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# BANANA - THE GREEN GOLD OF INDIA

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## ABSTRACT

*Banana is one of the major cash crops in India. Banana cultivation plays a vital role in the growth and development of our Nation. India earns foreign exchange through exports of banana and banana products. It provides employment opportunities, generates income to the people and thereby strengthens the country's economy. The major banana producing states of India are Tamil Nadu, Maharashtra, Karnataka, Gujarat, Andhra Pradesh, Assam, Bihar, West Bengal and Madhya Pradesh. Tamil Nadu alone produced 5136.2 tonnes of banana in 2018. Now-a-days, banana is called as "green food". Due to its adverse impact of indiscriminate use of chemicals, new trend for organic production of banana is increasing in the country. An attempt is made below to highlight the cultivation area, cultivation, productivity, consumption and exports of banana in India.*

## Introduction

Banana cultivation is one of the most important cash crops in Indian agriculture. India is the largest banana cultivator in the world. Banana is the world's fourth most important food crop after rice, wheat and maize in terms of total value of production. It is a starchy staple food crop, rich in vitamins A, C and B6, as well as an easily produced source of energy. Compared to other staple crops, banana is cheaper to produce year round in varied environmental conditions and highly suited to intercropping and mixed farming systems with livestock, as well as an important subsistence food and source of energy for low income families, providing food security, nutrition and energy for hundreds millions of people in tropical and subtropical countries.



namely Tamil Nadu, Kerala, Karnataka, Andhra Pradesh, Telangana, Maharashtra, Gujarat, West Bengal, Assam, Madhya Pradesh, Bihar and Odisha.

The Union Agriculture & Farmers Minister, Radha Singh addressed at the National Banana Festival, 2018 held in Thiruvananthapuram, Kerala on 17th February 2018 about the importance of banana and said that the banana and plantains are the major staple food crop for millions of people in tropical developing countries. He also said that the banana is the native of India and widely grown in tropical, sub-

With urbanization expanding, farmers turn to banana as a "cash crop", which may be the only source of income to the rural population. It serves as a food security crop to the rural community in developing countries including Sri Lanka, and plays an important role in poverty alleviation. Banana cultivation is mainly concentrated in different states of India

tropical and coastal region of India. Banana is important as a household food, for nutritional security as well as social security in many parts of the world. In India there has been a significant increase in terms of area, production and productivity in the last two decades.

Banana also has several applications including the production of alcohol, animal feed and starch. Besides its use in medicine, it is exploited as a fibre or as a source of leaves. Banana bread, banana dry-chips, and baby food are among the processed banana foods.

Banana growers have small farms, scattered over a large area in the country. Banana cultivation is a labor intensive industry. Plantations of banana often require 100 or 1,000 workers, who are traditionally been paid very low wages. Many plantations provide housing, water, electricity, schools, churches and electricity for their workers and their families.

### Banana cultivation in the world

Banana cultivation is also concentrated in different countries such as Africa, Asia, the Caribbean and Latin America because of favourable climate conditions. Banana is cultivated in more than 130 countries in the world in 5 million hectares of land yielding 103.63 million tonnes. It is considered a poor man's fruit crop, widely cultivated in Sri Lanka. There were 55 varieties of banana cultivated in Sri Lanka.

### Banana cultivation in India

India is the largest producer of banana in the world. During 2018, India produces 29.70 million tonnes from an area of 0.88 million hectares with a productivity of 37 mt/hectare. India accounted for 15.5 percent in area and contributes 25.58 percent to the world production. Thus, banana has emerged as one of the most important fruit crops which are easily available to the common people.

It is predicted that because of its ever increasing demand, 60 million tonnes of banana will be needed to meet the domestic demand in 2050. Therefore, there is a wider scope for the experts of banana and banana products, which

further enhances the demand due to availability, affordability, taste, nutritional and medicinal values.

### Banana cultivation in Tamil Nadu

Banana cultivation is being practiced at different places of Tamil Nadu state viz., Tiruchirappalli, Thanjavur, Erode, Coimbatore, Kanyakumari and Dhindukkal districts. Tamil Nadu is better suited in India for banana cultivation than other states. Here it is cultivated in more than 2 lakhs hectares. In India only less than 20 percent of the banana produced is exported to other countries and the remaining 80 percent is domestically consumed.

Adequate water facilities and favourable climatic conditions are needed to cultivate banana but now-a-days most of the farmers are earning more profits by using 'sottu neer pasanam' that is, drip irrigation.

### Economic importance

Banana is one of the important cash crops in India and it is a popular and familiar fruit which provides high nutritional value with low price. The fruit is easily digestible and free from fat and cholesterol. Banana powder is also used as the first baby food. It helps in reducing risk of heart diseases when used regularly and is recommended for patients suffering from high blood pressure, arthritis, ulcer, gastroenteritis and kidney disorders. Processed products of banana such as chips, banana puree, jam, jelly, juice, wine and halwa can be made from the fruit.

