

## Multipurpose Benefits of Mahua: A Nutritional, Medicinal, and Economic Boon for Tribal Communities in Bastar Division of Chhattisgarh

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### Introduction

Mahua, also known as *Madhuca longifolia*, is a non-forest timber produce that has significant nutritional, medicinal, and economic benefits for tribal communities in India. This tree species is highly valued for its flowers, which are used to produce a fermented drink and edible oil, and its seeds, which are used for medicinal purposes. Mahua has been an integral part of the culture and livelihoods of tribal communities for generations, and its sustainable management is essential for their well-being and the conservation of forest resources and biodiversity.

However, the increasing demand for Mahua products and the lack of sustainable management practices have led to the overexploitation of Mahua trees and the depletion of forest resources. This has resulted in the loss of biodiversity, the degradation of ecosystem services, and the loss of traditional knowledge and cultural heritage. Therefore, there is an urgent need to implement sustainable management practices that ensure the conservation of Mahua trees and forest resources, while also promoting the socio-economic development of tribal communities.

### Mahua and its Traditional Uses:

- Mahua is a tree species that is found in the tropical and subtropical regions of India, and is particularly abundant in the central and eastern states. The tree can grow up to 20-25 meters in height and has a thick trunk with a greyish-brown bark. The leaves of the Mahua tree are large and shiny, and the branches are covered with clusters of fragrant white flowers.
- Mahua flowers are highly valued by tribal communities for their nutritional and medicinal properties, as well as their use in the production of a fermented drink called

Mahua. The flowers are harvested during the months of March and April, and are sun-dried or roasted before being used. The dried flowers are rich in carbohydrates, proteins, and minerals, and are consumed as a nutritious snack or used as a food supplement during times of food scarcity.

- The Mahua flowers are also used to produce Mahua, a popular fermented drink that is consumed by tribal communities across India. Mahua is made by fermenting the flowers in water for several days and then distilling the resulting mixture to produce a potent alcoholic beverage. Mahua has a sweet and fruity taste, and is often consumed during social ceremonies and festivals.
- In addition to its use as a food and beverage, Mahua also has medicinal properties and is used in traditional Ayurvedic medicine to treat a variety of ailments. The flowers and leaves of the Mahua tree are used to treat fever, cough, diarrhea, dysentery, and other respiratory and digestive disorders. The seeds of the Mahua tree are also used to produce an oil that is used in cooking, as well as in the treatment of skin ailments and rheumatism.

### **Significance of Mahua for Tribal Communities:**

Mahua is an integral part of the culture and livelihoods of tribal communities in India, particularly those living in the central and eastern states. The tree is deeply embedded in the social, cultural, and economic fabric of these communities, and plays a vital role in their food security, income generation, and traditional knowledge systems. For many tribal communities, Mahua is a key source of income during the lean agricultural season, when other sources of income are scarce. The sale of Mahua products, such as Mahua flowers, Mahua oil, and Mahua liquor, provides a significant source of income for many households, particularly those headed by women. Mahua also plays an important role in the traditional knowledge systems of tribal communities, who have developed a deep understanding of the ecology and management of Mahua trees over generations. Tribal communities have developed a range of practices and rituals associated with the harvesting and processing of Mahua products, which reflect their cultural values, social norms, and traditional knowledge.



**Fig.1. Tribal women collecting the Mahua**

### **Challenges and Opportunities for Sustainable Management of Mahua:**

Despite the significant socio-economic and cultural benefits of Mahua, the increasing demand for Mahua products and the lack of sustainable management practices have led to the overexploitation of Mahua trees and the depletion of forest resources. This has resulted in the loss of biodiversity, the degradation of ecosystem services, and the loss of traditional knowledge and cultural heritage. The unsustainable harvesting of Mahua flowers, for example, has led to the decline in the number and size of Mahua trees, which has in turn affected the availability of other forest products and ecosystem services. The overexploitation of Mahua trees has also led to conflicts between different user groups, particularly between tribal communities and commercial traders. However, there are also opportunities for the sustainable management of Mahua that can promote the conservation of forest resources and the socio-economic development of tribal communities. Community-based approaches that involve the active participation of tribal communities in the management of forest resources can promote the effective conservation of Mahua trees, while also ensuring that the benefits of Mahua products are distributed equitably.

### **Economic Value:**

Mahua has significant economic value, particularly for the rural communities that rely on it for their livelihoods. The tree provides a source of income for many forest-dependent



communities, who collect and sell its various products. The seeds of Mahua are used to produce oil, which is used in cooking, as a source of fuel, and in the manufacture of soap, cosmetics, and other products. The flowers of Mahua are also used to produce Mahua liquor, which is a popular drink in many parts of India.

### **Environmental Impact:**

The collection and use of Mahua has both positive and negative environmental impacts. On the one hand, the cultivation and use of Mahua can help to conserve forests and biodiversity, as it provides an alternative source of income for forest-dependent communities. On the other hand, the overexploitation of Mahua can lead to the depletion of forest resources, as well as the loss of biodiversity and ecosystem services.

### **Products from Mahua:**

Mahua has a wide range of uses, and its various products are highly valued for their nutritional, medicinal, and economic benefits. The following are some of the products that can be derived from Mahua:

- 1. Mahua Seeds:** Mahua seeds are rich in oil, which is extracted by crushing the seeds and then boiling them in water. The oil is used for cooking, as a source of fuel, and in the manufacture of soap, cosmetics, and other products. Mahua oil is also used in traditional medicine for its various health benefits, including its anti-inflammatory, analgesic, and antioxidant properties.
- 2. Mahua Flowers:** Mahua flowers are used to produce Mahua liquor, which is a popular alcoholic drink in many parts of India. The flowers are collected during the flowering season, and then fermented and distilled to produce the liquor. Mahua liquor has a sweet taste and a mild aroma, and is consumed during festivals and celebrations.
- 3. Mahua Cake:** Mahua cake is a by-product of the oil extraction process, and is used as a source of animal feed. The cake is rich in protein and other nutrients, and is highly valued as a supplement for livestock.
- 4. Mahua Bark:** Mahua bark is used in traditional medicine for its various health benefits, including its anti-inflammatory, analgesic, and anti-diabetic properties. The bark is also used as a source of fuel wood and charcoal.



**Fig.2. Different products of Mahua**

### Conclusion

Mahua, a tree with a significant cultural, economic, and environmental importance in India, has been a valuable non-timber forest produce for centuries. In the Bastar tribal areas, Mahua has played an essential role in the livelihoods of the forest-dependent communities for generations. The tree provides various products such as flowers, fruit, and seeds that are highly valued for their nutritional, medicinal, and economic benefits. The byproducts of Mahua, such as Mahua oil, are used to make soaps, candles, and other household items. However, the increasing demand for Mahua products has led to overexploitation, which can have devastating effects on forest resources and biodiversity. Therefore, sustainable management practices for Mahua are paramount to ensure the long-term benefits of this

valuable resource for forest-dependent communities. The development of a value chain for Mahua that includes local communities can provide them with additional income and help preserve the forest ecosystem. In conclusion, Mahua is not only a valuable resource for its nutritional, medicinal, and economic benefits but also plays a critical role in the forest ecosystem and the livelihoods of many forest-dependent communities. Sustainable management practices and the development of value chains can help ensure that the resource is used responsibly, preserving its benefits for future generations.

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