OPVs-major cereals (Rice) Public-Private Archetype

**Bottlenecks**

**Seed characteristics**
- Relatively high multiplication rate
- Relatively high isolation distance (4m)
- No visual difference between grain and seed
- High level of seed not true to type
- Farmers only need to replace seed every 3-4 years

**Demand characteristics**
- Little market pull for improved varieties
- High re-use of seed (beyond 3-4 years)
- High prevalence of fake and non-certified seed
- Free distribution hampers brand building seed companies

**Regulatory**
- Low capacity for certification
- Profit margins would allow for private certification
- No intellectual property system operational
- NTR disincentive for institutes to produce EGS efficiently
- QDS not allowed for maize and rice

**EGS production**
- Breeders use out-growers with limited supervision
- Fragmented value chain – no clear EGS demand forecasting
- Lack of trust amongst producers on quality issues
- 1 extra generation needed to produce sufficient quantities.

**Proposed solutions to bottlenecks**

**Public Private partnership for public varieties, allowing QDS**

**Objective:**
- Increase volumes of high quality EGS for seed production
- Reach more farmers through QDS for selected OPVs (excluding Maize) with low market penetration

**Roles and responsibilities public private partnership**

**Breeder seed**
- Breeders produce sufficient quantities breeder seed at institute
- SC pay full production cost (appr. UGX 50,000/kg)
- NARO provides DNA finger printing services
- External inspection by NSCS/AgVerify (private sector)

**Foundation seed**
- Conditional exclusivity contracts between NARO and SC;
- Foundation seed produced at Institute (ZARDIs), SC, LSBs under supervision
- Breeder provides supervisory support & capacity building to SC staff at a fee
- External inspection by NSCS/AgVerify/accredited inspectors

**Commercial seed**
- Seed companies produce seed on farm or use out-growers
- Certified seed marketing through formal channels
- External inspection by AgVerify for certified seed.
- Allow QDS when dissemination of variety is slow
- QDS inspection by DAOs

![Diagram](image-url)