RESURGENT AGRIC

ARECA NUT

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1. Agricultural and Botanical Details

Areca nut (*Areca catechu*) is the seed of the fruit of the areca palm. It is also known as Betel nut. It is not a native crop of India. It is generally believed to be native to Malaysia or Philippines where it is grown in many varieties. It is a tropical crop which grows from the West Indies to the East Coast of Africa, and in Bangladesh, China, Sri Lanka and Malaya. The practice of chewing the areca nuts is attributed to Vietnam and Malaysia. It was from Southeast Asia that the crop spread to Asia and India where it is cultivated as a cash crop. It is conjectured that ancient Indian literature provides information on betel nut and its mastication. The Indian Ayurveda texts also refer to the areca nuts as a traditional medicine.

Its use in India is also noted from the pre-vedic period and was described by the word *taamboola* in ancient Indian civilization. It is extensively used in Hindu religious rites of birth, marriage, nuptial and is also offered to guests as a mark of hospitality. It is offered to gods in veneration in the form of *taamboola*, which consists of one areca nut placed over two betel leaves.

Areca nut is extensively used as a masticator in south and southeast Asian countries, chewed with or without betel leaves. However, in India it has a special ethno-religious importance.

The cultivation of arecanut is mostly confined to 28º north and south of the equator. It grows well within the temperature range of 14ºC and 36ºC and is adversely affected by temperatures below 10ºC and above 40ºC. Extremes of temperature and wide diurnal variations are not conducive for the healthy growth of the palms. Arecanut can be grown in areas receiving annual rainfall of 750 mm in *Maidan* parts of Karnataka to 4,500 mm in *Malnad* areas of Karnataka. In areas where there is prolonged dry spell, the palms are irrigated. Due to its susceptibility to low temperature, a good crop of arecanut cannot be obtained at an altitude of more than 1000 m MSL.

2. Uses

The chewing of betel nut quids dates to antiquity. In the 1st century AD, Sanskrit medical writings claimed that betel nut possessed 13 qualities found in the region of heaven. It is pungent, bitter, spicy, sweet, salty, and astringent. It was said to expel wind, kill worms, remove phlegm, subdue bad odors, beautify the mouth, induce purification, and kindle passion. Because of its CNS stimulating effects, betel nut is used in a manner similar to the western use of tobacco or caffeine. Arecoline is responsible for some of the effects of betel quid chewing, such as alertness, increased stamina, a sense of well-being, euphoria, and salivation. Chewing the nut

stimulates the flow of saliva to aid digestion. Betel nut also has been used to stimulate the appetite.

Betel nut's medicinal use is limited, and long-term negative reactions to betel quid chewing are well known. A decrease in positive symptoms among men with schizophrenia was attributed to betel nut consumption.

3. Production

3.1 Worldwide

Rank	Country (2019)	Share in Production (2019)	Production Quantity (2018-2019)
1	India	52.31%	901.00K
2	Bangladesh	18.39%	316.72K
3	Indonesia	8.68%	149.45K
4	Myanmar [Burma]	7.88%	135.66K
5	Taiwan	6.03%	103.77K
6	Sri Lanka	3.11%	53.65K
7	Thailand	2.32%	40.04K
8	Bhutan	0.94%	16.11K
9	Nepal	0.32%	5.54K
10	Malaysia	0.01%	206.00

