



# **Seed System Innovations and Strategy to Scale"** **- A Critical framework for Varietal Adoption and** **Impact in Bangladesh**

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# Rice Economy in Bangladesh

Staple food for 162 million population

70% contribution to Agricultural GDP

An average per-capita consumption rate of 144.5 kg/year

It accounts for 67.5 percent of the daily caloric intake

Bangladesh is the third-largest rice market globally

Producing and consuming 34.6 and 35.8 million metric tons (MMT) in 2020/2021

Scope for productivity enhancement



Data source: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0261118>



## Reflection pointers

- 150+ varieties released till date
- Several new releases (<5 years) has quite less BS indent
- Are the products not meeting farmers' requirements?
- Are those varieties properly positioned for their optimum spread?
- Are varietal communication strategy is well designed and implemented?

Low SRR

Slow paced VRR

Seed Access Issue

Seed quality Issue

Replacing capacity

# Low varietal turnover and ruling varieties

#	Ruling varieties	YoR
1	BR 11	1980
2	BR 22	1988
3	BRRI dhan 28	1994
4	BRRI dhan 29	1994
5	BRRI dhan 32	1997
6	BRRI dhan 39	2003



# KEY ELEMENTS IN VARIETAL POSITIONING

## Market Driven product positioning

- Distinctive varietal features and farmers' needs
- Comparative advantage
- Replacement capacity
- Selection of geography
- Communicating advantages to the target audience
- Assurance of quality seeds supply
- Competition from other products
- Varietal Feedback
- Product Modification
- New product development

PRODUCT  
FEATURES

TARGETED  
DEPLOYMENT

APPROPRIATE  
CHANNELS

PROMOTION  
& SUPPLY



# Product Positioning and Market expansion through Partnership

**Product Development**—Research Institute, Universities

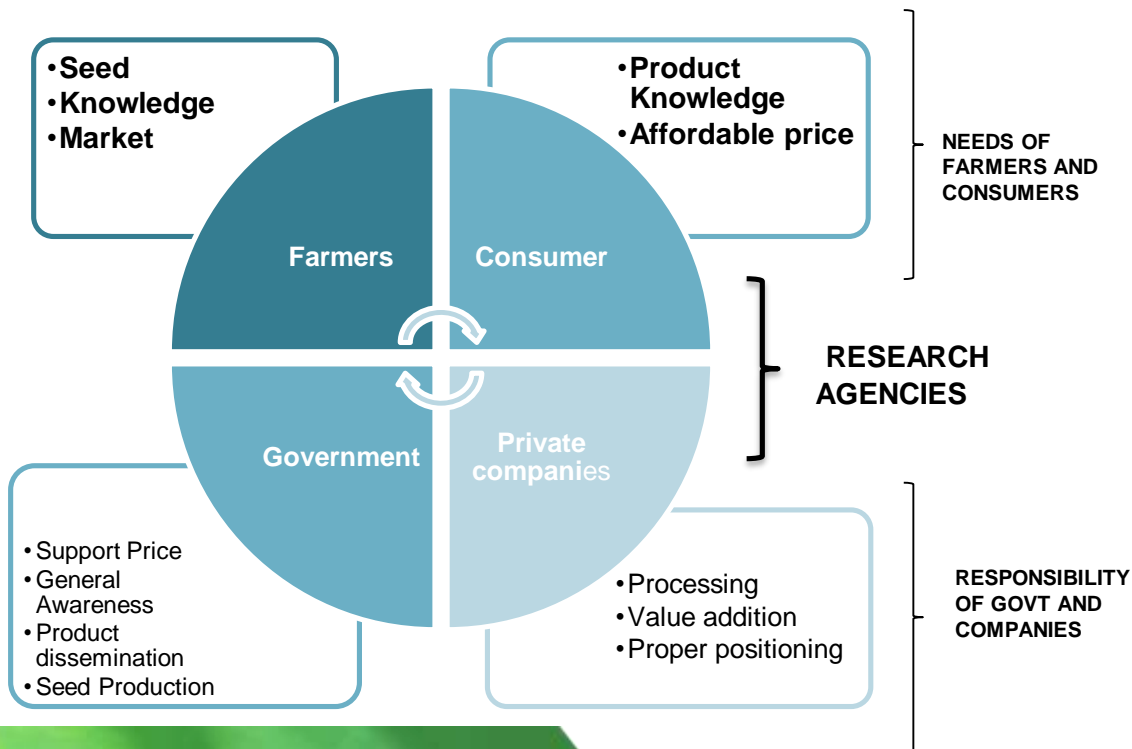
**Product Testing**—National System, CG institutes

