



## Documentation of the Minor Edible Fruits Sold in Phoolbagan, Kolkata, India

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### Abstract

Most of the underutilized minor fruits of the tropics are often available only in the local markets. They are usually relatively less palatable than other commercial fruits. Minor fruits generally have lesser demand in the market. They are usually very resilient and can adapt to the local climate. Literature review reveals that minor edible fruits play a vital role as food and medicine. Along with humans, many birds and animals eat these minor fruits. These minor fruits are part of our indigenous fruit legacy. Sometimes these minor fruits are sold in temporary shops by individuals who bring them from the districts into the city. Documentation of the minor edible fruits in different areas will help in making a comprehensive database of these underutilised fruits in local areas. There need to be extensive awareness drives so that the urban population becomes aware of the nutritional status of these minor fruits. Awareness drives need documentation of existing minor fruit diversity first. This paper is a documentation of the minor edible fruits sold in Phoolbagan near Gurudas College.

**Keywords:** *Minor Edible Fruits, Underutilised Fruit, Documentation, Indigenous Fruit Legacy*

### Introduction

Some fruits don't have great demand in the fruit market. Though these fruits are consumable to human beings but are relatively less palatable than other mainstream fruits. So, they are either grown to a limited extent or are not cultivated at all (Srivastava, Bishnoi & Sarkar, 2017). The important fruit crops grown commercially in India are mango, banana, Citrus sp, guava, grape, pineapple, papaya, sapota, litchi and apple which comprise more than 75 percent of the total area under fruit cultivation (Mitra, Pathak & Chakraborty, 2010). All the underutilized fruit trees and shrubs together comprise the rest 25 percent. Sometimes they are

grown along the roadsides or on uncultivated tracts of land. Sometimes these minor fruits are sold in temporary shops by individuals who bring them from the districts into the city.

Most of the underutilized fruits of the tropics are often available only in the local markets and are practically unknown to other parts of the world (Porika et. al., 2019). They are usually not are not cultivated in large tracts of land (Roy & Bauri, 2019). Since the area under each of these fruit trees is insignificant, they are popularly known as 'minor fruits' or 'underutilized fruits'. Dr. B.C. Mazumdar, Professor in Horticulture, Institute of Agricultural Science, Calcutta University in his book 'Minor Fruit Crops of India: Tropical and Subtropical' gave the definition of minor fruits as "those fruits which though are consumable to the human beings but relatively less palatable than other fruits, which have lesser demand in the market, which are grown to a limited extent only and are not usually cropped in organized plantations with application of inputs are considered in grouping as minor fruit crops" (Mazumdar, 2004).

#### *Documentation of Edible Minor Fruit*

In many floristic works on the Indian sub-continent, there has been documentation of the minor fruits and wild edible fruits viz. Assam (Humphrey, Carter & Dorine, 1921); Bangladesh (Rahman & Rahman, 2014); Indian Himalayas (Joshi, 1998); Sikkim (Suresh et al., 2014) and Tripura (Majumder & Dutta, 2009; Das et al., 2013). The Food Plants International database documents 4,973 edible plants in India, 1,170 in Sri Lanka and 11,155 for the broader Asia region (French, 2019).

#### *Utility of Edible Minor Fruits*

Researchers who have worked with underutilised fruits are of the opinion that minor edible fruits play a vital role in food and medicine. They are the genetic resource of any country and have an impact on the nutrition of the population (Pasha & Uddin, 2019). There have been several research works on the utility and importance of minor fruits (Mitra, Pathak & Chakraborty, 2008; Majumder & Dutta, 2009; Malik et al., 2010; Mahapatra & Pratap, 2012). Different aspects of the nutritional value of these underutilized fruits have been studied and documented by researchers (Mitra, Pathak & Chakraborty, 2008; Seal, 2011). Some of these minor fruits are eaten raw. Some are cooked or made into pickles before consumption.

#### *Study Site*

Phoolbagan is an area in Kolkata that is connected to both Sealdah and Ultadanga railway stations that connect the North & South 24 Parganas districts. Phoolbagan is well connected by road too with different parts of the city and districts. Local residents of the districts often bring minor fruits to the city. They set up temporary shops by simply placing some newspaper or plastic sheets on the ground and selling them. At the end of the day, the plastic sheets are folded, and the persons return home.

Gurudas College is an undergraduate college located in Phoolbagan in Kolkata, West Bengal, India. The coordinates of the college are 22.5712° N, 88.3905° E. It is located in an urban locality in the heart of the city. There is ample green cover on the campus.

## Results

Minor fruits are seasonal fruits. So, documentation of the fruits that were sold in makeshift shops in Phoolbagan very near Gurudas College took about one year viz. 2019. Students are one big segment of the population who like tangy fruit preparations either raw or as pickles there seemed to be a steady consumer strength for the vendors of these minor fruits. Often the same individual would be selling different minor fruits during different seasons. Table I gives a list of minor fruits (in alphabetical order) that were sold in Phoolbagan along with their family names and common names. In Table II list of edible minor fruits that were found in the vicinity but generally not sold as raw fruits are given.