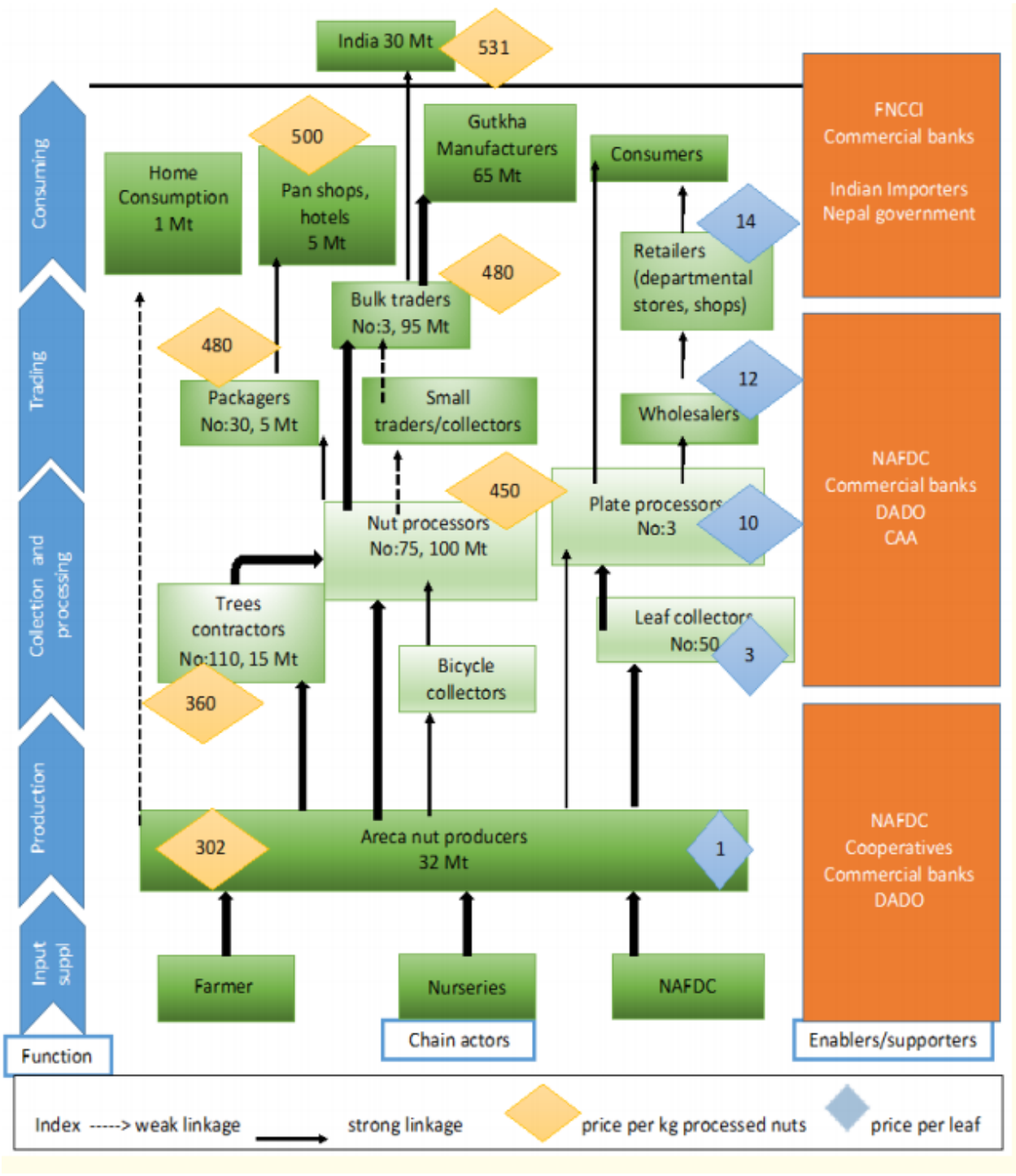
3.2 In India

In 1990–91 the area under areca nut plantation was 208,400 hectares (515,000 acres) and production was 249,300 tonnes. During 2013–14 its production was 729,810 tonnes from an area of 445,000 hectares (1,100,000 acres). In Karnataka, which leads the country in its production, its production was 4,57,560 tonnes from an area of 218,010 hectares (538,700 acres). The details of state wise area and production are given in the Table for ten states.

