

PRESERVATION OF TRADITIONAL SEED – ENVIRONMENT

NEWS: The Centre for Science and Environment (CSE) recently examined community seed banks (CSBs) across India and raised concerns over declining intergenerational transfer of traditional seed conservation knowledge.

WHAT'S IN THE NEWS?

Importance of Traditional Seed Conservation

a) Genetic Diversity and Ecological Stability

- Traditional seeds possess a **broad genetic base**, which makes them naturally more resilient to **pests, diseases, and changing environmental conditions**.
- Unlike modern monocultures where a single pest or disease can wipe out entire crops, **traditional polycultures allow natural resistance and biological buffering**.
- This **diversity enhances ecosystem services** such as pollination, soil health, and predator-prey balance, ensuring sustainable agriculture.

b) Climate Resilience and Risk Mitigation

- With climate events like **droughts, floods, cloudbursts, and heatwaves** becoming increasingly unpredictable, traditional seeds offer **built-in climate adaptability**.
- These seeds are often **locally adapted over centuries** and suited to specific agro-climatic zones, enabling them to **withstand stress better than high-input hybrids**.
- In **mixed cropping systems**, even if certain seed varieties fail, others often survive and produce food, thus **minimising the risk of total crop failure**.

c) Sustainability and Low-Input Farming

- Traditional seeds are **open-pollinated and reusable**, meaning farmers can **save seeds from each harvest** without dependence on external suppliers.
- These seeds thrive under **organic and natural farming methods**, requiring little to no chemical fertilizers or pesticides.
- In contrast, **commercial hybrid seeds are non-replicable**, often require chemical inputs, and must be **purchased afresh each season**, increasing farmers' financial vulnerability.

Role and Potential of Community Seed Banks (CSBs)

- **Community Seed Banks** allow farmers to **borrow traditional seeds at the start of the season and return double the quantity post-harvest**, creating a self-replenishing cycle.
- CSBs are especially valuable in **ecologically fragile zones** (like hill and tribal areas), ensuring **local seed security and resilience**.
- Despite their importance, India **lacks a dedicated national policy** to support and integrate CSBs into its formal agricultural framework.
- The **Seed Bill 2019**, which could provide legal structure and support to CSBs, remains **pending**, and there is **no formal mechanism** to recognise and mainstream farmer-led seed systems.

Challenges in Traditional Seed Conservation

a) Declining Youth Engagement

- Many young farmers are **opting for hybrid or genetically modified (GM) seeds**, often influenced by aggressive marketing and perceptions of higher yields.
- The knowledge of traditional seed conservation is **not being passed down** effectively across generations, threatening the continuity of these practices.

b) Lack of Governmental Support

- Most CSBs in India are **run by NGOs, self-help groups, or local communities** with minimal resources and infrastructure.
- They receive **little to no support from central or state agricultural schemes**, and remain **unrecognised** in official databases or subsidy programs.

c) Cultural Erosion and Knowledge Loss

- Traditional seed-saving practices, like **‘Rotiyaana’ in Uttarakhand**, are disappearing due to urbanisation, migration, and weakening of joint family systems.
- The **oral transmission of knowledge**—including storage techniques, seed selection, and sowing rituals—has greatly reduced.

d) Policy Gaps and Risk of Biopiracy

- Although the **Protection of Plant Varieties and Farmers’ Rights Act (PPVFRA)** exists, **common knowledge seed varieties** are poorly documented.
- This gap allows **corporations or individuals to falsely register traditional varieties** as their own intellectual property, leading to **biopiracy and exploitation of community resources**.

Ground-Level Preservation Practices and Innovations

a) Niyamgiri Foothills, Odisha

- Tribal farmers cultivate a wide variety of **millets, pulses, herbs (like tulsi), and flowers (like marigold)**, ensuring **nutritional security and biodiversity** in their shifting cultivation systems.

b) Barah Anaj System, Uttarakhand

- Promoted by the **Beej Bachao Andolan**, this system involves growing **12 diverse traditional crops together**, ensuring **risk distribution, soil enrichment, and balanced nutrition**.

c) Teeratha Village, Karnataka

- Youth participate in **Participatory Variety Selection (PVS)** through the **Sahaja Samrudha CSB network**, where they test, observe, and select millet varieties in experimental plots called **“diversity blocks”**.

d) Chizami, Nagaland

- A **women-led community seed bank** actively conserves local varieties and conducts **training sessions for youth and schoolchildren**, fostering interest in **traditional agriculture and seed storage**.

- Women use **eco-friendly storage methods**, such as **mud pots or bamboo baskets lined with neem leaves**, to preserve seed viability without chemicals.

e) Bharat Beej Swaraj Manch (BBSM)

- Founded in 2014, BBSM hosts **community seed festivals** in urban areas like Mumbai, Pune, Kolkata, and Hyderabad.
- These events **raise awareness of seed sovereignty**, connect farmers and consumers, and showcase seed conservation as a **citizen-led, people's movement**.

Way Forward: Policy and Cultural Revitalisation

a) Policy and Legal Reforms

- There is an urgent need to **fast-track the documentation of traditional seed varieties** to prevent misappropriation and biopiracy.
- Policies should formally **recognise CSBs**, provide **financial and institutional support**, and **integrate farmer-led initiatives** into the national seed strategy.

b) Youth Involvement and Education

- Introduce **seed-saving and agro-biodiversity topics in school curricula**, vocational training, and rural development schemes.
- **Offer incentives such as fellowships, awards, and start-up grants** for young individuals or groups involved in seed conservation efforts.

c) Decentralised and Localised Models

- Promote **in-situ conservation** by encouraging seed preservation on farms, in forests, and in native ecosystems.
- Establish **cluster-level CSBs** at a scale of **one per 100–200 villages**, to ensure **localised and participatory seed sovereignty**.

d) Cultural and Social Revitalisation

- Use **local festivals, folk stories, songs, and community rituals** to reconnect youth and farmers with **agro-cultural heritage**.
- Encourage intergenerational storytelling and practices to **preserve the socio-cultural context** of traditional agriculture.

Concluding Remarks

- Traditional seed conservation is more than a biodiversity issue—it underpins **ecological sustainability, food sovereignty, and cultural identity**.
- With the right **policy support, youth engagement, legal safeguards, and community participation**, India can **strengthen its seed sovereignty movement**.
- Empowering local seed saviours and integrating traditional knowledge can help **build a more resilient, self-reliant, and climate-smart agricultural future**.

Source: <https://www.downtoearth.org.in/wildlife-biodiversity/indias-seed-saviours-will-the-next-generation-preserve-our-seeds#:~:text=%E2%80%9CThere%20is%20a%20need%20to,risk%20losing%20>