**Seed Production**—Government, private agencies, farmers' collectives

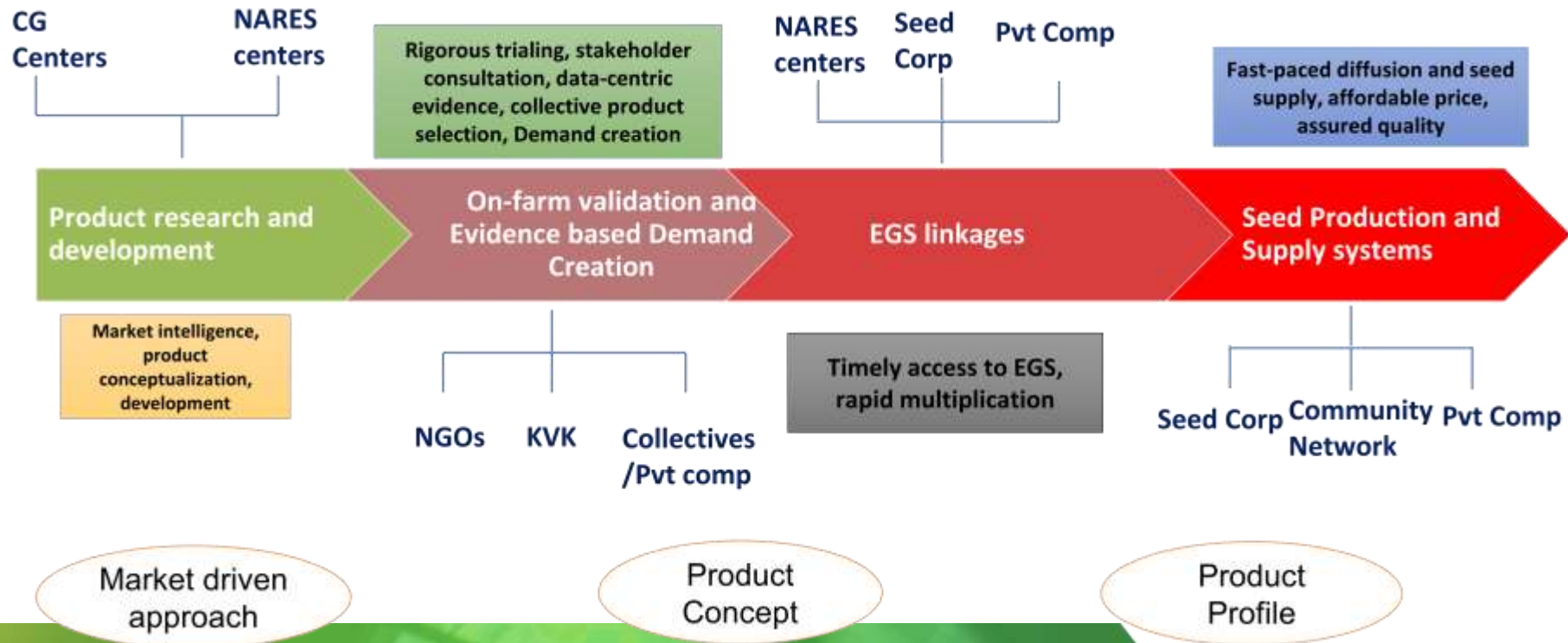
**Product Scaling**—National system

**Product Promotion**—Government, Private Agencies.

**Product Price**—Support price (Govt), market discovered price (Companies)



# The Potential framework



**OFTs:**

- ✓ Evaluation of a set of new varieties against a benchmark and farmers check
- ✓ Comparative assessment
- ✓ Feedback to breeder
- ✓ Result sharing with seed stakeholders

**Cafeteria**

- ✓ Assessment of a large number of potential varieties
- ✓ Varieties are evaluated by different stakeholders
- ✓ Varietal awareness
- ✓ Varieties inclusion in seed chain

**Dealer led demo**

- ✓ Demonstration through dealers
- ✓ Farmers always come back to dealers for a better variety.
- ✓ Increasing demand for the variety indicates varietal suitability

