

## Geographical Indication (GI) Tagged Bananas in India

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Geographical Indications (GI) are indications used on items that have distinct intrinsic characteristics derived from the specific geographical origins. This provides legal protection for the distinctive products and traditional knowledge that are indigenous to their individual regions or communities. There are 8 different banana varieties, i.e., Nanjanagud banana, Virupakshi hill banana, Sirumalai hill banana, Kamalapur red banana, Changelikodan nendran banana, Jalgaon banana, Myndoli banana, and Kanyakumari Matti banana received GI tag in India. The awareness about all these bananas at the public level is poor. Popularizing these varieties through publication would really help the farming communities that received the GI-tags in India. Medicinal values, aroma and taste are superior in GI tagged bananas over other varieties. For instance, Kanyakumari Matti Banana is a good source of baby food, Kamalapur red banana is good for typhoid fever, Virupakshi hill banana juice inhibits the colorectal cancer line proliferation, and Sirumalai hill banana helps in neurological system functioning.

### Introduction

The Geographical Indications of Goods (Registration and Protection) Act of 1999 was passed by the Indian Parliament in December 1999, and it went into effect on September 15, 2003. Geographical Indications (GI) are indications used on items that have distinct intrinsic characteristics derived from the specific geographical origins. This provides legal protection for the distinctive products and traditional knowledge that are indigenous to their individual regions or communities. Thus, GI-tagged items commemorate the location of origin, which is unavoidable in the manufacturing of products. This act of applying GI to products benefits producers economically while also limiting illicit use of GI tags. This act promotes the culture and traditional knowledge of the products (Ingole et al., 2023). Only authorized users from a specified geographical origin are permitted to use these tags. Furthermore, this will protect the items' integrity in overseas marketplaces.

### Significance of GI bananas to farmers

Consumer preferences for medicinal values beyond taste in GI bananas allow farmers to contemplate increased GI banana production (Dhamodharan and Selvaraj, 2013). Consumer awareness of the different health benefits of GI-tagged bananas sets the door for product growth and development. Farmers benefit economically from the sale of their produce. Additional work to confirm the validity of GI-tagged bananas available in marketplaces is also required to justify the premium consumers is paying (Sharma and Rajan, 2018). This would eliminate unscrupulous market practices and ensure that producers receive the proper premium for GI-tagged products.

## GI tagged bananas India

**1. Nanjanagud banana:** It is a stoloniferous shrub that originated in Nanjangud, a sacred site in Karnataka, and is grown in and around the Mysore region of the state. The plant grows to a height of 5.35 meters. The fruits of the plant have a distinct flavor due to the alluvial soil composition. Organic cultivation practices retain the fruits' unique taste and aroma. The Najanagud rasabale (Figure 1) banana has high antioxidant activity due to the presence of different phenols, saponins, flavanoids, ascorbic acid, and minerals, as well as a balanced ratio of IDF and SDF, making it a promising way to promote health (Ramu et al., 2017).

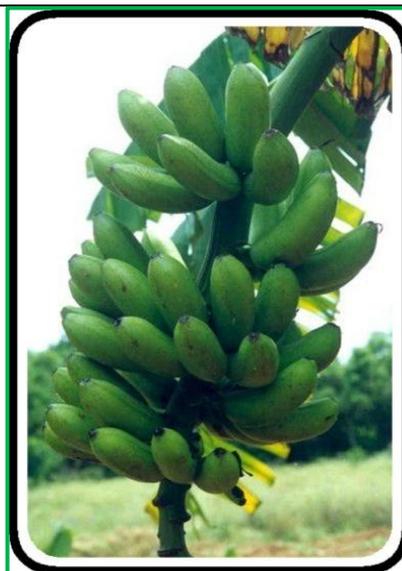


Figure1. Najanagud rasabale

**2. Virupakshi Hill Banana:** This GI-tagged banana is grown in the eastern regions of the Western Ghats as well as the Eastern Ghats, such as Lower Palani Hills and Sirumalai Hills. The hill banana (Figure 2) can grow to a height of 300 cm. The curved, luscious fruits are available all year. Another advantage of fruit is that the pulp does not spoil despite the black fruit skin, which increases its market value. This type has a distinct taste, flavor, and long-lasting quality. Because of its distinct flavor and sweetness, the heritage banana of Tamil Nadu is utilized to make Panchamirtham, a specific sort of Prasadam served in Murugan temples, particularly Pulney. The fruit juice of the virupakshi banana has also been proved to inhibit colorectal cancerline proliferation through in vitro assay (Praveena et al., 2018).

