

# TRENDS & PATTERN OF HORTICULTURE CROPS WITH SPECIAL REFERENCE TO TOMATO AND CITRUS FRUITS

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## Abstract

Agriculture sector plays a major role in the economy of Haryana because it is the largest contributor of food grains, fruits, and vegetables in India as the state contributes 15 per cent of the overall agricultural production. The foremost crops produced by Haryana are rice, wheat, sugarcane, cotton, oilseeds, pearl millet, gram, barley etc. On the other hand, major fruit productions are Mango, Guava, Grapes, Chiku, Litchi, Peach, Pear, Plum, Water Melon, Musk Melon, etc. The major vegetable productions are Potato, Onion, Tomato, Radish, Carrot, Cabbage, Cauli Flower, Capsicum, Bhindi, Brinjal, Arbi, Peas, etc. The objective of the study is to analyze the area of production with respect to the quantity production of tomato and citrus fruits produced in the state of Haryana. The study is based on time-series method where the data is collected for the period of 2008-09 to 2018-19. The data is analyzed by using simple statistical tools and graphical representation. The other additional statistical methods used such as percentage method, average method, compound annual growth rate, etc. The horticulture crop comprises of cultivation of vegetables, fruits, flowers, and spices. But Vegetables and Fruits comprise of higher percentage and area of production in respect of

horticulture crops from Haryana. The area allocation for the cultivation of fruits and vegetables has been increased manifold in last one decade with respect to the total area of production and productivity.

## Paper Identification



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## INTRODUCTION

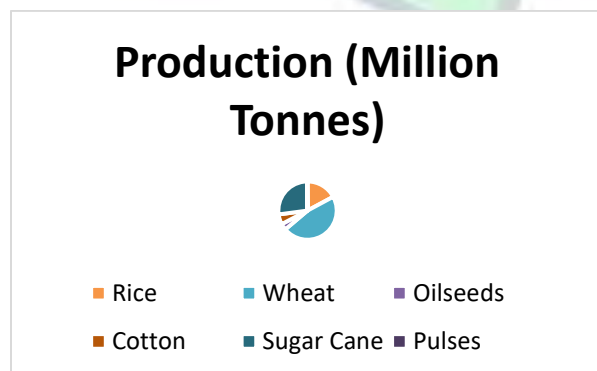
Agriculture is one of the prominent sectors of income generation for people in Haryana because the livelihoods of majority of people are dependent upon agriculture and allied activities directly or indirectly. The agriculture activity is a top priority in the state for last two decades and the agriculture sector of Haryana is also benefitted because of strong infrastructure facilities such as metalled roads, electrification in rural areas, networking of canals, development of market yards etc. These facilities are complimenting the research activities in agriculture and developing an

excellent extension network for disseminating the information for improving the agriculture practices for farmers in order to provide higher yields and showing tangible results. Haryana comes at 22<sup>nd</sup> place in fruits and 11<sup>th</sup> place in vegetables production in country. Haryana is also known for producing fruits in large quantities in India. Its position is 22<sup>nd</sup> in entire India where the state makes total production of 737.82 thousand MT of fruits from the total area of 60.92 thousand hectares of cultivation area. As far as production of vegetables is concerned then the state is ranked at 11<sup>th</sup> position by producing 61.57 lakh MT of vegetables from the cultivation area of 410.74 thousand hectares.

Haryana state is blessed with food surplus because it is the largest contributor of food grains, fruits, and vegetables in India as the state contributes to 15 per cent of the overall agricultural production. The foremost crops produced by Haryana are Rice, wheat, sugarcane, cotton, oilseeds, pearl millet, gram, barley etc. On the other hand, major fruit productions are Mango, Guava, Citrus fruits, Chiku, Litchi, Peach, Pear, Plum, Water Melon, Musk Melon, etc. The major vegetable productions are Potato, Onion, Tomato, Radish, Carrot, Cabbage, Cauli Flower, Capsicum, Bhindi, Brinjal, Arbi, Peas, etc

#### Area and Production of Horticulture Crops

Graph- Production of Principal Crops during 2015-16



#### Area and Production of Horticulture Crops

As far as horticulture crops are considered then 4.90 lakh hectare area is used for its production which comprises 7.58 per cent of the entire gross cropped area of Haryana state. Horticulture crop production in Haryana is approximately 70.50 lakh MT during the year 2015-16.

