, alongside a study on institutional arrangements for cassava EGS in Southeast Asia.

WP5’s collaboration with policymakers, the private sector, and farmer organizations in six countries (Ethiopia, India, Kenya, Nigeria, Rwanda, Uganda) enhanced seed sector development, focusing on regulatory and investment improvements. Efforts included addressing market entry barriers, partnering with think tanks and research bodies, and working with entities like AGRA and the Africa Union for broader sector impact.

WP6, in partnership with CSA, Pragati, ALF, and CBCC, implemented gender-responsive strategies to boost women’s roles in seed production, providing EGS to marginalized groups to foster a decentralized seed system and improve access to quality seeds. This involved studies on how different seed systems support access for women and smallholder farmers.

EOIO 4: Government partners actively promoting policy solutions to accelerate the adoption of improved varieties, varietal turnover, and quality seed use by women and men in selected countries, geographies, and market segments.

WP2 collaborated with governments to enhance seed variety prioritization and market creation, leading to the promotion of new and biofortified bean varieties across Ethiopia, Ghana, Kenya, Mozambique, Nigeria, Rwanda, and Zambia. These partnerships have successfully influenced government extension models and support programs, facilitating the introduction and adoption of nutrient-rich bean and cowpea varieties, aimed at addressing nutritional needs and boosting agricultural productivity.

WP3 engaged with government partners to advocate for policy changes that speed up the adoption of quality seeds, including the development of seed standards in Kenya, seed certification procedures in Ghana, and self-certification in Tanzania. This aims to streamline varietal turnover and ensure the availability of quality seeds to farmers.

WP5 achieved significant milestones in policy and regulatory reforms across six target countries, serving as a critical platform for engaging a wide range of stakeholders in seed policy reform. Efforts focused on ensuring reforms were evidence-based and practical; this work included the development of licensing guides and model agreements to facilitate better management and negotiation of seed production and distribution, contributing to improved varietal turnover, seed quality, and trade.

WP6 partnered with The African Seed Access Index (TASAI) to review and develop new metrics for measuring inclusive seed access, aiming to implement these metrics in Uganda. This strategic collaboration seeks to enhance understanding and tracking of seed access, particularly for marginalized groups, to promote broader and more equitable participation in seed markets.

EOIO 5: Governments, funders, researchers, extension services, and other seed system actors using new tools for monitoring varietal turnover and quality seed use.

WP2 advocated for Seed Equal partners, including researchers and extension services, to use Open Data Kit for gathering data on legume seed production and marketing, aiding in the accurate forecasting of demand and supply to enhance varietal adoption and turnover across Africa.

WP3 harnessed the RTB Tools4SeedSystems Toolbox to track key seed system metrics, showcasing the toolbox’s application in a workshop attended by participants from various countries and organizations, which underscored its relevance in humanitarian settings.

WP4 focused on deploying VarScout in Kenya, training ward agricultural extension officers across major potato-producing areas to collect and share data on potato variety adoption, and thereby supporting decision-making and policy development within the agricultural sector.

WP5 outlined a research agenda to establish baseline indicators for evaluating seed sector policies and supported a unified approach for impact assessment within CGIAR’s Genetic Innovation (GI) Science Group, targeting the evaluation of market-intelligent varieties and seed system innovations.
WP1: Demand-driven cereal seed systems

WP2: Boosting legume seed through a demand-led seed approach
WP4: Partnerships, capacity building, and coordination to ensure uptake of public-bred varieties and other innovations

Outcome 1:证据显示·不同政府间伙伴关系，以确保种业和植保市场的发展。
Outcome 2: WP5 directly informed policy change processes in six countries:
Outcome 3: Women, men, youth and disadvantaged socio-economic groups accessing affordable, market-determined and producer preferred, high yielding, resilient variety seed farmers in selected countries, geographies, and market segments.

WP5: Policies for varietal turnover, seed quality assurance, and trade in seeds

Outcome 1: Actionable, evidence-based policy recommendations to promote the adoption of new and improved varieties and quality seed.
Outcome 2: Women, men, youth and disadvantaged socio-economic groups accessing affordable, market-determined and producer preferred, high yielding, resilient variety seed farmers in selected countries, geographies, and market segments.
Outcome 3: Integrated seed systems increasing the quantity of seed of improved varieties available to farmers by priority crops in selected countries.
WP6: Scaling equitable access to quality seed: Reaching the unreached with quality seeds and traits

