COCONUT

Visvesvaraya Trade Promotion Centre (VTPC)

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Preface

With a robust agro potential the Country has, the Government of India has launched the One District One Focus Product Scheme (ODOFP)for agriculture sector by the Ministry of Food Processing Industries. Among its primary objectives, the ODOFP initiative aims to enhance the value of the products which is eventually expected to boost employment and income levels of the farmers. The identified products across the country is available at https://www.nfsm.gov.in/odopstatecropsreport.aspx

Karnataka has identified its product mix with high demand and export potential across all the districts. The implementing agency for this initiative is the Karnataka State Agricultural Produce Processing and Export Corporation Limited (KAPPEC), the nodal agency in the State.

VTPC being the nodal agency for promotion of exports from the State has made an attempt to draw the action plan district wise, to capture the potential, present status and future prospects in domestic and international markets. Besides, detailed insights have been providedinto the biological description of the product, their local, national and international varieties, export-import analysis, HS codes. For a holistic perspective for those concerned, each report also provides SPS standards, processing technologies available, export grading and packing specifications, and suggested pivotal roles and responsibilities among the government departments, boards, corporations and Universities.

Presenting the Action Plan/Report for Coconut, a ODOFP product mapped to Ramnagara, Hassan and Tumakuru districts of Karnataka, formulated by VTPC. I sincerely hope that this ready reckoner with first-hand information regarding the farming sector would help all those concerned, especially the FPOs and food processing entrepreneurs who have a desire to focus on exporting this product.

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Director (Exports) & Managing Director

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Coconut - Demands and Prospects

Introduction

Coconut, the edible fruit of the coconut palm (Cocos nucifera), a tree of the palm family (Arecaceae) probably originated somewhere in Indo-Malaya and is one of the most important crops of the tropics. Coconut flesh is high in fat and can be dried or eaten fresh or processed into coconut milk or coconut oil. The liquid of the nut, known as coconut water, is used in beverages.

Physical description

A single coconut palm may yield 100 coconuts annually, and each fruit requires a year to fully ripen. Mature coconuts, ovoid or ellipsoid in shape, 300–450 mm (12–18 inches) in length and 150–200 mm (6–8 inches) in diameter, have a thick fibrous husk surrounding the familiar single-seeded nut of commerce. A hard shell encloses the insignificant embryo with its abundant endosperm, composed of both meat and liquid. Coconut fruits float readily on water and get dispersed widely by ocean currents and by humans throughout the tropics.

Uses

Besides the edible kernels and the drink obtained from green nuts, the harvested coconut also yields copra, the dried extracted kernel, or meat, from which coconut oil, a major vegetable oil, is expressed. The Philippines and Indonesia lead in copra production, and throughout the South Pacific, copra is one of the most important export products. The meat may also be grated & mixed with water to make coconut milk, which is used in cooking and as a substitute for cow's milk. The dry husk yields coir, a fiber highly resistant to salt water and used in the manufacture of ropes, mats, baskets, brushes, and brooms.

Popular Coconut varieties across the world

Coconut has several commercial and traditional cultivars which can be sorted mainly into tall cultivars, dwarf cultivars, and hybrid cultivars (hybrids between tall and dwarf plants). Some of the dwarf cultivars such as 'Malayan dwarf' have shown some promising resistance to lethal yellowing, while other cultivars such as 'Jamaican tall' are highly affected by the same plant disease. 'West coast tall' (India) cultivar is drought resistant and the 'Hainan Tall' (China) variety is cold tolerant. Other aspects such as seed size, shape and weight, and copra thickness are also important factors in the selection of new cultivars. Some cultivars such as 'Fiji dwarf' form a large bulb at the lower stem and others are cultivated to produce very sweet coconut water with orange-coloured husks (King coconut) used entirely in fruit stalls for drinking (Sri Lanka, India).

1. Malayan Yellow Dwarf Coconuts

Widely found in tropical areas, these hybrid coconut variants have a significantly high yield. They ideally require free and well-drained soil along with plenty of organic mulch in the surroundings. Both of these conditions help them thrive. Among the multiple variants of dwarf coconuts, these coconuts are deemed more popular than its contemporaries. When young, the fruits of these coconuts are pale greenish in color. However, once they start aging the leaf stalk and sprouts eventually assume pale yellowish and brownish hue. First developed in the Malaysian region between 1800 and 1900 by early Indonesian planters, Malayan Yellow Dwarf is now found in several countries like Thailand, Brazil, and Fiji. Their produce is usually oblong, and the fruits are medium weighing up to 700 to 800 grams.

2. Fiji Dwarf

This variant of coconut has gained massive popularity in Florida over the last couple of decades. While most of the coconut trees of Fiji were destroyed by the 1980s, in the 1990s, due to brown root rot disease, the Fiji Dwarf emerged as a lofty tree that is incredibly resistant to this lethal ailment. It has since then been planted in significantly large numbers. This tree derives the term dwarf from the fact that it bears a large number of fruits despite being strikingly short and people can harvest the fruits from the tree without using a ladder. This tree continues to achieve an excellent height as years pass by and it can grow to 1 foot at an annual level.

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In addition to disease resistance, this tree comes with multiple other benefits. It appears much lusher when compared to other palms as the leaves are fuller when compared to any other plants. This renders a perfectly full appearance to the canopy. The leaflets are wide and much shorter when compared to other coconut palms. The look and appearance of this plant are widely popular among gardeners who prefer keeping trees for their ornamental charm. One of the biggest qualities of Dwarf Fiji is probably the fact that it is incredibly durable. This tree is robust and can effectively withstand poor quality wind, soil, and excessive rainfall. They can successfully thrive in unexpected conditions and are known to have excellent qualities for disease resistance. According to the US Agricultural Research Service, this tree is certainly a 'tough nut'.

