



An Analysis of Growth of Spices Production in India

Daya Nand Thakur

Assistant Professor
Vivek College of Management & Technology,
Bijnor, Uttar Pradesh-246701

ABSTRACT

In this paper, I am trying to present growth of spices production in India. The data of production for 9 years from 2013 to 2021 of major spices producing countries like India. India is the largest spice producing countries. India produces about 75 of the 109 varieties listed by the International Organization for Standardization (ISO). The Most produced and exported spices are Pepper, Cardamom, Chili, Turmeric, Cumin, Celery, Fennel, Fenugreek, Ginger and coriander make about 76 percent of the total production. India contributes 75 percent of global spice production. Spices producing countries are India, Indonesia, Iran, Vietnam, Pakistan, Spain, China, Guatemala, Turkey and Grenada etc. The main reason for growth of spices in India are variation in climate tropical and subtropical and temperature. Spices are used to improve taste and flavor of foods. Some spices help in improving immunity in individuals. It means spices can be considered as a good antioxidant.

Keywords: Spices, Anti-oxidants, medical properties, growth of spice production in India.

INTRODUCTION

Spices are fragrance substances of vegetable origin and are originated from various parts of plants like roots, stems, seeds, flower buds, leaves, fruits etc. The spices are an important part of human nutrition and food preparation as They help in adding taste and flavor to the food. They help in bringing out the unique flavor, taste and color to the food. Spices also have some medical properties so also used for medical purposes. India is the world's largest producer and exporter of spices. The production of different spices has been growing rapidly over the last few years.

Production in 2020-21 was 10.7 million tons growing at an 8 percent CAGR since 2014-15. During 2020-21, the export of spices reached an all-time high both in terms of value and volume by registering a growth of 17 percent in US\$ value terms and 30 percent in volume terms. During Financial year 2020-21, the single largest spice exported from India was chili followed by mint products, cumin, spice oils and oleoresins, and turmeric. These constitute almost 80 percent of the total spices export from the country.

India produces about 75 of the 109 varieties listed by the International Organization for Standardization (ISO). Name of produced and exported spices are pepper, cardamom, chili, ginger, turmeric, coriander, cumin, celery, fennel, fenugreek, garlic, nutmeg and mace, curry powder, spice oils and oleoresins.

Spices producing states in India are Madhya Pradesh, Rajasthan, Gujrat, Andhra Pradesh, Telangana, Karnataka, Maharashtra, Assam, Orissa, Uttar Pradesh, West Bengal, Tamil Nadu, and Kerala.

II. OBJECTIVES

Analysis of growth of spice production in India during 2013-21.

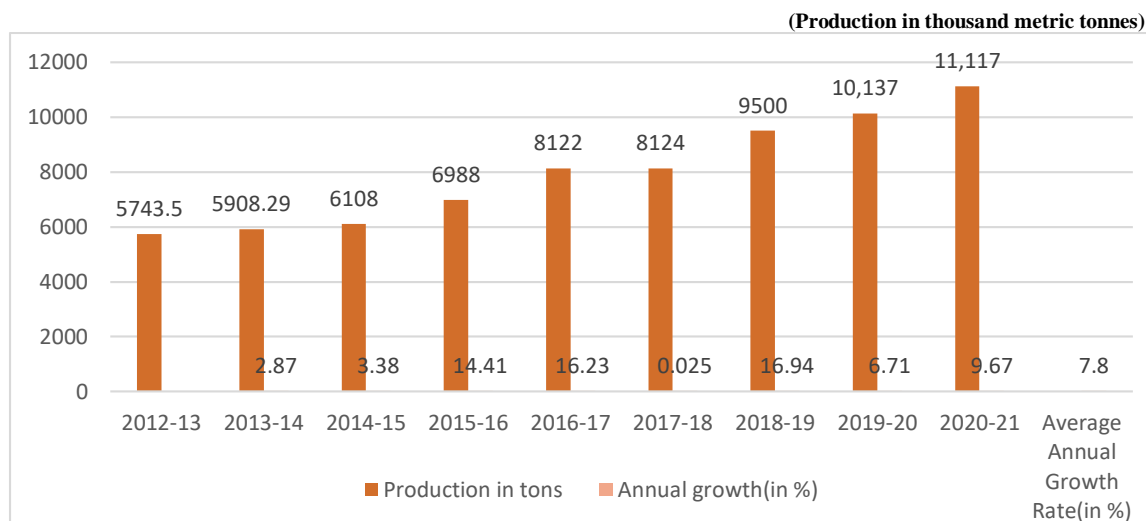
METHODOLOGY

The study includes of production of spices in India. The secondary data collected from IBEF, Spices Board of India, Statista Research Department, and data also collected from some magazines, journals, books and internet. The data of spices production for 10 years from 2011 to 2021. Main spices producing states are Madhya Pradesh, Rajasthan, Gujrat, Andhra Pradesh, Telangana, Karnataka, Maharashtra, Orissa, Assam, Uttar Pradesh, West Bengal, Tamil Nādu, and Kerala etc. The collected data have been analysed by statistical methods, Annual growth and average annual growth analysis has used for finding conclusion.

