

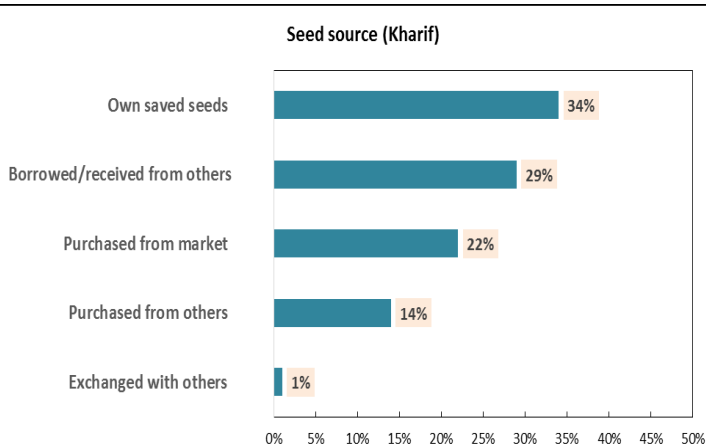
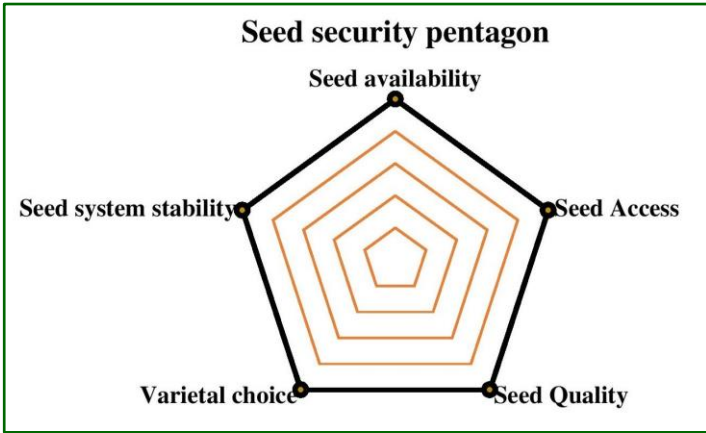
Community seed banks in times of change – situation, challenges, and opportunities

IRRI



Dr Swati Nayak
Scientist and South Asia Lead,
Seed Systems
IRRI

Seed Security Dynamics at Community Level

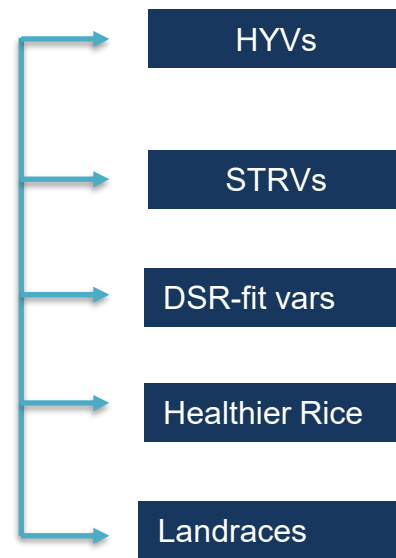
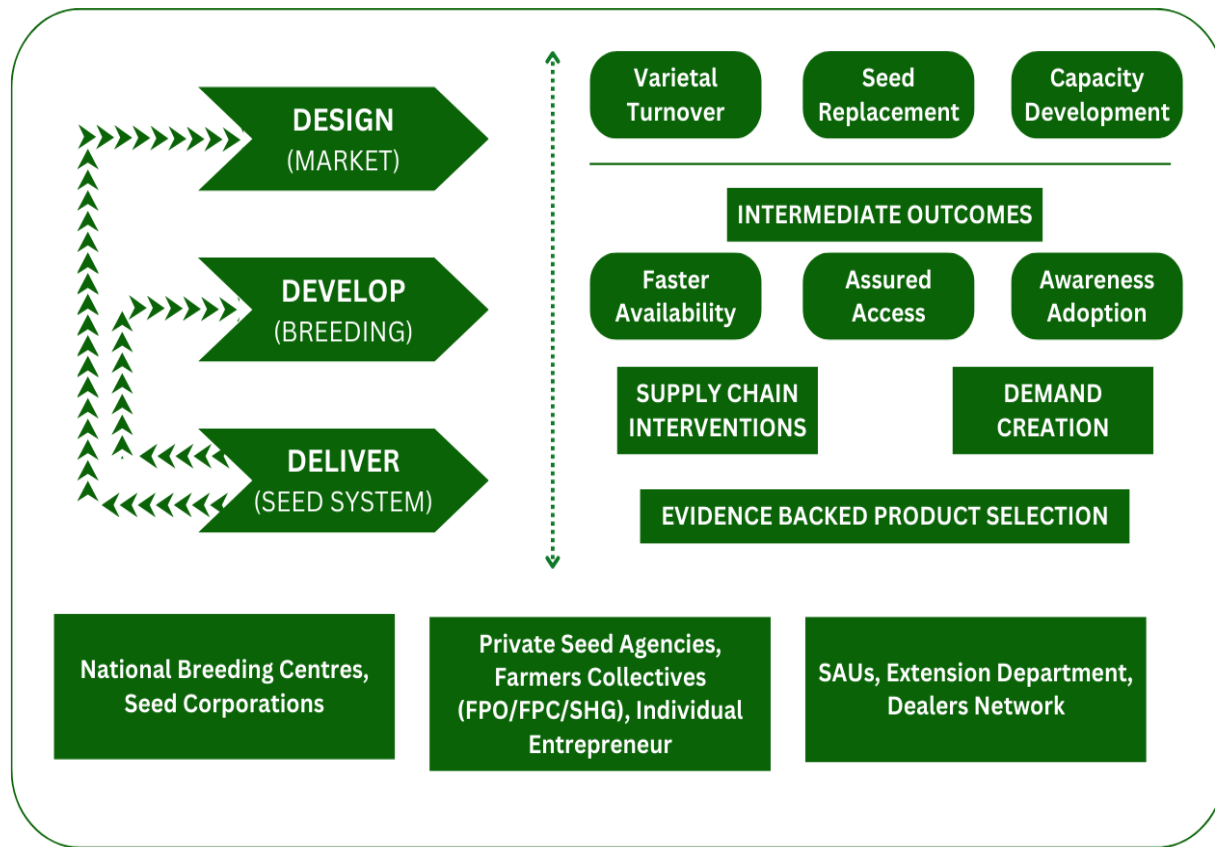


