



Western Rajasthan: A Review on Rohida (*Tecomella undulata*), Introduction, Importance, Conservation and Future Perspectives

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The Rohida (*Tecomella undulata*) is a multipurpose tree of western Rajasthan in arid and semi-arid climates. It is capable of living with extreme temperatures, low rainfall, and extreme environment. The state tree of Rajasthan is Rohida. It is an important component of ecological balance, soil conservation, fodder, timber and medicinal applications. At present, indiscriminate felling of trees and climate change along with failure for natural regeneration due to unmanageable cuts have led the population of Rohida in a declining state. Thus, conservation and scientific management of this fishery is imperative.

Overview

A significant arid area of India, Western Rajasthan is distinguished by sandy soils, high temperatures, little rainfall, and a lack of water. Few plants are able to endure such extreme circumstances. One tree that does well in these circumstances is the rohida. It is also known locally as "Rohira." It is referred to as the "Teak of the Desert" because of the purity and strength of its wood. This tree is significant for the rural economy as well as the ecology.

Taxonomy

- Scientific Name: *Tecomella undulata*
- Family: Bignoniaceae
- Common Names: Rohida, Rohira
- Kingdom: Plantae
- Division: Angiosperms
- Class: Dicotyledons

Description of Botany

Rohida is a medium-sized deciduous tree that typically reaches a height of five to ten meters. Its bark is rough and brown, and its trunk is robust and straight. Simple, oppositely orientated leaves are seen on branches. It is an ornamental tree because of the lovely orange-red blooms that appear in the spring. The fruit is a capsule with several seeds within. The wind spreads the light seeds. The tree is resistant to drought because of its extensive root structure.

Distribution by Region

Rohida is primarily found in India's desert northwest.

Principal areas:

- Rajasthan, particularly the western portion Gujarat
- Punjab's arid areas
- A portion of Haryana It is particularly prevalent in the Thar Desert of Rajasthan. It may live in regions with 100–500 mm of precipitation.

Ecological Significance

Rohida is crucial to the ecology of the desert. It stabilizes sandy soils and aids in soil conservation. Its roots maintain sand dunes and link the soil, preventing erosion. Additionally, it promotes biodiversity by giving insects and birds a place to live. It also contributes to the preservation of environmental equilibrium by absorbing carbon dioxide.

Agriculture's Significance

In agroforestry systems, rohida plays a significant role. It is planted on field margins by farmers.

- Protects crops from severe gusts by acting as a windbreak.
- Enhances the microclimate in fields
- According to certain research, it increases the amount of organic matter in the soil.

Economic Significance

Wood from Rohida is quite precious. Applications:

- Furnishings
- Tools for agriculture
- Decorative objects
- Building The wood is robust and impervious to termites. In rural places, it also provides a source of income.

Medicinal Significance

Traditional medicine makes use of rohida:

- Bark: used to skin conditions
- Flowers: used to treat blood problems • Leaves: used to specific illnesses Nevertheless, further scientific investigation is required in this area.

The Value of Livestock

Particularly in times of drought when there is a shortage of other fodder, rohida leaves make excellent animal feed. It helps livestock systems in rural areas.

Dangers to Rohida

Rohida is currently under threat from a number of sources:

- Unlawful cutting
- Insufficient natural regeneration Climate change
- Excessive grazing Urbanization Its population is decreasing as a result of these circumstances.

The necessity of conservation

The following reasons make conservation crucial:

- Preserves ecological equilibrium
- Crucial to the environment of the desert
- Is valuable economically

Conservation strategies

- Programs for plantations
- Programs for raising awareness
- Restricted grazing
- Preservation of seeds

Man-made Transmission

Seeds are used to spread rohida. Procedure:

- Gathering nutritious seeds Raising a nursery
- Transplanting
- Additionally, studies on vegetative propagation are being conducted.

Contribution to Sustainable Farming

Rohida is important to sustainable agriculture because

- Preservation of soil
 - Support for biodiversity
 - Resilience to climate change
- Integration of agroforestry Low-input agricultural systems can use it.

Future Opportunities

Rohida can be utilized in the future for:

- Afforestation in deserts
 - Mitigation of climate change
 - The growth of agroforestry
 - The advancement of genetics
- In conclusion In western Rajasthan, the rohida tree is very significant for the ecology, agriculture, economy, and society. It is perfect for desert areas due to its versatility and resistance to drought. Its conservation is crucial given the risks it faces today. It can make a substantial contribution to sustainable development with the right scientific management and conservation initiatives.

References

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