Table-1.1. Spice Production in India from financial year 2013 to 2021.

(Production in thousand metric tonnes)			
Year	Production volume	Annual growth of production (in %)	Average annual growth (in %)
2012-13	5,743.5	-	70.235/9=7.80
2013-14	5,908.29	2.87	
2014-15	6,108	3.38	
2015-16	6,988	14.41	
2016-17	8,122	16.23	
2017-18	8124	0.025	
2018-19	9,500	16.94	
2019-20	10,137	6.71	
2020-21	11,117	9.67	

Sources: www. Statista.com, Production volume of spices India FY 2009-22 published by Statista Research Department, Jul 4, 2022.

Figure-1.1. Production of spices in India during 2013 to 2021

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The 1.1. table and figure shows the production of spices in India during 2013 to 2021. In the year 2021, India produced 11,117 thousand metric tons spices and growth rate was 9.67 percent while in the year 2013, India produced 5,743.5 or 5744 thousand metric ton with annual growth rate 2.87 percent and average annual growth rate was 7.8 percent. It was observed that in 2016 and 2019, production of spices was increased by 16.23 percent and 16.94 percent respectively.

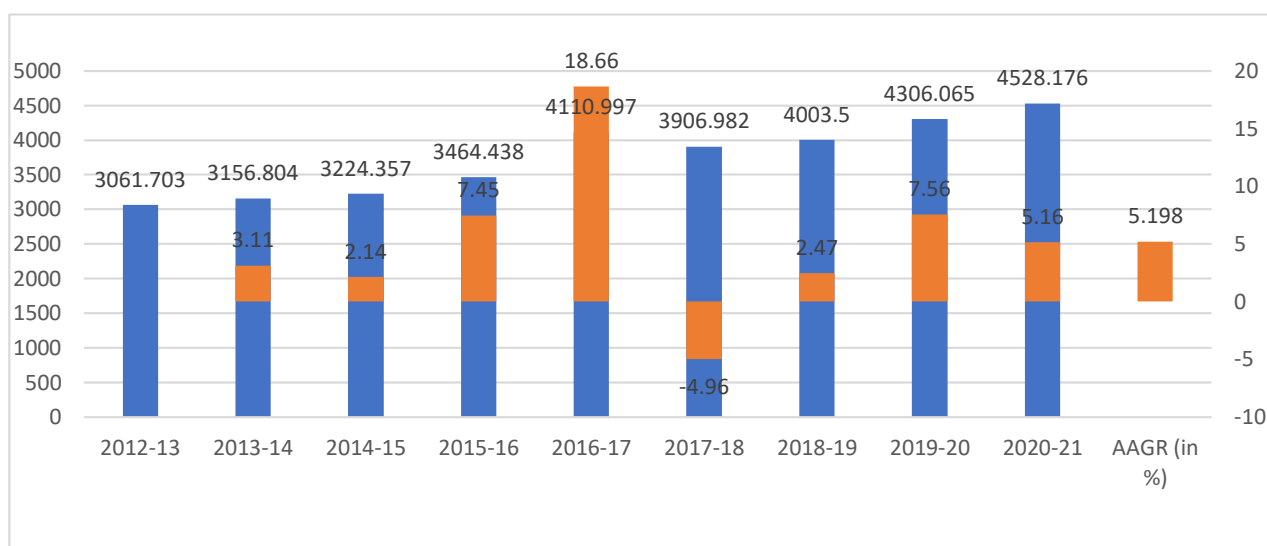
Table 1.2: Area used for Spice production in India during 2012-13 to 2020-21

(Area in '000' hectare)			
Year	Area in '000' hectare	Annual growth (in%)	Average annual growth rate
2012-13	3061.703	-	41.5881/8 = 5.5.1985 %
2013-14	3156.804	3.11	
2014-15	3224.357	2.14	
2015-16	3464.438	7.45	
2016-17	4110.997	18.66	
2017-18	3906.982	-4.96	
2018-19	4003.500	2.47	
2019-20	4306.065	7.56	
2020-21	4528.176	5.16	

