Nutritional Value of Forest Foods of South Rajasthan

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Introduction

India is home to about 18% of the world's population, 15% of its cattle, 4.2% of its freshwater resources, 1% of its forests, and 0.5% of its pasture land. It is endowed with an abundant natural biodiversity of native crops. There were about 100,000 rice varieties in India throughout the 20th century, but less than 6,000 remain today. This makes obvious how our native crop variety are disappearing. There are more than 200 different species of indigenous crops in Rajasthan. However, due to their zeal, some farmers continue to grow some of those lost crops for their own household consumption in a few remote regions such as the tribal areas of Banswara, Dungarpur, and Pratapgarh districts of Southern Rajasthan. When key crops are threatened by weather extremes brought on by climate change, it becomes vital to diversify crops in order to help small-scale farmers maintain their standard of living. The Bhil, Garasia, Meena and Kathodi communities rely extensively on forest-based foods, wild edible plants (WEPs), minor forest produce (MFP), wild fruits, greens, tubers and seasonal mushrooms. These foods contribute significantly to dietary diversity, micronutrient intake and food security, particularly among economically marginalized tribal groups.

The Importance of Traditional Crops and Varieties

Over the past few years, local farmers with their own land races and seeds have been cultivating traditional crops and their landraces of maize, paddy, black gram, cotton, small millets, and other fruit and vegetable crops. These seeds thrive in sustainable agriculture by small and marginal farmers because they are well suited to the regional climate and topography. Although their yield potential is known to be restricted, land races thrive in sustainable agricultural environments. Over time, a number of high-yielding cultivars have been produced and recommended as a result of advancements in agriculture; nonetheless, their usefulness in different climates is limited. The landraces require assistance for their conservation, use, and value addition due to their wide genetic base, nutritional value, and adaptability. Additionally, because of their values and perception of belonging, tribal farmers—who are primarily found in Rajasthan's tribal belt—are more connected to their own seeds. Henceforth, small and marginal farmers need some necessary assistance in this particular field. Tribal people in Southern Rajasthan claim that throughout the past few years, there has been a significant shift in eating habits. Modern staples like wheat have gradually replaced traditional cereals and locally grown vegetables in the diet.

Table 1: Forest / Tribal Foods of South Rajasthan

Name	Parts Eaten	Benefits
Prosopis cineraria (Sangri pods)	Immature pods (sangri), leaves as fodder	High-protein desert food; excellent in scarcity seasons.
Ziziphus mauritiana (Ber / Desert jujube)	Fresh & dried fruits	Vitamin-C rich immunity food for tribal communities.
Balanites roxburghii (Hingot / Desert date)	Fruits, seeds, young leaves	Energy-dense fruit, traditional anti-diabetic use.
Cordia dichotoma (Gunda / Lasora)	Fruits, leaves	Cooling, digestive, used widely in tribal cuisine.
Dioscorea species (Wild yam – Ratalu/Jamalu)	Tubers	Staple fallback food in scarcity; high energy.
Amaranthus species (Wild amaranth / Chaulai leaves)	Leaves	Excellent for anemia & bone health.
Chenopodium album (Bathua – wild leafy green)	Leaves0	Highly nutritious winter green consumed by Bhil tribes.
Madhuca longifolia (Mahua)	Flowers, seeds, fruits	Seasonal food, energy source, fermented/roasted in tribal diets.
Anogeissus latifolia (Dhawda gum)	Gum/resin	Cooling, used in summer, digestive aid.
Phoenix sylvestris (Wild date palm - Khajur)	Fruits, sap	Tribal sweetener and energy food.
Bauhinia variegata (Kachnar buds)	Flower buds	High-protein seasonal vegetable.
Tribulus terrestris (Gokhru greens)	Leaves, young shoots	Medicinal and kidney-supporting green.
Momordica dioica (Kakoda / Spine gourd)	Fruit	Popular monsoon vegetable; strengthens immunity.

