

Trends in Production, Price Fluctuations of Ginger in Telangana and Five Major Ginger Producing States in India

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ABSTRACT: Ginger rhizome is one of the major spices grown and consumed in India. India is the leading country in production and area of ginger having a share of 43.1 and 43.6 per cent in the world. The present study was carried out considering Telangana as the study area. Though the farmers in Telangana are very much interested in cultivating ginger and are adopting it, they are discouraged by high costs of production and huge price fluctuations due to which farmers could not get expected returns. So the present study was conducted in Telangana along with five major ginger producing states in India for a period of 10 years from 2011 to 2020 and analyzed the trends in production and price fluctuations by using CAGR and percentages tools. The study revealed that there was a positive per cent increase in the production of ginger in all the considered states but compared to other states Telangana showed less growth rate (CAGR of 2.19 per cent) in production as the area and productivity under ginger cultivation remained almost the same over the years. In case of trends in price fluctuations in all the states there is a positive per cent increase in price of ginger over the study period even though there were huge price fluctuations due to various factors year on year.

Keywords: Ginger production, price fluctuations, Compound Annual Growth Rate, Trends, Ginger prices, Telangana.

INTRODUCTION

India is aptly referred to as the "Spice Bowl of the World" for production of several species (IIFPT, 2018). Among all the spices grown in India ginger is one of the major spices. Bijaya and Bag (2018) (*Zingiber officinale*) is a flowering plant whose rhizome, ginger root or ginger, is widely used as a spice and a folk medicine (NCCIH, 2019). It is an herbaceous perennial native of South-East Asia.

Globally, ginger is used in different forms such as raw ginger, dry ginger, bleached dry ginger, ginger powder, ginger oil, ginger oleoresin, ginger candy, etc. As people are becoming more health conscious, the use of ginger and ginger products is increasing among the households. The global ginger and ginger processing market was valued at US\$ 2.16 billion in 2018 and it is expected to reach US\$ 3.42 billion by 2023, increasing at a CAGR of 6.6 per cent (Center for Advanced Trade

Research, 2020). China is the largest exporter of ginger in the world, with exports of over 50 per cent of ginger followed by Netherlands, Thailand, Peru and India (Center for Advanced Trade Research, 2020).

India is the largest producer of ginger having a share of 40 per cent in world ginger production which has a total production of 2225 TMT followed by Nigeria with 13.84 per cent, China with 11.8 per cent and Indonesia with 5.53 per cent. India is also leading in the area of ginger with 40.1 per cent followed by Nigeria with 17 per cent, China with 12.07 per cent and Nepal with 4.29 per cent in the year 2020-21 (FAO, 2021).

Maran, Kuruppampadi, Ernad, Wayanad, Himachal and Nadia are some of the indigenous cultivars of ginger and 'Rio - de - Janeiro' is the exotic cultivar, which is popular among ginger farmers in India (Center for E-learning, KAU, 2019).

Ginger cultivation in Telangana is seen majorly in

Sangareddy, Vikarabad, Jangaon, Adilabad, and Warangal districts. The highest percentage share in total production of ginger in Telangana in 2020-21 was observed in Sangareddy district with 96.26 per cent with 15308 tonnes of production, followed by Vikarabad with 2.95 per cent, Jangaon with 0.62 per cent, Adilabad with 0.13 per cent and Warangal with 0.04 per cent (Directorate of Economics and Statistics, 2021).

Though farmers in these districts are very much interested in cultivating ginger and are adopting it, they are discouraged by huge price fluctuations and decreasing price trends due to which farmers could not get expected returns. So the present study was conducted to analyse the trends in production and price fluctuations of ginger in Telangana and five major ginger producing states and trends in exports from India.

MATERIALS AND METHODS

The present study was carried out in the year 2021-22, considering Telangana and five major ginger producing states in India as the study area. Based on the quantity of ginger production in the year 2020-21 the highest ginger producing states are Karnataka, Madhya Pradesh, Assam, West Bengal were selected for the study apart from Telangana, whereas Kerala was selected as it was once one of the nation's traditional ginger-producing states which used to contribute about

26.3 per cent of total ginger production of India.

The study was conducted by compiling the secondary data for a 10 year period of 2011 to 2020 about production and prices of ginger from indiastat website and National Horticulture Board respectively. The same data was analysed for trends in production and price fluctuations by using simple descriptive statistics, Compound Annual Growth Rate (CAGR) and percentages.

