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## *Oroxylum indicum*: An important vegetable cum medicinal plant

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#### Abstract

Since time immemorial plants are considered as one of the key source of human diet and hold a great importance in treating enormous diseases and illness. *Oroxylum indicum* is one of the important vegetable cum medicinal plant playing a vital role in human wellbeing. Though the plant holds a great importance in human prosperity, it is still less popular when it comes for consumption as vegetable due to the lack of knowledge and awareness regarding its beneficial properties and lack of research as a result of which their actual potential has not been much explored till now. Therefore, such crops need to be taken under consideration by performing various forms of researches such as collection and maintenance of existing genotypes, evaluation, extraction of bioactive compounds and its better utilization, etc. which will also prevents its genetic erosion. Thus, the present article focuses on highlighting the importance of *Oroxylum indicum* in human well beings and also aims in expressing the future scope of the crop for the fruitful outcome.

**Keywords:** *Oroxylum indicum*, broken bones tree, Indian trumpet flower

#### Introduction

*Oroxylum indicum* popularly known as broken bones tree or Indian trumpet flower is a semi deciduous flowering tree that belongs to the family Bignoniaceae. It is native to Indian subcontinent and is mainly spread over the Himalayan foothills up to an elevation of 1000-1200 m above mean sea level (Jagetia, 2021) <sup>[3]</sup>. In India, it is widely distributed in different parts of Eastern and Western Ghats and also covers an important area in North Eastern parts of the country (Jayaram and Prasad, 2008) <sup>[4]</sup>. *Oroxylum indicum* is known by different vernacular names such as Bhatghila in Assamese; Indian Trumpet flower, Tree of Damocles, Midnight Horror in English, Tentu in Gujarati; Katvanga, Tuntuka, Shyonaka in Sanskrit; Sonapata, Shyonak, Sauna in Hindi, Tatelo in Nepali; Tetu, Tayitu in Marathi; Achi, Puta-Puspam, Vengamaram in Tamil. Such plant is reported to be enriched with several bioactive compounds such as anthocyanins, carotenoids, carbohydrates, phenolics, terpenoids, etc. beneficial for mankind (Wang *et al.*, 2006) <sup>[13]</sup>. However, due to several factors such plant species is nowadays considered as threatened or endangered plant species.

#### Taxonomical classification

Kingdom	Plantae
Division	Magnoliophyta
Class	Magnoliopsida
Order	Lamiales
Family	Bignoniaceae
Genus	<i>Oroxylum</i>
Species	<i>indicum</i>

#### Botanical description of the crop

*Oroxylum indicum* is a deciduous tree which grows up to a height of 12 to 18 metres with branching habit at the top portion of the tree. Bark of the tree is greenish brown in colour with corky lenticels. Leaves are 3-7 cm long, green in colour, pinnately compound with ovate or elliptic shape. Flowers are numerous, reddish purple in colour at the outer portion and pale yellowish colour at the inner portion. Flowers also release fetid odour to attract the pollinators (Rathod *et al.*, 2022) <sup>[11]</sup>. Plant bears a hardy, woody, flat, sword shapes fruits in which small flat seeds are present in a yellowish creamy papery structure.

Fig 1: Leaves of *Oroxyllum indicum*Fig 2: Flower buds of *Oroxyllum indicum*Fig 3: Seeds of *Oroxyllum indicum*Fig 4: Fruit pod of *Oroxyllum indicum*Fig 2: Flowers of *Oroxyllum indicum*Fig 3: *Oroxyllum indicum* tree

### Medicinal importance of *Oroxyllum indicum*

Since ancient time, *Oroxyllum indicum* were used in the preparation of several Ayurvedic formulations such as Amritarista, Dantadyarista, Brahma Rasayana, etc. for treating various illnesses (Rajasekharan *et al.*, 2017) [10]. The root bark of *Oroxyllum indicum* is used in stomatitis, nasopharyngeal cancer and tuberculosis (Padgilwar *et al.*, 2014) [8]. It helps in increasing appetite, useful in fevers, asthma, intestinal worms and useful in vomiting, dysentery and diarrhoea (Kirtikar & Basu, 2001 [6]; Prakash, 2005 [9]). It is reported that the leaves decoction of this plant helps in treating ulcer, cough and rheumatic fever. The seeds are also found to be useful in treating throat infection and hypertension (Kunwar *et al.*, 2009). [7] Fruits of *Oroxyllum indicum* are found to be protective against throat, heart and found effective in the diseases like piles and bronchitis (Chopra *et al.*, 2002 [1]; Drury, 2006 [14]; Khare, 2007 [5]).

### Economic importance of *Oroxyllum indicum*

The flowers of *Oroxyllum indicum* is mainly used as a vegetable. They are consumed in different forms such as curries, soups and pakoras, etc. Due to the bitter flavour in the freshly collected flowers, they are firstly preferred to be boiled or blanched in a hot water for few minutes to remove its bitterness and then later cooked as desirable. Some farmers sell the freshly collected flowers in the local market during their flowering time to earn some money.

### Cultivation Aspects

*Oroxyllum indicum* is a perennial plant which usually grows without much care. The easiest method for the propagation of *Oroxyllum indicum* is through seed and it is considered to be

the most preferred method from the perspective of plant conservation and genetic variation (Singh *et al.*, 2014) [12]. But due to the low germination rate and viability, sometimes propagation through seeds becomes problematic. Singh *et al.*, 2014 in their findings stated that the seeds pre-treated with cold water at 4 °C for 24 hours will lead to better germination ultimately creating an easy method to the farmers for economic cultivation.

### Religious and Cultural Aspects

India is a diverse country with diversified group of people residing based on religions, cultures, traditions, etc. It is believed that *Oroxyllum indicum* holds a great importance in several Buddhism culture. Most of the Buddhist believer's use the dry seeds of *Oroxyllum indicum* in their precious cultural and traditional rituals including religious ceremonies and wedding ceremonies which marks its valuable importance in several religious and cultural aspects.

### Future Scope of the Crop

As the demand for vegetables are increasing day by day, the pressure to the soil and producers for producing the vegetables are also increasing simultaneously. The advancement of modern technologies and development of high yielding varieties through such technologies are in pace to fulfil the demand but people now a days are also diverting towards utilization of underutilized (not commonly used) vegetables for fulfilling their needs. Therefore, *Oroxyllum indicum* has a great scope in future days as a valuable vegetable and as it also possesses several medicinal properties valuable for humankind such crop can also be further explored through research and experiments for its better

utilization in future days for fruitful outcome.

### Conclusion

Vegetables are considered as an essential part of balance diet. Some vegetables not only serve as a part of meal but also play a vital role in treating several illnesses. Due to the lack of knowledge and awareness regarding some valuable crop like *Oroxylum indicum*, their actual potential has not been much explored till now. Therefore, such crops need to be taken under consideration by performing various forms of researches such as collection and maintenance of existing genotypes, evaluation, extraction of bioactive compounds and its utilization, improvement, etc. which not only prevents the genetic erosion of the particular plant species from the nature but also favors better utilization of the species for human benefit in upcoming days.

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