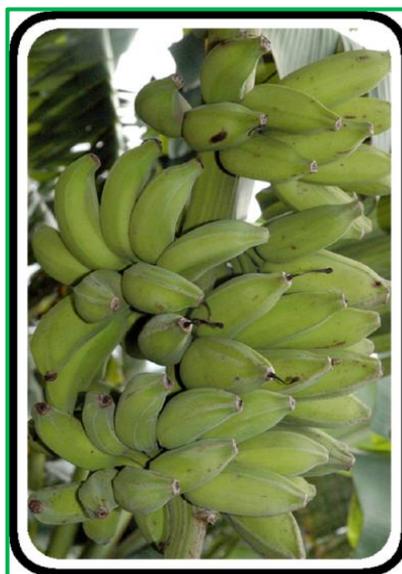


Figure 2. Virupakshi Hill Banana

### 3. Sirumalai Hill Banana

Sirumalai banana (Figure 3) is grown in the eastern regions of the Western Ghats as well as in the Eastern Ghats, such as the Lower Palani hills, Sirumalai Hills, and so on. The properties of fruits and crops are very similar to those of Virupakshi Hill banana. However, the fruits are sweeter and smaller than the Virupakshi Hill bananas. These fruits are abundant in potassium, which helps the neurological system functioning.



Figure 3. Sirumalai Hill Banana

#### 4. Kamalapur Red Banana

Kamalapur Red Banana (Figure 4) is grown mostly in Kamalapur and the surrounding villages of Rajnal and Navanihal in Karnataka's Gulbarga district. Plain lands are unsuitable for this crop. The fruit is high in iron content. Fruits with red skin and cream-colored pulp stand out in terms of quality and marketing potential. These fruits are advised for typhoid patients, particularly children with fever. Kamalapur red banana is highly sought after due to its nutritional value and medicinal properties.. Kamalapur red banana pulp-incorporated probiotic yogurt was found to provide the benefits of both red banana and probiotic yogurt (Harshapriya et al., 2024).

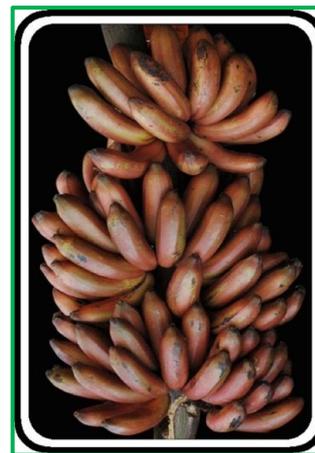


Figure 4. Kamalapur Red Banana

#### 5. Chengalikodan Nendran Banana

It is a typical Nendran variety grown in the Chengazhikode area, Wadakkancherry block, Thrissur district. The area was called for its landlords, the Chengazhi Nambiyars. During the Onam season, the bunches are used to make Kazhchakula (Kazhcha: gift; Kula: bunch), which are offered to temples and given to friends and relatives. Among numerous plantain ecotypes, the Chengalikodan variety (Figure 5) outperformed the others in terms of quality criteria such as TSS, total sugar, pulp/peel ratio, and total carotenoids (Joseph and Simi, 2020).



Figure 5. Chengalikodan Nendran Banana

#### 6. Jalgaon Banana

Jalgaon banana (Figure 6) is grown at Jalgaon, which is known for its high yield. Jalgaon is known as India's 'Banana Capital'. Crop production is successful due to favorable climatic conditions, soil fertility, and irrigation facilities (drip irrigation). Jalgaon banana cultivars include the dwarf Cavendish, Robusta, Grand Naine, and Shrimanti varieties. The plant can grow to a height of 9-14 meters. The fruits have a sweeter taste due to their delicate pulp. The crop is propagated using both classic vegetative and tissue culture methods.



Figure 6. Jalgaon Banana

### 7. Myndoli Banana

The Myndoli Banana (Figure 7), also known as Moira Banana, is grown in Pernem, Bicholima, and Bardez Talukas in Goa. Fruits that are high in nutrients are consumed as sweets, milkshakes, steamed (ukdun), roasted (bhajun), and fried. They are also used in the making of the popular Goan dish "Myndolya Kelyacho Halvo," which consists of ripe banana slices fried in ghee and simmered in sugar syrup. The bananas taste nice and are also suitable as gifts. The fruits are high in nutrients and act as a laxative. The fruits cost more than other types.



Figure 7. Myndoli Banana

### 8. Kanyakumari Matti Banana

The Matti Bananas (Figure 8) are grown in Kalkulam and Vilavancide taluks of Kanyakumari regions. There are six known types [Nal Matti (yellowish-orange colour and fine aroma), Theyn Matti (honey taste), Kal Matti (calcium oxalate crystals forming in the pulp), Nei Matti (aroma of ghee), and Sundari Matti (elongated fingers, thick peel, and creamy white rind)] of Matti Bananas and popularly known as "Baby Banana". This is banana got GI tag recently (31/07/2023). It is considered as a baby food because of its low total soluble solids content.



