



# THE FIASCO OF INDIAN CASHEW

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## -----ABSTRACT-----

Cashewnut is a commercial crop grown in many countries around the world. At present, India is the leading producer of cashew (in shell) and Vietnam is the major competitor of India. This paper focuses on the performance of cashewnut cultivation among important states of India for the past ten years. The study is exclusively based on secondary data. Herfindahl index were used to analyze the data to find out the market concentration among the states. The study came into the conclusion that, productivity of the states was highly concentrated when compared to area and production under cashewnut cultivation.

**KEY WORDS:** Cashewnut, Commercial, Herfindahl Index, Performance, Production etc.-----

## 1. INTRODUCTION

India is an agrarian economy. Agricultural sector is a major source of raw materials, employment and chiefly a revenue generator to the government. One of the most important cash crops of this sector is cashewnut otherwise known as wonder nut. The innate of cashew tree was from Brazil. Eventually it spreads all over the world. Primarily, the tree was used for the conservation of soil, afforestation and development of waste land. Afterwhile, the fruits and nuts of the crop are widely used for the consumption and export purpose because of its nutritional value. The term cashew came forward from the Portuguese name 'caju' which was snatched from the innate name 'acajou'. In India, it was popular as 'Kaju' (Kulkarni et. al., 2012).

The cashew was brought into India in 16<sup>th</sup> century. Country has a remarkable role in the production of cashew. In the world, India is the largest producer, processor, consumer, exporter and importer of cashew (Kumar and Banana, 2018). In India, the cashew was initially introduced in Goa and further expanded to other states like Kerala, Karnataka, Tamil Nadu, Andhra Pradesh, Maharashtra etc. Most of the rural farmers depended on cashew for their subsistence earning especially who were living near the peninsular regions. India is the leading producer of cashew in the world as on 2020 and the domestic consumption of cashew as on 2019 was 207.18 thousand metric tonnes.

## 2. LITERATURE REVIEW

Israrullah and Sonnad (2018) analysed the growth of cashew in India by taking into account of the data from 2000-01 to 2014-15. The result reveals that area and production had a significant growth as compared to productivity. Whilst the states like West Bengal and Maharashtra had positive growth of productivity with one per cent level of significance. Kulkarni et. al., (2012) conducted a study on the trend of cashew in India using standard statistical tools like AM, C.V, CGR, and Herfindahl Index. The conclusion of the study explains that even though the area under cashew cultivation was high in the selected states, the productivity was comparably low. According to the authors, increase in area was mainly due to the government intervention by considering the crop as maintenance free and also it was cultivable in the waste land. Herfindahl index shows a moderate concentration among the states of India cultivating cashewnut.



**3. OBJECTIVE**

- ❖ To analyze the area, production and productivity of cashew in important states of India.

**4. METHODOLOGY**

This paper is purely based on secondary data gathered from Directorate of Cashew and Cocoa Development (DCCD) located in Cochin and also from websites of Statista Research Department, 2022. The important state-wise trend of area, production and productivity of cashew were analysed using Herfindahl Index for the period of past ten years from 2010-11 to 2019-20. Herfindahl Index estimated the market concentration of states in terms of area, production and productivity of cashewnut in India. HI is computed using the formula given below:

$$HI = \sum_{i=1}^N S_i^2$$

Where, HI = Herfindahl Index

S<sub>i</sub> = Share of 'i' States

N = Number of States

**Table 4.1: Concentration Measures**

Level of Concentration	Type of Market	Market Power	Concentration Ratio
Non-Concentrated Market	Highly Competitive, part of Monopolistic Competition	Low	Below 0.1
Moderately Concentrated Market	Part of Monopolistic Competition, Loose Oligopoly	Moderate	0.1 to 0.18
Highly Concentrated Market	Tight Oligopoly, Dominant Firm	High	Above 0.18

The concentration of states is analysed and interpreted based on the index value which indicates the following: HI below 0.01 is highly concentrated, HI below 0.1 is an un-concentrated index, HI between 0.1 and 0.18 represents moderate concentration and HI above 0.18 represents high concentration.

