

Forgotten Crops, Forgotten Wisdom: Rediscovering the Agricultural Heritage of Tribal Communities

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Introduction

Across many tribal landscapes, agriculture is not simply a way of producing grain. It is part of a wider food system shaped by forests, livestock, seasonal cycles, local seeds, community institutions and generations of ecological knowledge. Yet many crops and food practices that once formed the everyday diet of tribal communities are becoming less visible. As farming systems become more market-oriented and diets change, the diversity that once protected households against environmental and nutritional uncertainty can gradually narrow.

The phrase “forgotten crops” refers here to locally adapted crops and varieties that have received less attention in mainstream production and markets, rather than to crops that have literally disappeared everywhere. Small millets, traditional pulses, indigenous vegetables, tubers, oilseeds and locally preferred varieties can remain important in particular communities even when they occupy a small share of commercial agriculture. Their value lies not only in yield, but also in their adaptation to local environments, food cultures and household needs.

The Food and Agriculture Organization describes Indigenous Peoples’ food systems as closely connected with biodiversity, traditional knowledge, natural-resource management, diet diversity and local institutions (FAO, 2021). This perspective is useful for understanding tribal agriculture in India, where cultivation often exists alongside gathering, livestock rearing and other livelihood activities. The lesson is not that every traditional practice is automatically superior. Rather, it is that valuable knowledge and crop diversity should be identified, documented and assessed before they are lost.

This article explores the agricultural heritage associated with tribal communities and asks a practical question: how can forgotten crops and useful traditional knowledge be conserved while also creating meaningful opportunities for nutrition, livelihoods and sustainable agriculture?

The crops we are slowly forgetting

India’s tribal farming landscapes contain considerable crop diversity, particularly in rainfed and hilly regions. Small millets such as finger millet, little millet, foxtail millet and other minor cereals have historically fitted well

into dryland production systems. ICAR notes that small millets have an important place in dry farming and are particularly relevant to tribal and hill agriculture (Hariprasanna, 2023). Alongside cereals, farmers may maintain traditional pulses, oilseeds, vegetables, tubers and local fruit species.

These crops can perform several functions at the same time. A crop may provide household food, fodder, seed for the next season and an occasional source of cash. A traditional variety may also be preferred because of taste, cooking quality, maturity period or cultural importance rather than because it produces the highest commercial yield. This multifunctionality is easy to overlook when agricultural performance is judged using a single indicator such as yield per hectare.

From traditional diversity to future food security

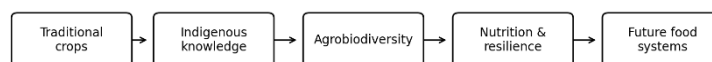


Figure 1. From traditional diversity to future food security. Wisdom embedded in tribal farming systems

Traditional farming knowledge is often cumulative rather than written. It can be expressed through seed selection, crop combinations, seasonal calendars, food preparation, livestock integration and observations of soil, rainfall, vegetation and pests. FAO notes that Indigenous Peoples have developed deep knowledge of ecosystems and seasonal patterns through long-term adaptation to diverse environments (FAO, 2024). In agricultural settings, such knowledge can influence what is planted, where it is planted and how different resources are combined.

One important feature is diversity. Instead of relying on a single crop, households may combine cereals, pulses, vegetables, trees and livestock. Diversity can spread production risk and provide different foods across the year. It can also support ecological functions within the farm. However, the exact benefits depend on the crop combination, management and local environment; therefore, traditional systems should be understood in their specific context rather than treated as one uniform model.

Seed knowledge is another important component. Farmers may select seed based on maturity, grain quality, colour, taste, storage ability or performance under local conditions. Such farmer selection can maintain variation

within and among local crop populations. ICAR's continuing work on Indigenous Technical Knowledge and community seed banks reflects the growing recognition that traditional agricultural knowledge and local crop diversity deserve systematic documentation and validation (ICAR, 2026a; ICAR, 2025).

Why are traditional crops disappearing?

The decline of traditional crops rarely has a single cause. Market incentives can encourage farmers to concentrate on a smaller number of commercially recognized crops. Changes in food preferences can reduce household demand for traditional foods. Labour availability, migration, wildlife damage, lack of assured prices and weak processing facilities can further reduce the attractiveness of crops that are otherwise well adapted to local conditions.

Evidence from ICAR's work in hilly and tribal areas illustrates this tension. In Koraput, Odisha and Kolli Hills, Tamil Nadu, millets remained part of farming and dietary systems and were viewed as economically viable and culturally acceptable, but lack of assured market prices and crop damage by wild animals were reported as major constraints. The same programme found scope for farmer-led extension through millet farmer facilitators and producer groups (ICAR, 2024).

