AGRA SeedSAT

Ghana

Stakeholder Validation Meeting

June 07, 2022
Premier Best Western Hotel - Accra Ghana

WWW.AGRA.ORG
<table>
<thead>
<tr>
<th>Time</th>
<th>Work Focus</th>
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<tbody>
<tr>
<td>8:30 - 9:00</td>
<td>Welcome, introductions and opening formalities</td>
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<tr>
<td>9:00 - 9:15</td>
<td>Review of goals and structure of SeedSAT and link to CESSA</td>
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<tr>
<td>9:30 - 10:30</td>
<td>Presentation (10 mins each) and discussion of Group I thematic area country scores by strategic objectives</td>
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<td>10:30 - 11:00</td>
<td>Health Break</td>
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<td>11:00 - 12:00</td>
<td>Continuation with Group II thematic area country scores by strategic objectives</td>
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<tr>
<td>12:00 - 12:45</td>
<td>Presentation of Group I thematic area recommendations (10 minutes each) followed by stakeholder feedback and discussion</td>
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<td>12:45 - 1:45</td>
<td>Lunch Break</td>
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<tr>
<td>1:45 - 4:00</td>
<td>Presentation of Group II thematic area recommendations (10 minutes each) followed by stakeholder feedback and discussion</td>
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<td>4:00 - 4:15</td>
<td>Next steps and appreciation</td>
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George Bigirwa
Deputy Vice President-Program Innovations & Delivery - Technical
AGRA
Review: What is the Seed System Assessment Tool (SeedSAT)?

A comprehensive tool for **analysing national seed system functionality** with respect to best practices

**Holistic** assessment approach looking at the complete system, which is different from approaches such as TASAI or Access to Seed Index

177 **scored indicators** spread across 8 Thematic Areas

**Not a longitudinal data gathering approach**, like TASAI -- rather it is focused on a full systems view via collaboratively scored indicators with **supporting rationale** for scores

A **learning journey**, for both national stakeholders and AGRA

Key goal is to drive **behaviour change and CESSA (Center of Excellence for Seed Systems in Africa) investment** – to develop better seed systems to serve farmers
Thematic Areas Assessed in SeedSAT

1. Breeding, variety release and maintenance
2. Early generation seed
3. Quality commercial seed production
4. Farmer awareness and participation
5. Seed markets and distribution
6. Policy, legal and regulatory environment
7. Quality assurance
8. National planning and coordination
Initiatives for improving Africa’s seed systems by different public and private actors remain uncoordinated today, leading to neglect of certain key elements.

There are challenges around access to solid evidence about what is working and what is not, valid data and information for decision-making, and technical advice and support for implementation of improved system processes.

CESSA aims to bridge this gap by partnering with various players to address these challenges.

What CESSA is Going to Offer:

- Analysis (SeedSAT)
- Training/Capacity building
- Convenings & Alliances
- Catalytic grants
- Knowledge & Data library
- Technical Advice
- Access 2 Finance
- Models/Case studies
- Digital tools
AGRA has had strong chapters in supporting seed systems. Looking ahead, the next chapter must revolve around supporting sustainable improvements in seed systems on the continent.

African nations want to implement best practice approaches, but need knowledge and support to do this.

Increasingly there is need to see:
1) more coordination among donor projects; and
2) large scale government-led impact from seed system investments.

AGRA and its country partners have a unique leadership opportunity to be the catalytic leaders of this work on the continent, building upon a strong history of seed system development.
Francis Mwatuni
Program Manager, SeedSAT
AGRA
Overview of SeedSAT structure

What does a national seed system assessment entail?

- Country
- Thematic Areas (8 in total)
- Thematic Area Strategic Objectives (average of 5 per Thematic Area)
- Indicators – scored, with supporting rationale (average of 22 per Thematic Area)
How is the assessment conducted?

✓ Focus is on wholistic system measured by 177 indicators in a **standard framework used for all countries**

✓ Significant **desk research**, supplemented by input from:
  - Evidence collection (legal documents, surveys, key informant interviews, etc.)
  - Outside technical expertise from seed system specialists
  - AGRA technical experts
  - AGRA country team representatives … combine to determine initial scores and rationale for the scores

✓ **Validation meeting** to review overall scoring picture and brainstorm on recommendations (today)

✓ Recommendations will drive both AGRA and other development partner investments and support (future)
Understanding the scoring approach

- Scoring is based on a Likert scale of 0 (low) to 3 (high)
- Scoring definitions are detailed, and specific to each indicator
- Scores are assigned based on what is closest to the reality on the ground; exact matches are not always possible due to the complexity of systems
- For presentation, colours are assigned to the four possible scores. See below.

