



Significance of Forest Biodiversity in Poverty Alleviation and Economic Security of the Nation

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The number of products provided by trees worldwide is extensive. The wood, bark, leaves, flowers, fruits, seed and root of trees yield food, fodder, fuel wood, fibre, medicine, gums, resins, starch and numerous other products used for subsistence and industrial purposes.

As estimated today in India there are 3000 plants having medicinal value, 200 plants bearing essential oils or commercial oil seeds, 100 species giving dyes of commercial importance and 120 species giving gums and resins. According to an estimate in India collection of different plant parts at present is responsible for production of following products:-

Forest Produce	Qty (Tonnes)
Food Products	101200
Myrobalon	132250
Sal seeds	7097000
Mahua	69760
Neem seeds	115000
Palmarosa oil	1600
Eucalyptus oil	150
Sandal oil	160
Lemon grass oil	950
Gum	180500
Resin	17000
Bidi leaves	360000
Bamboos	4716000
Fibres	5750
Laak	13000

Source : Tewari DN 1994 Tropical Forest Produce. IBD, Dehradun

Food from forests

Fruits, leaves, nuts, gum, mushrooms, roots, tubers etc. are some of the important source of food of forest origin. Forests and farm trees make significant direct contributions to the food security of tribal and rural populations. Forests also contribute indirectly to food security through cash income generated from sales of gathered and processed forest products.

Food from forests provides many essential nutrients and help to improve both the physical and mental well being of rural masses. It has been estimated that 80% of the forest dwellers in Bihar, Orissa, Madhya Pradesh and Himanchal Pradesh depend on forests for 25-50% of their annual food requirements.

The edible plants occurring in forests may be classified as follows:

- Those eaten only in times of real emergency or famines.
- Wild foods ordinarily gathered and consumed locally but not sold in markets.
- Wild food gathered and sold locally in markets and consumed locally.
- Cultivated crops entering internal trade.
- Wild foods entering international trade.

Famine foods of vegetable origin include a variety of plant parts, the most frequently used among them being:

- Starchy enlarged rhizomes, roots and tubers.
- Leaves of perennial plants, either woody or having perennial shoot stocks.
- Pulp of fruits of perennial woody plants, and



d. Seeds of certain wild grasses shrubs and trees.

Forest provide rich source of genetic diversity which is valued for food purposes.

The wild cultivars of the cultivated plants are important for breeding purposes for developing disease and pest resistant species. On the basis of edible parts plants found in forests can be classified as follows:-

- i. Plants yielding edible fruits.
- ii. Plants yielding edible stems and tubers.
- iii. Plants yielding edible leaves.
- iv. Plants yielding edible seeds.
- v. Plants yielding edible flowers.
- vi. Plants yielding edible underground roots and rhizomes.
- vii. Fodder trees.

i. Plants yielding edible fruits

There are huge numbers of plant species including trees, shrubs, herbs and climbers, which yield edible fruits. The fruits are eaten either riped or unriped. Some of the fruits are pickled and some are made into jams and other products. Different parts of a fruit are edible may be the pulp thalamus, inflorescence, endocarp and mesocarp etc. depending upon the ripeness of the fruit.

ii. Plants yielding edible stems and tubers

Stem and tubers of several plants are edible. Several species of bamboo are known to produce culms which are eaten in different parts of the world. They make good curries and also pickled. Some tubers are boiled and eaten. Some are cut and dried and made into flour and cooked.

iii. Plants yielding edible leaves:

Leaves of forest plants can be consumed either raw or cooked. Several leaves are good substitute for green vegetable. Some leaves such as *Murraya koenigii*

used as flavouring agent with medicinal properties. Some leaves are pickled and made into chutney. Some leaves make a good soup.

iv. Plants yielding edible seeds

Seeds of a large number of species are edible. Some of them have a high market value. Seeds of chilgoza pine (*Pinus gerardiana*) are one of the best dry fruits. Seeds of Chiraunji (*Buchanania lanzan*) and cashew nut (*Anacardium occidentale*) are considered very nutritive. Similarly, there are other seeds from forest origin which form a part of the human diet in one form or the other.

v. Plants yielding edible flowers

Flowers of several species form a part of human diet. Some flowers are used for making vegetables such as *Moringa olifera*. Flowers of Rhododendron are used for making jam. Famous Mahua tree produces thalamus which is sweet and used for various purposes and eaten in various forms.

vi. Plants yielding edible underground roots and rhizomes

Underground parts such as roots, rhizomes, tubers etc. of several species are eaten and are nutritious. Kand-Mool (rhizome and roots) were the traditional source of food for the Tribals. Some of them are pickled also.

vii. Fodder Trees

Fodder can be obtained from forests without causing any significant adverse effect on trees, as most of the trees are of deciduous nature and shed their leaves. Therefore, the leaves from these trees can be harvested for feeding the livestock.

Thus, forest biodiversity can play a vital role in poverty alleviation and economic security of the nation. Hence, the existing biodiversity should be conserved with proper sustainable use without making any over exploitation.

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