What is lost when crop diversity declines?

The loss of a traditional crop is more than the loss of a seed. It may mean the loss of a recipe, a storage practice, a seasonal food, a source of fodder or a locally adapted option for difficult environments. When several local varieties disappear, farmers may also lose choices that could become useful under future climatic or market conditions.

Crop diversity also has a nutritional dimension. Traditional food systems can provide a wider range of cereals, pulses, vegetables, fruits and gathered foods than diets dominated by a few staples. FAO has highlighted diet diversity and biodiversity as important characteristics of Indigenous Peoples' food systems and as potential contributors to more resilient and sustainable food systems (FAO, 2021).

Traditional knowledge is valuable—but it should be tested, not romanticized

There is a tendency to describe traditional agriculture either as outdated or as inherently sustainable. Both positions are too simplistic. Traditional farmers have accumulated practical knowledge under particular ecological and social conditions, but some practices may be labor-intensive, low-yielding or unsuitable when circumstances change. The useful approach is to ask which elements work, for whom, under what conditions and with what evidence.

This is where scientific institutions and agricultural extension can contribute without displacing community knowledge. Farmers can identify preferred traits and locally meaningful indicators, while researchers can evaluate productivity, nutrition, resilience, soil effects and economic returns. Participatory varietal selection in Koraput, Odisha provides a current example: tribal farmers evaluated traditional and nationally released finger millet varieties under farmer-practice conditions, allowing local preferences and scientific assessment to inform selection (ICAR, 2025).

From forgotten crops to future foods

Revival becomes meaningful only when conservation is connected to use. A traditional crop that is stored in a seed bank but has no place in farmers' fields, kitchens or markets may remain vulnerable. The challenge is to create a complete pathway from seed to food and, where appropriate, from food to enterprise.

For example, a traditional millet can be conserved through community seed systems, cultivated using locally suitable practices, processed locally and marketed as a culturally familiar food or as a value-added product. The same logic can apply to traditional pulses, vegetables, tubers and other local products. Value addition should not mean changing every traditional food into a packaged product; it should mean creating viable options for farmers and consumers while retaining quality, identity and nutritional value.

Table 1. Why traditional crops matter beyond yield

Dimension	Potential contribution	What needs attention
Food diversity	Adds locally familiar cereals, pulses, vegetables and other foods.	Changing diets and declining household demand.
Biodiversity	Maintains genetic and crop diversity within farming landscapes.	Replacement by a narrow range of commercial crops.
Risk management	Provides options adapted to local rainfall, soils or seasons.	Performance varies by location and management.
Cultural heritage	Preserves food practices, seed knowledge and community identity.	Loss of intergenerational knowledge.
Livelihoods	Creates opportunities for processing, local trade and niche markets.	Weak aggregation, processing and assured markets.

Recent initiatives in tribal regions show that such transitions are already being attempted. In Nandurbar, Maharashtra, ICAR-IIMR has worked with tribal farmers on millet cultivation, processing, value addition and entrepreneurship. In Andhra Pradesh, a millet primary processing unit was established in 2026 for a tribal FPO in Kurnool district, with the stated aim of strengthening production, processing, branding and marketing of millet-based products (ICAR-IIMR, 2025; ICAR-IIMR, 2026).

The role of women and younger generations

The survival of agricultural heritage depends on who continues to practise it. In many communities, women play major roles in seed selection, food processing, storage, kitchen gardens and preparation of traditional foods. Yet their knowledge may remain informal and invisible in agricultural records. Documentation and conservation programmes should therefore treat women as knowledge holders and decision-makers rather than only as beneficiaries.

Younger people face a different reality. Education, migration and changing aspirations can reduce the time available for traditional farming. At the same time, young people can become important in processing, packaging, enterprise management, marketing and documentation of local foods. A useful strategy is not to ask youth to return to agriculture exactly as it was practiced in the past, but to create new economic roles around valuable parts of the agricultural heritage.

From household crop to community enterprise

The economic revival of a forgotten crop requires more than production. Farmers need aggregation, quality management, processing, storage, packaging and market connections. Producer groups and FPOs can help combine small quantities from many farmers and create enough volume for buyers. They can also support common grading, branding and negotiation.

A current example comes from Kurnool district of Andhra Pradesh, where ICAR-IIMR dedicated a millet primary processing unit to a tribal FPO in July 2026. The FPO had mobilised 757 tribal farming families, predominantly engaged in finger millet and other small millets. The initiative linked production with primary processing, value addition and marketing, illustrating how a traditional crop can become part of a more organised local value chain (ICAR-IIMR, 2026).