**Cluster Demo:**

- ✓ Demonstration of a new variety
- ✓ Awareness generation
- ✓ seed production



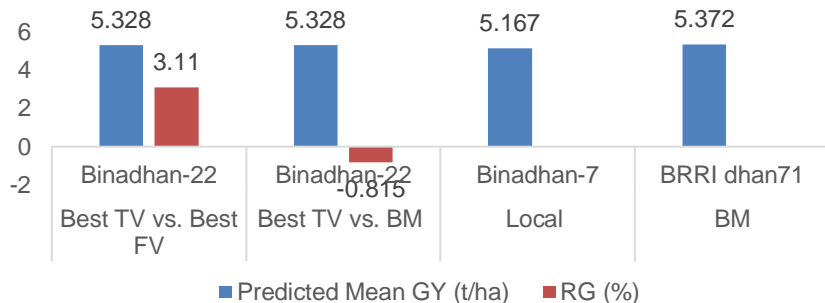
**Demand side : End-to-End Extension Model**



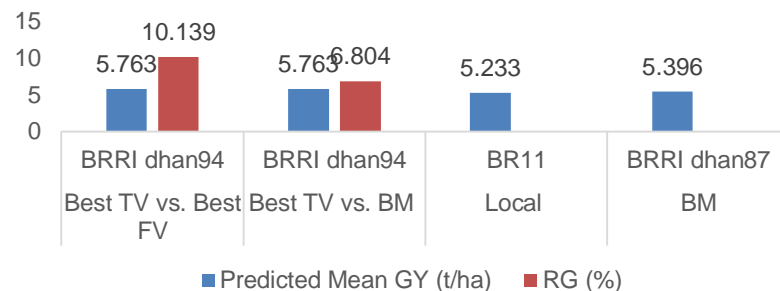
# Evidence Driven Supply Side Innovations