**5. RESULTS AND DISCUSSION**

India is the largest producer of cashew (in shell) in the world with 23.19 percent of world’s production as per the data of 2020 (Statista, March 2022). Andhra Pradesh, Karnataka, Kerala, Maharashtra, Odisha and Tamil Nadu are the important states that produce cashewnut in India. The area, production and productivity of cashewnut among important states are discussed below:

**Table 5.1: Area under Cashew Nut in Important States of India**

	Andhra Pradesh	Karnataka	Kerala	Maharashtra	Odisha	Tamil Nadu	Total	HI	
	(“000 Hectare)								
2010-11	183 (21.66)	119 (14.08)	78 (9.23)	181 (21.42)	149 (17.63)	135 (15.98)	845 (100)	0.18	
2011-12	184 (21.27)	121 (13.98)	83 (9.60)	183 (21.16)	158 (18.27)	136 (15.72)	865 (100)	0.17	
2012-13	183.95 (21.02)	121.88 (13.92)	84.88 (9.70)	184.20 (21.04)	163.91 (18.73)	136.42 (15.59)	875.24 (100)	0.17	
2013-14	184.95 (21.03)	124.11 (14.11)	84.93 (9.66)	184.20 (20.94)	166.91 (18.98)	134.42 (15.28)	879.52 (100)	0.17	
2014-15	185.45 (20.57)	124.71 (13.83)	84.53 (9.37)	186.20 (20.65)	180.41 (20.01)	140.42 (15.57)	901.72 (100)	0.17	
2015-16	185.57 (20.42)	125.86 (13.85)	87.01 (9.57)	186.20 (20.49)	182.91 (20.12)	141.33 (15.55)	908.88 (100)	0.18	
2016-17	185.57	127.86	90.87	186.20	183.31	141.58	915.39	0.17	



	(20.27)	(13.97)	(9.93)	(20.34)	(20.02)	(15.47)	(100)	
<b>2017-18</b>	186.78	129.07	92.81	191.45	193.99	142.28	936.38	0.18
	(19.95)	(13.78)	(9.91)	(20.45)	(20.72)	(15.19)	(100)	
<b>2018-19</b>	191.27	129.92	95.74	191.45	205.38	142.28	956.04	0.17
	(20.01)	(13.59)	(10.01)	(20.03)	(21.48)	(14.88)	(100)	
<b>2019-20</b>	192.45	132.43	98.82	191.45	213.96	150.30	979.41	0.19
	(19.65)	(13.52)	(10.09)	(19.55)	(21.85)	(15.34)	(100)	

Source: DCCD, Cochin

Note: ( ) parenthesis denotes the percentage share of states

Table 5.1 exhibits the area under cashewnut cultivation among prominent states of India. Out of the total area, Odisha holds premier position with maximum area (21.84 percent) followed by Andhra Pradesh (19.65 percent) and Maharashtra (19.55 percent), whereas Kerala (10.09 percent) holds a least position with minimum area as on 2019-20. Herfindahl index (HI) ranged between 0.1 and 0.18 indicates a moderate concentration among the selected states for the following years except 2019-20. For the final year, the concentration of states was infinitesimal i.e. there is a high market power among the states like oligopolistic competitive market.

**Table 5.2: Production under Cashew Nut in Important States of India**

							(In '000 MT)	
	Andhra Pradesh	Karnataka	Kerala	Maharashtra	Odisha	Tamil Nadu	Total	HI
<b>2010-11</b>	107	57	71	208	91	65	599	0.20
	(17.86)	(9.52)	(11.85)	(34.72)	(15.19)	(10.85)	(100)	
<b>2011-12</b>	110	60	73	223	97	68	631	0.20
	(17.43)	(9.51)	(11.57)	(35.34)	(15.37)	(10.78)	(100)	
<b>2012-13</b>	117.20	74.64	76.96	224.64	100.84	62.40	656.68	0.20
	(17.85)	(11.37)	(11.72)	(34.21)	(15.35)	(9.50)	(100)	
<b>2013-14</b>	100.42	80.61	80.12	236.20	85.71	67.39	650.45	0.22
	(15.44)	(12.39)	(12.32)	(36.31)	(13.18)	(10.36)	(100)	
<b>2014-15</b>	100.00	80.50	80.00	235.00	85.50	67.00	648	0.22
	(15.43)	(12.42)	(12.35)	(36.27)	(13.19)	(10.34)	(100)	
<b>2015-16</b>	95.50	73.00	72.00	220.00	80.50	58.00	599	0.22
	(15.94)	(12.19)	(12.02)	(36.73)	(13.44)	(9.68)	(100)	
<b>2016-17</b>	111.39	85.15	83.98	256.61	93.90	67.65	698.68	0.22
	(15.94)	(12.19)	(12.02)	(36.73)	(13.44)	(9.68)	(100)	
<b>2017-18</b>	116.92	89.45	88.18	269.44	98.59	71.03	733.61	0.22
	(15.93)	(12.19)	(12.03)	(36.73)	(13.44)	(9.68)	(100)	
<b>2018-19</b>	109.90	84.08	82.89	215.64	92.67	66.77	651.95	0.21
	(16.87)	(12.90)	(12.71)	(33.07)	(14.21)	(10.24)	(100)	
<b>2019-20</b>	115.39	70.62	69.62	181.14	110.00	70.11	616.88	0.19
	(18.71)	(11.45)	(11.29)	(29.36)	(17.83)	(11.36)	(100)	