What extension can do differently

Agricultural extension can become the bridge between inherited knowledge and contemporary opportunities. Instead of replacing local practices with a standard package, extension can begin by documenting what

farmers already know and use. It can then connect that knowledge with scientific evidence, improved production practices, processing technologies, nutrition information and market opportunities.

Three functions are especially important. First, extension can facilitate participatory documentation of local crops and practices. Second, it can help farmers test promising varieties and practices through demonstrations and farmer-led experimentation. Third, it can support collective action by connecting farmer groups with research institutions, processors, FPOs, local markets and government programmes.

Table 2. A practical pathway for agricultural heritage revival

Stage	Key action	Expected outcome
Document	Record crops, varieties, foods and farming knowledge with community participation.	Local agricultural heritage becomes visible.
Conserve	Use community seed systems, farmer seed networks and on-farm conservation.	Local diversity remains available to farmers.
Validate	Combine farmer evaluation with scientific assessment.	Useful practices and varieties are identified with evidence.
Add value	Improve processing, storage, packaging and product development where appropriate.	Higher usability and potential returns.
Connect	Link producer groups with local markets, institutions and consumers.	Greater demand and stronger livelihood opportunities.

Conserving heritage without freezing it in the past

Conservation should not mean turning tribal agriculture into a museum exhibit. Agricultural heritage survives when it remains useful. Farmers need the freedom to choose what to grow, consumers need reasons to value the

resulting foods and institutions need mechanisms to support seed conservation, processing and fair market access.

This requires a shift from a preservation-only mindset to a living-heritage approach. A local variety can be conserved in a community seed bank, but it should also have opportunities to remain in cultivation. A traditional food can be documented, but its continued relevance depends on whether households still want to prepare and eat it. A local crop can be promoted in markets, but expansion should not undermine the ecological and cultural systems that made it valuable in the first place.

A community-centred pathway for reviving forgotten crops

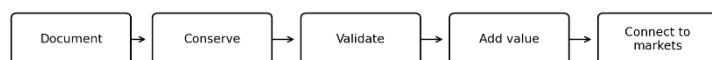


Figure 2. A community-centred pathway for reviving forgotten crops.

Building a stronger future around forgotten crop

A practical agenda can begin with mapping local crop and food diversity at village or community level. Such inventories can record local names, uses, seed sources, maturity periods, preferred traits, cultivation practices and seasonal availability. The information can then guide participatory conservation and research rather than remaining as a static list.

The next step is to make promising crops economically relevant. Small-scale processing, local procurement, institutional demand, nutrition programmes, community markets and producer organisations can create pathways for regular use. Where products enter wider markets, quality standards, branding and transparent benefit-sharing become important.

Government and research institutions also have a role. The Ministry of Tribal Affairs supports tribal livelihoods through programmes including the Pradhan Mantri Janjatiya Vikas Mission, which brings together mechanisms for marketing minor forest produce and institutional support for tribal products and produce (Ministry of Tribal Affairs, 2026). Such approaches can complement crop-focused interventions by strengthening the wider livelihood system in which tribal agriculture operates.

Two lessons for agricultural development

The first lesson is that diversity is an asset only when it is recognised. A crop that is invisible in statistics, markets and extension programmes can easily disappear even when farmers value it. The second lesson is that conservation and development should not be treated as opposites. With farmer participation, appropriate scientific validation and viable

market pathways, traditional crops can contribute to contemporary nutrition and livelihood goals.

The objective, therefore, should not be to return tribal agriculture to an imagined past. It should be to carry forward the most useful elements of its agricultural heritage while allowing farmers and communities to decide how those resources fit into present and future livelihoods.

Conclusion

The story of forgotten crops is ultimately a story about choices. Agricultural systems become narrower when only a small number of crops receive attention, markets and investment. Tribal communities hold many examples of how food production can be connected with local ecology, cultural preferences and diverse livelihood activities. Not every traditional practice needs to be preserved unchanged, but neither should valuable knowledge be discarded simply because it is old.

The opportunity lies in combining community knowledge with careful scientific assessment, conservation with use and traditional crops with appropriate value chains. Recent ICAR initiatives in tribal millet regions demonstrate that farmer participation, seed conservation, processing, value addition and organised marketing can be brought together in practical programmes. The task ahead is to ensure that these efforts remain farmer-centred and that benefits reach the communities that have maintained the knowledge and diversity in the first place.

Forgotten crops need not remain forgotten. If farmers, researchers, extension professionals, institutions and consumers recognise their value, agricultural heritage can become a living resource for dietary diversity, biodiversity conservation and resilient rural livelihoods.

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