Source: Directorate of Arecanut and Spices Development (DASD)

Figure-1.2: Spices Production Area in India during 2012-13 to 2020-21

(Area in '000' hectare)



Source: Directorate of Arecanut and Spices Development (DASD)

The 1.2. table and figure shows production of spices area wise in India during 2013 to 2021. According to table and figure, area of spices production has increased from 3061.703 ('000' hectare) in 2012-13 to 4,528.176 ('000' hectare) in 2020-21. It was observed that spice production area has shown growth by 18.66 percent in 2016-17 and 7.56 percent in 2019-20. Which is the highest growth rate. While in financial year 2017-18, it was observed that growth rate was negative (-4.96 percent). Overall average annual growth rate was 4.621 percent.

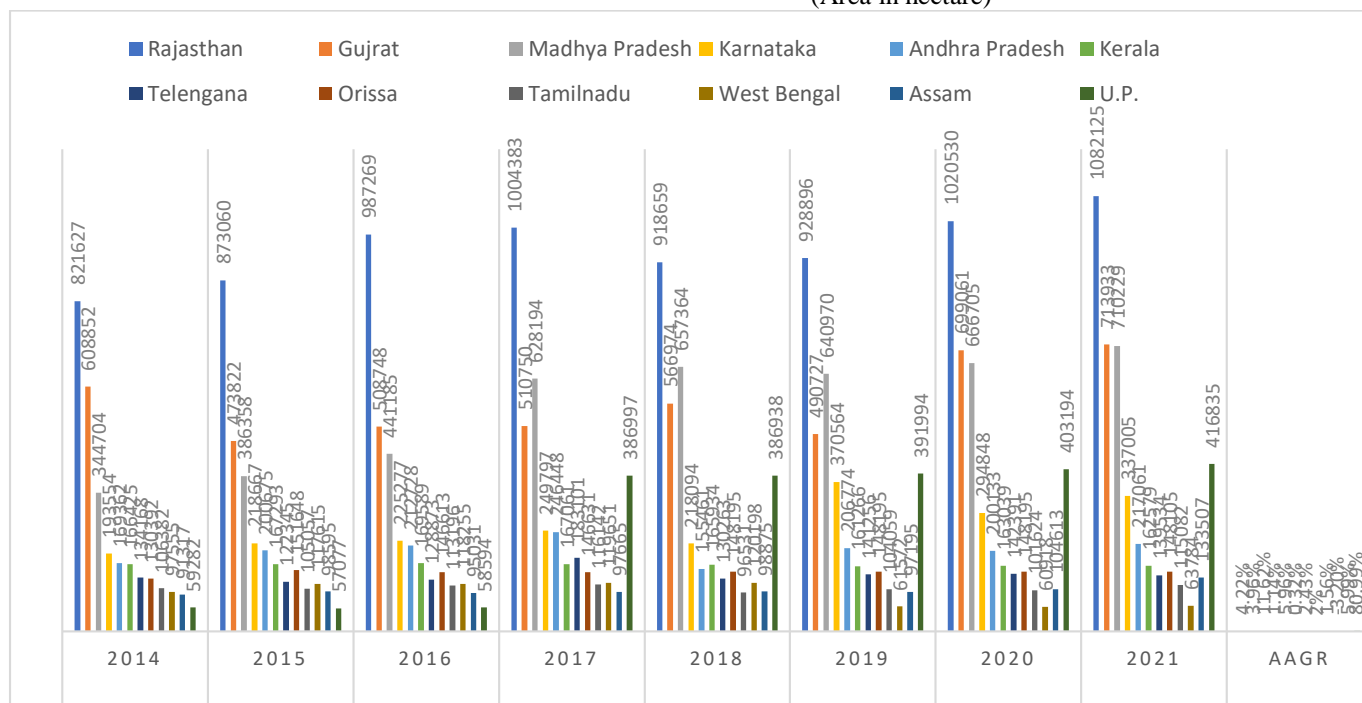
Table 1.3: Major State-wise Spices production area in India during 2014 to 2021.