Source: IRRI survey in Odisha, 2019

- Smallholder farmers requiring small quantities of seeds
- Need for local, adapted, and resilient seed systems
- Limited varietal choices
- Weak seed extension and delivery
- Increased emphasis on HYV/Hybrids
- Traditional seed production and storage
- Significant farmer-farmer seed exchange
- Community-led seed source is vital for seed security
- Vital vehicle for biodiversity conservation (preserving landraces etc.



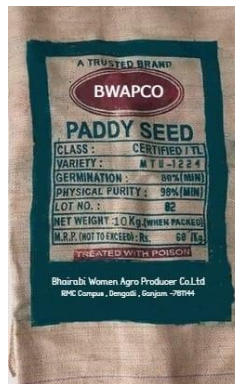
Seed System Strategy at IRRI



Non-paddy crops—Pulses, oilseeds

Seed Amplification through FPC—For business and improved seed security (Odisha, 2023)

Entities/Varieties	Seeds Produced (Kgs)
Farmers' Collectives	28800
Bina dhan 17	800
BRR1 dhan 69	8000
DRR 56	4000
Swarna Samridhhi	11200
Swarna Sub-1	4800
Individual Growers	26400
Bina Dhan 11	16000
BRR1 75 (HUA565)	2400
Swarna Shreya	8000
Total	55200



- **Production**—Technical know-how of QRSP (Season long)
- **Certification**—Licensing, registration, certification
- **Marketing**--Linking with the processing unit, packaging, market exploration, selling opportunities, margin maximization
- **EGS linkages**—Provision of EGS, Institutional linkages
- **Regular field support**—Field monitoring support, quality maintenance

Success case: VILLAGE SQUARE <https://www.villagesquare.in/women-reap-success-with-rice-seed-business-in-odisha/>



Empowering Communities for improved varieties and quality seeds

Cap Dev around Seed Business

Production
Techniques,
methods,
Varietal
evaluation,
selection

Registration,
Processing
Certification,

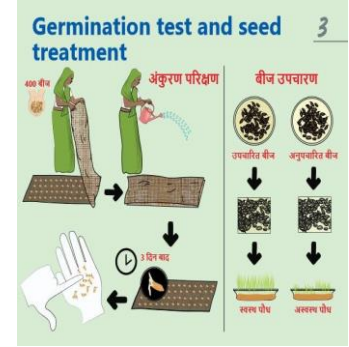
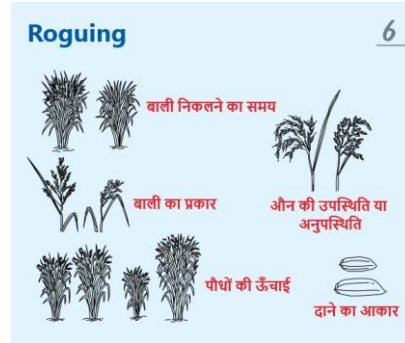
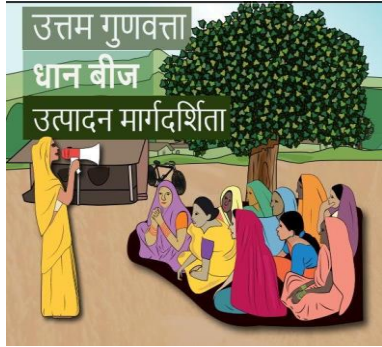
EGS linkages
(Production
Continuity)

