

# Geographical Indications in Horticulture Preserving Heritage and Promoting Health

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## Abstract

Geographical Indications (GIs) serve as a powerful tool to safeguard traditional horticultural produce, linking their unique qualities and reputation to specific regions. In India, with its rich diversity of fruits and deep-rooted cultural practices, GI tags help preserve biodiversity, promote rural economies, and protect farmers' knowledge systems from exploitation. GI-tagged fruits such as Alphonso mango, Nagpur orange, and Mahabaleshwar strawberry not only symbolize regional identity but also offer superior nutritional and market value. This paper explores the concept of GIs in horticulture, highlighting their role in protecting

authenticity, enhancing consumer trust, and supporting sustainable agricultural development. A comprehensive overview of GI-labelled fruit crops in India is provided, underscoring their socio-economic, cultural, and nutritional significance. By bridging tradition with modern intellectual property rights, GI certification emerges as a pathway to rural empowerment, international competitiveness, and the conservation of agricultural heritage.

**Keywords:** Geographical Indications; Horticulture; Fruits; Biodiversity; Rural Economy; Intellectual Property Rights; Nutrition.

## Introduction

### Fruits with an Identity, Flavour with a Legacy

In India, fruits are not merely food but symbols of tradition, pride, and cultural heritage. From Alphonso mangoes in Maharashtra to Kaji Nemu lemons in Assam, each fruit reflects its native soil and climate. Protecting this uniqueness in a globalized food market is possible through Geographical Indications (GI), which act as a seal of authenticity, linking quality and reputation to specific regions. Much like Champagne in France, fruits such as Mahabaleshwar Strawberry and Nagpur Orange derive their identity from regional conditions and cultivation practices.

India, with its vast fruit diversity, uses GI tagging as more than a technical certification—it safeguards biodiversity, supports local economies, and preserves traditional knowledge.

GI-labelled fruits, often richer in nutrition and cultural value, also strengthen consumer trust and promote sustainable farming systems.

Globally, fruit production plays a vital role in food security. The FAO identifies China, India, Brazil, Turkey, Mexico, and the United States as top producers, with worldwide production reaching 867,775 thousand tonnes (Singh et al., 2022). Recognizing their importance, the United Nations declared 2021 as the International Year of Fruits and Vegetables (IYFV) to raise awareness about nutrition, health benefits, and waste reduction (Kaparapu et al., 2020; del Río-Celestino et al., 2020). Rising incomes, urbanization, lifestyle changes, and global trade have further increased demand for horticultural crops (Jose).

A GI tag certifies products with qualities or reputation tied to their origin. Recognized under the WTO’s TRIPS Agreement and in India by the Geographical Indications of Goods (Registration

and Protection) Act, 1999, GI acts like a passport for products, proving: Where they come from; Why their traits are unique; How tradition and environment shape their identity.

**What is a Geographical Indication (GI)? – A Stamp of Authenticity**

Have you ever wondered why Darjeeling Tea, Nagpur Oranges, or Banaganapalle Mangoes taste uniquely authentic? The answer lies in their Geographical Indication (GI), which links flavour, quality, and reputation to specific regions. In horticulture, more than half of GI registrations are for fruits such as mangoes, citrus, bananas, grapes, lychees, pomegranates, strawberries, and guavas (Kishore et al., 2019). For fruits, distinctiveness arises from soil, climate, cultivation, and harvesting practices. Examples include the Tripura Queen Pineapple with its balanced sweetness and acidity, Mahabaleshwar Strawberry with early maturity

and juiciness, and Kachai Lemon from Manipur, valued for aroma and Vitamin C.

GI tags not only safeguard producers against imitation but also build consumer trust, promote sustainability, and strengthen rural livelihoods.

In short, a GI tag means:

*“This fruit is not just from India. It is from here, and only here can it grow this way.”*

Table 1: List of major tropical and subtropical fruits crops labelled with GI tag from India. The data were collected from official website of Intellectual Property of India (<https://ipindia.gov.in/>)

