Annual Innovation Lab Council Partners Workshop
Scaling Up Agricultural Research Technologies & Designing Research for Improved Nutritional Outcomes

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Shangri-La Hotel, Kathmandu

Feed the Future Innovations Lab for the Reduction of Postharvest Loss

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IRRI Vision for Bangladesh

Rice Science for a Better World
A rice value chain that alleviates poverty and underpins food security, adequate nutrition and environmental sustainability in priority zones of Bangladesh.
The good, the bad & the ugly of rice in Bangladesh

**Good:** from famine after independence to sufficiency, mechanized land preparation and sowing

**Bad:** average yields 1t/ha lower than Indonesia and Vietnam

**Ugly:** seed handout programs continue
Rice Science for a Better World

Major Recent Developments:

• Rapid deployment of tolerance genes – drought, submergence & salinity (directly reached 1 million farmers through FfF in 18 mo in SW BD)

• MOU with private company ACI and engagement with USAID-BD on a Private-Public Alliance: rice breeding & seed

• BRRI release high zinc rice “BRRI dhan 62”

• Contained field trial of Golden Rice sown
Huge opportunities for Bangladesh:

• Asian mega-deltas: Bangladesh becomes the world laboratory for salinity in monsoonal deltaic agricultural systems (GM species are a component)

• Make rice seed hand-outs history
**Feed the Future Innovations Lab for the Reduction of Post-Harvest Loss**

<table>
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<th><strong>Purpose:</strong></th>
<th>Provide global leadership in <strong>food security</strong> by reducing post-harvest loss (PHL) and food waste</th>
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| **Partners:** | Kansas State University  
University of Illinois at Urbana-Champaign  
& International Rice Research Institute (IRRI)  
Oklahoma State University  
Fort Valley State University  
South Carolina State University  
University of Nebraska, Lincoln  
University of Kentucky |
**Crops:** Durable staple crops
- Cereals (e.g., rice – Bangladesh)
- Oilseeds
- Legumes
- Root crops
- Seeds
- Processed value-added products

**Countries:** Bangladesh
- Ghana
- Ethiopia
- Guatemala

(This allows us to share experiences across crops and geographies and methods, what works, what doesn’t)
IRRI’s “4 Pillars” approach to PH
1. Improved technology options
2. Business models & value chains
3. Extension and outreach
4. Multi-stakeholder learning platforms

Other “value creators”
- Research
- Extension
- NGOs & community organizations
- Banks/MFIs/finance
- Policy-makers

Business models
- Farmers
- Service providers
- Traders
- Millers
- Rice markets

Production  Harvesting  Threshing  Drying  Storage  Milling
Needs for improved drying options & best practices

“the sun isn’t free”

High costs of land, concrete, and labor

Traffic obstruction and dangers to human safety

High physical & quality losses in field drying
Bangladesh: Mechanical batch dryer

Ali’ Seed Farm - NEW
- Seed production, processing, and wholesale
- Contract seed processing services to seed co.’s
- Drying services to local farmers

- Previous public sector intervention failed 10 yrs ago
- In 2013, private sector entrepreneur invested from get-go when shown a viable value proposition (CSISA pilot, April 2013)
- 200 tons of seed dried and processed to date
- 2014 planned pilots for millers and farmer groups for drying paddy & maize under FtF Postharvest Innovations Lab
New Technologies in the Pipeline
(nearly ready for release)

Source: A. Salvatiera, 2012
Improving On-Farm & Warehouse Storage

Pilot testing of promising “on the shelf” and “in the field elsewhere” best practices and technologies

Local artisan manufactured small-scale sealable metal silos

Small-scale Storage Systems

Improved On-Farm Grain Storage

Source: Kansas State University
Our vision for Bangladesh

“More than just technology”

Training & Extension

- Financial literacy, business skills
- Market linkages
- BDS – business development services
- Farmers as entrepreneurs
- Business plans
- Credit, loans, microfinance

FtF Postharvest Innovations Lab

Technologies

Business Models
Thank You!

“Our customers”
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Solar Bubble Dryer video

Source: A. Salvatiera, 2012