Summary of Rice Seed Road Map for Uganda

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1.0 General Overview of Rice Seed Sector

- Legislation:

- Initiatives:
  - NAADS, PRiDe, CARD, Africa rice, CIDA, CATALIST (IFDC), EAAPP, ISSD and a national Seed Sub-sector Coordination Group

- Institutions:
  - MAAIF, NARO, NAADS, Seed Cos, NGOs, projects, UNFFE

General Overview cont’d

- Seed is produced based on demand and availability of funds from projects.

- **Forum for information sharing:** No specific forum for seed but rice steering committee and Joint Coordination Committee, rice multi stakeholder innovation platform

- Rice Multi stakeholder innovation platform

- Current rice seed prdn:

<table>
<thead>
<tr>
<th>Seed category</th>
<th>Quantity (MT)</th>
<th>Area (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breeder</td>
<td>1.25</td>
<td>1.25</td>
</tr>
<tr>
<td>Fdn seed</td>
<td>24</td>
<td>18</td>
</tr>
<tr>
<td>Cert seed</td>
<td>504</td>
<td>392</td>
</tr>
</tbody>
</table>
General Overview cont’d

- Certified varieties: NERICA 1, 4 & 10, Africa 1 & 2, NARIC 1 & 2, NP2 & 3 and UK2 (Upland)
- On pipeline – NERICA 6 WITA 9 (Lowland) and NAMCHE 1, 2, 3 & 4 (Upland)
- Staffing (human resources):

<table>
<thead>
<tr>
<th>Inspection</th>
<th>Knowledge</th>
<th>Research</th>
<th>Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Inspectors</td>
<td>PhD (1), MSc (2) BSc (1)</td>
<td>7 Researchers</td>
<td>PhD (4) and MSc (3)</td>
</tr>
<tr>
<td>4 Technicians</td>
<td></td>
<td>BSc (2) Diploma (2)</td>
<td></td>
</tr>
<tr>
<td>30 Laborers</td>
<td></td>
<td></td>
<td>≤ High School</td>
</tr>
<tr>
<td>Private sector = ???</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.0 Critical Challenges

Legislation, Policy, Institutions and Planning
- National Seed policy is still in draft form
- Inadequate human resource and budget to enforce legislation
- No specific national annual budget and plan for seed multiplication
- Absence of long term forecasting for demand of the rice seed in the country
- Lack of long term plans and strategy for rice seed multiplication and development
- Rice Multi stakeholder innovation platform (NOT YET AT NATIONAL LEVEL)
- Lack or inadequate testing facilities and appraisal of seed quality during procurement process from the private companies by public agencies
Critical Challenges cont’d

Technical (Production, Supply, Marketing & Inspection)
- Lack of projection of demand
- Limited resources (human, budget)
- Higher dependence on donor project funds
- Seed from sources such as Africa Rice is not of higher standards
- Inadequate infrastructure (cold storage facilities, equipment for testing and evaluation of parental lines)
- All operations are concentrated in one station (Namulonge)
- No feedback mechanism (from private companies who buy the foundation seeds)
- Lack of commercial interest by private companies in rice seed production
- Limitations in land for private companies engaged in contract seed production

Critical Challenges cont’d

- Fragmented and weak distribution system
- Absence of registry of farmers engaged in certified rice seed production
- Limited access to finance for agro input dealers and potential seed producing entrepreneurs
- Poor quality and adulteration of rice seeds.
3.0 Vision and Scope of Rice Seed Road Map

**Vision:** “Self-sustaining supply of quality rice seed in Uganda”

**Scope:** “The entire supply chain of rice seed system in Uganda”

**Goal:** “To enable access to quality rice seed by farmers in Uganda by 2018”

**Objectives:**
- Improve quality of seed
  - By building capacities and strengthening of inspection & certification processes
- Increase volume seed
  - by mobilizing and building capacities of farmers, private & public sector stakeholders
- Enhance accessibility of improved seed
  - through timely distribution and strengthening of supply chain
- Promote implementation of seed policies & regulations
  - by providing advocacy, creating awareness re-organization of rice seed industry

**Implementation Structure**

- **Rice Steering Committee (RSC)**
  - Direct RIS to develop concept notes for funding,
  - Approve concepts

- **Rice Technical Committee (RTC)**
  - Provide technical guidance

- **Rice Industrial Secretariat (RIS)**
  - Mobilize funds (in collaboration with TWG)
  - Monitor projects

- **Technical Working Group (TWG)**
  - Mobilize funds
4.0 Strategic Principles & Approaches

Legislation & Policy:
- Expedite national seed policy
- A need to build human resource capacities
- Give adequate incentives and price support for seed production amongst farmers.
- Creation of awareness amongst farmers and registration of farmer-seed producers

Production & Inspection
- Recruitment of staff for inspection and certification and building their capacities

Principles and Approaches cont’d

- Upgrading seed testing laboratories
- Extension services focusing on awareness of the importance of renewal of seed sources

Supply & Marketing
- Strengthening PPP for broadening seed sources and improved efficiency of seed supply chain
- Ensuring quality assurance and proper packaging
- Streamline public procurements of certified seed
5.0 Target setting and Gap Identification

**Target Production**

- 682,803 MT GRAIN (NRDS Target Prod. by 2018)
- 13,656 MT Certified Seed
- 273 MT Foundation Seed
- 5.46 MT Breeder Seed