3. Golden Malay

Primarily grown in parts of Bulgaria, the Golden Malay is known to be imported right from Indonesia. They produce stunning fruits that have a brownish and bronze tinge. When fully ripe, these fruits assume a red colour. If you are growing them outside the tropical region, make sure the trees are sheltered and in a completely warm position. They also thrive quite well in areas that have plenty of organic mulch along their surroundings. In terms of soil, free-draining soil works best for them. On average, these trees can assume a height of 12 meters and a width of 8 to 12 meters. These plants start bearing fruits from a significantly early stage, where the fruits too have a golden orangish hue. As with most other types of coconut, the Golden Malay is known to produce high-quality drinking water. The flesh of the fruit may also be used for cooking.

4. King Coconut

Native to the Sri Lankan region, the King Coconut trees are abundantly found in several parts of India. While it is slightly shorter than the other variants of Palm trees, it produces best quality fruits. It is known to grow at an average height of 20 meters producing more than 20 nuts in a bunch. The nuts appear like football with a long yet oval structure. The size of the fruits is 20 to 30 cm in length and their skin has a vibrant orangish hue. King Coconuts are available throughout the year and are generally harvested after they mature for 7 to 8 months. Their nut tends to produce a sweet yet perfectly flavorful liquid that is cool, hydrates and refreshes you.

The nutritional value of these coconuts is equally high. They are known to be a primary source of vitamin, amino acids, and other useful elements like phosphate and potassium. The most unique factor about these fruits is that their liquid contains more calcium than orange or any other citrus fruit making it one of the best fruits to try for people suffering from bone density issues. The King Coconut also contains plenty of bioactive enzymes that boost the metabolism of an individual while also assisting in digestion. They are primarily harvested for their milk and the liquid found along the rinds.

5.West Coast Tall Coconut

variety can grow in almost every kind of soil. They thrive well in littoral sand as well as every other kind of soil that can perfectly tolerate moisture. These trees take around 6 to 7 years for bearing fruits and they can yield almost 80 to 90 nuts or palms on an annual basis. These coconuts also yield plenty of water that can later be whipped up into coconut juice.

6. Macapuno Coconut

Alternatively known as the Kopyor Coconut, this is a dwarf variant of coconut and a type of Mutant tree. Being a natural mutant, the flesh of these fruits is soft and almost similar to jelly. This usually happens due to a form of abnormal growth in the endosperm. Over time, it makes way for an under-nourished or collapsed embryo that further leads to tenderness. While most Macapuno coconut comes with the same nutritional properties as the normal coconut, the unusual development in the embryo creates a unique shell that has jelly-like coconut meat and almost zero liquid.

This variety of coconut is not as popular as its counterparts. However, they are widely grown in several parts of Asia. In these parts, they are known as a sweet and prized delicacy. In fact, a large number of Asian desserts are made from these coconuts and the price of these products is much higher than the price of desserts made from regular coconuts. Macapuno coconuts have a firm, but soft texture and their taste is pleasant, nutty, and yet perfectly sweet. Some of the varieties also contain some amount of oil and proteins and are therefore known for their nutritional value.

7. Panama Tall

Alternatively known as the Pacific Tall, the Panama Tall is a lofty variant that bears ripe, juicy coconuts. One of the most striking features of the Panama Tall is its close resemblance to the Jamaica Tall tree. The biggest difference between both the trees is that the former has Umbrella shaped canopies while the Jamaican Tall appears more perfectly rounded. The Panama Tall is both beautiful and elegant and it can successfully withstand adverse weather conditions like storm and winds. It is also known to be one of the most cold-tolerant variants of coconut trees. Gardeners who are looking to plant a lofty coconut palm and are bothered about the possible drops in temperature might greatly benefit from this variant of the coconut trees. Upon maturing, these trees can assume a height of 90 ft and they thrive best in hardiness zones of 9 to 11. They require full sun and moderate moisture.

8. Maypan Coconut

Abundantly found in the Jamaican regions, this tree was developed during the mid-nineties during an experiment. At this point, researchers were looking for coconut palms with a high degree of resistance to the dangerous yellowing disease, which affected the growth and development of several coconut trees. These trees can assume a height of 60 feet, and they thrive well in hardiness zones from 10 to 11. They require full Sun, and the moisture requirements are minimal. Being a cross between the Malayan Dwarf and the Panama Tall, this tree is best known as a hybrid. While it is native to Jamaica, you may also find it in parts of Latin America and Florida.

9. VHC1 Coconut

A hybrid of the East Coast Tall and the Malayan dwarf, this tree is extremely large and fertile. It produces fruits after a period of four years, and annually, you can expect around 80 to 100 coconut palms from this variant.

10. East Coast Tall

With a fruit-bearing time of around six to eight years, this coconut tree is known to yield around 70 nuts on an annual basis. The coconut from these trees contains around 64 per cent of oil and they thrive best in loamy soils and any other form of well-drained soil. The East Coast Tall coconut tree is moderately tolerant to lethal pests like bugs, mites, and insects.

11. Panama Tall

This variety is known for its leathery fronds that usually produce around six to twelve inches long coconuts. It takes around six to seven years as the fruit-bearing time and can produce around 70 to 80 coconuts annually. Being extremely low-maintenance, this is probably one of the best coconut tree variants for home gardeners.

12. Dwarf Orange

With an average lifespan of forty years, this tree can assume a lofty height of around 5 meters. It produces orangish coconuts and takes around three to four years for complete maturation. The coconuts from these trees are best known for their excellent meat content and the sweet water.

Varieties of Coconuts exported from India

There are several varieties of coconuts available in the market including West Coast Tall, East Coast Tall, Chandrakalpa, VPM -3, Aliyar Nagar, and so on. Coconut exporters in India export numerous varieties of coconuts to countries around the world.