The tender stem, which bears the inflorescence, is extracted by removing the leaf sheaths of the harvested pseudo stem and is used as vegetable. Plantains or cooking bananas are rich in starch and have a chemical composition similar to that of potato. Banana fibre is used to make bags, pots and wall hangers. Rope and good-quality paper could also be prepared from banana waste. Besides this, banana leaves are used as healthy and hygienic eating plates. In that sense, use of banana leaf is both traditional as well as modern, that is, scientific. Particulars of banana exports and imports in India during 2016-2017 are given table-II.

S. No.	Particulars of Exports			Particulars of Imports		
	Countries	Value	%	Countries	Value	%
1	Ecuador	2.70	23.30	USA	2.6	18.80
2	Guatemala	1.20	10.50	Belgium	1.2	8.80
3	Costa Rica	996.8	8.50	Russia	999.2	7.10
4	Belgium	940.90	8.00	Germany	992.3	7.10
5	Colombia	914.90	7.80	Japan	923.5	6.60
6	Philippines	618.80	5.30	United kingdom	831.4	5.90
7	Netherlands	451.40	3.80	China	585.5	4.20
8	Dominican republic	444.70	3.30	Netherlands	516.5	3.70
9	USA	431.20	3.70	Italy	492.8	3.50
10	Côte d'Ivoire	370.00	3.10	France	455.6	3.30
11	Cameroon	338.10	2.90	Canada	409.4	2.90
12	Germany	328.00	2.80	South Korea	328.4	2.30
13	Honduras	259.20	2.20	South Arabia	263.5	1.90
14	Mexico	197.10	1.70	Poland	249.4	1.80
15	France	171.10	1.50	Argentina	210.2	1.50
16	Other countries	848.49	11.60	Other countries	1883.97	20.60
	Total	7314.59	100.00	Total	9145.47	100.00

**Source:** [www.worldstopexports.com/bananas-exports-country.com](http://www.worldstopexports.com/bananas-exports-country.com)

## Nutritional values

Banana is one of the most popular fruits, ideal for any age group. Hence, these are natural no-fuss, sealed in their own wrapper, serving as a versatile fruit for snack, dessert, cooking or for blending into nutritional milk shakes. Banana is eaten in many ways and has plenty of nutritional and medicinal benefits. Ripe banana is utilised in multitude of ways in the human diet—from simply being peeled and eaten out-of-hand to being sliced and served in fruit cups and salads, sandwiches, custards and or mashed into ice cream, bread, muffins and cream pies. Banana puree is important as infant food.

Fresh bananas provide adequate levels of minerals like copper, magnesium and manganese. Magnesium is essential for bone strengthening and has cardiac-protective role as well. Manganese is used by the body as a co-factor for the antioxidant enzyme superoxide dismutase. Copper is required in the production of red blood cells. Because of their high level potassium content, bananas are highly

recommended by doctors for patients with low potassium level. 100 grams of banana pack contains 358 milligrams of potassium and 90 kcal of energy. It also has 1.09 grams of protein and 2.6 grams of fibre. No wonder banana is considered an important food to boost the health of malnourished children. Those who lack sodium in their diets can't go wrong with banana, with its 1 milligram of sodium. There is also 22.84 grams of carbohydrate in a large banana.

## Varieties of Banana

There are two main varieties of bananas—fruit or sweet banana and plantain. Fruit banana is eaten raw out of hand when it turns yellow and develops a succulent sweetness with a soft, smooth, creamy, yet firm pulp. Plantain—a cooking banana—is also referred to as the meal, vegetable or horse banana. It has lower water content, making it drier and starchier than fruit banana. Commercially, bananas are classified into dessert types and culinary types. Important banana varieties cultivated in different states of India.

## Important Banana Varieties Cultivated in India

### Andhra Pradesh

Dwarf Cavendish, Robusta, Rasthali, Amritpant, Thellachakrakeli, Karpoora Poovan, Chakrakeli, Monthan and Venagu Bontha.

### Assam

Jahaj (Dwarf Cavendish), Chin Champa, Malbhog, Sonahaji (Robusta), Honda, Manjajahi, Chinia (Manohar), Kanchkol, Shimkol, Jatkol, Digjowa, Kulpat, Bharat Moni.

### Bihar

Dwarf Cavendish, Alpon, China, Chin Champa, Malbhog, Muthia, Katha, Gauna.

### Gujarat

Dwarf Cavendish, Lacatan, Hanchal (Lokhandi), Sandew Selection, Basra, Robusta, G-9, Hanchal, Shimmati.

### Jharkhand

Basra, Singapur.

### Karnataka

Dwarf Cavendish, Robusta, Rasthali, Poovan, Monthan, Bakkibale.

### Kerala

Nendran (Plantain), Parayankodan (Poovan), Rasthali, Monthan, Red Banana, Robusta.

### Madhya Pradesh

Basra.

### Maharashtra

Dwarf Cavendish, Basra, Robusta, Lal Velch, Sated Velch, Raji Nendran, Grand Naini, Shreemant, Red Banana.

### Odisha

Dwarf Cavendish, Robusta, Champa, Pithaour.

### Rajasthan

### Tamil Nadu

Virapaksh, Robusta, Red Banana, Poovan, Rasthali, Nendran, Monthan, Karuppatravali, Sakka, Peyer, Matti.