Top 10 Areca nut Producing States in India (2019–20)			
Rank	**State**	**Area ('000 ha)**	**Production ('000 tonnes)**
1	Karnataka	218.01	457.56
2	Kerala	100.01	100.02
3	Assam	68.04	89.00
4	Meghalaya	17.11	24.68
5	West Bengal	11.39	21.16
6	Mizoram	10.14	6.05
7	Tamil Nadu	6.7	8.62
8	Tripura	4.7	9.92
9	Andaman & Nicobar Islands	4.23	5.88
10	Maharashtra	2.2	3.58

4. Framework

Figure below represents the micro level value chain map derived from the study. The flow chart is just to get an idea about the forward, backward and lateral linkages of the arecanut industry. The numeric values can be ignored.



5. Varieties

Systematic evaluation of exotic and indigenous accessions of arecanut and selection for high yield and its component characters have resulted in release of high yielding varieties and

also identifying some of the promising cultivars for different agroclimatic conditions of the country.

Distinguished characters of released varieties of arecanut

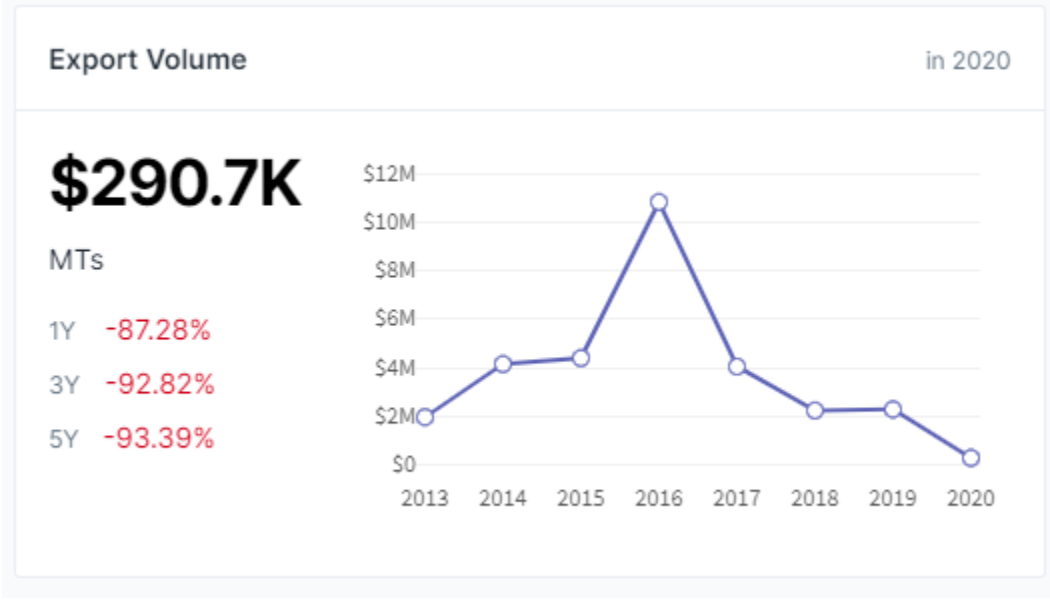
Variety	Growth habit	Shape & Size of nut	Yield Chali (kg/palm)	Year of release	Recommended agro-climatic area
Mangala	Semi tall early bearing	Round & small	3.0	1972	Coastal Karnataka and Kerala
Sumangala	Tall	Oval & medium	3.28	1985	Karnataka and Kerala
Sreemangala	Tall	Round and Oval	3.18	1985	Karnataka and Kerala
Mohitnagar	Tall Homo-geneous	Oval to round medium	3.67	1991	West Bengal Karnataka and Kerala

6. Consumption

// being researched //

7. Export - Quantity and Value

The export value of India was USD 2.76M, and the export volume was 290.67K metric ton in 2020.