FRUIT	VARIETY	STATE	SPECIFICATION
Apricot	Ladakh Raktsey Karpo Apricot	Ladakh (UT)	Sweetness and white seed coat
Banana	Nanjanagud Banana	Karnataka	Distinct aroma
Banana	Virupakshi Hill Banana	Tamil Nadu	Sweet taste, nutrients enriched
Banana	Sirumalai Hill Banana	Tamil Nadu	Improved shelf-life
Banana	Kamalapur Red Banana	Karnataka	High calorie value with vitamin C and B6 enriched
Banana	Myndoli Banana	Goa	Rich nutritional and medicinal value.
Banana	Kanyakumari Matti Banana	Tamil Nadu	Fragrant, sweet, and slightly acidic flavor, firm texture, and powdery nature
Banana	Jalgaon	Maharashtra	small, reddish-purple berries with a sour-sweet taste
Bengal Currant	Chiraigaon Karonda	Uttar Pradesh	Antioxidant enriched
Grapes	Nashik Grapes	Maharashtra	Berry quality
Grapes	Bangalore Blue	Karnataka	Unique shape and size
Grapes	Sangli Raisins	Maharashtra	Excellent quality, pleasant flavor
Guava	Allahabad Surkha Guava	Uttar Pradesh	Exclusive flavor and popularity
Indian Blackberry	Badlapur Jamun	Maharashtra	Sweet taste and floral aroma
Lychee	Tezpur	Assam	Attractive yellow color with a reddish tinge
Lychee	Shahi Litchi	Bihar	High pulp contents
Lychee	Ramnagar Nainital Litchi	Uttarakhand	Large size and weight
Mango	Malda Laxman Bhog Mango	West Bengal	Fibreless flesh with pleasant flavor and taste

Mango	Malda Khirsapati (Himsagar) Mango	West Bengal	Aroma, flavor
Mango	Malda Fazli Mango	West Bengal	Gloss, taste, aroma and pulpiness
Mango	Malihabadi Dusseheri Mango	Uttar Pradesh	Creamy, tender texture, delicate, non-fibrous and juicy pulp
Mango	Appemidi Mango	Karnataka	Saffron hued fruits
Mango	Gir Kesar Mango	Gujarat	Sweetness
Mango	Alphonso	Maharashtra	Sweetness, fiberlessness
Mango	Marathwada Kesar	Maharashtra	Color of flesh and rind, excellent taste, flavor
Mango	Banaganapalle Mango	Andhra Pradesh/Telangana	Distinct aroma and a small, flat seed
Mango	Rataul Mango	Uttar Pradesh	Distinct flavor, rich scent, thin skin, and generous amount of flesh
Mango	Kuttiattoor Mango	Kerala	Unique aroma, luscious taste, generous amount of pulp, and distinctive shape and size
Mango	Mankurad Mango	Goa	Deliciously juicy with tangy taste
Mango	Banaras Langda Aam	Uttar Pradesh	Unique sweet-sour flavor with bigger size
Mango	Kari Ishad Mango	Karnataka	Sweetness and aroma
Mango	Jardalu	Bihar	Sweet flavor
Orange	Coorg Orange	Karnataka	Sweetness
Orange	Tamenglong Orange	Manipur	High juice content, tanginess and sweetness
Orange	Nagpur Orange	Maharashtra/Madhya Pradesh	Sweet and unique taste
Orange	Arunachal Orange	Arunachal Pradesh	Tart and citrusy
Orange	Jalna Sweet Orange	Maharashtra	Sweet and tangy flavor
Orange	Devanahalli Pomello	Karnataka	Aroma and thin peel
Orange	Kaji Nemu	Assam	Distinct taste, juicy pulp, and vibrant color
Orange	Kachai Lemon	Manipur	sweet-sour orange with a bright orange color
Orange	Memong Narang	Meghalaya	high sweetness, thicker peel, and high Vitamin C content
Orange	Khasi Mandarin	Meghalaya	Large size and sweet-tart flavor
Peach	Ramgarh Nainital Aadu	Uttarakhand	Distinct aroma, relatively large size
Peach	Malta Fruit	Uttarakhand	Sourness and size
Pineapple	Vazhakulam Pineapple	Kerala	Rare and very sour fruit with a pleasant smell
Pineapple	Tripura Queen Pineapple	Tripura	Bright orange color, sweet and aromatic juice, and unique balance of sweetness and tanginess
Pomegranate	Solapur	Maharashtra	Improved quality parameter
Sapota	Dahanu Gholvad Chikoo	Maharashtra	Berry quality
Seabuckthorn	Ladakh Seabuckthorn	Ladakh (UT)	Sweetness
Strawberry	Mahabaleshwar Strawberry	Maharashtra	Early maturity and higher yield

Figure 1: Socio-economic benefits of Geographical Indications (GI) in horticulture