1. West Coast Tall

West Coast Tall also is known as ordinary or common tall variety is recommended for large scale cultivation. This type yields good quality coconut juice which can be fermented too. The quantity of coconut juice produced is also good as compared to other varieties. It can be used for edible purposes and soap manufacturing.

2. East Coast Tall

This variety takes around 6 to 8 years to bear coconuts. The coconuts are smaller in size as compared to the West Coast tall type. This variety is also recommended for large-scale production along the coastal lines. You can find this variety of coconut in Andhra Pradesh, Tamil Nadu, Bihar, Pondicherry, and so on.

3. Philippines Ordinary (Kerachandra)

The Philippines' ordinary variety is known to grow in all types of soil. The time taken for bearing for this type of coconut is around 5 years. The average yield per year, per palm, is approximately 110 nuts. The oil content in this variety is around 66%.

4. Chandrakalpa Or Lakshadweep Ordinary (Lct)

The Chandrakalpa variety grows well in all types of soil and can withstand the stress of moisture. The Chandrakalpa type can be found in Kerala, Tamil Nadu, Karnataka, and such other states in India.

5. Vpm - 3 (Andaman Ordinary)

The specialty of the VPM-3 variety is that it is drought tolerant and also suitable for rainfed and irrigated conditions. It has high copra content and 70% oil content. This variety is found in states like Orissa, Tamil Nadu, Kerala, Andamans, Andhra Pradesh, Bihar, and so on.

6. Aliyar Nagar

The specialty of the VPM-3 variety is that it is drought tolerant and also suitable for rainfed and irrigated conditions. It has high copra content and 70% oil content. This variety is found in states like Orissa, Tamil Nadu, Kerala, Andamans, Andhra Pradesh, Bihar, and so on.

7. Tiptur Tall

The Tiptur Tall is a popular cultivator from the state of Karnataka. The time taken for bearing for this variety varies from 6 to 7 years. The average yield is around 86 nuts per palm per year. It has approximately 68% oil content.

8. Kera Sagara (Seychelles)

Kera Sagara is a popular cultivar of Kerala State. It has around 68% oil content and has an average yield of 99 nuts per palm per year. The time taken forbearing is approximately 6 to 7 years.

9. Benavali Green Round (Pratap)

Pratap also known as Benavali Green Pound was released by CPCRI in the year 1985. This variety yields approximately 110 nuts per year.

10. Philippines Tall (Chandrathara)

The Philippines Tall also known as Chandrathara cultivar was released in 1985. The approximate yield per year for this variety is 110.

11. Assam Tall (Kamaroopa)

The Assam Tall or Kamaroopa cultivar was released in 1985, the weight of the copra is around 189. The yield per year for Assam Tall is approximately 110 nuts per year.

12. Kalpadhenu

A variety that grows well in Kerala, Andhra Pradesh, Tamil Nadu, Andaman and Nicobar Islands and such other regions in India. The yield per hectare of Kalpadhenu is approximately 22,794 nuts per hectare.

13. Kalpa Pratiba

Kalpa Pratiba can be found mostly in the states of Maharashtra, Kerala, and some regions of Andhra Pradesh and Tamil Nadu. The approximate yield per hectare is 23,275 nuts per hectare.

14. Kalpa Mitra

The variety Kalpa Mitra is grown widely in Kerala and West Bengal. The yield of the Kalpa Mitra variety is approximately 80 nuts per year. The tenure required for the flowering of Kalpa Mitra is around 58 months.

15. Kerakeralam

This cultivar is of the Kerala state. It has around 68% oil content. Kerakeralam has a time for bearing of 6 to 7 years. The average yield of Kerakeralam is around 99 nuts per palm per year.

For more information:https://coconutboard.gov.in/docs/coconut-english.pdf

Varieties of Coconut grown in Karnataka

Dwarf Cultivars

1. Kalpa Jyothi

Dwarf variety with yellow fruits, the higher average yield of 114 nuts per palm per year under rainfed conditions with an estimated copra yield of over 16 kg per palm per year. Recommended for cultivation in Kerala and Karnataka for tender nut purposes.

2. Kalpa Surya

Dwarf variety with yellow fruits, the higher average yield of 114 nuts per palm per year under rainfed conditions with an estimated copra yield of over 16 kg per palm per year. Recommended for cultivation in Kerala and Karnataka for tender nut purposes.

Hybrid Cultivars

3. KalpaSreshta (MYD x TPT)

The mean yield is 167 nuts/palm/year, with estimated high copra outturn of 35.9 kg/palm/year or 6.28t/ha copra. The hybrid is suitable for tender nut purpose. This hybrid is recommended for cultivation in Kerala and Karnataka States.

4.Chandra Sankara (COD x WCT)

The palms come to bearing early when compared to tall palms. It is a heavy yielder and produces 116 nuts/palm with a range of 100-150 nuts. The copra content in nut is 160-230 g. It is susceptible to drought and hence irrigation is required during summer months. Chandra Sankara was released by CPCRI in 1985 for cultivation in Kerala and Karnataka.

Tall Cultivars

5. Chandra Kalpa

The average annual yield is 100 nuts/palm. The palm grows in all types of soil, and it can withstand moisture stress. This cultivar is recommended for cultivation in the states of Kerala, Karnataka, Andhra Pradesh, and Maharashtra.

6. KalpaTharu

This variety is recommended for ball copra production. It yields around 116 nuts per palm per year with copra content of 176g, under rainfed situations. This is recommended for cultivation in Karnataka, Kerala and Tamil Nadu.

7. Kalpa Haritha

A superior high yielding tall selection with lesser incidence of eriophyid mite infestation. The average nut yield is 118 nuts per palm per year under rainfed conditions with estimated copra yield of 25.5 kg per palm per year. Recommended for Kerala and Karnataka, suitable for copra and tender nut purpose.