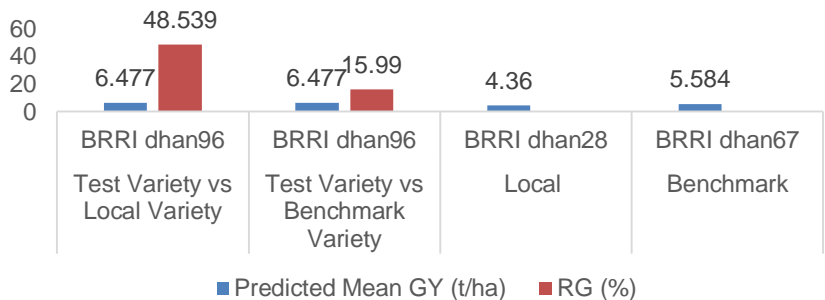
### RLR-SD



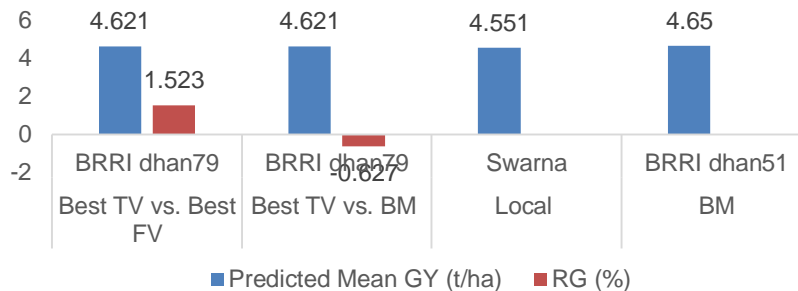
### RLR-LD



### Haor Eco System



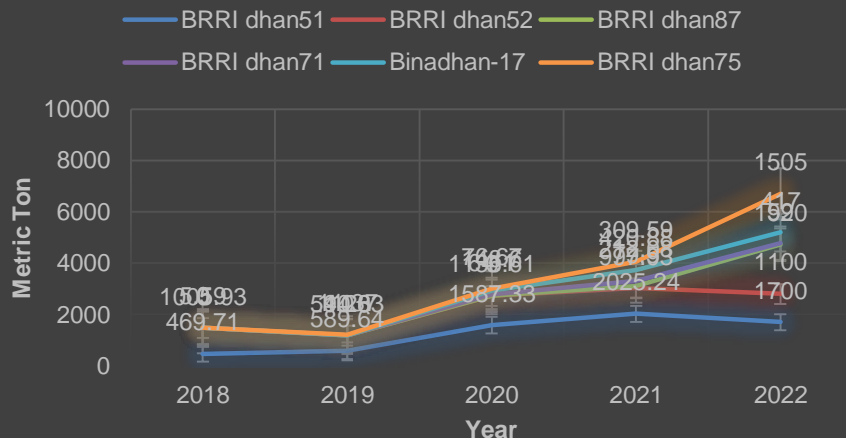
### FFS



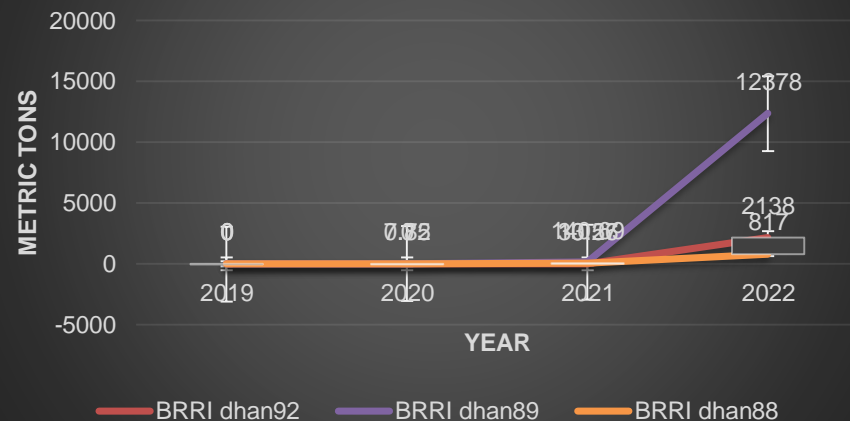
**Examples of TRICOT Inspired On-Farm Trial Modelling across Market Segments – IRRI-BRRI Conceptualization and Large Scale Expansion**