(Area in hectare)

State	2014	2015	2016	2017	2018	2019	2020	2021	AAGR
Rajasthan	821627	873060	987269	1004383	918659	928896	1020530	1082125	4.22%
Gujrat	608852	473822	508748	510750	566974	490727	699061	713933	3.96%
Madhya Pradesh	344704	386358	441185	628194	657364	640970	666705	710229	11.62%
Karnataka	193554	218667	225277	249797	218094	370564	294848	337005	1.14%
Andhra Pradesh	169362	200675	212728	246448	155461	206774	200133	217061	5.96%
Kerala	166425	167293	169589	167061	165934	161266	163039	162579	-.324%
Telangana	134168	122345	128873	183101	130263	141256	142391	139534	2.43%
Orissa	130392	151648	146613	146631	148195	148195	148195	148105	2.0%
Tamil Nādu	106382	105057	113196	116142	96531	104059	101624	115082	1.56%
West Bengal	97,555	117615	118255	119651	120198	61572	60918	63784	-3.2%
Assam	91317	98595	95031	97665	98875	97195	104613	133507	5.99%
Uttar Pradesh	59,282	57,077	58,594	3,86,997	3,86,938	391994	403194	416835	80.99%

Source: Directorate of Arecanut and Spices Development (DASD)

Figure 1.3: Major state wise spices production area in India
(Area in hectare)



Source: Directorate of Arecanut and Spices Development (DASD)

The 1.3 table and figure show the state wise Spices production area in hectare. State wise production of spices have shown upward trend as per average annual growth rate during 2014 to 21. Rajasthan used the largest area for spices production in 2021 but average annual growth rate is low compare to Uttar Pradesh, Madhya Pradesh and Karnataka. As per table, it is observed that Uttar Pradesh, Madhya Pradesh and Assam have shown the highest average annual growth rate 80.99 percent, 11.62 percent and 5.99 percent respectively. Spices production area have also increased from 59,282 hectare to 4,16,835 hectare in Uttar Pradesh, from 3,44,704 hectare to 7,10,229 hectare in Madhya Pradesh and from 91,317 hectare to 1,33,507 hectare in Assam. While West Bengal and Kerala have shown negative annual average growth rate -3.24 percent and -3.2 percent respectively.

Figure 1.4: Major state wise production of spices in tons during 2014-21
(Production in '000' Tons)

State	2014	2015	2016	2017	2018	2019	2020	2021 (3 rd Adv est.)	AAGR
Gujarat	1019.963	1014.470	1077.561	848.927	917.309	747.157	1009.930	1033.184	1.67
Annual growth (%)	-	-0.54	6.22	-21.22	8.05	-18.88	35.17	2.30	
Andhra Pradesh	775.817	918.018	766.155	1144.656	714.629	592.865	896.196	885.550	6.65
Annual growth (%)	-	18.33	-16.54	49.40	-37.57	-17.04	51.16	-1.22	
Madhya Pradesh	698.867	678.690	710.896	2945.094	3036.249	2970.690	3075.979	3308.784	46.88
Annual growth (%)	-	-2.89	4.75	314.28	3.1	-2.2	3.54	7.57	
Rajasthan	674.811	623.969	1055.222	1391.798	1144.716	1044.527	1058.914	1228.864	12.06
Annual growth (%)	-	-7.53	69.11	31.90	-17.75	-8.75	1.38	16.05	
Telangana	551.517	493.930	443.404	818.084	662.967	740.296	853.094	845.309	10.12
Annual growth (%)	-	-10.44	-10.23	84.50	-18.96	11.66	15.24	-0.91	
Maharashtra	341.275	420.714	371.712	213.446	224.391	196.962	388.042	424.134	9.75
Annual growth (%)	-	23.28	-11.65	-42.58	5.13	-12.24	97.01	9.30	
Karnataka	332.486	400.297	401.198	750.823	662.411	755.145	612.935	707.753	15.31
Annual growth (%)	-	20.40	0.23	87.15	-11.78	14	-18.83	15.47	
Orissa	303.132	296.717	285.684	287.017	297.260	297.260	297.260	294.448	-0.39
Annual growth (%)	-	-2.12	-3.72	0.47	3.57	0	0	-0.95	
Assam	229.523	321.020	267.868	284.979	297.024	300.242	331.009	337.863	6.76
Annual growth (%)	-	39.86	-16.56	6.39	4.23	1.08	10.25	2.07	
Uttar Pradesh	209.243	230.062	217.672	281.008	248.726	286.684	266.181	278.686	5.0
Annual growth (%)	-	9.95	-5.39	29.1	-11.49	15.26	-7.15	4.7	
West Bengal	207.720	323.760	329.889	334.435	343.652	251.846	253.060	253.866	5.14
Annual growth (%)	-	55.86	1.89	1.38	2.76	-26.71	0.48	0.31	
Tamil Nadu	187.317	196.127	202.532	213.588	154.960	171.948	188.403	182.217	0.46
Annual growth (%)	-	4.7	3.3	5.46	-27.45	10.96	9.57	-3.3	

Source: Directorate of Arecanut and Spices Development (DASD)