<table>
<thead>
<tr>
<th></th>
<th>0 generally represents no or almost no activity for the indicator</th>
<th>1 generally represents a low amount of activity that is far below what is needed</th>
<th>2 generally represents a moderate level of activity but still below what is needed for a successful system</th>
<th>3 generally represents a score for an indicator that means the system is performing well in this area</th>
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<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
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</table>
5. Is there good implementation of government quality assurance field inspection activities for locally produced seed?

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<tbody>
<tr>
<td>There is no effective implementation of the required field inspection activities</td>
<td>The required field inspection activities by the certification agency rarely occur or are rarely timely, well-coordinated and accurate</td>
<td>The required field inspection activities by the certification agency occur and are timely, well-coordinated, and accurate approximately half the time, but either don't occur or are problematic the rest of the time</td>
<td>The required field inspection activities by the certification agency occur and are always or almost always timely, well-coordinated and accurate</td>
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**Rationale**

1. Transport deficiencies cited in numerous reports, with high hectarage of fields to be inspected per vehicle (6,000+)

2. Despite significant improvement in staffing levels from 2017-2020, inspector workload levels remain approximately 8x higher (hectares to inspect, per inspector) than best practice levels (RED&FS data)

3. Lack of training impacts field inspection accuracy and coordination

4. Eight independent reports cite deficiencies, including inadequate number and capacity of inspectors and experience of inspectors
Uganda scoring: Quality Commercial Seed Production

Uganda’s seed production capacity is strong with over 95% seed of key staple crops being locally produced by 42 seed companies. Maize hybrid seed production has taken root; out of the 40 varieties produced 80% are hybrids. The country currently recognizes QDS and the main crops produced under this category are beans, rice and soybean.

<table>
<thead>
<tr>
<th>Strategic Objectives</th>
<th>Indicator Scores</th>
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<tbody>
<tr>
<td>A Efficient, government-enabled seed production environment</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>B Adequate supply of quality seed of modern varieties</td>
<td>5 6 7 8</td>
</tr>
<tr>
<td>C Effective outreach to distributors and end-users</td>
<td>9 10 11 12</td>
</tr>
<tr>
<td>D Financial stability and access to finance</td>
<td>13 14 15 16</td>
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<tr>
<td>E Industry advocacy</td>
<td>17 18 19 20</td>
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<tr>
<td>D Financial stability and access to finance</td>
<td>21 22 23</td>
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<tr>
<td>E Industry advocacy</td>
<td>24 25</td>
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</table>
What does SeedSAT look like for an individual country?

<table>
<thead>
<tr>
<th>SeedSAT Thematic Areas</th>
<th># of strategic objectives</th>
<th># of indicators</th>
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</thead>
<tbody>
<tr>
<td>I Breeding, variety release and maintenance</td>
<td>5</td>
<td>22</td>
</tr>
<tr>
<td>II Early generation seed</td>
<td>5</td>
<td>19</td>
</tr>
<tr>
<td>III Quality commercial seed production</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>IV Farmer awareness and participation</td>
<td>3</td>
<td>24</td>
</tr>
<tr>
<td>V Seed markets and distribution</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>VI Policy, legal, regulatory</td>
<td>4</td>
<td>19</td>
</tr>
<tr>
<td>VII National quality assurance</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>VIII National planning and coordination</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>TOTAL</td>
<td>39</td>
<td>177</td>
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This is our purpose today…

Collaborative dialogue about SeedSAT results between AGRA, country Ministry of Agriculture and stakeholder representatives

Agreement on prioritized solutions and investment plan for consideration by AGRA and other donors
Radar chart: A good way to show a country’s overall assessment status

All 8 Thematic Areas have a point on the radar screen, and the colouring can range from 0% (on the left) to 100%
Below is the “radar chart” graphic for Ghana’s seed system assessment

Breeding, Variety Release & Maintenance

Early Generation Seed

Quality Commercial Seed Production

Farmer Awareness and Participation

Seed Market and Distribution

National Planning & Coordination

Quality Assurance

Policy, Legal, Regulatory

Seed Market and Distribution

“Perfect” 100% system

BVRM

EGS

QCSP

FAP

SMD

PLR

QA

NPC

Policy, Legal, Regulatory

Quality Assurance

Seed Market and Distribution

Farmer Awareness and Participation

Quality Commercial Seed Production

Early Generation Seed

Breeding, Variety Release & Maintenance

National Planning & Coordination
Upon completion of the final scoring, the assessment team will collaboratively develop recommendations for the key investments to strengthen the national seed system.

