NIRMAN

An Initiative for Sustainable Development

Raisar Community Seed Bank

Place- Daspalla, Nayagarh

Facilitated by- NIRMAN

Raisar Community Seed Bank

- Seed bank was established in 2019 with the support of SWISSAID .
- Conserve and to provide farmers diversified indigenous seeds which have historical and cultural value that were used in past also resistant to disease, pest and climate change.
- The primary function of seed bank is safeguarding agricultural resilience, enhancing local food system and promoting sustainable farming practices.

Who manages the seed bank? How does it function?

- Seed bank is managed by a core committee of 27 members including male & female champion farmers from 9 villages.
- The core committee members ensures preservation & provision of quality seeds by facilitating seed exchange where community members can exchange various seeds which promote the sharing of agricultural knowledge and fosters collaboration among farmers.

Seed collection and preservation- 150 Varieties

- Paddy - 64 types
- Maize – 5 types
- Oil seed - 9 (4 mustard, 3 sesamum, 1 flax seed, 1 sunflower)
- Millet - 6 (2 finger millet, 1 little millet, fox tail millet, pearl millet, sorghum)
- Vegetables- 42 (3 brinjal, 3 sponge gourd, 2 bottle gourd, 1 cucumber, 3 okra, 3 cowpea, 5 bitter gourd, 6 french bean, 1 guar, 4 pumpkin, 4 tomato, 1 spine gourd, 2 beans, 2 amaranthus, 2 khada saag), Tubers – 6 types
- Pulses – 24 types (3 horse gram, 4 black gram, 2 green gram, 1 chickpea, 1 field pea, 3 bargudi, 2 mankadadanti, 1 bhodei, 3 arhar, 4 chana)

Climate Resilient

Climate Resilient to	Example
Drought resistant	chinamali paddy
Wind resistant	Paunji paddy
Low water requirement paddy	Kusumkali, Sariageta
Disease pest resistant	Kantei brinjal, Dhanua chilly

Collection method and Source of seed

- Good quality seeds are collected from local farmers through exchange method at village level or at exhibition and seed festivals and also from participatory seed diversity block,
- Core committee has a list of seed savers of particular variety who provide seeds to seed bank whenever require.

Methods for storing seeds

- Seeds are sun-dried before storage to reduce moisture content, preventing Mold and decay.
- Using of ash and sand to absorb excess moisture.
- Neem leaves are mixed with seeds to repel insect pest.
- Seeds are stored in traditional earthen pots are sealed with paddy straw, mud and cow dung paste to keep moisture and pest out.
- Seeds are store in cool dark store places.
- Seeds are also store in sealed bamboo bags and jute bags for short term use allowing air circulation while keeping pests away.

Community Seed fair

Sustainability initiatives and impact of the seed bank

- Community ownership encourage local farmers, elders and women SHGs to take active role in managing and maintaining the seed bank.
- Use seed lending, return and exchange system.
- Implement community led rule and regulations.
- Organize seed fairs and exchange programs to promote diversity and knowledge sharing and creating example of community runned local seed system.
- Use low cost, eco-friendly storage methods to keep seed viable.
- Maintain a wide variety of indigenous seeds.
- Integrate agroecological farming.

Community engagement

- Seed collection and conservation
- Seed exchange and distribution
- Integration with sustainable farming systems like crop rotations, mixed cropping
- Training and capacity building on agro-ecological farming practices,
- Establishing seed multiplication plot, seed diversity block on farmer land
- Strengthening community networks

Seed Access

- Open access to community members like small holder farmers, women groups who rely on indigenous seeds
- Seed lending and return system where farmers borrow seeds before planting season and expected to return an equal or larger quantity after harvest
- Farmers can exchange seeds in bartering system by participating in seed fairs
- Seeds are store within village or nearby locations allowing farmers to access them easily when needed.
- Seed bank has membership system where farmers contribute seeds in exchange for access. Membership ensures actively participate in maintaining and managing seed bank

How does these traditional seeds play to communities' agriculture practices

- Indigenous seed thrive in specific climatic conditions, soil types and eco-systems, reduces the risk of crop failure
- Indigenous seeds have natural resistance to local pest and diseases and help farmers save costs while maintaining environment friendly agricultural practices
- Economic benefits of small farmers through save and exchange of indigenous seeds instead of purchasing expensive hybrid seeds and also empowers local farmers reducing their dependence on multinational seed corporations

Impact on local agricultural practices and food security

- Increased seed accessibility and availability in rural area also reduced dependency on external markets or commercial traders
- Preservation of indigenous seed varieties are well suited to local climate and soil conditions leading to maintain bio-diversity
- Strengthening bio-diversity and ecosystem resilience by encouraging the cultivation of diverse crops reducing monoculture practices that make farmers vulnerable to diseases and climate shocks also enhance soil fertility through crop rotation and mixed cropping system
- With access to diverse & resilient seeds leads to consistent agriculture production, reducing risk of food shortage, improving household nutrition and dietary diversity

Challenges

- lack of infrastructure for proper storage conditions
- limited knowledge & training about maintaining pure line seeds, seed storage techniques, seed plots
- Financial constraints – difficult to establish sustainable seed bank without any financial support for quantitative/qualitative variety, storage systems, training and manage operational cost
- Seed contamination due to cross pollination, improper storage affect the quality
- Changing climatic conditions affect seed production process and ability of crops to thrive

Future goals

- **Sustainable seed storage and management through infrastructure and techniques to ensure long term viability and quality**
- **Expanding the diversified and disease, pest & climate resilient indigenous seeds varieties**
- **Community ownership and active participation in decision making & management**
- **Capacity building and training on seed preservation methods, sustainable practices**
- **Financial independence and self-sufficiency through local fund raising, membership fees, partnership with govt. or non-govt. organizations, seed business**
- **Linkage with local and regional market, seed traders for strengthening of economic viability of seed bank**
- **Encouraging research and collaboration with research institutions, KVKs, Agriculture dept.**
- **Creating platform for documentation and knowledge sharing to encourage wider adoption of effective seed bank management system**
- **Engagement with state for supportive policies that protect and promote local seed system**

Weblinks

https://www.indiaspend.com/agriculture/how-seed-banks-in-odisha-are-promoting-organic-farming-843054

https://nirmanodisha.org/wp-content/uploads/2021/12/Indigenous-paddy-seed-bank-a-ray-of-hope-for-farmers-OrissaPOST-03-Dec-2021.pdf

Thank You!