Production data of Coconuts

This is a list of the top 10 countries by coconut production from the years 2016 to 2020, based on data from the Food and Agriculture Organization Corporate Statistical Database. The total world production for coconuts in 2020 was 61,520,382 metric tonnes, down by 1.0% from 62,159,626 tonnes in 2019. The Philippines, Indonesia and India produce around 70% of the world's total copra, with the Philippines and Indonesia also being the world's main coconut oil exporters.

Rank	Country/region	2020	2019	2018	2017	2016
1	Indonesia	16,824,848	17,074,536	17,100,000	17,200,000	17,400,000
2	India	14,695,000	14,682,000	16,413,000	11,166,772	11,344,306
3	Philippines	14,490,923	14,765,057	14,726,165	14,049,131	13,825,080
4	Brazil	2,458,839	2,348,663	2,345,400	2,210,139	2,634,396
5	Sri Lanka	2,233,600	2,468,800	2,098,400	1,960,000	2,408,800
6	Vietnam	1,719,415	1,677,044	1,571,709	1,499,228	1,469,960
7	Papua New Guinea	1,217,293	1,205,510	1,186,400	1,186,400	1,186,400
8	Mexico	895,291	908,302	926,400	927,200	925,600
9	Thailand	827,424	866,416	858,235	761,914	904,094
10	Malaysia	560,984	536,606	495,531	517,589	504,773

Area-wise Production and productivity of coconuts worldwide (2020)

No.	Countries	Area ("000 Hectares)	Production (Million nuts)	Productivity (Nuts/ha)
1.	F.S.Micronesia	18.00	60.00	3,333
2.	Fiji	61.00	257.00	4,213
3.	Guyana	10.00	92.00	9,200
4.	India	2,173.00	20,309.00	9,346
5.	Indonesia	3,397.00	13,994.00	4,120
6.	Jamaica	17.00	121.00	7,118
7.	Kenya	89.00	305.00	3,427
8.	Kiribati	31.00	145.00	4,677
9.	Malaysia	85.00	561.00	6,600
10.	Marshall Island	7.00	18.00	2,571

The production of coconut in India stood at 21207 million nuts during 2020-21, which is 34% of the global production. The productivity is 9687 nuts per hectare, which is the highest in the world.

151319: Refined Coconut Oil

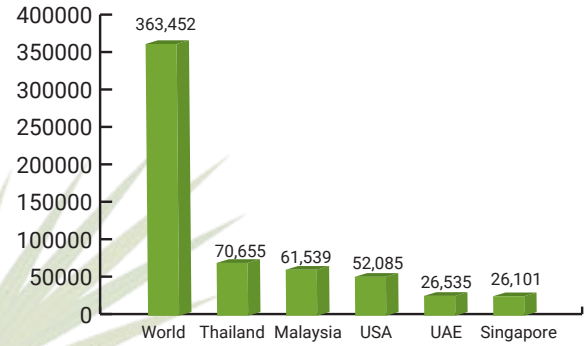
Year	Area ('000 ha)	Production (Million nuts)	Productivity (Nuts per ha)
2010-2011	1,895.90	16,942.92	8,937
2011-2012	2,070.70	23,351.22	11,277
2012-2013	2,136.67	22,680.03	10,615
2013-2014	2,140.50	21,665.19	10,122
2014-2015	1,975.81	20,439.60	10,345
2015-2016	2,088.47	22,167.45	10,614
2016-2017	2,082.11	23,904.10	11,481
2017-2018	2,096.72	23,798.23	11,350
2018-2019	2,150.89	21,288.24	9,897
2019-2020	2,173.28	20,308.70	9,346

Source: Coconut Development Board, Government of India.

080119: Fresh coconuts, whether or not shelled or peeled (excling in the inner shell "endocarp".

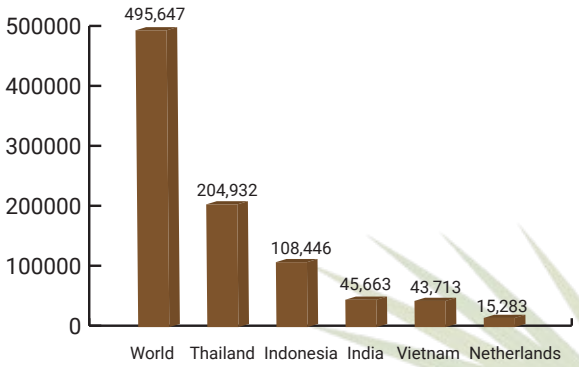
2021 Global Imports 363,452 USD

No.	Country	Value USD
1.	Thailand	70,655
2.	Malaysia	61,539
3.	USA	52,085
4.	UAE	26,535
5.	Singapore	26,101



2021 Global Imports 363,452 USD

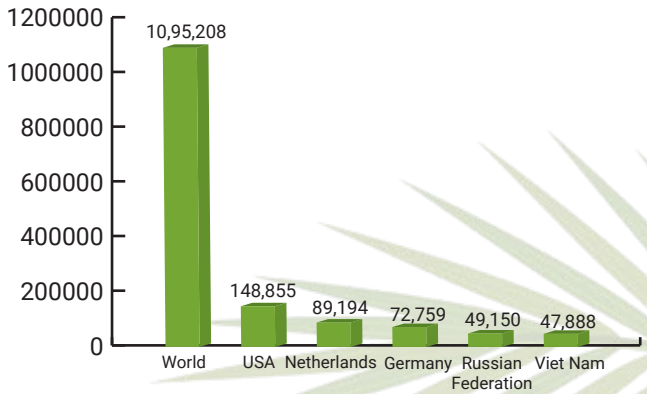
No.	Country	Value USD
1.	Thailand	204,932
2.	Indonesia	108,446
3.	India	45,663
4.	Vietnam	43,713
5.	Netherlands	15,283



080111: Desiccatedcoconuts.