8. Major Production Organisations in India

S No	Company	Address	Contact	Website
1	Konark Herbals & Health Care	Dabhel, Daman, Dadra and Nagar Haveli and Daman and Diu	8046050001	https://www.kherbalhealthcare.com/
2	Lingappa And Company	No. 24 A, 4th Cross, Behind Raitha Bhavan Apmc Yard, Mavinathopu, Tiptur - 572201,	8048717707	https://www.lingappaandco.com/

		Tumakuru, Karnataka, India		
3	Shreeji Enterprise	GR FLOOR,SHREEJI ENTERPRISE,Gir Somnath,ABHISHEK COMPLEX SHOP NO 1, Khadi Bhandar, Veraval, Junagadh-362265, Gujarat, India	8048560119	na
4	Amatya Impex Private Limited	209, A.J.C. Bose Road Karnani Estate Building, Kolkata-700017, West Bengal, India	8046046905	https://amatya-impex-private-limited.business.site/
5	Devku Nursery	Jesingpura, Patiya, NH 8, Prantiz, Sabarkantha-383205, Gujarat, India	8048017257	http://devkunursery.byethost14.com/?i=1
6	Aayurmed Organic Herbals LLP	No. 113 & 114, Shiv Shambhu Industrial Estate, Waliv Vasai East, Mumbai - 401208, Maharashtra, India	8046049763	https://www.aayurherb.com/
7	Tushiyah Enterprises	Prestige Willington Park, 12062 Gangama Circle, Jalahalli, Bengaluru-560013, Karnataka, India	8048581792	na
8	S M ENTERPRISES	SHOP NO 2,A P M C YARD,,SALMARA,,Dakshina Kannada,Karnataka, Kavoor, Mangalore-574201, Karnataka, India	7971476218	na
9	Cosmos Commodities	1/123l And 1/123f, K.u.r. Complex,, Gandhi Nagar, Ooty Main Road,, Mettupalayam, Gandhi Nagar, Ooty Main Road, Near Black Thunder, Coimbatore-641301, Tamil Nadu, India	8048875590 http://cosmoscommodities.com/	http://cosmoscommodities.com/
10	Archana Global Trade	39, Anjali 1st Main, 1st Cross, Devraj Arus Nagar, Opposite To Water Tank, Vinoba Nagara, Shimoga, Shivamogga-577204, Karnataka, India	8046051663	na

9. Major domestic Sales Organisations in India

S No	Company	Address	Contact	Website
1	S.A Kisan World	Ground Floor, 01, Venkateshwara Rice Mill, Jp Nagar Road Kuvempu Circle, Near Petrol Pump, Kammardi, Thirthahalli, Shivamogga-577125, Karnataka, India	7971484191	na
2	Lingappa And Company	No. 24 A, 4th Cross, Behind Raitha Bhavan Apmc Yard, Mavinathopu, Tiptur - 572201, Tumakuru, Karnataka, India	8048717707	https://www.lingappaandco.com/
3	Devku Nursery	Jesingpura, Patiya, NH 8, Prantiz, Sabarkantha-383205, Gujarat, India	8048017257	http://devkunursery.byethost14.com/?i=1
4	Aayurmed Organic Herbals LLP	No. 113 & 114, Shiv Shambhu Industrial Estate, Waliv Vasai East, Mumbai - 401208, Maharashtra, India	8046049763	https://www.aayurherb.com/
5	Vikram Traders	Marufganj, Near Aluminium Factory, Haldi Patti, Patna-800008, Bihar, India	8042538112	na
6	S4 General Trading Co.	No. 1664, Pataudi House, Darya Ganj, New Delhi-110002, Delhi, India	8068441153	http://indianafoods.in/
7	Ratikant Export Import	K8, Plot Number 1152, Kalinga Nagar, Near Sum Hospital, Bhubaneswar, Khorda-751003, Odisha, India	080762 00604	https://ratikantexportimport.business.site/
8	Barak Valley Betel Nut Trading	216, JB Kalain, Cachar, Silchar-788815, Assam, India	8048925923	na
9	Earth Enterprises	76/Hiranagar, Opposite Zadafiya School, Ashvini Kumar Circle Surat 8, Hiranagar, Ashvini Kumar Circle, Surat-395008, Gujarat, India	8048564481	na