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Seed system actors engaging in vertical and horizontal strategies.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Seed system actors engaging in new vertical and equity in development systems.</td>
</tr>
<tr>
<td></td>
<td>Improved seed systems increasing the quantity of quality seed of improved varieties available to farmers for priority crops and in selected countries, geographies, and market segments.</td>
</tr>
<tr>
<td></td>
<td>Women and youth establishing seed production and marketing enterprises.</td>
</tr>
<tr>
<td></td>
<td>Women and youth establishing seed production and marketing enterprises.</td>
</tr>
<tr>
<td></td>
<td>Seed system actors engaging new metrics for inclusion and equity in development systems.</td>
</tr>
<tr>
<td></td>
<td>Women and youth establishing seed production and marketing enterprises.</td>
</tr>
<tr>
<td></td>
<td>Improved seed systems increasing the quantity of quality seed of improved varieties available to farmers for priority crops and in selected countries, geographies, and market segments.</td>
</tr>
<tr>
<td></td>
<td>Women and youth establishing seed production and marketing enterprises.</td>
</tr>
<tr>
<td></td>
<td>Improved seed systems increasing the quantity of quality seed of improved varieties available to farmers for priority crops and in selected countries, geographies, and market segments.</td>
</tr>
</tbody>
</table>

WP7: Strengthening resilience through inclusive seed and product value chains

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Identification of priority evidence needs in the context of priority themes.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Development of knowledge products that relate to identified priority evidence needs.</td>
</tr>
<tr>
<td></td>
<td>Use of CGIAR evidence in program design decisions.</td>
</tr>
<tr>
<td></td>
<td>Conduct complementary analysis on key themes in SSA countries and globally.</td>
</tr>
<tr>
<td></td>
<td>Product knowledge products to rapidly share results from analysis with WP6 and other key stakeholders.</td>
</tr>
<tr>
<td></td>
<td>Disseminate new evidence to WFP and other key stakeholders.</td>
</tr>
<tr>
<td></td>
<td>Identify priority country offices and their capacity strengthening needs to engage in evidence informed programme design and delivery.</td>
</tr>
<tr>
<td></td>
<td>CGIAR staff assigned to support WFP country offices.</td>
</tr>
<tr>
<td></td>
<td>Training delivered to support WFP country program staff.</td>
</tr>
</tbody>
</table>

Outcome 1 (WFP using CGIAR strategic support in program design)  
WP7, K4

Outcome 2 (WFP using CGIAR strategic support in program design)  
WP7, K4

Outcome 3 (WFP using CGIAR strategic support in program design)  
WP7, K4

WP7, K4

Outcome 4 (WFP using CGIAR strategic support in program design)  
WP7, K4

Outcome 5 (WFP using CGIAR strategic support in program design)  
WP7, K4

Outcome 6 (WFP using CGIAR strategic support in program design)  
WP7, K4
## Work Package progress rating summary

<table>
<thead>
<tr>
<th>WORK PACKAGE</th>
<th>PROGRESS RATING &amp; RATIONALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Progress rating WP1 progress is on track. So far achievements in a number of market segments, organization of on-farm trials and building of partnerships for strategic seed linkages, and seed multiplication and delivery have exceeded the year two targets.</td>
</tr>
<tr>
<td>2</td>
<td>Progress rating WP2 results align with the Plans of Results and Budgets (PORB) and qualify 2023 progress as on track.</td>
</tr>
<tr>
<td>3</td>
<td>Progress rating WP3 is on track, and work proposed in the PORB has been achieved. 2023 was a strong year for delivery for WP3, including 76 results reported in PRMS, more than a quarter of which were new, high-quality knowledge products. WP3 has expanded its activity in Bangladesh, Cambodia, Laos, and Peru, in addition to the geotargeting regions in Nigeria, Tanzania, and Uganda where cross-Center teams ran capacity development workshops for national partners together with WP4. Outcome progress was measured through application of new WAVA metrics and high (beyond target) volumes of seed delivery were achieved for target VPC crops.</td>
</tr>
<tr>
<td>4</td>
<td>Progress rating WP4 progress is on track, and 2023 outputs, available in draft reports, will be sent for system-wide consultation during 2024.</td>
</tr>
<tr>
<td>5</td>
<td>Progress rating WP5 progress is on track and aligned with the PORB. Outputs have been produced as planned.</td>
</tr>
<tr>
<td>6</td>
<td>Progress rating WP6 progress is on track. It aligns with the PORB. Outputs have been achieved, and outcomes are either in progress, as per plan, or have been achieved already and exceeded target, particularly in engaging women in seed production and marketing. New metrics have been developed and piloted in 2023, and will be promoted for use by other actors in 2024. Several diagnostic and baseline studies have been completed to generate evidence on gender-intentional strategies for access and synergies between formal and informal systems.</td>
</tr>
<tr>
<td>7</td>
<td>Progress rating WP7 is on track and very much aligned with the PORB. All three outcomes have deliverables reported and carried out in implementation countries of Uganda and Malawi in collaboration with WFP-country offices. These include working with WFP and other stakeholders to design and implement the crop yield estimate for OFSP in Karamoja as well as capacity sharing with stakeholders on GAP for sweet potato and bean value chains.</td>
</tr>
</tbody>
</table>