Figure 8. Matti Banana

More details of these GI tagged bananas are given in the Tables 1 and 2.

Table 1. Registration details of GI tagged Bananas in India.

S. No	GI tag number	Geographical Indications	Geographical Area	Year	Applicant Name	Applicant address	Certificate Number
1	35	Nanjanagud Banana	Karnataka	2006	Director of Horticulture, Department of Horticulture, Government of Karnataka	Department of Horticulture, Government of Karnataka, Biotechnology Centre, Hulimavu, PB No. 7648, Bangalore - 560 076, Karnataka	20
2	124	Virupakshi Hill Banana	Tamil Nadu	2008	Tamil Nadu Hill Banana Growers Federation	6-3-17, Main Road, Pattiveeranpatti, Dindigul District, Tamil Nadu, Pin Code - 624211	103
3	126	Sirumalai Hill Banana	Tamil Nadu	2008	Tamil Nadu Hill Banana Growers Federation	6-3-17, Main Road, Pattiveeranpatti, Dindigul District, Tamil Nadu, Pin Code - 624211	104

4	133	Kamalapur Red Banana	Karnataka	2009	Director of Horticulture, Department of Horticulture, Government of Karnataka	Biotechnology Centre, Hulimavu, PB No. 7648, Bangalore - 560 076, Karnataka	115
5	479	Chengalikodan Nendran Banana	Kerala	2014	Chengalikodan Banana Growers Association	C/o Krishi Bhavan Erumapetty, Post Office: Erumapetty, Thrissur - 680 584, Kerala, India. Facilitated by Kerala Agricultural University, Kerala Agricultural University (PO), District: Thrissur-680 656, Kerala, India.	228
6	498	Jalgaon Banana	Maharashtra	2016	Nisargraja Krushi Vidnyan Kendra	Nisargraja Krushi Vidnyan Kendra, Tandalwadi, Taluka: Raver, Jalgaon- 425 502, Maharashtra, India	281
7	680	Myndoli Banana	Goa	2021	Myndoli Banana Growers Association (MBGA)	Myndoli Banana Growers Association (MBGA), No. 89, Deulwada, Ibrampur, Pernem - 403 503, Goa, India. Facilitated by Patent Information Centre (PIC), Department of Science & Technology (DST), Government of Goa, India.	394
8	757	Matti Banana	Tamil Nadu	2023	Kanyakumari Banana and Horticulture Farmers Producers Company Limited	5/230/2, Chetticharvalli, Kallukettyvillai, Veeyanoor, District Kanyakumari - 629 158, Tamil Nadu	489

Source: Journals of GI (<https://search.ipindia.gov.in>) and ICAR NRCB

**Table 2. Origin and cultivated areas of GI tagged Bananas in India.**

S	GI tagged bananas	Origin	Areas of cultivation
1	Chengalikodan banana	Chengazhikodu village, Thrissur, Kerala	Chowannur, Desamangalam, Erumapetty, Kaiparambu, Muntoor, Ollukkara, Pazhayannur, Puzhakkal, Thayyur and Wadakkancherry of Thrissur.
2	Kamalapur Red Banana	Kamalapur village of Gulbarga district, Karnataka	Rajnal, Okali and Nadvinhalli villages of Gulbarga district
3	Nanjand rasabale	Nanjand of Karnataka	Mysore and Chamaraja nagar district of Karnataka
4	Jalgaon banana	Tandalwadi village of Jalgaon district, Majorashtra	Jalgaon district of northern Maharashtra
5	Virupakshi banana	Palani, Dindigul district of Tamil Nadu	Lower Pulney and Shervaroy hills of Tamil Nadu.

6	Sirumalai banana	Sirumalai, Dindigul district of Tamil Nadu	Sirumalai
7	Myndoli banana	Goa	Pernem, Bardez and Bicholim taluks of Northern Goa
8	Matti banana	Southern parts of Western Ghats is the origin for 'matti' bananas ( <i>Musa Accuminata</i> )	Kalkulam and Vilavancide taluks of Kanyakumari regions

Source: Journals of GI (<https://search.ipindia.gov.in>) and ICAR NRCB

## Conclusion

Granting Geographical Indication (GI) tags to specific varieties associated with their native regions can significantly enhance the income and livelihood of local farmers. GI recognition protects unique traditional varieties, preserves their identity, and promotes their value in national and international markets. Therefore, the GI tagging system plays a vital role in empowering indigenous communities and ensuring sustainable economic growth.

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