Figure 1.4: Major state wise production of spices in tons during 2014-21

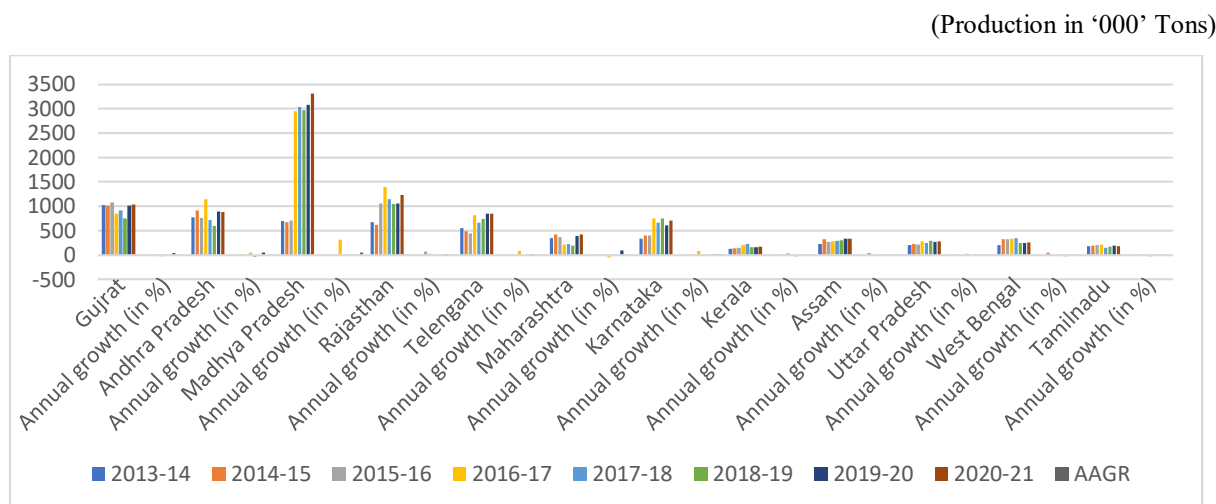


Table and figure 1.4 shows spices production in various state of India during 2013-14 to 2020-21. It is observed that spices production has increased in some state like Madhya Pradesh, Rajasthan, Gujrat, Andhra Pradesh, Telangana, Karnataka, Maharashtra, Assam, Orissa and Uttar Pradesh. According to table and figure, Madhya Pradesh is the largest producer of spices in 2020-21. On the basis of Average annual growth rate, production of spices in Madhya Pradesh has shown the highest 46.88 percent. Production of spices in Madhya Pradesh increased from 7,10,896 tons in 2016 to 29,45,094 tons in 2017. Which is shown 314.28 percent annual growth. On the basis of Average annual growth rate, top five spices producing states are Madhya Pradesh (46.88%), Karnataka (15.31%), Rajasthan (12.06%), Telangana (10.12%) and Maharashtra (9.75%). While on the production of spices, name of top five spices producing states are Madhya Pradesh (33,08,784 tons), Rajasthan (12,28,864 tons), Gujrat (10,33,184 tons), Andhra Pradesh (8,85,550 tons), and Telangana (845,309 tons) etc.

CONCLUSION

Average annual growth method has been used in the study to analyze spice production in India during 2013 to 2021. India contributes 79 percent of global spices production. In the financial year 2020-21, the production of Indian spices was valued at around 19 billion US dollars, which is much higher than what it was in financial year 2019-20.

India is the largest spice producers in the world.

According to the International Organization for Standardization (ISO), Indian spices occupied an 82.43% appreciating area in the production of the global spices market as India holds 75 kinds of spices out of a total 109 global spices. Spices producing states in India are Madhya Pradesh, Rajasthan, Gujrat, Andhra Pradesh, Telangana, Karnataka, Maharashtra, Assam, Orissa, Uttar Pradesh, West Bengal, Tamil Nadu, and Kerala. Percentage of spices production area has increased in Uttar Pradesh (80.99%), Madhya Pradesh (11.62%), Assam (5.99%) Andhra Pradesh (5.96%), and Rajasthan (4.22%).

while on the basis of production, top five states in India are Madhya Pradesh (33,08,784 tons), Rajasthan (12,28,864 tons), Gujrat (10,33,184 tons), Andhra Pradesh (8,85,550) and Telangana (845,309 tons). Some state like Gujrat, Orissa and Tamil Nādu have shown negative annual growth while some state like Madhya Pradesh, Uttar Pradesh, Telangana have shown positive annual growth and average annual growth. Main reason is low productivity of spices in some states.

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