### Definitions

- **On track**: Annual progress largely aligns with Plan of Results and Budget and Work Package theory of change. Can include small deviations/issues/delays/risks that do not jeopardize success of Work Package.
- **Delayed**: Annual progress slightly falls behind Plan of Results and Budget and Work Package theory of change in key areas. Deviations/issues/delays/risks could jeopardize success of Work Package if not managed appropriately.
- **Off track**: Annual progress clearly falls behind Plan of Results and Budget and Work Package theory of change in most/all areas. Deviations/issues/delays/risks do jeopardize success of Work Package.
Key results

This section provides an overview of results reported by the CGIAR Research Initiative on Seed Equal in 2023. These results align with the CGIAR Results Framework and Seed Equal’s theory of change. Source: Data extracted from the CGIAR Results Dashboard on 29 March 2024.

Overview of reported results

<table>
<thead>
<tr>
<th>Outputs</th>
<th>Outcomes</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation development</td>
<td>Other outcome</td>
<td>86</td>
</tr>
<tr>
<td>Other outputs</td>
<td>Innovation use</td>
<td>19</td>
</tr>
<tr>
<td>Capacity sharing for development</td>
<td>Policy change</td>
<td>68</td>
</tr>
<tr>
<td>Knowledge products</td>
<td></td>
<td>47</td>
</tr>
</tbody>
</table>

Contributions to the UN Sustainable Development Goals

- **Nutrition, health and food security**: 289 contributions
- **Poverty reduction, livelihoods and jobs**: 290 contributions
- **Gender equality, youth and social inclusion**: 288 contributions
- **Climate adaptation and mitigation**: 67%
- **Environmental health and biodiversity**: 34%

Percentage of reported results tagged to CGIAR Impact Areas

- **Climate adaptation and mitigation**: 289 contributions
- **Gender equality, youth and social inclusion**: 288 contributions
- **Nutrition, health and food security**: 67%
- **Poverty reduction, livelihoods and jobs**: 45%
- **Environmental health and biodiversity**: 34%

Number of innovations by readiness level

- **Proven innovation**: The innovation is validated for its ability to achieve a specific impact under uncontrolled conditions (16 innovations)
- **Uncontrolled testing**: The innovation is being tested for its ability to achieve a specific impact under uncontrolled conditions (5 innovations)
- **Prototype**: The innovation is validated for its ability to achieve a specific impact under semi-controlled conditions (6 innovations)
- **Semi-controlled testing**: The innovation is being tested for its ability to achieve a specific impact under semi-controlled conditions (3 innovations)
- **Model/Early Prototype**: The innovation is validated for its ability to achieve a specific impact under fully-controlled conditions (6 innovations)
- **Controlled testing**: The innovation is being tested for its ability to achieve a specific impact under fully-controlled conditions (31 innovations)
- **Proof of concept**: The innovation’s key concepts have been validated for their ability to achieve a specific impact (8 innovations)
- **Formulation**: The innovation’s key concepts are being formulated or designed (9 innovations)
- **Basic research**: The innovation’s basic principles are being researched for their ability to achieve a specific impact (2 innovations)
- **Idea**: The innovation is at idea stage (0 innovations)
**Number of knowledge products by type (trend overview, 2022-2023)**

- Report: 2022 - 9, 2023 - 18
- Presentation: 2022 - 5, 2023 - 7
- Poster: 2022 - 3, 2023 - 6
- Working Paper: 2022 - 1, 2023 - 4
- Book Chapter: 2022 - 1, 2023 - 2
- Journal Article: 2022 - 1, 2023 - 1
- Brief: 2022 - 1, 2023 - 1
- Video: 2022 - 1, 2023 - 1
- Manual: 2022 - 1, 2023 - 1
- Internal Document: 2022 - 1, 2023 - 1

**Number of individuals trained by CGIAR (trend overview, 2022-2023)**

- Female:
  - 2022: 1,830
  - 2023: 6,034

- Male:
  - 2022: 2,105
  - 2023: 8,578

- Unspecified:
  - 2022: 100
  - 2023: 6

**Number of policies by stage and by type (trend overview, 2022-2023)**

- Stage 1:
  - 2022: 6
  - 2023: 4

- Stage 2:
  - 2022: 7
  - 2023: 2

**Number of results by country**

Data here represents an overview of reported results in 2022 and 2023. One result can impact multiple countries and can therefore be represented multiple times.

