Public-Private Partnership Enhances Seed Production and Utilization by Bean Farmers in Rwanda

Augustine M., Rubyogo J.C., Butare L., Kiza D., Nyiringabo I., Murwanashyaka E., Mukankubana D., Muvara J., Mukakigeri J., Gafaranga J., Masuki K., Bigirwa, G. and Daphrose G.

Pan African Grain Legume and World Cowpea Conference 28 February – 4 March 2016, Livingstone, Zambia
IP 1: Climbing beans (Burera); IP 2: Bush beans (Nyagatare); IP 3: Snapbeans (Muhanga)
“It all starts with the seed”
“No Seed security = No Food security”
PRODUCTIVITY FUNCTION (Chrispals et al. 2001)

- Productivity = Variety (40%) + GAP (60%)

- Seed is both a carrier for genetic yield material and an input in yield enhancing GAPs

- Major bean diseases are seed-borne (ALS, BCMV, Anth, CBB, Root rots species, .......) and or constrain weak plants from bad seeds
Background and the problem

- Rwanda released adapted & high yielding bean varieties with yield potential of 2.5 – 5.0 MT/Ha.

  - However, on-farm bean yield stands at 1.2 MT/Ha,
    - Attributable to less than 5% access to and utilization of improved seed by farmers

- Bean systems dominated by old and low yielding varieties
Major features of bean seed systems in Rwanda

- **Formal**: dominated by public research; extension services and supplies <5% seed
- **Informal**: farmer saved/exchange, local markets - accounts for >95% seed supply
- Few and young local seed companies
- Seed recycling common, creating low effective demand and less interest by SMEs
- Little land holding by farmers; not attractive to large scale investments in seed
Objectives and expected outputs

Objective:
- To enhance access to and utilization of new bean varieties by farmers through public-private partnership approach

Outputs:
- Seed production and distribution increased
- New varieties promoted
## PROCESS: (i) Identification of partners

<table>
<thead>
<tr>
<th>Partner</th>
<th>Name</th>
<th>Category</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public research</td>
<td>RAB</td>
<td>Breeder/basic</td>
<td>Country-wide</td>
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<tr>
<td>Devt partners</td>
<td>CIAT/AGRA/ASARECA</td>
<td>Technical/financial</td>
<td>Country-wide</td>
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<tr>
<td>Seed Company</td>
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<td></td>
<td>Win-Win</td>
<td>Certified</td>
<td>East &amp; Central</td>
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<td></td>
<td>APC</td>
<td>Certified</td>
<td>North &amp; West</td>
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<tr>
<td></td>
<td>COAMV</td>
<td>Certified</td>
<td>North &amp; West</td>
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<tr>
<td>F/Federation</td>
<td>Imbaraga</td>
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<tr>
<td>NGO</td>
<td>DERN</td>
<td>Certified</td>
<td>North/West</td>
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<td>DRD</td>
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<td>RDO</td>
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<td>East/Central</td>
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<tr>
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<td>KOPAMU</td>
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<td>PSM</td>
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<td></td>
<td>Imbarutso</td>
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<td>South</td>
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<tr>
<td>Project</td>
<td>HarvestPlus</td>
<td>Certified</td>
<td>Country-wide</td>
</tr>
</tbody>
</table>

Local Gov’t Admin and extension for support and organization services
(ii) MoUs, meetings and capacity building

- MoUs were agreed on and signed by all partners.

- Quarterly and seasonal planning and review meetings were held to share challenges and strategies to meet fresh seed needs and targets.

- RAB trained more than 1,000 individuals—extension agents, members of seed companies, NGOs, cooperatives and contract farmers.
(iii) Awareness creation through:

• Demonstrations established for new varieties

• Field days, agric. shows and release ceremonies used to launch new varieties.

• Mass communication platforms
  – FM and national radio, newspapers

• Brochures, posters and booklets designed, printed and distributed.
Assortment of awareness creation tools
Seed distribution to farmers:

- Branding was done and seed disseminated through:
  - Open-marketing,
  - Pay-back,
  - Agro-dealer networking
  - Bulk sales (50, 100 kg-bags)
  - Small-pack sales (0.5kg, 1kg, 2kg, 5kg, 10 – 25 kg bags)

purchase schemes.
RESULTS: Increased Seed production

- Seed production increased by **three times** in 2012, and
- over eight times in 2013
- Compared to 2009 before the PPP initiative
Increased seed production cont’d

- Annual seed increments were sharp below 0 (~-2) in 2008 to ~60 in 2013
- Supply increased from 1.6% in 2009 to 13.6% in 2013 of the national demand.
- About **80%** replacement of old varieties by improved ones
- Proportion of **new climbing beans** increased from 40% to **53.3%** between 2011 and 2013
Impact on landscape
Acknowledgement

- Government of Rwanda - RAB
- ASARECA
- PABRA
- CIAT
- Harvest Plus
- Farmers and their organizations
- NGOs
- Seed entrepreneurs
THANK YOU