Marketing
supports
Intelligence,
Packaging,
product
placement

Varietal Extension



Gender Inclusive Approaches in Cap Dev Efforts



Classroom + Practical
Gender inclusive (40% Women farmers)
Pictorial/gender friendly
Training manuals
Local Language



Kalanamak Case from Uttar Pradesh



End product development (value addition)

Evaluation and seed system development

Identification of marketable accessions



Participatory Identification & Purification of Kalanamak Accessions



- Kalanamak accessions were identified and purified following collection from different farmers' fields
- Morphological, Biochemical and Molecular screening of accessions were conducted
- Ten superior accessions designated as K1 to K10 were identified from the program



Community level Evaluation of Kalanamak varieties at GI locations- Gorakhpur, Siddharthnagar



Photographs of Kalanamak cafeteria trial field in Gorakhpur and Siddharthnagar district.

Kalanamak varieties tested in cafeteria in UP from year 2022-24

S. No	Year-2024	Year-2023	Year-2022
	Kalanamak Variety/Accession	Kalanamak Variety/Accession	Kalanamak Variety/Accession
1	K1 Accession	K1 Accession	K1 Accession
2	K2 Accession	K2 Accession	K2 Accession
3	K3 Accession	K3 Accession	K3 Accession
4	K4 Accession	K4 Accession	K4 Accession
5	K5 Accession	K5 Accession	K5 Accession
6	K6 Accession	K6 Accession	K6 Accession
7	K7 Accession	K7 Accession	K7 Accession
8	K8 Accession	K8 Accession	K8 Accession
9	K9 Accession	K9 Accession	K9 Accession
10	K10 Accession	K10 Accession	K10 Accession
11	Kalanamak KN-3	Kalanamak KN-3	Kalanamak KN-3
12	Bauna Kalanamak-101	Bauna Kalanamak-101	Bauna Kalanamak-101
13	Bauna Kalanamak-102	Bauna Kalanamak-102	Bauna Kalanamak-102
14	Kalanamak Kiran	Kalanamak Kiran	Kalanamak Kiran
15	Pusa Narendra Kalanamak-1	Pusa Narendra Kalanamak-1	Kalanamak Traditional
16	Pusa Narendra Kalanamak CRD-2	Pusa Narendra Kalanamak CRD-2	



Quality Seed Production training on Kalanamak Rice

- I. Gorakhpur, Siddharthnagar and Bahraich
- II. More than 150 farmers participated including women farmers of different SHG groups.
- III. District Agriculture officers, agricultural scientists, departmental officers, KVK scientists, and seed certification officials participated as resource persons and covered technical components of quality seed production.



Capacity Development On Seed Production and Storage



Quality Seed Production of Kalanamak rice varieties 2024

Variety	Quantity of seed distributed to farmers (kg)	No of farmers involved in seed production	Quantity of seed produced (Kg)	Quantity of seed sell (Kg)	Rate of seed sell (Rs/kg)	Agency name/SHG name/any other organization to whom seed was sell
Bauna kalanamak 102	50	7	3250	3050	75-80	FPO, SHG and village Farmers
Kalanamak KN 3	50	10	3000	2700	75-80	FPO, SHG and village Farmers
Kalanamak Kiran	50	9	3400	3300	75-80	FPO, SHG and village Farmers
Pusa Narendra Kalanamak CRD-2	100	15	6800	6300	75-80	FPO, SHG and village Farmers
Total	250	41	16450	15350		



Reviving and Commercialization of Landraces in Odisha

- Profile about 188 landraces for their agronomic characteristics and grain quality/nutrition value though robust in field and lab evaluations
- Identify 3-4 products for reviving and positioning them in seed chain and potential value chain to contribute to the state's goal of sustainable agriculture, and food security
- Developing community based seed system of identified varieties

Target Districts: Balasore, Balangir and Sambalpur

Women Farmers

Smallholder Farmers

Tribal Communities

Agricultural Cooperatives and Farmer Groups

Local Markets and Agribusinesses



Ongoing interventions around landraces in Odisha

Purification, morphological characterisation & agronomic assessment--188 landraces, exclusion of established landraces

1

On-farm validation and selection

2

Molecular markers assessment/ Drought/Salinity screening

3

Grain quality assessment

4

EGS & Seed increase

5

Product Profiling & positioning

6

Market Mapping

7

Scoping community networks for seed system development for Landraces



Challenges and Future Directions

Challenges

- Lack of technical and financial support
- Policy and regulatory matters
- Knowledge gaps and low awareness
- Infrastructure constraints



Scopes

- Capacitated community and their role in preserving traditional knowledge and local varieties
- Conservation of native and heirloom seeds
- Empowering women and tribal farmers
- Utility in Crop Improvement Programmes



Thank You!

