



Preserving the Past, Nurturing the Future: The Vital Role of Landrace Conservation in Odisha

*¹ Preeti Yadav, ²K. Shravani, ³Sudam Sahoo, ⁴Surya Prakash Yadav and ⁵R. N. Padaria

¹ Research Scholar, ICAR-Indian Agricultural Research Institute, New Delhi

² Research Scholar, Division of Agricultural Extension, ICAR-Indian Agricultural Research Institute, New Delhi

³ Progressive farmer and Head, Desi Bihan Surakhya Samiti, Kattipali, Bargarh, Odisha

⁴ Fertilizer Analyst, Department of Agriculture, Lucknow, Uttar Pradesh

⁵ Joint Director (Extension), ICAR- Indian Agricultural Research Institute, New Delhi

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Introduction

Odisha is known for its agro biodiversity over the country and world. There are certain section of farmers still conserving traditional varieties crops particularly paddy, millets and vegetables. These landraces were cultivated in their family from generations and are deep rooted in their cultural, rituals and traditional. Though over the years the acreage of these landraces decreasing at household level due to popularization of high yielding varieties, but still there are few sections of farmers who are custodian of these traditional landraces. Farmers like Sudama Sahoo in western Odisha, Raimati Gujaria of Koraput, Odisha, Lahiri Bai (Queen of millets) in Madhya Pradesh. Custodian farmers play a pivotal role in conserving traditional crops and species, thereby contributing to biodiversity conservation and sustainable agriculture. In Odisha, a state rich in agrobiodiversity, farmer like Shri Sudama Sahoo stand out for their remarkable efforts in preserving indigenous agricultural practices. This article presents the conservation initiatives of Shri Sudam

Sahoo, highlighting the unique challenges and strategies adopted in different regions of Odisha.

Sudama Sahoo: Leading the Charge in Landrace Conservation

Shri Sudama Sahoo from Bargarh district, Western Odisha, a government-recognized progressive farmer, has devoted his life to conserving traditional crops in Odisha. Despite facing numerous challenges such as water scarcity and fluctuating market demands, Sahoo has remained steadfast in his commitment to preserving indigenous seeds and promoting organic farming practices. Through the establishment of seed banks and participatory plant breeding programs, he has succeeded in revitalizing local crop varieties and enhancing resilience in the face of climate change. Sahoo's efforts have not only secured livelihoods for local communities but also inspired a new generation of farmers to embrace sustainable agriculture. He was recognized by Indian Council of Agricultural Research, New Delhi by



awarding him ICAR-Jagjivan Ram Abhinav Kisan Puruskar /Jagjivan Ram Innovative Farmer Award in 2019 for his efforts towards organic farming and sustainable agriculture. He was recognized by many government institutions, organization, state universities for his efforts in conserving landraces and promoting organic farming.

Sudama Sahoo was born into a farmer family and excelled in his studies. Since childhood, he had been deeply influenced by traditional farming methods and chose not to pursue a career as a Police Superintendent in his state. Instead, he dedicated himself to preserving traditional varieties and farming practices. The catalyst for this decision was the alarming rate of farmer suicides in his village and neighbouring areas. Over the years, he has conserved 1100 varieties of paddy landraces and has been actively involved in teaching other farmers in Odisha to join the campaign "*Apni meethi apna khad, Apna Beej Apna Swad*" (Our Soil Our Fertilizers; Our seeds, Our Taste).

He is not only conserving field crop like paddy but also conserving and cultivating traditional vegetables and fruits. Imagine a man deeply rooted in his farmer's heritage, refusing the allure of a prestigious job to champion a cause close to his heart. In his quest, Sudama founded the *Desi Bihan Surakhya Samiti*, a beacon of hope for farmers across Odisha. With 1200 passionate members and counting, this organization is a testament to the power of unity in conservation efforts. Among these associates, approximately 250 farmers successfully cultivated 22 native varieties of seeds. Farmers from diverse districts like Bargarh, Jharsuguda, and Baghdihi are all part of this movement, united in their dedication to preserving landraces and

embracing organic, traditional farming. But Sudama's vision doesn't end there. He's not just exchanging seeds; he's sowing the seeds of a community-driven revolution. Through initiatives like household seed banks and the Abhinav Seed Bank, he's empowering farmers to take ownership of their agricultural heritage. One of Sahoo's most notable achievements is the registration of 22 rice varieties under his name. Furthermore, He is renowned for his expertise in rice length classification. He has identified and classified rice grains into five distinct types based on their length, providing valuable insights for farmers and researchers alike. Yet, Sudama's mission goes beyond seeds and soil; it's about reviving a spirit of togetherness. He dreams of recreating the lively gatherings of old, where villagers shared stories, wisdom, and laughter under the evening sky. It's a vision of collective learning, where each farmer's experience enriches the entire community.

Among the landraces he conserved, there was a magical one he called "*Talmuli*," which he confidently claimed was free from the attack of the Brown Plant Hopper. He planted *Talmuli* in one plot and a High Yielding Variety in another. The plot where *Talmuli* was cultivated remained unaffected by the BPH, whereas the other plot suffered from the infestation. Similarly, landraces like *Kusumkali* were resistant to pest attacks and yielded 15-19 quintals per acre, fetching prices of 250-300 per kg in the retail market. Though market value plays a crucial role in the continuation of cultivating these landraces, the cultural, religious, and health benefits also motivate farmers to conserve them, even though the area of cultivation is small. Landraces like *Kusum* are cultivated for their benefits in curing joint pains and are given to pregnant women. *Kalabati*, with its good yield and



being 100 percent sugar-free albeit carbohydrate-rich, is grown and conserved by many farmers in Bargarh and Baghdihi districts. Some rare landraces like *Bahal*, *Bathrash*, and *Bajna* are cultivated for their culinary preferences and are saved in seed banks. Farmers take 2kg of rare landraces seeds from the seed bank and return them with interest double the rate borrowed from the seed bank. To support farmers and promote the propagation of native seeds, the *Desi Bihan Surakhya Samiti* takes proactive measures. One such measure is that farmers book seeds in advance with the seed bank. This system ensures that farmers have access to the desired seeds when they are in demand. By booking seeds in advance, farmers can secure the availability of the native varieties they require for cultivation.