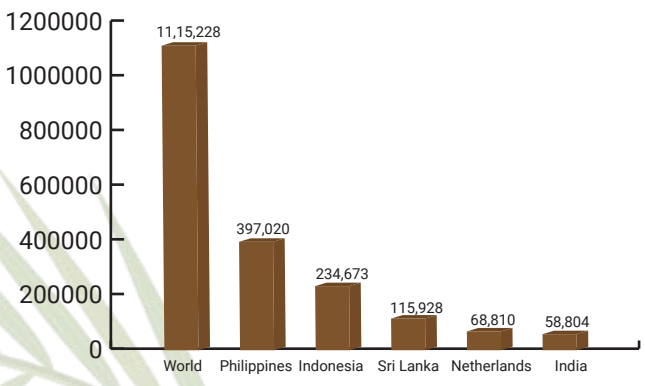
2021 Global Imports 1,095,208 USD

No.	Country	Value USD
1.	USA	148,855
2.	Netherlands	89,194
3.	Germany	72,759
4.	Russian Federation	49,150
5.	Viet Nam	47,888



2021 Global Exports 1,115,228 USD.

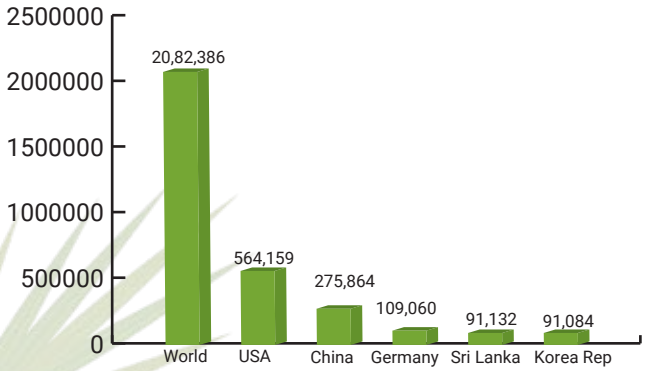
No.	Country	Value USD
1.	Philippines	397,020
2.	Indonesia	234,673
3.	Sri Lanka	115,928
4.	Netherlands	68,810
12.	India	58,804



151319: Desiccated coconuts.

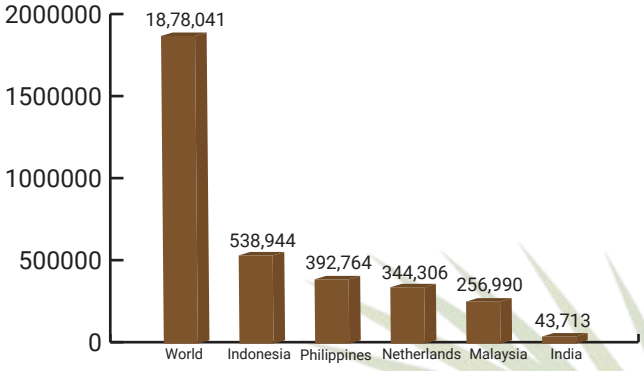
2021 Global Imports 2,082,386 USD.

No.	Country	Value USD
1.	USA	564,159
2.	China	275,864
3.	Germany	109,060
4.	Sri Lanka	91,132
5.	Korea Rep	91,084



2021 Global Exports 1,878,041 USD

No.	Country	Value USD
1.	Indonesia	538,944
2.	Philippines	392,764
3.	Netherlands	344,306
4.	Malaysia	256,990
6.	India	43,713

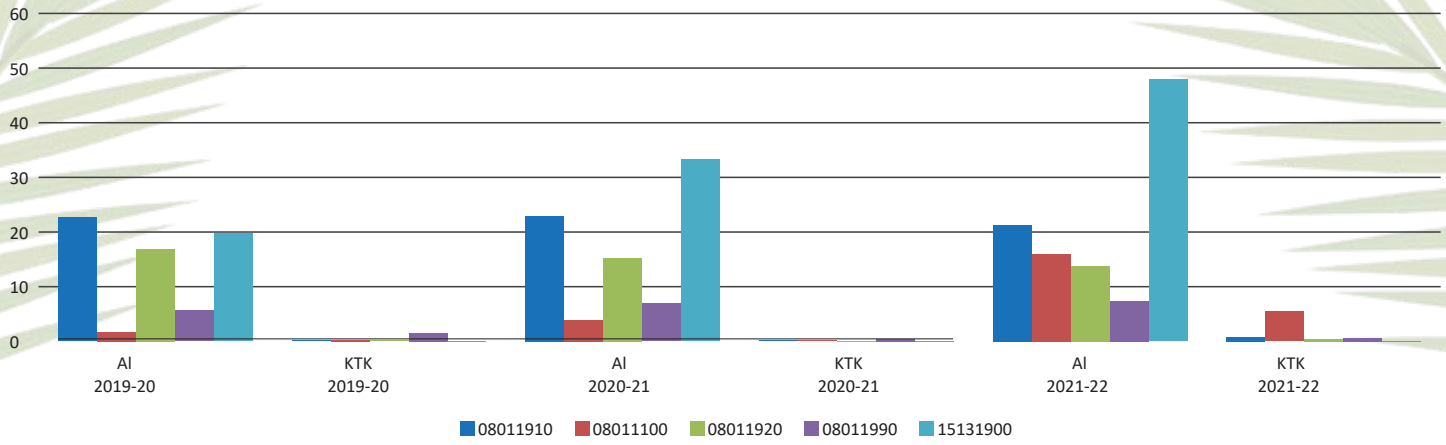


HS Codes of Coconut and its products

08011910	Coconut Fresh Excl. Desiccated and Endocarp
08011100	Coconut Desiccated
08011920	Coconut Fresh Excl. Desiccated and Endocarp
08011990	Other Coconuts excluding fresh and dried and desiccated and endocarp
15131900	Coconut Copra: Refined oil and fractions.

