



Preserving Landraces

Why in News

Recently, [Padma Shri award](#) was given to **Rahibai Popere**, popularly known as **Seedmother**, from Akole taluka of Ahmednagar, Maharashtra.

- She was awarded for recognition of her work that **has helped save hundreds of landraces (wild varieties of commonly grown crops) at the village level.**
- Presently, farmers mainly **grow hybrid crops.**

Key Points

▪ Hybrid Crops:

- **About:** A hybrid crop is a **result of two different varieties of plant being cross-pollinated** to create an off-spring or hybrid that contains the best traits of each of the parents.
 - With **hybrid rice and wheat**, for example, selective breeding over a period of time **has allowed scientists to develop varieties that have higher yield or other desirable traits.**
 - Over the years, **farmers have adopted these varieties.**
- **Related Issues:** Crop improvement through selection and breeding over several decades **has narrowed the genetic base of most crops.**
 - Biodiversity allows a natural mechanism for crops to develop traits to face challenging situations.
 - However, given the **large-scale human interference** in crop selection, that ability is now lost in most commercial crops.

▪ Landraces:

- **About:** Landraces **refer to naturally occurring variants of commonly cultivated crops.**
 - These are as **opposed to commercially grown crops**, which are developed by selective breeding (hybrids) or through [genetic engineering](#) to express a certain trait over others.
- **Utility of Landraces:** Amid the threat of climate change, a challenge before scientists and policymakers is to develop varieties that can withstand both abiotic and biotic stresses.
 - **Rich Genetic Pool:** Naturally occurring landraces have a large pool of still untapped genetic material, which can provide solutions.
 - The wider the gene pool, the more the chance of developing a trait that can help in surviving extreme climate events.
 - **Higher Yields With Proper Input:** There is a common misconception that landraces have lower yields than hybrids. However, with proper agricultural

practices, landraces can give better yield with lower input costs.

- **High Nutrition Profile:** Many landraces are richer in nutrients than commercially grown variants.
- **Examples of Landraces: Kalbhat** is a unique **landrace of scented rice**.
 - Over the years, this variant had almost vanished from cultivators' fields as hybrid variants became popular.
 - It has better climate resilience than popularly grown rice and can withstand floods or drought better.

Way Forward

- **Need to Save Landraces:** Currently, Landraces survive in only a few rural and tribal pockets, but they too are depleting for want of proper conservation.
 - Traditional knowledge about the way these need to be grown, or how seeds are to be saved, is also vanishing.
- **Community Led Programme:** BAIF community-led programme is worth emulating across the other states.
 - The **BAIF Development Research Foundation** is a charitable organisation based in Urali Kanchan near Pune in Maharashtra, that pioneers agricultural development. It **aims to identify germplasm available** and, through community participation, **create seed banks**.
- **Research in Landraces:** There is much remains to be understood about the germplasms of the landraces.
 - It is necessary to understand how these landraces can contribute to climate-resilient agriculture; nutritional profiling too can hold the key to fighting deficiencies.

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