**Assumptions**
- Average Rate: 50 kg/Ha,
- Average yield: 2.5 t/Ha,
- Seed-Grain Ratio: 1 : 50

**Gaps in Production**

<table>
<thead>
<tr>
<th>Seed Type</th>
<th>Target Amount (MT/year)</th>
<th>Current Production/supply (MT/year)</th>
<th>Gap (MT/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breeder Seed</td>
<td>1092</td>
<td>0.078</td>
<td>1</td>
</tr>
<tr>
<td>Foundation Seed</td>
<td>55</td>
<td>3.88</td>
<td>51</td>
</tr>
<tr>
<td>Certified</td>
<td>2731</td>
<td>250</td>
<td>2481</td>
</tr>
</tbody>
</table>

**Gaps in Required Area**

<table>
<thead>
<tr>
<th>Seed Type</th>
<th>Targeted Area (Ha)</th>
<th>Current Area (Ha)</th>
<th>Gap (Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breeder Seed</td>
<td>2.184 Ha</td>
<td>0.034 Ha</td>
<td>2.15 Ha</td>
</tr>
<tr>
<td>Foundation Seed</td>
<td>109.2 Ha</td>
<td>1.55 Ha</td>
<td>107.65 Ha</td>
</tr>
<tr>
<td>Certified</td>
<td>5.462 Ha</td>
<td>79.6 Ha</td>
<td>5382.4 Ha</td>
</tr>
</tbody>
</table>

**Gaps in Human Resources**

<table>
<thead>
<tr>
<th>Seed Producing Stations</th>
<th>Researcher Required</th>
<th>Available</th>
<th>Gap</th>
<th>Technician Required</th>
<th>Available</th>
<th>Gap</th>
<th>Workers/ Laborers Required</th>
<th>Available</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Na'CRRI, Na mulonge</td>
<td>10</td>
<td>7</td>
<td>3</td>
<td>8</td>
<td>4</td>
<td>4</td>
<td>60</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>Al. West Nile</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>15</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>Serere, Far East</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>15</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>Lira, North</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>15</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
<td><strong>9</strong></td>
<td><strong>20</strong></td>
<td><strong>16</strong></td>
<td><strong>95</strong></td>
<td><strong>65</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Technical Gaps

**Production & Inspection**
- Technical know-how (knowledge on seed production procedures & protocols)
- Initial seeds (breeders' seeds) not sufficient available
- Lack of commercial interest by private companies in rice seed production
- The inadequate inspection staffs also affect seed production (as the lots may not be inspected; and hence not certified)
- Limitations in land for private companies engaged in seed production
- Technical capacity of inspectors
- Testing equipments
- Inadequate operational budget for inspection and testing
- Transportation means
- Accreditation of national seed testing labs
- Seed board:- not meeting regularly
- Varietal release procedures – not clearly known

6.0 Intervention Options

**Legislation, Policy, Institutions & Planning**

Suggestions to policy makers
- Expedite the process of drafting the national seed policy
- Harmonize national seed production standards and procedures with the regional blocks
- Draw long-term strategies for the development of seed sub sector
- Streamline varietal release procedures with international procedures
- Establish a registry of community- and farmer-seed producers
- Raise interests of contract farmers in rice seed production for private companies through policy decisions;
- Supplement the capacity and reach of NSCS by training and engaging local extension agents to perform inspection of fields where farmers produce seed for themselves
Intervention options cont’d

- Allocate exclusive annual budget for production of line for multiplication and inspection of breeder’s, pre-basic and basic seed production of popular rice cultivars
- Install a self-sustaining seed fund that could reinvest the funds generated from the sales of foundation seeds back into the production of breeder- and foundation seeds
- Widen the licensing framework by issuing rights for multiplication of seeds of more than one variety per private seed company
- Set up rice multi-stakeholder innovation platform at all rice producing regional and at national levels
- Establish clear and realistic projections on demand for rice seeds, varieties on a seasonal/annual basis by engaging local governments, private sector, NAADS and MAAIF

Intervention option cont’d

Production & Inspection

- Establish a database on all existing rice varieties and their characteristics
- Improve the technical know-how of researchers
- Capacity building for “certified” seed production & inspection:
  - Increase the quantity and access of initial seeds
  - Encourage participation of private sector in commercial rice seed production
  - Increase number of researchers and inspectors
Intervention Options cont’d

- Procurement of testing equipments and laboratory infrastructures
- Increased budget for inspection, testing & transportation
- Accreditation of national seed testing labs by subscribing to OECD and ISTA
- Harmonization of regional seed policies through collaboration with regional blocks
- Organizing training programs for farmers who save seeds for themselves and extension agents who shall monitor seed production and/or selection technologies

Supply & Marketing

- Actively promote agro-dealers
- Scale out the functions of foundation seed production & supply through other NARO centers/stations
- Promote and strengthen agro-dealer networks in rice production areas
- Training of seed multipliers (farmers and other private producers) to broaden the sources of supply of certified seeds in more rice production areas
- Create awareness on financial products and schemes available for seed production
Intervention Options cont’d

- Increase the budget outlay for supply of certified seeds under local administration
- Increase annual operational budget allocation for National Seed Certification Services Unit
- Improve the timeliness of availability/release of funds for seed supply to local administration
- Facilitate quality assurance through inspection of seeds sold in the market
- Reduce forgery by ensuring that the seeds are packed with tamper proof materials and the required technical details are shown
- Provide quality assurance through monitoring & evaluation of distribution practices & services