Source: DCCD, Cochin

Note: ( ) parenthesis denotes the percentage share of states

Production of cashewnut largely relies upon the area covering fruit bearing trees, their age and breed. Thus, the production of cashewnut among major states was tabulated in table 5.2. According to DCCD, the production was highest in Maharashtra with 29.36 percent and lowest in Kerala with 11.29 percent as on 2019-20. There exists a high concentration among the states while taking into account of Herfindahl index in the production of cashew. It implies that, in production the states acts as a dominant firm like tight oligopolistic market situation.



Table 5.3: Productivity under Cashew Nut in Important States of India

							(In Kg/hectare)	
	Andhra Pradesh	Karnataka	Kerala	Maharashtra	Odisha	Tamil Nadu	Total	HI
2010-11	588 (13.26)	491 (11.08)	947 (21.36)	1231 (27.78)	669 (15.09)	507 (11.43)	4433 (100)	0.18
2011-12	601 (13.21)	517 (11.36)	948 (20.84)	1282 (28.17)	683 (15.01)	519 (11.41)	4550 (100)	0.18
2012-13	646 (13.98)	640 (13.85)	898 (19.44)	1282 (27.75)	685 (14.83)	469 (10.15)	4620 (100)	0.19
2013-14	646 (12.99)	750 (15.09)	910 (18.31)	1317 (26.49)	679 (13.66)	669 (13.46)	4971 (100)	0.18
2014-15	539 (12.41)	645 (14.85)	946 (21.78)	1262 (29.05)	474 (10.91)	478 (11.00)	4344 (100)	0.18
2015-16	490 (12.43)	572 (14.51)	851 (21.58)	1200 (30.43)	430 (10.91)	400 (10.14)	3943 (100)	0.19
2016-17	600 (13.03)	672 (14.60)	962 (20.91)	1378 (29.94)	513 (11.14)	478 (10.38)	4603 (100)	0.19
2017-18	600 (13.03)	672 (14.60)	962 (20.91)	1378 (29.94)	513 (11.14)	478 (10.38)	4603 (100)	0.19
2018-19	595 (13.61)	683 (15.62)	947 (21.66)	1169 (26.73)	503 (11.50)	476 (10.88)	4373 (100)	0.19
2019-20	625 (15.52)	565 (14.02)	762 (18.92)	982 (24.38)	595 (14.77)	499 (12.39)	4028 (100)	0.19

Source: DCCD, Cochin

Note: ( ) parenthesis denotes the percentage share of states

The productivity of cashewnut among the leading states of India was represented in table 5.3. Maharashtra ranked first in the productivity of cashew because of the adoption of new technology followed by Kerala and Andhra Pradesh. Tamil Nadu has the least productivity among the leading states. It is because of the prevalence of soil texture of the state. While considering Herfindahl index, the concentration of selected states were fluctuating. It means that share of productivity in the initial period was like loose oligopoly except 2012-13, whereas from 2015-16 onwards, the cashew productivity is as same as the tight oligopolistic market situation.

## 6. CONCLUSION

Cashew is considered as a maintenance free crop cultivated in the waste land with low fertility. The palpable outcome from the study is that: when comparing to area, production and productivity of important states under cashew cultivation is highly concentrated with a value above 0.18. It is mainly due to the shifting of farmers from the production of cashew to other plantation crops like rubber. But the trend on area is increasing, production is fluctuating and productivity goes on diminishing. Maharashtra holds the top most position in all the domains like area, production and productivity among the selected states. Thus the results remain catastrophe. Therefore, government intervention in the field of cultivation is important for the improvement of yield rate.

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