Compound Annual Growth Rate (CAGR): Compound Annual Growth Rate (CAGR) was used to analyse the changes in production and prices of ginger in five major ginger growing states of India and Telangana over a 10 year period from 2011 to 2020.

$$CAGR = \left(\frac{\text{Final value}}{\text{Starting value}} \right)^{1/N} - 1$$

Where,

N= number of years (1,2,3,...)

RESULTS AND DISCUSSIONS

Trends in production of ginger in Telangana and five major ginger producing states in India. The trends in production of ginger for the period 2011-2020 in Telangana and major ginger producing states such as Karnataka, Madhya Pradesh, Assam, West Bengal and Kerala has been represented in Fig. 1.

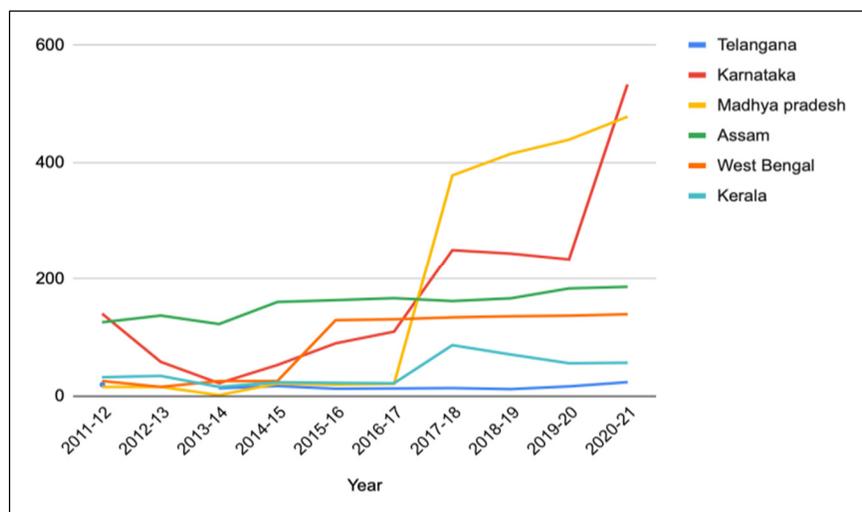


Fig. 1. Trends in ginger Production in Telangana and Five Major Ginger Producing States in India for 10 Years.

Trends in production of ginger in Telangana. In Telangana the Compound Annual Growth rate of ginger production during the period 2011-21 was 2.19. Over the years Telangana also showed increased CAGR in production but at a very low rate. During the period 2011-13 the production decreased by 33 per cent as there was a decrease in area by 19 per cent. However during 2014-15 the production increased by 30 per cent which can be attributed to the high price for ginger in

the previous year. During the period 2015-2018 the production has increased in a few years whereas it has decreased in a few years. An increasing trend in production was noticed in the years 2019 and 2020.

Trends in production of ginger in five major ginger producing states. In Karnataka over the study period the production of ginger increased significantly due to involvement of migrants from Kerala in cultivation of ginger. During the period 2011-2020 Karnataka

recorded a CAGR of 16.03 in ginger production Karnataka was in first position in terms of ginger production in India for the year 2020-21.

Madhya Pradesh, the second most leading state in ginger production, recorded the highest CAGR of 46.89 for the period 2011-21 among the major ginger producing states in India. During the period 2011-13 the production and area were very less but the production started to increase from 2014 along with increase in area and productivity with the adoption of good cultivation practices.

The CAGR of production in Kerala for the period 2011-20 is 6.61. In Kerala, a downward trend in the acreage of ginger was noticed from 1999–2000 thereby a drastic decrease was seen in 2009–2010 (Shroff, AERC Report, 2020). The major cause of decrease in area was due to increased cultivation costs making ginger cultivation unprofitable and also due to risks posed by prevalence of diseases like root wilt due to which the ginger farmers moved to the neighboring state of Karnataka for ginger cultivation, where land was available for lease and labour was fairly priced.

West Bengal and Assam, the eastern states of India also showed an increased CAGR of ginger production i.e., 21.00 per cent and 4.47 per cent respectively during the study period 2011-2020. The above results are consistent with a recent study conducted by Shroff (2020) analyzing the trends in area and production and productivity of ginger across the states in India from 1990 to 2019, the study found that ginger production has been varying along with area and productivity.