Recommendations will lead to highly practical dialogue with CESSA and partners about technical support, capacity building, investment, and more...

Example of recommendation from beta version work for both Ethiopia and Nigeria:

Design and carry out training programs, potentially including digital training approaches, for both federal and regional QA laboratory staff to ensure appropriate procedures are followed for all QA activities (Quality Assurance Thematic Area).
Lilian Gichuru
Program Officer, SeedSAT
AGRA
(for Jane Ininda)
Breeding, Variety Release and Maintenance
Seed System Thematic Areas Assessed in SeedSAT

1. Breeding, variety release and maintenance
2. Early generation seed
3. Quality commercial seed production
4. Farmer awareness and participation
5. Seed markets and distribution
6. Policy, legal and regulatory environment
7. Quality assurance
8. National planning and coordination

Seed System Thematic Areas Assessed in SeedSAT
Ghana scoring: Breeding, Variety Release and Maintenance

**Key notes:** Crop/variety development conducted by Crops Research Institute (CRI), Savanah Agricultural Research Institute (SARI) and the West African Center for Crop Improvement (WACCI). Germplasm sources from neighboring NARIs, and CGs (IITA, CIMMYT, Africa Rice, IRRI, ICRISAT). PPB and PVS data used in selection decisions.

### Strategic Objectives

<table>
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<tr>
<th>Indicator</th>
<th>Scores</th>
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<tbody>
<tr>
<td>A</td>
<td>1 2 3</td>
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<tr>
<td>B</td>
<td>4 5 6 7 8</td>
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<tr>
<td>C</td>
<td>9 10 11 12 13</td>
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<tr>
<td>D</td>
<td>14 15 16</td>
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<tr>
<td>E</td>
<td>17 18 19</td>
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<tr>
<td>F</td>
<td>20 21 22</td>
</tr>
</tbody>
</table>
Lilian Gichuru
Program Officer, SeedSAT
AGRA
(for Jane Ininda)
Early Generation Seed (EGS)
Seed System Thematic Areas Assessed in SeedSAT

1. Breeding, variety release and maintenance
2. Early generation seed
3. Quality commercial seed production
4. Farmer awareness and participation
5. Seed markets and distribution
6. Policy, legal and regulatory environment
7. Quality assurance
8. National planning and coordination
Ghana scoring: Early Generation Seed

Key notes: Main sources of basic seed the Council for Scientific and Industrial Research (CSIR) institutes (CRI and SARI) and the Grains and Legumes Development Board (GLDB). LCIC is a key non-government EGS entity. NASTAG supports building seed company capacities in hybrid seed production.

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<tr>
<td>A  EGS availability</td>
<td>1 2 3</td>
</tr>
<tr>
<td>B  Enabling environment for EGS production</td>
<td>4 5 6 7</td>
</tr>
<tr>
<td>C  EGS planning and demand forecasting</td>
<td>8 9 10</td>
</tr>
<tr>
<td>D  EGS access and feedback by seed producers</td>
<td>11 12 13</td>
</tr>
<tr>
<td>E  Quality control and regulatory interaction</td>
<td>14 15 16 17</td>
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George Bigirwa
Deputy Vice President-Program Innovations & Delivery - Technical
AGRA
Quality Commercial seed Production
**Ghana scoring: Quality Commercial Seed Production**

**Key notes:** The Ghana seed industry is still young as evidenced by the few seed producers (less than 20 local seed companies none of whom produces more than 4,000 MT, few multinational companies, few varieties released by the research system. Many old varieties are still in production, and this partly explains why yields are still low. Recent studies (KIT 2021) showed that maize yields are still at less than 1 t/ha and 0.3 t/ha for soybean.

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Joseph Ahenda
Program Officer, Seed Regulatory Specialist
AGRA
Quality Assurance
Seed System Thematic Areas Assessed in SeedSAT

1. Breeding, variety release and maintenance
2. Early generation seed
3. Quality commercial seed production
4. Farmer awareness and participation
5. Seed markets and distribution
6. Policy, legal and regulatory environment
7. Quality assurance
8. National planning and coordination
Ghana scoring: Quality Assurance

Key Notes: Seed Quality Assurance service is being offered by Ghana seed Inspectorate Division (GSID). The authorized seed classes are Breeders, Pre-basic, Basic, Certified Seed and Quality Declared Seed (in the National Seed Policy but not in the Act). Ghana follows OECD seed scheme and ISTA rules but not a member.