### West Bengal

Champa, Monthan, Dwarf Cavendish, Giant Governor, Arthai, Singapur.

### Medicinal uses of Banana

All parts of the banana plant have different medicinal properties. Bananas are very good to people for different reasons. They provide a quick burst of energy and are a

good source of vitamins C and B6. The banana flower helps to cure bronchitis, dysentery and ulcers. cooked flowers are given to diabetics. the astringent plant sap is beneficial in hysteria, epilepsy, leprosy, fevers, haemorrhages, acute dysentery and diarrhoea, and it is applied on haemorrhoids, insect and other stings and bites. young leaves are placed as poultices on burns and other skin afflictions. the astringent ashes of the unripe peel and of the leaves are taken in dysentery and diarrhoea and used for treating malignant ulcers. the roots are administered in digestive disorders, dysentery and other ailments. banana-seed mucilage is given in cases of diarrhoea.

Anti-fungal and antibiotic principles are found in the peel and pulp of fully ripe bananas. The antibiotic acts against mycobacterium. A fungicide in the peel and pulp of green fruits is active against a fungus disease of tomato plants. The particulars of facts and figures of banana

### Names, varieties, relatives

Bananas came first from the jungles of Southeast Asia. They grow in the tropical 'Banana Belt' between 30° N and S latitude. There are two main types, the table banana and the plantain (cooking banana), and almost 1,000 varieties.

### Nutritional value

Bananas are very good for health. They provide a quick boost of energy and are a good source of vitamins C and B6.

### Dishes, combos, snacks, preparation

Eat bananas fresh for breakfast or a snack. Eat dried banana slices as a snack. To make banana juice, press a ripe banana through a wire strainer, then add some milk and a little clear honey. Mashed banana can also be part of a weaning diet for infants.

### Easy to grow

Very easy to grow in the right place. Bananas like moderate rainfall and moderate warmth. They grow best in rich, well-drained soil.

### Time frame

Bananas are grown and harvested all the year round and are ready to be harvested 8 to 10 months after planting. They are more likely to fruit in warm weather.

### Propagation, planting instructions

Bananas grow up to 15 m high. Planting distances vary between 2 × 1 m and 5 × 5 m, depending on variety.

They are grown by planting suckers taken from the base of mother plants. Suckers are dried for about two days before planting.

## Care/ cultivation

Their stems are not wood but rolled leaves and can bow down easily. Use props or windbreaks to protect against high winds. The banana weevil, a black beetle, is one of the serious constraints to banana production. The larvae bore through the corm and the lower stem. Field sanitation is very important and the plants should be kept clean. Use borer-free planting materials and plant suckers very soon after you cut and treat them so that weevils cannot re-infest the suckers.

## Productivity

Each stalk produces one huge flower cluster/bunch and then dies. Each bunch is made up of many "hands" which in turn have a number of fruits. The whole bunch can have hundreds of fruits and weigh more than 50 kg. It can produce fruits from 3 to 20 years on an average. The main plant is cut away after harvesting, and the daughter becomes the main plant.

## Harvesting/ storing.

Bananas can be harvested when three-quarters of the fruit are full size. To ripen them, hang the bunch in an airy place.

## Preserving/processing.

Bananas are usually eaten fresh, but they can be kept for a long time in dried form.

## Other uses.

The big leaves are used as green umbrellas, plates, tablecloths, temporary mats, etc.

## Culture

Some think that bananas were the first fruit on the earth. They are one of the most important tropical fruits, an important cash crop grown on large plantations for export, and an essential staple food for many developing countries.

## Government Initiatives

The Government of India has started several organizations for promoting the agriculture sector in India of which the National Banana Research Centre is an important one which provides proper guidance and advice to the

banana cultivators. As per the guidance of National Agriculture Research Centre of India, National Banana Research Centre was started by the Central Government of India in 1993 at Tiruchirappalli for providing proper guidance and advice to banana farmers. The main objectives of the banana research centre are:

- To provide basic necessary techniques for promoting the production as well as uses of banana.
- To provide different varieties of bananas from traditional through research and micro techniques.
- To provide the necessary information regarding banana cultivation for improving productivity and yield.
- To introduce new technology in the field of banana cultivation.
- To promote banana cultivation by providing proper guidance and advice to the banana cultivators.
- To regulate and control the activities of banana cultivation.
- To provide suitable solutions for solving the problems of banana cultivation.

## Conclusion

All the parts of banana are very useful and valuable, like the parts of coconut, and no part of the banana plant or the fruit goes as waste. In India, both the dry or the unripe as well as the fruit enjoy good market. The different parts of banana tree like tender, leaf, fibre are very useful benefiting the farmers. Banana products have great demand both in domestic as well as overseas markets because of their uses of all parts for different end purposes. The banana farmers can earn more income through converting the banana products into value added products like chips, jam and choose milks hap and ice cream. Now-a-days, from the banana fibre, fancy products like dress, chappals and beauty products are manufactured. The banana products create more attractiveness among the young generation of people by different uses. Therefore, it may be considered that "banana is a green gold of India" due to its ever increasing demand for it and its products.

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