#### REVIEW OF LITERATURE

**Sharma & Singh (2019)** mentioned that the farmers are using high-tech production of horticulture crops under guarded conditions as a major expansion in recent times. The protected method of cultivation is capital intensive and it has also the ability to improve the productivity of fruits and vegetables in a different manner and it also improves the quality of production of horticulture in a successful manner. The protected cultivation would also lead to virus-free cultivation because it provides the insect-proof net house at a commercial scale. The protected method of horticulture cultivation would boost the production of fruits and vegetables for the state and it would also help in diversifying the agriculture of the Haryana. The considerable changes in horticulture crops and their diversification can be notified in terms of favourable price regime, upgraded technology and also increase in productivity of the crops, financial support, and even developed infrastructure facilities.

#### OBJECTIVE OF THE STUDY

- To analyze the area of production with respect to the quantity production of tomato produced in Haryana region.
- To analyze the area of production with respect to the quantity production of citrus fruits produced in Haryana region

## DATA COLLECTION AND RESEARCH METHODOLOGY

The data collected for the study is based on time-series method where the data is collected for the period of 2008-09 to 2018-19. The data is analyzed by using simple statistical tools and graphical representation. The other additional statistical methods such as percentage method, average method, compound annual growth rate, etc. would also be used in case of requirement.

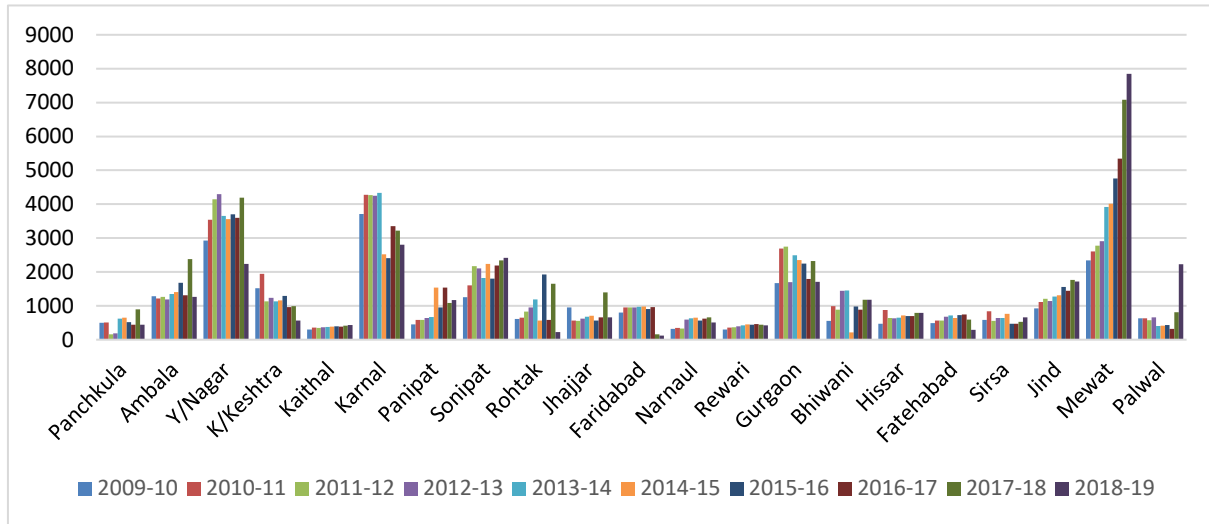
The current study is based on secondary data collected from reliable sources such as Horticulture.com, Economic survey of India, Centre for Monitoring Indian economy, Haryana Statistical Abstract Affairs book, and other suitable and reliable government sources.