10	Cosmos Commodities	1/123l And 1/123f, K.u.r. Complex,, Gandhi Nagar, Ooty Main Road,, Mettupalayam, Gandhi Nagar, Ooty Main Road, Near Black Thunder, Coimbatore-641301, Tamil Nadu, India	8048875590	http://cosmoscommodities.com/

10. Major export organisations in India

S No	Company	Address	Contact	Website
1	Pisum Food Services Private Limited	33 15, Prashant Bunglow, Karve Road, Pune-411004, Maharashtra, India	7971478106	https://pisumfoods.com/
2	Muscat Trading Company & Services (MTCO)	Vellalur Vellalore, Coimbatore-641111, Tamil Nadu, India	8048559216	na
3	MAHAVIR INTERNATIONAL	Plot No 14 BAROI MUNDRA ROAD, MAHAVIR SUPER MARKET, Baroi Road, Mundra, Kachchh-370421, Gujarat, India	8048950731	na
4	SRV Global Service	83/468, Mani Complex, First Floor, Near GSK Bakery, Sitra Bus Stop, Coimbatore-641014, Tamil Nadu, India	8068442226	na
5	S4 General Trading Co.	No. 1664, Pataudi House, Darya Ganj, New Delhi-110002, Delhi, India	8068441153	http://indianafoods.in/
6	Ratikant Export Import	K8, Plot Number 1152, Kalinga Nagar, Near Sum Hospital, Bhubaneswar, Khorda-751003, Odisha, India	080762 00604	https://ratikantexportimport.business.site/

7	Circa Group	Maibam Chingmang P.O Nambol, Bishnupur District Maibam Chingmang - Nambol, Maibam Mamang Leikai, Manipuri, Nambol-795134, Manipur, India	7971387199	na
8	Adroit Hair Exporter	Murshidabad, Beldanga, Opposite Mitali Hall, Kolkata-742133, West Bengal, India	8048371635	na
9	Poonam International Exports & Imports	1192 Urban Estate - 2, Hisar-125005, Haryana, India	8048361218	na
10	S.R.S Impex	3/226 ATTUR MAIN ROAD MANGALAPURAM, Rasipuram, Namakkal-636202, Tamil Nadu, India	8046041010	na

11. Top importing countries

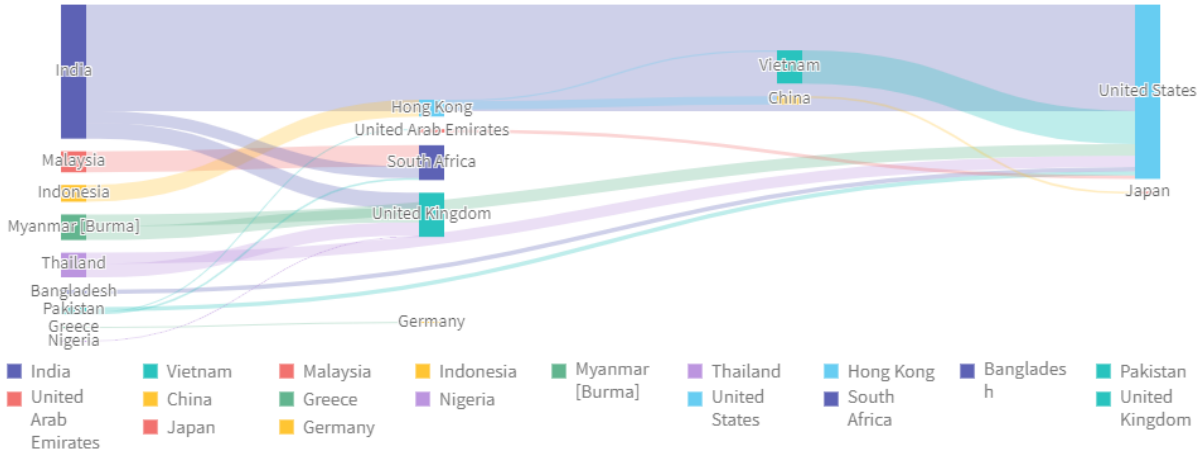
The top export destinations of Areca Nut from India in 2020 are shown below. The top 3 export destinations were the United States (USD 2.16M), United Kingdom (USD 318.54K) and South Africa (USD 241.96K) based on export value.