Strategic Objectives

A  QA regulations that are consistent with best practices
B  Implementation of QA activities for locally produced and imported seed
C  Implementation of point of sale/distribution QA activities
D  Efficiency and affordability of QA compliance for seed producers/importers
E  Service focus: QA dialogue, support, training and feedback
F  Institutional support for QA

Indicator Scores
Group discussion of first four Thematic Areas
Lilian Gichuru
Program Officer, SeedSAT
AGRA
(for Fred Muhhuku)
Seed Markets and Distribution
Seed System Thematic Areas Assessed in SeedSAT

1. Breeding, variety release and maintenance
2. Early generation seed
3. Quality commercial seed production
4. Farmer awareness and participation
5. Seed markets and distribution
6. Policy, legal and regulatory environment
7. Quality assurance
8. National planning and coordination
Ghana scoring: Seed Markets and Distribution

**Key notes:** Ghana’s 2.2 million farming HHs are served by 3,500+ agrodealers, with 80%+ of the seed sold under the PFJ subsidy program and agrodealers largely concentrated in urban areas. NGO and direct company sales to farmers are minimal. There is a functional agrodealer association. Certified seed volumes are not easily available, but maize/rice/soya seed is approx. 24,000 MT.

**Strategic Objectives**

| A | Efficient, government-enabled environment for seed markets and distribution |
| B | Industry adherence to seed regulations |
| C | Distributor seed supply and quality |
| D | Seed distributor capacity development |
| E | Distributor support for farmer knowledge and consumer protection |
| F | Industry advocacy |

**Indicator Scores**

1  2  3  4
5  6  7
8  9
10 11 12 13 14 15
16 17 18
19 20 21 22
23 24
Francis Mwatuni
Program Manager, SeedSAT
AGRA
(for Rufaro Madakadze)
Farmer Awareness and Participation
Seed System Thematic Areas Assessed in SeedSAT

1. Breeding, variety release and maintenance
2. Early generation seed
3. Quality commercial seed production
4. Farmer awareness and participation
5. Seed markets and distribution
6. Policy, legal and regulatory environment
7. Quality assurance
8. National planning and coordination
**Ghana scoring: Farmer Awareness and Participation**

**Key notes:** Ghana has over 4200 active extension workers and an extension worker to farmer ration of 1:709. Adoption of improved seeds in the country is still very low at 11%. The PFJ program is raising awareness of the use of improved seeds for farmers but one of the bottlenecks is that most hybrid maize is from multinational companies.

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**Strategic Objectives**

**A** Government communication for inclusive farmer awareness and participation

**B** Effective government-supported extension services for farmers

**C** Effective private-sector and NGO advisory, awareness and participation activities

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**Indicator Scores**

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Joseph Ahenda
Program Officer, Seed Regulatory Specialist
AGRA
(for Boaz Keizire)
Policy, Legal and Regulatory
**Ghana scoring: Policy, Legal, Regulatory**

**Key notes:** While Ghana’s seed Policy, Legal, and Regulatory framework has been undergoing significant developments in the recent years, some major gaps still exist. These include an incomplete PVP regulatory and institutional framework, national seed rules that are not aligned with the regional ECOWAS seed rules, and limited capacity on the part of regulatory institutions which affects implementation of seed rules.

**Strategic Objectives**

- **A** Presence and effective implementation of seed policy, laws, and regulations (or equivalent)
- **B** Seed policy, laws, regulations aligned with regional, international standards
- **C** Seed policy, laws, regulations support an enabling environment for seed systems
- **D** Effective and inclusive stakeholder engagement in design and development of seed policy, laws, regulations, and procedures

**Indicator Scores**

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
Joseph Ahenda
Program Officer, Seed Regulatory Specialist
AGRA
(for Vine Mutyasira)
National Planning and Coordination
Seed System Thematic Areas Assessed in SeedSAT

1. Breeding, variety release and maintenance
2. Early generation seed
3. Quality commercial seed production
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8. National planning and coordination
**Key notes:** (National (Seed) Planning and Coordination refers to whether or not a country's Ministry of Agriculture has a coordinated team or unit in place, with senior Ministry representation, that is focused on sustainable seed sector development and growth)