## DATA ANALYSIS

**Table - Tomato Crop of Haryana during the Year 2009-10 to 2018-19 (Area in Hectares)**

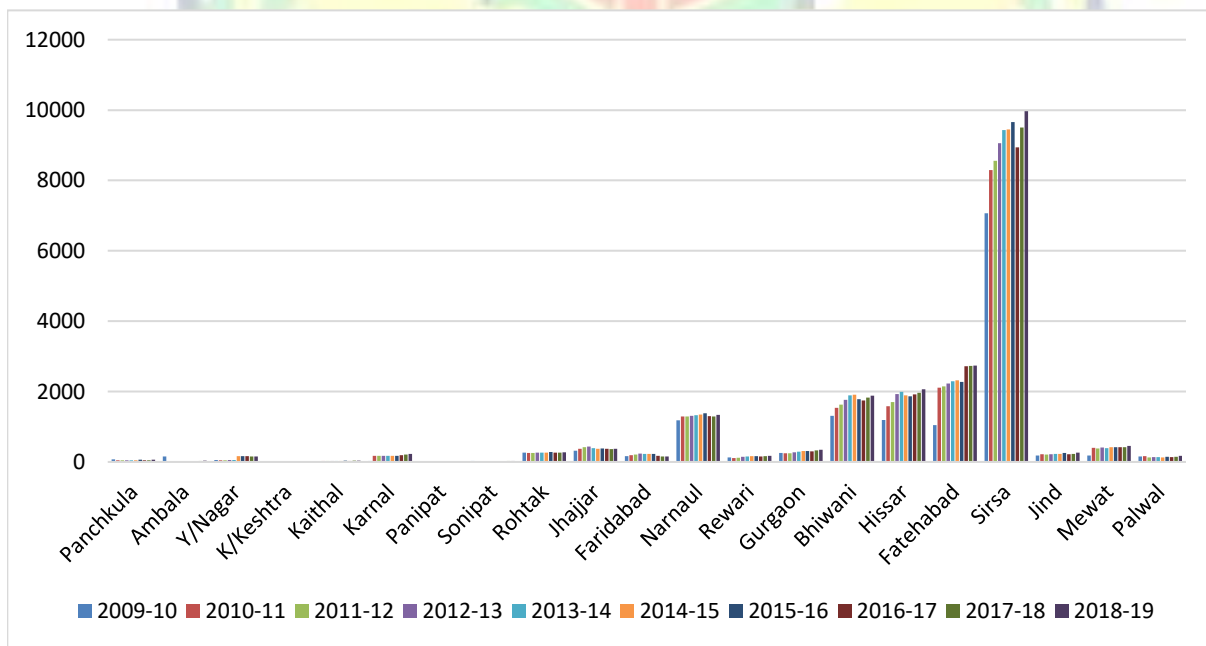
District	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Panchkula	500	510	158	187	623	655	518	440	895	440
Ambala	1285	1220	1262	1190	1351	1410	1679	1312	2380	1266
Y/Nagar	2930	3540	4145	4297	3650	3560	3699.5	3600	4191	2240
K/Keshtra	1515	1945	1130	1240	1131	1160	1290	960	990	570
Kaithal	300	360	350	370	375	390	399	390	418	429
Karnal	3714	4280	4270	4250	4332	2520	2409	3350	3220	2800
Panipat	450	580	580	645	670	1535	954	1535	1086	1167
Sonipat	1255	1600	2170	2105	1820	2240	1806	2186	2340	2420
Rohtak	615	650	830	950	1190	562	1925	587	1650	225
Jhajjar	955	570	560	620	675	703	565	660	1393	663
Faridabad	800	950	950	950	970	980	905	959	161	125
Narnaul	320	350	330	595	633	655	568	622	660	505
Rewari	305	355	367	396	425	450	439	457	445	419
Gurgaon	1674	2695	2750	1695	2495	2350	2248	1792	2325	1710
Bhiwani	552	990	890	1445	1456	215	977	889	1175	1176
Hissar	470	880	640	630	655	720	699	695	789	789
Fatehabad	490	565	565	680	720	645	728	745	598	290
Sirsa	586	836	556	645	640	760	472	470	528	660
Jind	920	1110	1212	1145	1276	1315	1555	1441	1761	1713
Mewat	2340	2610	2780	2910	3920	4010	4759	5340	7085	7850
Palwal	630	629	575	660	408	410	433	320	815	2224