S.No.	Country	Export Value of India ('000 USD)	Export Quantity of India ('000 MT)
1	United States	2160	201.24
2	United Kingdom	318.54	49.31
3	South Africa	241.96	31.66
4	New Zealand	9.91	1.22
5	Uganda	9.87	5.05
6	Germany	8.23	1.23
7	Switzerland	7.67	0.96
8	Ireland	0.021	0

12. Network of origin countries and importing countries other than India

Discover the top export flows of Areca Nut in 2020. The top export flow in 2020 was from India to the United States, with an export value of USD 2.16M.

(Refer: https://www.tridge.com/intelligences/areca-nut/export)



13. Apex Bodies/Associations

All-India Areca Growers' Association & Arecanut Research and Development Foundation

A trust viz., Arecanut Research and Development Foundation was registered on 20.5.1998 under the able guidance and advice of Padmabhushan Dr. D.Veerendra Heggade, Dharmadhikari, Shree Kshetra Dharmastala., who is the Founder President of the trust. The foundation was inaugurated on 5.12.1998 by Sri J.H Patel (The then Chief Minister of Karnataka) on the eve of the CAMPCO Silver Jubilee Celebration. The president of CAMPCO is the permanent Managing Trustee of the Trust. Other permanent trustees are the President of Totagar Sale Society, Sirsi, Vice-President of MAMCOS Ltd , Shimoga and The President of All India Areca Growers Association, Mangalore. The benefits are passed on to areca growing farmers and the members of their immediate families of Indian Nationality.

14. Commodity Exchanges

MCX

According to a news article published on Business Standard (April, 2019), the Multi Commodity Exchange (MCX) has received an approval from the Securities and Exchange Board of India to launch future trading in Arecanut, which is one of important cash crops in India. The exchange is planning to launch futures in August, in the midst of

the season. The exchange official said that the MCX will be going with a Red Rashi variety for Arecanut futures. Arecanut is mainly divided into two varieties White and Red. Red variety is a boiled one which is used for manufacturing Gutka. The red variety has a mix called Rashi and it contains all the varieties such as Api, Bette, Gorubulu etc. The traders price according to the content of each of these varieties. Api is considered as a best quality variety so it gets more price. Even this variety has different sub varieties. M Suresh Bhandary, managing director, The Central Arecanut and Cocoa Marketing and Processing Co-operative Limited (CAMPCO) said that one needs to wait and watch how MCX would be handling this since unlike other commodities, this commodity cannot be stored and sold and it has a lot of varieties.

Refer:
https://www.business-standard.com/article/markets/mcx-gets-sebi-nod-to-launch-future-trading-in-cash-crop-arecanut-119042000306_1.html