**Table 1: List of Minor Edible Fruits Sold in Phoolbagan**

Sl. No.	Scientific Name	Family	Common Name in English	Common Name in Bengali
1	<i>Aegle marmelos</i> (L) Corr.	Rutaceae	Wood apple	Bael
2	<i>Annona squamosa</i> L.	Annonaceae	Custard apple	Aata
3	<i>Annona reticulata</i> L.	Annonaceae	Bullock's heart	Nona
4	<i>Artocarpus heterophyllus</i> Lam.	Moraceae	Jackfruit	Kathal
5	<i>Averrohoe carambola</i> L.	Oxalidaceae	Carambola/ Tree Sorrel	Kamranga
6	<i>Borassus flabellifer</i> L.	Arecaceae	Asian Palmyra palm/ Toddy palm	Taal
7	<i>Citrus grandis</i> Osbeck	Rutaceae	Pumello	Batabi
8	<i>Dillenia india</i> L.	Dilleniaceae	Dillenia	Chalta
9	<i>Dimocarpus longan</i> Lour.	Sapindaceae		Ashphal
10	<i>Elacocarpus floribunda</i> Blume.	Elaeocarpaceae	Olive	Jalpai
11	<i>Embilica officinalis</i> Gaertn.	Euphorbiaceae	Amla	Amlaki
12	<i>Feronia limonea</i> L. Swingle	Rutaceae	Elephant apple	Kayeth Bael
13	<i>Ficus hispida</i> L.	Moraceae	Fig	Dumur
14	<i>Physalis peruviana</i> L.	Solanaceae	Cape Gooseberry	Tapari
15	<i>Spondius cythera</i> Sonn.	Anacardiaceae	Hog Plum	Amra
16	<i>Syzygium cuminii</i> L.	Myrtaceae	Indian Blackberry	Jamun
17	<i>Syzygium jambos</i> L. (Alston)	Myrtaceae	Rose Apple	Golap Jaam

18	<i>Syzygium samarengense</i> (Blume) Merrill & Perry	Myrtaceae	Star Apple/ Wax apple	Jamrul/Jaman
19	<i>Tamarindus indica</i> L.	Leguminosae	Tamarind	Tetul
20	<i>Termenalia bellirica</i> (Gaertn) Roxb.	Combretaceae	Beleric Myrobalan	Bahera
21	<i>Trapa bispinosa</i> Roxb.	Trapaceae	Water chestnut	Panifal
22	<i>Ziziphus mauritiana</i> Lamk	Rhamnaceae	Indian Plum/ Jujube	Kul

**Table 2: List of Minor Edible Fruits Found around Phoolbagan Which Are Obtained Freely from Roadside Trees and Shrubs and Sometimes Sold As Raw Fruits**

Sl. No.	Scientific Name	Family	Common Name in English	Common Name in Bengali
1	<i>Aegle marmelos</i> (L) Corr.	Rutaceae	Wood apple	Bael
2	<i>Carissa carandas</i> L.	Apocynaceae	Carandas plum	Karamcha
3	<i>Dillenia india</i> L.	Dilleniaceae	Dillenia	Chalta
4	<i>Grewia asiatica</i> L. Masters	Tiliaceae	Blueberry	Phalsha
5	<i>Mimusops elengi</i> L.	Sapotaceae	Spanish Cherry	Bakul
6	<i>Morus alba</i> L.	Moraceae	Mulberry	Tunt
7	<i>Pithecellobium dulce</i> (Roxb.) Benth.	Fabaceae (s.l.)	Manila tamarind	Jilipi phal
8	<i>Spondias cythera</i> Sonn	Anacardiaceae	Hog Plum	Amra
9	<i>Tamarindus indica</i> L	Leguminosae	Tamarind	Tetul
10	<i>Ziziphus mauritiana</i> Lamk	Rhamnaceae	Indian Plum/ Jujube	Kul

From the above two tables, it is seen that 22 minor edible fruits are sold at different times of the year in Phoolbagan. There are 10 edible minor fruits listed in Table 2 that are usually found growing in roadside trees or shrubs around Phoolbagan, and these are generally not sold.

## Discussion

With unsustainable market pressures and rapid urbanization, the majority of these species have come to near extinction (Diengngan & Hasan, 2015). However, these underutilized fruit species are usually extremely resilient. They have adapted themselves and can survive harsh agro-climatic conditions. They can be established on degraded lands, which are presently being underutilized either due to poor soil fertility or moisture scarcity

(Diengngan & Hasan, 2015). As they are not commercially cultivated their price is generally much lower than the commercial fruits. Minor fruits are adapted to the local climate. Along with humans, many birds and animals eat these minor fruits.

There are many less-known fruit species that have the potential for commercial exploitation but are yet to be utilized to their potential (Pareek & Sharma, 1993). These minor fruits are usually restricted to localized regions.

They are reported to be highly nutritious and contribute to poverty elevation and the household food security of rural people (Roy & Bauri, 2019). Minor fruits play a significant role in herbal medicine too (Mallikarjuna et al., 2019). The Food Plants International database which covers 27,000 edible plant species is an excellent way to raise awareness about these minor fruits (French, 2019).

These minor fruits are part of our indigenous fruit legacy. Awareness about these underutilized fruits needs to be a part of the conversation within educational institutions. Short project work could be initiated by teachers associated in schools and colleges to popularise these minor fruits. Ultimately sustained consumption of these fruits can push them away from the brink of consumption.

## **Conclusion**

These minor fruits are underutilized because there is not much awareness about their nutritional benefits. Apart from diverse nutritional properties, they are also relatively cheaper than commonly cultivated fruits. However, it is often that the low price makes their value seem less within the urban population. There need to be extensive awareness drives so that the urban population becomes aware of the nutritional status of these minor fruits. If there is a demand for these minor fruits among the general population, there is still hope that these species will survive.

## **Conflict of Interest**

The author declares that she has no conflict of interest.

## **Acknowledgement**

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