**Graph - Tomato Crop of Haryana during the Year 2009-10 to 2018-19 (Area in Hectares)**



Tomato is one of the major vegetable crops from Haryana. The result in form of tabular and graphical presentation indicates that the major districts of Tomato crops are from Yamuna Nagar, Karnal, and Mewat. The area allocated for tomato production has been significantly increased in Mewat during the last 10 years whereas the area has been decreased in Karnal, Ambala, Faridabad, etc.

**Graph - Citrus Crop of Haryana during the Year 2009-10 to 2018-19 (Area in Hectares)**



Citrus fruits refer to Oranges and Sweet Lime which are also being cultivated in Haryana but there are very few areas allocated for Citrus fruits. The major citrus areas allocated for citrus fruits are Narnaul, Bhiwani, Hissar, Fatehabad, and Sirsa. In fact, the maximum area is allocated in the Sirsa district.



**Table - Citrus Crop of Haryana during the Year 2009-10 to 2018-19 (Area in Hectares)**

District	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Panchkula	75	46	44	45	45	46	61	46	43	64
Ambala	154	10	10	10	10	10	10	10	32	33
Y/Nagar	52	48	48	58	57	163	163	163	156	156
K/Keshtra	7	10	10	10	10	10	12	12	11	16
Kaithal	15	31	26	26	26	27	36	25	33	33
Karnal	30	175	175	175	174	174	174	194	210	225
Panipat	12	14	12	12	13	11	9	11	16	17
Sonipat	30	21	21	21	21	22	23	22	25	30
Rohtak	267	259	260	264	264	266	281	264	269	278
Jhajjar	322	375	418	440	392	373	385	374	364	372
Faridabad	166	194	208	236	233	227	230	178	158	160
Narnaul	1186	1295	1295	1313	1327	1349	1384	1305	1296	1335
Rewari	126	114	122	151	157	165	169	160	167	176
Gurgaon	253	251	250	272	291	306	310	301	328	344
Bhiwani	1314	1534	1628	1764	1889	1911	1788	1749	1828	1885
Hissar	1191	1579	1701	1930	1989	1893	1863	1918	1964	2061
Fatehabad	1048	2111	2144	2225	2294	2323	2276	2717	2732	2739
Sirsa	7064	8299	8562	9062	9432	9450	9659	8939	9501	9972
Jind	182	221	213	222	232	233	253	218	231	265
Mewat	187	403	386	406	393	415	416	418	421	452
Palwal	156	161	131	133	133	125	150	141	146	176

## CONCLUSION

The major findings of the study are that the horticulture crop comprises of cultivation of vegetables, fruits, flowers, and spices. But Vegetables and Fruits comprise of higher percentage and area of production in all of the other commodities in the category of horticulture crops from Haryana. The area allocation for the cultivation of fruits and vegetables has been increased manifold in last one decade with respect to the total area of production and productivity. The study further indicates that while studying the increase in the cultivation of fruits and vegetables in the Haryana region with respect to the increase in area

allocation for cultivation then there is a positive outcome in terms of productivity enhancement. The study clearly shows that the Haryana region trying to focuses on the cultivation of fruits and vegetables because the state is enjoying diverse agro-climatic condition, exclusive soil quality and also great potential for fruit and vegetable crops.

The ultimate result indicates an overall increase in the production of vegetables and fruits in the last decade. The table and graph indicate the area allocated for the production of vegetables and fruits and the area allocation is directly related to the total production and productivity of vegetables and fruits.

However, there is very less increase in the area for fruits which indicate that there is huge scope left for further increase in total production and productivity.

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