15. Major challenges and wayouts

The production of areca nuts is now saturated because of the limited domestic use of the product and it has not much export potential. Despite efforts to develop some alternative uses for arecanut, so far no viable commercial exploitation has been possible. Instead of looking for only alternate possible uses of the product, the time has come that the policy makers and researchers should concentrate on the areca nut industry by intensifying the cropping patterns. The pressure on the land in India is very acute and it is possible to increase the productivity of important crops like pepper, cocoa and clove etc., which have great export potential. The beneficial effects of crop combinations, agrometeorology, fertility management, rhizosphere microorganisms, light use efficiency etc., should be employed to suitable crop combinations with arecanut. Unlike the coconut based multiple cropping which is mainly grown on rainfed conditions, the potential for multiple cropping in arecanut palms are greater because arecanut is raised mainly as an irrigated crop. The introduction of intercrops however, will increase the demand for water. The research needs of the system then, has to be addressed for efficient water use by component crops besides the main crop. This can be achieved by proper micro-irrigation systems. Plant breeding efforts also should be given a new dimension, since it involves growing plants under light and/or nutrient deficient conditions. Traditionally, evolving varieties have been done in sole crops under most optimal conditions. The breeders should not only attempt to maximize yields under shade environments, but look in for resistances to stresses and pests. One should not confine to such cropping systems described in these sections, but look for broader horizons. For example, the combination of pastures and animals as 'mixed farming' has not been given sufficient attention. The use of modulating t legumes in the basins of arecanut will enrich the fertility. Arecanut by-products like husk are degradable and can be utilized for cultivation of edible mushrooms in arecanut interspaces which is a novel proposition. This needs future trials to see its economic viability. According to the Hildebrand (1976) the focus of any crop model should be on the farmers. For this the agro-socio-economic survey of the target groups is essential. The three characteristics of such models are: a rapid generation of technology, orientation for more research based feedback and creating a multidisciplinary environment to evolve successful research in multiple cropping systems. In arecanut the first two processes are available and results of the multidisciplinary research has started giving some results. There is still a need to

get more precise and basic information. Then only it is feasible to refine the cropping systems in the field with long range extension action in mind. The programmes, resource use and technology development of multiple cropping with areca nuts is an example of how the biological efficiencies can be increased. This can be used as a model or reference for adopting other perennial crop based multiple cropping systems of the humid tropical countries.

16. Govt Policies and Incentives to promote the production and export

The Horticulture Department has planned to promote inter-cropping in arecanut plantations in the district under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). Under MGNREGA, financial assistance is being provided to farmers who take up cultivation of horticulture crops on their own land. At present, cultivation of arecanut, pepper, cocoa, mango, chikku, drumstick and banana can be taken up under MGNREGA. There are provisions to pay wages to the workers and to purchase inputs, including saplings, fertilizers and pesticides under MGNREGA. Farmers, having job cards issued under MGNREGA and who belong to the SCs, STs and those classified under the BPL category, are eligible to avail financial assistance under MGNREGA to cultivate horticulture crop on their own land.
Refer:
https://www.thehindu.com/news/national/karnataka/govt-to-promote-intercropping-in-arecanut-plantations-under-mgnrega/article8635088.ece

The Union Government has facilitated arecanut imports as an input for production of goods to be exported. The Director General of Foreign Trade (DGFT) in a recent notice said the import of arecanut as an input would be permitted only when it is by an actual user. It can also be imported by anybody, including the actual user, if the commodity is specifically mentioned in the standard input output norm of the export product.

17. Conclusion

India has been maintaining the top position in production as well as the export of areca nuts. Around 70% of the export volume is imported by the United States. Because of the limited domestic use and less export potential, the production of this commodity has been saturated. The only intensive use of this crop remains as an intercrop. By proper combination of areca trees the productivity of other import crops like pepper, cocoa etc. can be increased. There are special incentives introduced by the Govt to promote the intercropping of this crop.

18. Bibliography

18.1 Important Research Papers

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2. Areca nut varieties; CENTRAL PLANTATION CROPS RESEARCH INSTITUTE
3. Rakesh B K, Vineet L Kulkarni, Ruthvik S Vasistha, Monisha P, Madan K R; Drone Assisted Arecanut Harvesting Module

18.2 Other important references

1. Tridge; Intelligence; Areca nut
2. MCX gets Sebi nod to launch future trading in cash crop Arecanut; Business Standard
3. Govt. to promote inter-cropping in arecanut plantations under MGNREGA; The Hindu