# Strategic Partnerships and EGS linkage based on products with evidence

**Aman: Promising varieties allocation trends**  
Source: BADC



**Boro: Promising varieties allocation trends**  
Source: BADC



Source: BADC



## Impact evidence - varieties in total seed distribution by BADC

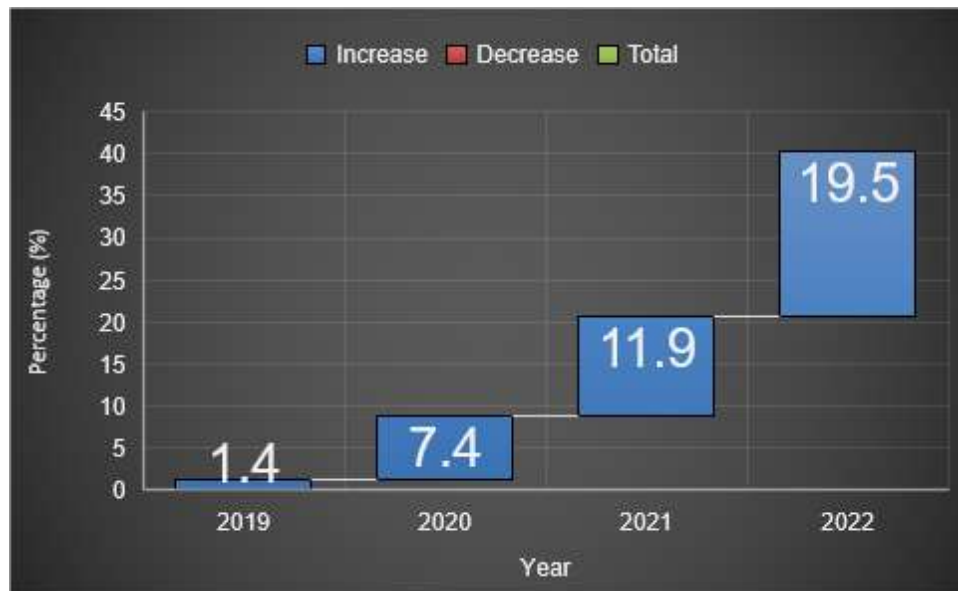


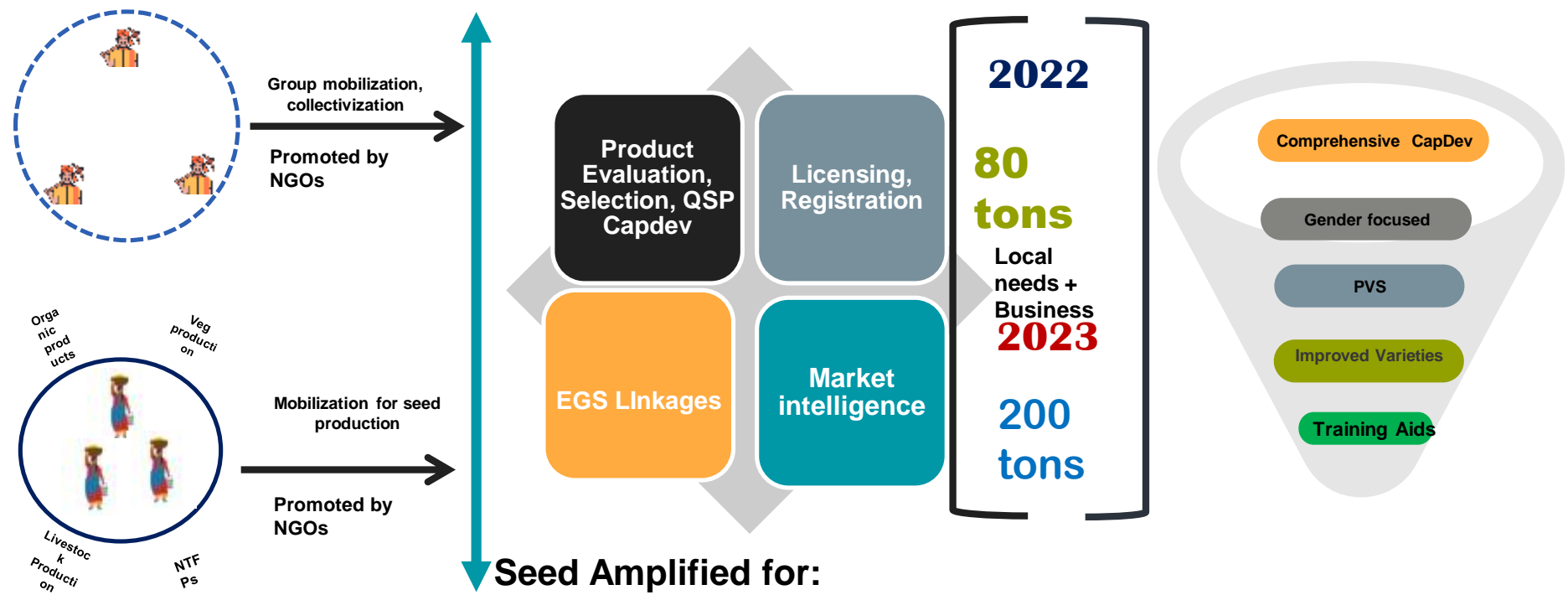
Figure: Last four years adoption trend of promising varieties (BRRI dhan71, BRRI dhan87, BRRI dhan52, BRRI dhan88, BRRI dhan89, and BRRI dhan96)

Source: BADC [http://badc.gov.bd/site/view/miscellaneous\\_info](http://badc.gov.bd/site/view/miscellaneous_info)

## Adoption Triggers

- End to End Extension Approach
- Farmers and stakeholders-centric varietal evaluation
- Encouragement for farmer-managed seed scaling

# Targeting Informal and Semi-formal seed supply chain: Community-led seed network model



**SHGs/FPC/FPO/SHG Federation—mostly women-led**

**Seed Amplified for:** **BRRI dhan 71, 75, 87, 74, 88, 89, 92, 96, 100 and Binadhan 17**

**DIFFUSION II ADOPTION II VARIETAL TURNOVER**



# The Transformative Policy Innovation for Transnational Seed Transfer- Seeds Without Borders



Cross border seed movement	# Varieties
Bangladesh to India	9
India to Nepal	2
Nepal to India	2
Bangladesh to India to Nepal	1

BS-Indent\* (demand in quintal) 2018-2022 of major varieties

BINA dhan 11 (2015)

101.08

BINA dhan 12 (2015)

94.95

BINA dhan 17 (2018)

9.3

# Established IRRI South Asia Regional Centre (ISARC) –Regional cooperation, NARES Capacity Building, Research Technical Support



## ***Cutting Edge Technology, Labs, and Infrastructure and Training facilities for the region and beyond***

- Speed Breeding Laboratory
- Grain Quality Laboratory
- Farm Mechanization
- Collaboration with National Seed Research and Training Centre
- IRRI Education and Massive Training Facility
- Computational Biology
- On-station research platforms
- Remote Sensing, GIS Lab
- Soil Testing Lab
- Weather Station

And Many more.....



**Thank you** [For collaboration reach at s.nayak@irri.org](mailto:s.nayak@irri.org)