Export performance of Coconut in the last four years: All India and Karnataka

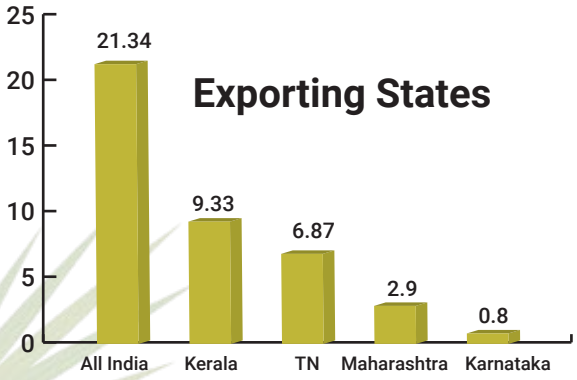
No	HS Code	Description	2019-20		2020-21		2021-2022		Major Importing Countries	Exporting States
			AI	KTK	AI	KTK	AI	KTK		
1	08011910	Coconut Fresh Excl. Desiccated and Endocarp	22.63	0.16	22.99	22.99	21.34	0.8	UAE, Iran, UK	Kerala,TN, Maharashtra, Karnataka
2	08011100	Coconut Desiccated	1.67	0.23	3.85	3.85	15.98	5.47	UAE, Qatar, Saudi Arabia	Karnataka, Kerala, TN
3	08011920	Coconut, Dried Excl. Desiccated and Endocarp	16.84	0.15	15.28	15.28	13.73	0.46	UAE, Afghanistan, UK	TN, Maharashtra Gujarat (Karnataka 5)
4	08011990	Other Coconuts excluding fresh and dried an desiccated and endocarp	5.61	1.58	6.89	6.89	7.36	0.56	Spain, USA, UK	TN, Kerala,Karnataka
5	15131900	Coconut Copra: Refined oil and fractions.	19.71	0.04	33.28	33.28	47.89	0.03	UAE, Saudi Arabia, USA	Kerala, TN and Puducherry

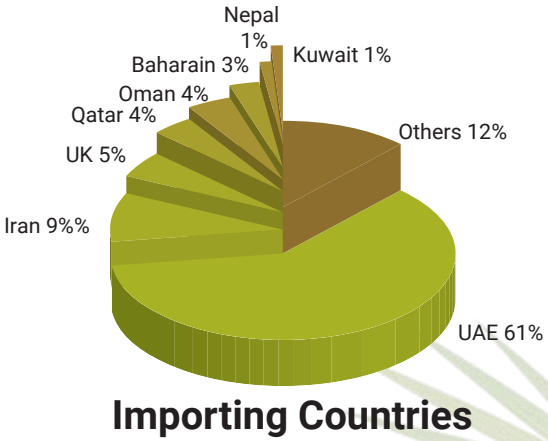


Export Analysis of Coconuts: 2021-22*

08011910: Coconut Fresh Excl. Desiccated and Endocarp

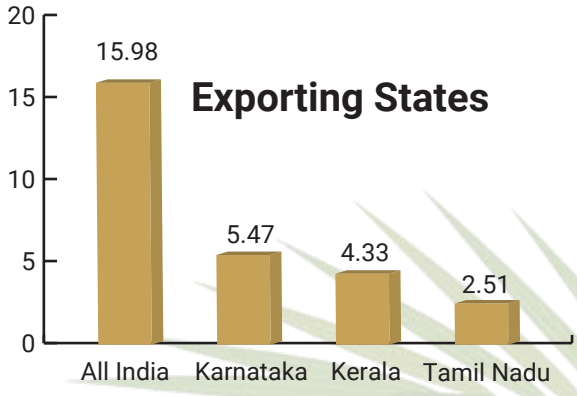
Rank	State	Value USD Mn	Destination
	All India	21.34	UAE, Iran, UK, Qatar (+27)
1.	Kerala	9.33	UAE, Oman, UK (+15)
2.	Tamil Nadu	6.87	UAE, Iran, UK, Bahrain (+12)
3.	Maharashtra	2.90	UAE, Iran, Qatar (+16)
4.	Karnataka	0.8	UAE, Iran, Saudi Arabia, Qatar.

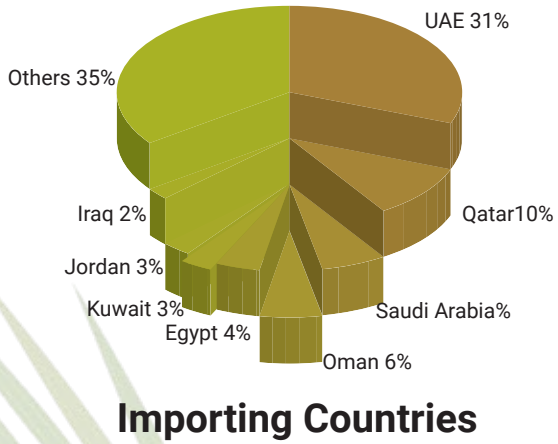




08011100: Coconut Desiccated

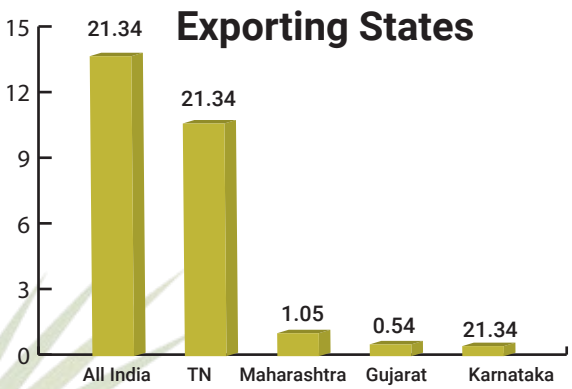
Rank	State	Value USD Mn	Destination
	All India	15.98	UAE, Qatar, Saudi Arabia (+74)
1.	Karnataka	5.47	UAE, Saudi Arabia, Egypt (+22)
2.	Kerala	4.33	UAE, Qatar, Kuwait, Oman (+18)
3.	Tamil Nadu	2.51	UAE, Oman, Nepal, Egypt (+26)