1. There is no specific unit or team under the Ministry of Food and Agriculture (MoFA) in Ghana that is dedicated to seed system planning and coordination.
2. Malawi has a Policy Planning Monitoring and Evaluation Directorate under the Ministry of Food and Agriculture (MoFA) that is mandated to oversees agricultural policy research, regulations, and coordinates review of seed policies, legislation, and regulation together with the National Seed Council, but it appear to have limited mandate on seed system planning and coordination

### Strategic Objectives

<table>
<thead>
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<th>Indicator Scores</th>
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<tbody>
<tr>
<td>A Effective national unit/team responsible for seed planning and coordination</td>
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<td>B Coordinated government collaboration</td>
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<tr>
<td>C Effective data gathering, analysis and sharing by the NSP&amp;C unit/team</td>
</tr>
<tr>
<td>D Functional and balanced seed dialogue platforms</td>
</tr>
<tr>
<td>E Smart design of subsidy and other government seed interventions</td>
</tr>
</tbody>
</table>
Group discussion of second four Thematic Areas
Breeding, variety release and maintenance

1. Breeding
2. Early generation seed
3. Quality commercial seed production
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Lilian Gichuru
Breeding, Variety Release, Maintenance- Ghana recommendations

Recommendation 1. Design and Fund breeding program based on clear definitions of product profiles and target crop growing environments with a focus on delivering realized genetic gain to farmers.

Breeding programs should optimize research activities with available resources, with both managerial and technical changes required. Need for well-defined, prioritized and market survey-based product profiles to guide breeding programs by defining market segments and priority constraints based on sufficient understanding of target markets and production systems. Involvement of cross functional teams (social scientists, gender specialists, economists, agronomists) to deliver product profiles consistent with beneficiary requirements (growers, processors, consumers).

Recommendation 2. Invest in resourcing and establishing procedures for variety maintenance

There is need to invest in established guidelines and appropriately trained personnel, for monitoring and maintaining of parental line stock quality. Operational procedures should be put in place and conducted to ensure genetic purity and high-quality seed and output regularly meets purity and quality criteria.
Breeding, Variety Release, Maintenance- Ghana recommendations

**Recommendation 3.** Develop a business case and prioritize investments to ensure research programs are supported with suitable infrastructure to carry out their research activities.

There is need to invest in well-designed, purpose-built facilities with proactive equipment maintenance schedules. This also includes greenhouse and/or field screening capacity for screening traits relevant to growers and consumers. There is also need to evaluate and ensure adequacy of seed store, labs, irrigation facilities, etc.

**Recommendation 4.** Provide adequate budget to meet goals for upscaling variety release and maintenance of germplasm with commercialization.

There is need to mobilize adequate budgetary support from government or other potential granting sources by showcasing successes and impacts from prior funding. Further a balancing of the proportion spent on salaries vs operation costs through better financial planning and tracking of costs.

Need for expert engagement in designing a variety licensing and a robust monitoring system for royalty payments, which could be ploughed back to support research programs.

Support a more coordinated and efficient teamwork across different disciplines and locations and explore where savings can be made and resources get allocated to priority areas.
Recommendation 5. Develop a mechanisms/forum for consultation of breeding programs with commercial seed producers to create better alignment for strong, two-way, and sustained partnerships

There is weak alignment breeding programs with the seed producers/traders to allow efficient seed production planning for all classes of seed. A formal process should be established for determining early generation seed requirements. This will require institutionalizing a joint decision-making mechanism with relevant stakeholders for final stage promotion of varieties/hybrids, using high-quality performance data. Formal channels for information exchange needed for both public and private breeders and seed producers.

Recommendation 6. Establish processes and procedures to assure better adoption of released varieties

There is need to understand farmer demand and production issues through better linkages with seed producers. This will be strengthened through proper feedback channels to better align with smallholder needs to support release decisions. Variety promotion and advancement systems should be defined through verified datasets using best competitive cultivars. Finally, the release process needs to be assessed for adequacy, timeliness and cost effectiveness.
Breeding, variety release and maintenance

Farmer awareness and participation

Early generation seed

Quality commercial seed production

National planning and coordination

Quality assurance

Policy, legal and regulatory environment

Seed markets and distribution

Lilian Gichuru
Early Generation Seed- Ghana recommendations

**Recommendation # 1: Fund EGS production, quality control and infrastructure support**

There is need to invest in EGS production and quality control infrastructure; including exploration of different models that work in EGS production such as farmer led businesses. The main institutions, CRI, SARI and GLDB may need to: (i) install irrigation systems and other production-enhancing methods and (ii) refurbish the existing cold storage facilities.