- Number of partners with a global focus: 51

- Woman seed producer selling the certified and branded seed she has produced to a local trader. Credit: Sarthak Panda, Access Livelihood Foundation
### Partnerships and Seed Equal's impact pathways

#### Results Dashboard

<table>
<thead>
<tr>
<th>Number of 2023 results by partner typology</th>
<th>Research organizations working on the crop (national)</th>
<th>Research organizations working on the crop (international)</th>
<th>Government (national)</th>
<th>Government (subnational)</th>
<th>Private company (other than financial)</th>
<th>Private company (other than financial)</th>
<th>Other</th>
<th>Research organizations and universities</th>
<th>Financial institution</th>
<th>Foundation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>161</td>
<td>86</td>
<td>46</td>
<td>20</td>
<td>17</td>
<td>15</td>
<td>14</td>
<td>86</td>
<td>161</td>
<td>86</td>
</tr>
</tbody>
</table>

#### Number of 2023 results by partner typology

1. **Research organizations working on the crop (national)**
2. **Research organizations working on the crop (international)**
3. **Government (national)**
4. **Government (subnational)**
5. **Private company (other than financial)**
6. **Private company (other than financial)**
7. **Other**
8. **Research organizations and universities**
9. **Financial institution**
10. **Foundation**

**Credit: Swati Nayak (IRRI)**
Supporting Rationale

**RECOMMENDATION**

<table>
<thead>
<tr>
<th>RECOMMENDATION</th>
<th>SUPPORTING RATIONALE</th>
</tr>
</thead>
</table>
| Build continuity for Seed Equal (SE)/GI: 
| - Time is needed to implement and assess impact of the product (variety) |  

**Adaptive Management**

Implement work planning through the Scriptoria Program Management Platform (PMP)  

| Support strong capacity-building programs |  

**Portfolio linkages and Seed Equal’s impact pathways**

Seed Equal’s WPs 1, 2, and 3 focus on accelerating seed delivery, and target market segments. Products from breeding pipelines undergo validation through farmer and market checks for scaling varietal turnover, and adopting cereals (WP1), legumes (WP2), and vegetatively propagated crops (WP3). This integration is closely tied to crop-specific breeding programs (WP2), and vegetatively propagated crops (WP3). This integration is closely tied to crop-specific breeding programs (WP2), and vegetatively propagated crops (WP3). It is also expected to expand in CWANA Regional Initiative (WP4), and in WA Regional Initiative (WP5) for legume seed value chain development.

**CGIAR Portfolio linkages**

**SEED EQUAL’S INTERNAL PORTFOLIO NETWORK**

Portfolios are expected to expand in CWANA Regional Initiative (WP4), and in WA Regional Initiative (WP5) for legume seed value chain development.
An innovative, market-focused model called DLSS, developed by PABRA, has been mainstreamed by the CGIAR Research Initiative on Seed Equal. The approach has significantly enhanced bean seed production in Zambia. EGS production surged by 221.4 percent, while certified and quality-declared seed production increased six-fold between 2021 and 2023. New varieties accounted for 88 percent of seed produced, improving varietal turnover. Additional effects included a 10.2 percent increase in bean grain production in 2023 and a 13 percent expansion in bean harvest area.

The demand-led system approach can improve seed availability and variety turnover, and enhance common bean grain supply in Zambia, by linking early-generation seed production with bean corridors and grain off-takers. By linking EGS production with bean corridors and grain off-takers, bean production grew 24 percent, from 3.2 to nearly 4 tons, while pre-basic seed production surged by 221.4 percent, from 1,424 tons in 2021 to 8,381 tons in 2023—a remarkable 221 percent increase. Certified and quality-declared seed production increased six-fold between 2021 and 2023. New varieties accounted for 88 percent of seed produced, improving varietal turnover. This has enhanced the supply of Tropical Agriculture is piloting the demand-led seed systems approach. Progress is not limited to Zambia. The International Institute of Tropical Agriculture is piloting the demand-led seed systems approach. By linking EGS production with bean corridors and grain off-takers, the demand-led system approach substantially improved seed adoption of high-quality seed of better-yielding varieties. Through these strategic interventions, breeder seed production was partially attributed to enhanced production through access to and transparency. In 2022, the Initiative forged partnerships with six grain off-takers. Through these partnerships, off-takers were connected to small-scale farmer training, policy influence supporting prioritized efforts to enhance seed production, private sector investments, ranking bean varieties, investing in seed increase, catalyzing off-taker investment, conducting collaborative marketing campaigns, building capacity for seed producers, and fostering partnerships that purchase beans or bean products from farmers or producers for further processing, distribution, or sale).

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Front cover photo

Women farmers checking seeds of paddy varieties at a seed fair held in Bolangir, Odisha. Credit: Devi Prasad Mahapatra (IRR)

Back cover photo

Seed demand estimation and business model tools developed by Seed Equal teams are helping partner like the Tanzania Agricultural Research Institute to improve the efficiency of their early generation sweet potato seed production. Credit: James Legg (IITA)