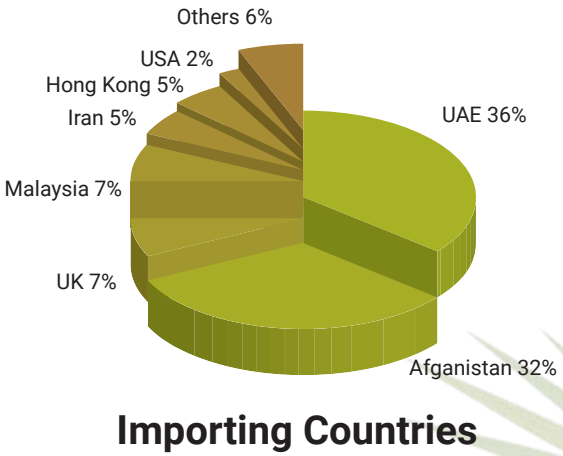




08011920: Coconut, Dried Excl. Desiccated and Endocarp

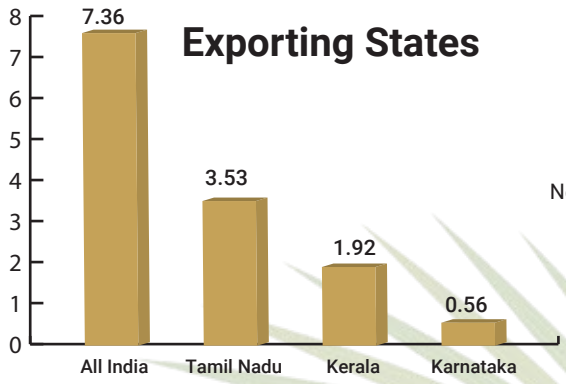
Rank	State	Value USD Mn	Destination
	All India	13.73	UAE, Afghanistan, UK (+49)
1.	Tamil Nadu	10.65	UAE, Afghanistan, Malaysia (+9)
2.	Maharashtra	1.05	UK, Malaysia, UAE (+29)
3.	Gujarat	0.54	USA, UK, Canada (+18)
5.	Karnataka	0.46	Hongkong, USA, Qatar

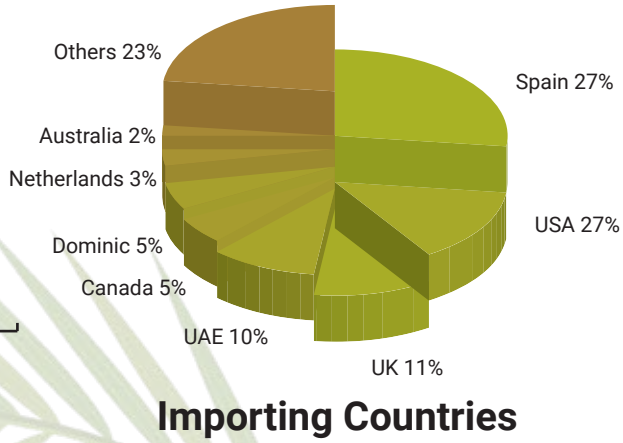




08011990: Other Coconuts excluding fresh & dried& desiccated& endocarp.

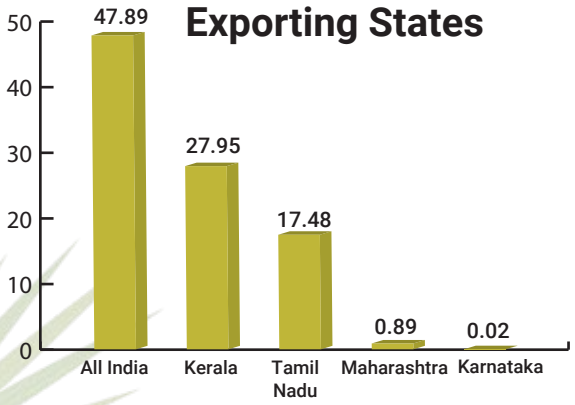
Rank	State	Value USD Mn	Destination
	All India	7.36	Spain, USA, UK, UAE (+52)
1.	Tamil Nadu	3.53	Spain, Dominic, UK (+20)
2.	Kerala	1.92	UK, USA, UAE, Canada (+15)
3.	Karnataka	0.56	USA, UAE, Canada (+10)

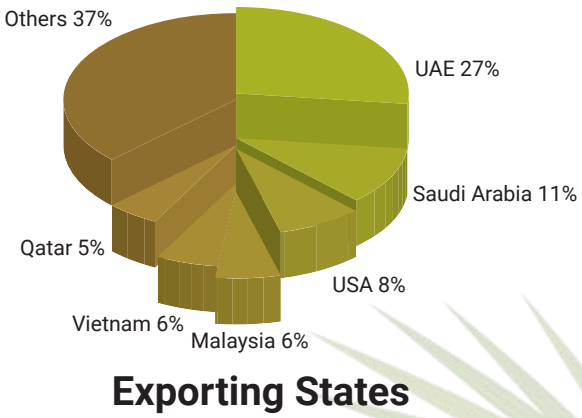




15131900: Coconut Copra: Refined oil and fractions

Rank	State	Value USD Mn	Destination
	All India	47.89	UAE, Saudi Arabia, USA (+110)
1.	Kerala	27.95	UAE, Saudi Arabia, Qatar (+47)
2.	Tamil Nadu	17.48	UAE, USA, Vietnam (+58)
3.	Maharashtra	0.89	Malaysia, Canada, USA (+46)
11.	Karnataka	0.02	UAE, Nepal, USA (+13)





SPS -TBT Standards for Coconut

Quality standard

There are no official marketing standards for fresh coconuts. But they still must comply with the same basic standards as any other fresh fruit, which means they have to be:

I. intact and sound.
II. clean, practically free of any visible foreign matter
III. practically free from pests
IV. practically free from damage caused by pests
V. free of abnormal external moisture
VI. free of any foreign smell and taste
VII. able to withstand transport and handlinga tolerance of 10% in each lot is permitted in number or weight of product not meeting the minimum quality requirements. Within this tolerance, not more than 2% in total may consist of produce affected by decay.