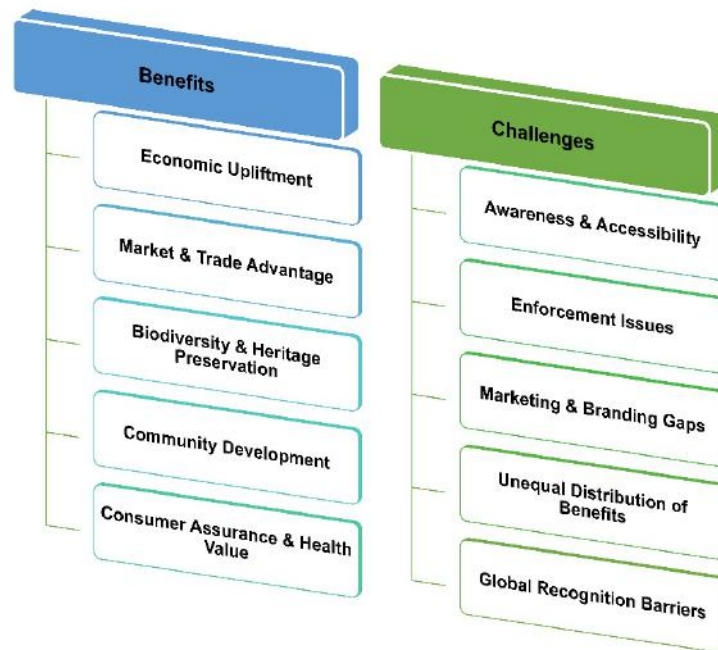
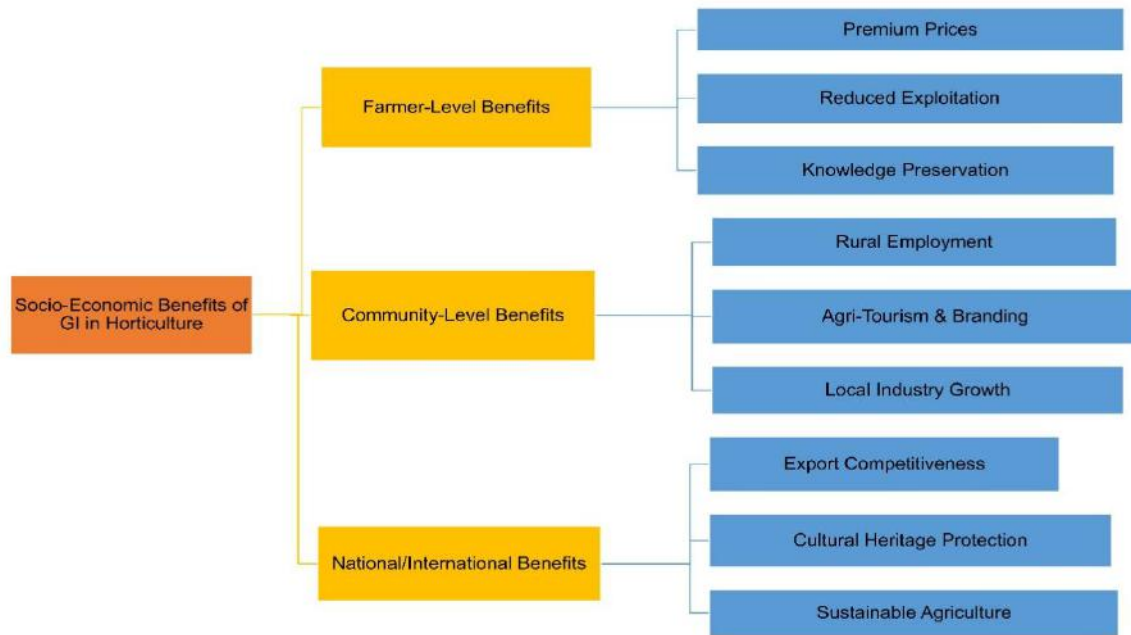


Figure 2: Benefits and Challenges of Geographical Indications (GI) in Horticulture

**CONCLUSION**

Geographical Indications in horticulture serve as a vital bridge between tradition and modern agricultural economies. By safeguarding unique regional fruit varieties, GIs not only protect cultural heritage but also generate tangible economic benefits through premium pricing, rural employment, and export competitiveness. At the same time, challenges such as limited

farmer awareness, weak enforcement, and inadequate global recognition remain barriers to realizing their full potential. Strengthening institutional support, promoting digital traceability, and enhancing international branding can ensure that GI-tagged fruits contribute more effectively to sustainable

agriculture, rural prosperity, and India's global agri-food identity.

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