Trends in year wise average price fluctuations of ginger in Telangana and five major ginger producing states in India. The trend analysis of average wholesale prices of ginger in major markets of Telangana, Madhya Pradesh, Karnataka, West Bengal, Kerala and Assam helps us to understand and compare the price fluctuations over these years in Telangana and other five ginger producing states.

In the year 2013-14 it is noticed that in all states there was a huge per cent increase in price from the previous year 2012-13. In Madhya Pradesh the price increased by 240 per cent, whereas in Karnataka the price increased by 210 per cent, in Kerala the price increased by around 189 per cent, in West Bengal the per cent increase in price was 187 per cent and in Assam it increased by 94 per cent. From the data presented in Figure 1, it can be noticed that the production decreased in all the five states in 2013-14 due to decrease in supply, increase in prices can be noticed.

In Telangana the average highest change in price for ginger was registered in 2020-21 year i.e., 7424.6 Rs/q and the least change in average price was registered in 2012-13 year i.e., 2672.9 Rs/q. The per cent increase of ginger prices over the period from 2011-12 to 2020-21 is 7.90 per cent.

In Karnataka, the per cent increase in prices is around 9.22 per cent over the period 2011-2020. In Madhya Pradesh the per cent increase in prices is 14.97 per cent in ginger price over the period 2011-2020 and had year to year price variations. Whereas in Kerala the per cent increase of ginger prices over the period from 2011-12 to 2020-21 in this state was 10.62 per cent even though there was a huge increase and decline in prices year to year.

In Assam the per cent increase in prices from 2011-12 to 2020-21 is highest for Assam i.e., 19.02 per cent which is indicating an increase in price received by farmers but there was also huge price fluctuations. And in West Bengal the per cent increase in prices from 2011 to 2020 is 7.94 per cent but there were price fluctuations, even in 2020-21 the negative per cent change in price was 47 per cent it may be due to increase in supply in that state. The results were on par with the results obtained by Shroff (2020) reported the increase in supply led to decrease in ginger price and there are also huge fluctuations in ginger prices in AERC Report, 2020.

Table 1: Trends in year wise average price fluctuations of ginger in Telangana and five major ginger producing states in India.

Sr. No.	Year	Telangana		Karnataka		Assam		West Bengal		Madhya Pradesh		Kerala	
		Avg price Rs/q	Per cent change										
1.	2011 - 12	3745	-	1709	-	2852	-	2445	-	2242	-	2505	-
2.	2012 - 13	2673	-29	2054	20	2994	5	2410	-1	1957	-13	2809	12
3.	2013 - 14	4649	74	6372	210	5796	94	6908	187	6659	240	8129	189
4.	2014 - 15	6159	32	5994	-6	7877	36	7362	7	6683	0.3	8138	0.1
5.	2015 - 16	4879	-21	3829	-36	7877	0	4865	-34	4593	-31	5494	-32
6.	2016 - 17	4078	-16	3067	-20	4362	-45	3730	-23	2624	-43	4792	-13
7.	2017 - 18	3106	-24	2687	-12	3987	-9	3320	-11	2120	-19	4298	-10
8.	2018 - 19	3143	1	3581	33	6042	52	5766	74	4157	96	5692	32
9.	2019 - 20	3228	3	4896	37	11578	92	9232	60	7199	73	8880	56
10.	2020 - 21	7425	130	3778	-23	13669	18	4866	-47	7868	9	6215	-30
	CAGR	7.90		9.22		19.02		7.94		14.97		10.62	

(Source: National Horticulture Board, 2022)

CONCLUSIONS

From the present study it can be noticed that the increase in production of ginger during the period 2011-2020 in Telangana was not even half of the increase in production in Assam, which had the lowest CAGR among the five major ginger producing states in India. Compared to other states Telangana showed less growth rate in production as the area and productivity under ginger cultivation remained almost the same over the years. Whereas even though there was a positive per cent increase in prices over the study period in all the considered states, there are huge per cent positive and negative changes in ginger prices due to various factors.

FUTURE SCOPE

Ginger is one of the important and most consumed spices whose demand will keep on increasing globally due to its health benefits and its use as a spice. Trends of price fluctuations and production of ginger in Telangana and five major ginger producing states in India are analyzed in this study, the same may be adapted for analyzing the trends in production and price fluctuations in the remaining states of India and a comprehensive study can be made throughout India.

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Conflict of Interest. None.

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