**Recommendation #2: Capacity and training**

Update skills in parental line maintenance. NASTAG should continue to build the capacity of seed companies in this area, so that they can multiply and commercialize new crop varieties being developed by the research institutions.
Recommendation # 3: EGS planning and demand forecasting

Scale for EGS planning with relevant digital tools to foster open and liberal access. Further, seed companies and the different EGS producers should develop a framework to determine the annual national requirement for the different classes of early generation seed. Digitized tracking will provide data on gaps, progress that informs funding and budgeting for EGS.
Breeding, variety release and maintenance

早期种子质量（Early generation seed quality）

商业种子生产（Commercial seed production）

农民意识和参与（Farmer awareness and participation）

国家规划和协调（National planning and coordination）

政策、法律和监管环境（Policy, legal and regulatory environment）

种子市场和分发（Seed markets and distribution）

品质保证（Quality assurance）
Recommendation # 1: Strengthen the seed quality control capacities within seed companies and growers

The capacities of seed companies/growers are so varied that not all are able to observe the required quality control requirements. PPRSD, in collaboration with NASTAG and SEEDPAG should conduct an annual audit of each seed company and grower to assess whether they adhere to these requirements and standards. In case there are gaps, then a plan should be put in place to address these gaps within a given timeline. Failure to address some of these gaps should lead to a withdrawal of the grower’s or company’s operating license.

Recommendation # 2: Sustain the range of government efforts to address the challenge of counterfeit/fake seed and monitor their effectiveness

There have been notable improvements in the government’s response to the challenge of fake seed. To sustain the improvements, the National Seed Council and NASTAG should monitor the following specific interventions: (i) inspection of seed fields, processing facilities, and agro-dealer outlets by the Ghana Seed Inspection Division (GSID); (ii) a requirement that all seed be sold in packages with labels and certification tags; (iii) a requirement that evidence of procurement of basic seed is provided when selling to the PFJ program, and (iv) a farmers’ awareness campaign as part of the PFJ program (v) Digitize the process – introduce scratch cards on seed packets.
Quality Commercial Seed Production recommendations for Ghana

**Recommendation # 3: Refurbish the government seed processing facilities**

Most of the seed growers process their seed at the various government-owned seed processing facilities at Winneba, Ho, Kumasi, Tamale, Bolgatanga, and Wa. Most of the processing equipment in these facilities need repair, impeding their capacity. PPRSD needs to conduct a comprehensive assessment of the status of these facilities and then invest in their refurbishment. The other alternative is for the seed companies to endeavor to acquire their own.

**Recommendation # 4: Develop sustainable seed market**

PFJ program is the main buyer of certified seed from seed growers this not only distorts the market but also creates dependence syndrome. There is need to develop a steady, reliable market driven seed distribution system.
Quality Commercial Seed Production recommendations for pilot countries

Recommendation # 5: Promote the growing of modern varieties

While tremendous efforts have been made to develop and release new varieties of different crops, old varieties dating several decades are still being grown. Farmers are not benefiting from new special traits like drought tolerance, disease and pest resistance let alone nutrition attributes. There is need to create awareness of these varieties.

Recommendation # 6: Access to finance

Many seed companies experience challenges to access funds from commercial institutions to invest in modern facilities like processing, storage, farm machinery and working capital to expand their businesses. Interest rates are high making it uncompetitive. With support from the government special facilities should be put in place for the seed entrepreneurs.
Quality Assurance Ghana recommendations

Recommendation # 1: Scoping studies for functional QA laboratories
Conduct scoping study to: assess current and anticipated QA laboratory volume; determine adequacy/inadequacy of current labs, staff numbers, staff experience, staff capacity, equipment, staff locational distribution, training needs, facilities, and infrastructure; propose specific approaches to remedy inadequacies; identify levels of capital investment as well as annual financing required to deliver viable and adequate seed testing services. If transition of lab-based activities to private sector is recommended and viable, incorporate the implications of third-party authorization into recommendations and findings.

Recommendation # 2: Expansion of crop scope/portfolio for seed QA
Support national seed regulatory authority to develop protocols for all priority scheduled/focus crops with a view to formalizing seed certification for a wider range of crops, including for vegetatively propagated materials.

Recommendation # 3: Establishment of ISTA-accredited seed laboratory
Support development of a new ISTA-accredited lab or upgrading of a current lab to ISTA standards to both serve as a valid reference laboratory and issue export certificates. Bring in appropriate technical advice to advise on steps and investment required.
Quality Assurance Ghana recommendations

**Recommendation # 4: Reduction in low quality and counterfeit seed**
Develop practical plans to address low quality and fake seed, e.g.: support full adoption and use of scratch card labels; strengthen seed inspectorate units for proper surveillance and monitoring; provide support for retesting and repackaging of expired and torn packets; and implement appropriate levels of pre- and post-control activities.