Picture 2: Booklet of his conserved landraces



Picture 1: Interaction with Shri Sudam Sahoo



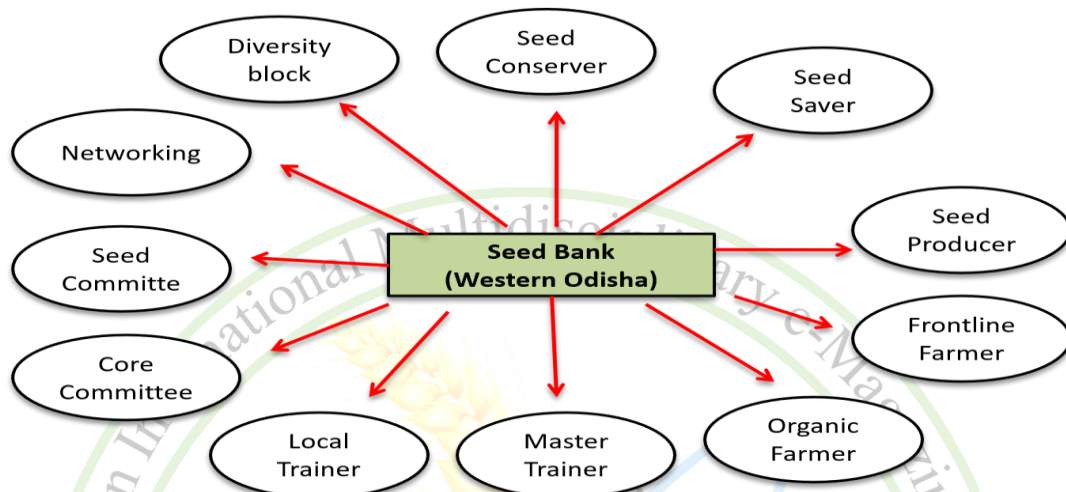
Picture 3: Conservation of landraces at his home-seed bank



Picture 4: Recognition and Awards to Shree Sudam Sahoo

How the formal seed bank works?

Sudam Sahoo seed bank and organization is following a well-planned working structure which is depicted below in the flow chart:



Seed Conservation Roles and Responsibilities:

Seed Conserver:

- Tasked with collecting seeds of different landraces and conducting thorough characterizations.
- Distinguishes between desirable and non-desirable traits for effective conservation.
- Sources seeds from various outlets including seed banks, seed festivals, and neighboring farmers.
- Utilizes diversity blocks, maintaining small nurseries of different paddy landraces within one plot for conservation purposes.

Seed Saver:

- Entrusted with conserving rare landraces cultivated by select households.
- Enters into contracts with seed banks to ensure multi-generational conservation either at their homes or within seed banks.
- Experienced in cultivating various landraces and produces seeds for

distribution among members and neighbouring farmers.

- Engages in the exportation of rice to 10 states, facilitated by collaboration with farmers' organizations, NGOs, and

participation in government schemes like PKVY (Paramparagat Krishi Vikas Yojana).

- Emphasizes organic seed production and markets rice in three distinct categories: medicinal, aromatic, and fine grains.

Frontline Farmers:

- Engage in research to create favorable environments for sustaining desirable varieties, ensuring resistance to diseases and pests.

Master Trainer/Local Trainer:

- Operate in a hierarchical structure from Master Trainer to Local Trainer to Regional Trainer.
- Provide comprehensive training on seed conservation techniques and various package of practices to seed savers and seed producers.

Core Committee:

- Comprises 21 members, with a dedicated Seed Committee consisting of 5 members.
- The Seed Committee oversees seed exchange, checks seed purity, and manages low-purity seeds by grinding



and selling them as powder in the market

Diversity Block:

The diversity block practice was an important method followed by farmers and particularly seed banks to maintain the genetic purity and conservation of important landraces. In the diversity block approach, different blocks were designated for the conservation of specific landraces. Each block was dedicated to maintaining the genetic purity of a particular landrace. The central panicle of the landrace in each block was selected, and seeds were saved from that panicle. This method ensured that the seeds collected represent the desired genetic traits and characteristics of the landrace. By carefully selecting and saving seeds from the central panicle, farmers and seed banks aim to preserve the genetic purity and integrity of the landrace for future cultivation and conservation.

Sudam Sahoo isn't just conserving crops; he's cultivating a legacy of resilience, unity, and shared knowledge. His story is a testament to the power of grassroots movements and the enduring spirit of those who refuse to let tradition fade away. In conclusion, the tireless dedication and innovative approach of Sudama Sahoo exemplify the crucial role of custodian farmers in preserving indigenous agricultural practices and landraces in Odisha. Through his leadership, Sudama has not only conserved over a thousand varieties of traditional crops but has also inspired a collective movement towards sustainable agriculture. His efforts, from establishing seed banks to promoting community-driven initiatives, have not only safeguarded biodiversity but have also empowered farmers to reclaim ownership of their agricultural heritage. Sudama's vision of unity and collective learning

serves as a beacon of hope, ensuring a resilient and vibrant future for farming communities in Odisha and beyond.

References

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