Cucumis callosus (Kachri)	Fruit	Used as a meat-tenderizer and souring agent; survival food.
Syzygium cumini (Jamun)	Fruit, seeds	Regulates blood sugar; used by tribal healers.
Tamarindus indica (Tamarind)	Fruit pulp, tender leaves	Digestive, cooling, appetite enhancer.
Wild mushrooms (Termitomyces spp.)	Mushrooms (rainy season)	Strong protein source for Bhil and Garasia tribes.
Helicteres isora (Marod phali)	Fruits	Digestive, anti-diabetic traditional use.
Grewia tenax (Gangeri)	Small orange-red fruits	Summer cooling fruit; used in "lassi-like" beverages.

Nutritional Value Table of Forest/Tribal Foods of South Rajasthan

Table 2: Proximate Composition & Key Micronutrients (per 100g)

Food Species	Category	Energy (kcal)	Protein (g)	Carbs (g)	Fat (g)	Fibre (g)	Calcium (mg)	Iron (mg)	Vit C (mg)
Prosopis cineraria (Sangri)	Pod	340	9–17	57	4	16–34	120	3–5	5–7
Ziziphus mauritiana (Ber)	Fruit	74	0.8	20	0.2	2	25	1.8	65–76
Grewia tenax (Gangeri)	Fruit	60	1	15	0.2	5	120	4–5	80+
Phoenix sylvestris (Wild date)	Fruit	250–320	2	65–70	0.5	6	40	1.3	4
Amaranthus spp. (Chaulai leaves)	Leafy veg	38	3.5	4	0.8	2.8	215–300	5–7	40
Chenopodium album (Bathua)	Leafy veg	43	4–5	7	0.8	3	300	5	70
Madhuca longifolia (Mahua flowers)	Flower	325	1.2	65–70	0.6	6	40	1.5	30
Madhuca longifolia (Mahua seeds)	Seed	450–500	20	30	30–40	6	40	3	0
Bauhinia variegata (Kachnar buds)	Flower buds	120	12–15	16	1	6	50	3	15
Dioscorea spp. (Wild yams)	Tuber	110	1.5	26	0.3	4	15	2	12
Momordica dioica (Kakoda)	Vegetable	35	2	6	0.3	3	25	1.2	70
Cucumis callosus (Kachri)	Fruit	60	1.5	14	0.2	3	22	1	60
Cordia dichotoma (Gunda)	Fruit	74	7	18	1	6	32	3	20
Termitomyces spp. (Wild mushrooms)	Mushroom	110	18–30	7	1–2	10	25	5–10	4
Balanites roxburghii (Hingot)	Fruit/Seed	350	5 (fruit) / 30 (kernel)	40	0.5 / 40	10	85	5	15
Helicteres isora (Marod phali)	Fruit	50	2	10	0.4	8–10	80	2–3	10
Syzygium cumini (Jamun)	Fruit	60	0.7	15	0.3	1.6	15	1–2	10–15
Tamarindus indica (Tamarind pulp)	Fruit pulp	240	3	62	0.6	5	170	2	4
Ficus racemosa (Gular)	Fruit	70	1	18	0.4	5	80	1.5	3
Tribulus terrestris (Gokhru greens)	Leafy veg	45	3	8	1	4	110	3	25

Importance of Forest foods

Role in Nutrition Security

Diets that would otherwise be dominated by cereals and pulses are diversified by forest foods. They supply vital micronutrients that tribal communities frequently lack, particularly iron, calcium, vitamin A, and vitamin C.

Seasonal and Ecological Value

Many species are seasonal but complementary:

Mahua flowers → summer

Wild mushrooms → monsoon

Berries and leafy greens → winter

Sangri , kachri → drought periods

This ecological spread helps tribal households manage food shortages.

Biodiversity and Cultural Knowledge

Indigenous communities possess strong knowledge of sustainable harvesting, processing and cooking methods—for example, detoxifying wild yams and preserving mahua flowers.

Conclusion

South Rajasthan Forest and tribal foods make up an ecologically sound and nutrient-dense food chain. They supply dietary fiber (wild figs, desert fruits), vitamins (amaranth, bathua, ber), minerals (hingot, tamarind, greens), proteins (sangri, mushrooms, kachnar), and energy (mahua, wild dates). Nutrition and livelihood security in tribal communities can be greatly enhanced by strengthening the collection, conservation, and marketing of these native foods.

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