**Recommendation # 5: Digital tools for increased volume and efficiency**
Identify opportunities and practical, recommended approaches to support QA processes with digital tools such as e-certification, GPS-linked field tracking and inspection reporting, and online registration of seed growers.

**Recommendation # 6: Sector dialogue among seed industry players**
Support government commitment to, and implementation of, inclusive sector dialogue to improve the enabling environment for private sector participants and investors. Strengthen the seed trade association’s ability to advocate for stronger systems and improve self-regulation among members.
Breeding, variety release and maintenance

Early generation seed

Quality commercial seed production

Farmer awareness and participation

National planning and coordination

Quality assurance

Policy, legal and regulatory environment

Seed markets and distribution
Recommendation # 1: National seed distribution mapping exercise
Establish number, type, geographical density and capacity of seed distributors to determine investments for upgrading and scaling. Update Ghana agrodealer database.

Recommendation # 2: Agrodealer business training
Facilitate capacity building in business management and scaling for seed distributors, to improve sustainability and quality of service providers, drive the establishment of more outlets for farmer access to quality seed, and diversify the supply of crop seed varieties with emphasis on new varieties. To be combined with Recom. # 3 below.
Recommendation # 3: Smart digital solutions for business

Expand the adoption and use of ICT innovations and digital solutions to assist in ordering, accounting, marketing and general stock management to improve efficiency and reduce costs. Training in the use of these digital solutions could be done as part of business management training in Recom. # 2 above.

Recommendation # 4: Credit support for business improvement and expansion

Link private distributors to information and/or affordable credit facilities to enable them invest in seed scaling initiatives such as proper storage (potentially including facilities such as cold rooms), farm input promotional activities, and general expansion (potentially including vegetatively propagated planting materials)
Breeding, variety release and maintenance

Early generation seed

Quality commercial seed production

Farmer awareness and participation

National planning and coordination

Quality assurance

Policy, legal and regulatory environment

Seed markets and distribution
Farmers Awareness and Participation – Ghana recommendations

**Recommendation # 1 Effective public extension models**
Scale up inclusive public and private sector extension and input models that train and demonstrate new improved varieties and other technologies at farm level to significantly increase yields and incomes – and provide institutional support for the extension systems to function effectively.

**Recommendation # 2 Training and capacity building**
Support the provision of regular training to public and private extension officers and subject matter specialists on seed matters and other identified gaps through programs such as in-service training. Support identification and access to widely and freely available digital training and support materials.
Farmers Awareness and Participation - Ghana recommendations

Recommendation # 3 Feedback mechanisms
Develop practical, transparent and highly inclusive two-way platforms with feedback mechanisms between farmers and seed regulators, research institution, private sector so that farmers can readily give feedback on seed quality, variety development, seed access, and more.

Recommendation # 4 Large scale outreach farmer communication
Support and or strengthen functional farmer outreach communication channels that can operate at a large scale with affordable unit costs, such as vernacular radio programmes (Farm Radio Trust), e-extension platforms and agrodealer initiatives that can reach large numbers of customers focussing on new varieties, crop marketing opportunities, feedback loops, etc.
Farmers Awareness and Participation - Ghana recommendations

Recommendation # 5  Knowledge management

Establish an online resource database of relevant extension and agricultural training materials that can easily be accessed by both extension workers and tech-enabled farmers, with a focus on seed choice and realizing the full potential of modern seed varieties at harvest time. The material should include lessons on agronomics and cultivation (soil health, seed choice, soil and seed match, and agronomic practices such as fertilizer application and spraying), in addition to post-harvest handling and storage.
Breeding, variety release and maintenance

Early generation seed

Quality commercial seed production

Farmer awareness and participation

National planning and coordination

Quality assurance

Policy, legal and regulatory

Seed markets and distribution

Joseph Ahenda
Recommendation #1: Fast Track Development and Approval of Plant Variety Protection Regulations

PVP Act 2020 was enacted but regulations are still under development. The process needs to be fast tracked to facilitate the implementation of the law. This should include implementation strategy and institutional framework e.g., PBR office.