Mature coconuts in the inner shells are normally expected to be:

- brown, uniform and without excessive fibers
- free from cracks, pests, or fungus
- without sunken or wet moldy eyes.

Husked coconuts are susceptible to cracking and weight loss and have a reduced shelf life. It is important for you to maintain coconuts fresh and prevent them from cracking by:

I. taking care of post-harvest handling
II. avoiding quick temperature changes of 8 degrees Celsius or more
III. storing and shipping husked coconuts preferably in cool temperatures between 0 and 16°C. Mature coconuts are generally shipped at 8°C to 12°C. Young coconuts are usually held at 3°C to 6°C. Higher temperatures will reduce shelf life significantly.
IV. Maintain a humidity level of around 80% for mature coconuts and 90% for young coconuts to prevent weight loss and evaporation.
V. Make sure to apply sufficient ventilation to prevent mold.
VI. Young coconuts have a softer inner shell and require extra attention at packaging and cooling to ensure shelf life. Mature coconuts also have differences in shell strength. For example, the Port-Bouet 121 has a thinner shell than the West African tall, which gives them a higher risk of cracking.

The main defects observed in coconuts are:

- broken nuts because of poor sack handling
- nuts wetted by the juice of other fruits, enhancing the growth of moulds
- germination of eyes.

Source: Export of coconuts to European market:
https://www.cbi.eu/market-information/fresh-fruit-vegetables/coconut/market-entry

Indian standards for coconut products, the AGMARK specifications for different coconut products, the Codex standard for aqueous coconut products, and the APCC standards for virgin coconut oil:
https://www.cabdirect.org/globalhealth/abstract/20143249540

Processing technologies available

- Value-added products: http://www.coconutboard.gov.in/CoconutProducts.aspx
- Processing technologies (Coconut Board, Government of India) - https://coconutboard.gov.in/TechnologyMission.aspx#ProcessingTechnology
- Processing technologies (CFTRI, Mysore) -

  a) Coconut beverage from tender coconut – https://cftri.res.in/technologies/BVP/cb.pdf
  b) Tender coconut water concentrate with added sugar – https://cftri.res.in/technologies/BVP/tcw.pdf
  c) Value Added products from coconut – https://cftri.res.in/technologies/CONP/vap.pdf
  d) Coconut Oil Blends with other vegetable oils – https://cftri.res.in/technologies/CONP/cob.pdf
  e) Spray dried coconut milk powder – https://cftri.res.in/technologies/SFS/coconut_milk_powder.pdf
  f) Coconut spread based on mature coconut water concentrate & coconut fiber – https://cftri.res.in/technologies/SFS/coconut_spread.pdf
  g) Neera Bottling –https://cftri.res.in/technologies/BVP/nb.pdf
  h) Desiccatedcoconut – https://cftri.res.in/technologies/SFS/desiccated_coconut.pdf

Action plan

Development, growth and market outreach for coconut and its products falls under the Coconut Development Board, Government of India. Visit their site for more information: https://coconutboard.gov.in/index.aspx

Measures for Enhancing competitiveness for export of coconut is on theirpriority list and link to their mission, goals and objectives is given here https://coconutboard.gov.in/TechnologyMission.aspx#Goals

Responsibility Matrix

Sl.no.	Actions	Responsibility
1.	Research on best global varieties and hybridization	Agricultural and Horticultural Universities, Karnataka
2.	Delegation of progressive farmers to Thailand, Indonesia & Philippines	Coconut Development Board, GOI and Horticulture department, Karnataka
3.	Farmer Sensitization program on available opportunities for exports	Coconut Development Board, GOI and Horticulture department, Karnataka
4.	Inviting Exporters/entrepreneurs to Investors meet for contract farming and processing industries	Horticulture Department and DIC Districts
5.	Farmer database and aggregation of the produce of Karnataka	Horticulture department and related FPOs
6.	Processing technology and Value Addition Handholding.	Coconut Development Board, GOI and CFTRI, Mysore.
7.	Export training, orientation and Market Intelligence	VTPC Karnataka

Regulators and Service providers

No.	Organization	Service	Contact
1.	APEDA	RCMC, Market survey and assistance.	1st Floor, Beeja Bhavan, Bellary Rd, Hebbal, Bengaluru - 560024. E: apedablr@apeda.gov.in
2.	KAPPEC	PMFME Scheme	17, Richmond Rd, Shanthala Nagar, Richmond Town, Bengaluru - 560025. E: kappec1996@gmail.com
3.	DGFT	IEC, Customs and ICEGATE	6th floor, Kendriya Sadan, C & E Wing, 17th main, Koramangala 2nd Block, Koramangala, Bengaluru - 560034 E: bangalore-dgft@nic.in
4.	Plant Quarantine	Phyto Sanitary certification (SPS)	Hebbal-Boopasandra Road HA Farm Post, Bengaluru - 560024. E: dd-pqfsb-ka@nic.in
5.	BIAL Cool Port	Freight and Flight	KIAL Road, Devanahalli, Bengaluru -560300 W: http://www.aisats.in
6.	Coconut Board	Freight and Flight	Director, Regional Office, Coconut Development Board, Hulimavu, Bannerghatta Road Bengaluru – 560076 ro-bnglr@coconutboard.gov.in