Recommendation #2: Support in-country capacity to implement laws and regulations

Advocate for increased number of seed inspectors, analysts and expand their capacity to offer seed QA service. Enhance capacity of seed regulatory authority, support development of seed standards and align to international best practice.
**Recommendation # 3: Implement and Support Private (Third Party) Seed Inspection**
Support adoption of Authorized private/third party seed certification to increase efficiency and help alleviate the financial and capacity stresses on regulators. This also leverages private sector specialized skills.

**Recommendation # 4: Develop Seed Strategy and Investment Plan in line with seed policy, laws and regulations**
The seed plan and strategy show the regulator’s approach and timeline on achieving the policy statements and provisions within the regulations. Monitoring of the implementation of the seed legal instruments to depict success, gaps and need for review.

**Recommendation # 5: Update DUS and NPT Evaluation Protocols**
Updating of MoFA manual on the Procedure for Release and Registration of Crop Genetic Material (Variety Release Manual) to address more than the 8 crops that are currently in the manual in line with new regulations.
Breeding, variety release and maintenance

Early generation seed

Quality commercial seed production

Farmer awareness and participation

National planning and coordination

Quality assurance

Policy, legal and regulatory environment

Seed markets and distribution
Recommendation # 1: Seed planning and coordination team
Support effort to constitute and roll out a functional unit or team under the Ministry to carry out seed system planning and coordination. The team should be supported to have the necessary skills, experience, structure, clear mandate or charter, and pluralistic composition required to fulfill its mandate.
Support Ministry to develop, communicate, and implement a clear and concise medium and long-term seed strategy.

Recommendation # 2: Institutional support for seed planning and coordination
Develop and implement sustainable funding and resource plans for Ministry staff to carry out seed planning and coordination responsibilities effectively. These responsibilities should include inclusive stakeholder gatherings, data collection and analysis, and long term seed system planning.
Recommendation # 3: Clear information for stakeholder decision-making

Develop an online seed sector platform that brings together information on seed (e.g., seed varieties, agrodealers, agrochemicals, seed industry contacts, key downloads) and invest to keep the platform up to date and relevant.

Recommendation # 4: Stronger enabling environment for private sector participants

Undertake training to build Ministry capacity to understand and implement various approaches to improving the enabling environment for private sector investors and participants in the national seed sector. This training should include enhanced understanding and implementation of smart subsidy and relief programs.

Institute functional, two-way multi-stakeholder dialogue on a regular basis to discuss industry issues and development.
Recommendation # 5: Seed demand forecasting
Support the Ministry to adopt and implement an economically robust framework for seed demand forecasting to facilitate stakeholder decision-making. Establish a baseline for seed volumes for key crops as part of this effort. Build capacity in the team responsible for carrying out the annual forecasting exercise and support communication of results.
George Bigirwa
Deputy Vice President-Program Innovations & Delivery - Technical
AGRA
Next steps

✓ AGRA will share these slides with you. Additional stakeholder input is most welcome. Kindly email any additional feedback to fmwatuni@agra.org

✓ AGRA will consider and include stakeholder feedback in development of proposed recommendations and final assessment reports

✓ AGRA has funding to develop national investment plans based on SeedSAT findings, and will collaborate with stakeholders to do this in 2022

✓ AGRA will share key SeedSAT findings and recommendations with other development partners
Example of support to Ethiopia & Nigeria following SeedSAT assessment

**Ethiopia**

1. EGS production
2. Institutional capacity and efficiency enhancement in QA engagement of public and private seed producers, and federal and regional QA authorities with the goal of creating a sustainable (self-financing) QA system.
3. Facilitation to ratify and implement policy and legal frameworks to create a functional enabling environment to allow local and foreign seed companies to operate in the country.
4. Strengthen the national seed trade association
5. Development of the Seed Investment Plan

**Nigeria**

1. Equip the national seed laboratory
2. Train national seed laboratory staff
3. Digitization and strengthening the National Seed Planning and Coordination Unit
4. Provide TA to some seed companies in the areas of seed production, processing and quality assurance
5. Development of the National Seed Investment Plan
In Summary . . .

- SeedSAT
- Country seed system stakeholder collaboration, analysis, and design of solutions
- EESSA

=Sustainable, systemic change benefitting millions of farmers and their families and Ghana’s economy
APPRECIATION

• We appreciate all the stakeholders who gave us preliminary information for Baseline scores and rationale

• We also appreciate all the stakeholders who gave their input on the information gathering exercise to finalize the scores, rationale and recommendations

• The AGRA country team is also appreciated for spearheading the country Baseline scoring and in logistical support for the validation meeting

• We finally appreciate all the stakeholders who came and participated in this important validation meeting