

Trends And Extent Of Vegetable Production In India

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Abstract: India is a second largest producer of vegetables after China. Fruits and vegetables are essential parts of our diets. Among all horticultural crops, vegetables recommended highest by ICMR. Therefore, vegetables occupy essential concern regarding production and productivity. The per capita recommended vegetables per day is 300 g per person per day (ICMR). Therefore, the vegetables require extra emphasis to improve production and productivity of it to feed the second largest population in the world. The data has been collected from various secondary sources. To study the trends of area and production of major vegetables has been collected from 2001-2018. To study the performance of vegetables, productivity has been calculated. Among all the vegetables, potato, onion, tomato and brinjal contribute maximum area and production. The vegetables are restricting to particular geographical condition so there is a need to increase the crop diversification to enhance the productivity, nutrition and food security.

1. INTRODUCTION

In agriculture, horticulture comprises major share in India. Agriculture contributes about 15% in National GDP and horticulture alone shares about 35% of total agriculture GDP (ChitraMani & Kumar, P. (2020); Sharma, M., & Kumar, P. (2020); Chand, J., & Kumar, P. (2020); Naik, M., & Kumar, P. (2020); Kumar, P., & Naik, M. (2020); Kumar, P., & Dwivedi, P. (2020); Devi, P., & Kumar, P. (2020); Kumari, P., & Kumar, P. (2020); Kaur, S., & Kumar, P. (2020); Devi, P., & Kumar, P. (2020); Sharma, K., & Kumar, P. (2020); Kumar, S. B. P. (2020); Devi, P., & Kumar, P. (2020); Chand, J., & Kumar, P. (2020). Horticulture includes fruits, vegetables, flowers, spices, medicinal and aromatic crops. India is the second largest producer after China. The total area and production of vegetables are 10.2 mha and 184 mt respectively, (Anonymous 2018). Among all states, Uttar Pradesh placed at first rank followed by West Bengal, Bihar, etc in total vegetable production. Potato occupy first place in total production. The major vegetables are being grown in India, Cauliflower, cabbage, okra, brinjal, cucurbits, etc. Fruits and vegetables are essential parts of our diets. Among all horticultural crops, vegetables recommended highest by ICMR. Therefore, vegetables occupy essential concern regarding production and productivity. The per capita recommended vegetables per day is 300 g per person per day (ICMR). Therefore, the vegetables require extra emphasis to improve production and productivity of it to feed the second largest population in the world (Kumar, P. (2019); Kumar, D., Rameshwar, S. D., & Kumar, P. (2019); Dey, S. R., & Kumar, P. (2019); Kumar et al. (2019); Dey, S. R., & Kumar, P. (2019); Kumar, P., & Pathak, S. (2018); Kumar, P., & Dwivedi, P. (2018); Kumar, P., & Pathak, S. (2018); Kumar et al., 2018; Kumar, P., & Hemantaranjan, A. (2017); Dwivedi, P., & Prasann, K. (2016). Kumar, P. (2014); Kumar, P. (2013); Kumar et al. (2013); Prasann, K. (2012); Kumar et al. (2011); Kumar et al. (2014).

2. MATERIAL AND METHODS

The data has been collected from various secondary sources. To study the trends of area and production of major vegetables has been collected from 2001-2018. To study the

Table 1. Area, Production and Productivity of Vegetables

performance of vegetables, productivity has been calculated. The productivity of vegetables has been calculated as follows:

$$\text{Productivity} = \text{Production} / \text{area}$$

Productivity measures in terms of MT/Hectare.

To study the extent of vegetables grown in different states of India, the percentage share of area under vegetables has been calculated.

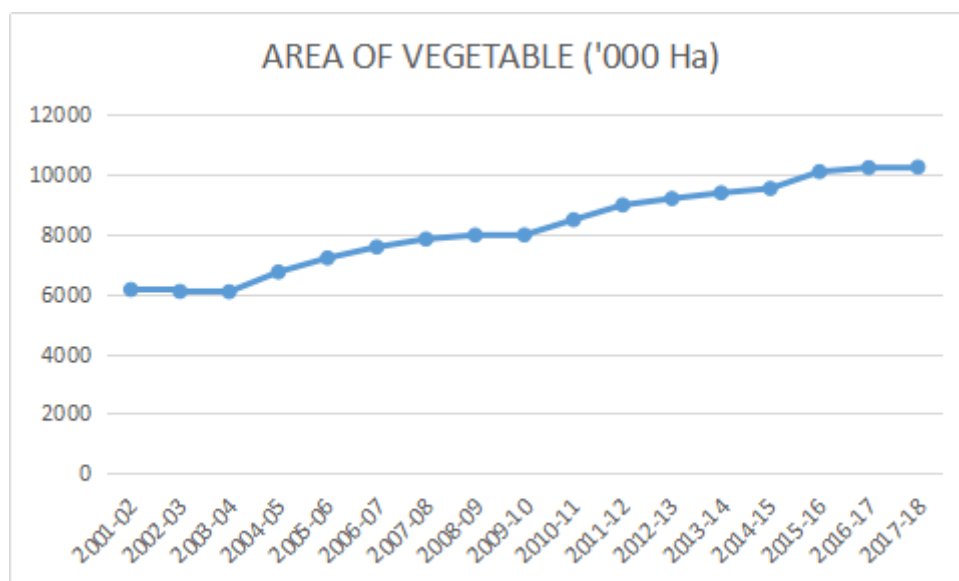
3. RESULT AND DISCUSSION

Area, Production and Productivity of Vegetables in India

In table 1, we can observe that the area under vegetable show an increasing trend except in 2002-03 and 2003-04. In 2002-03, comparatively less production was observed otherwise it shows increasing trend as well.

The productivity data shows a fluctuating result as depicted in figure 1.

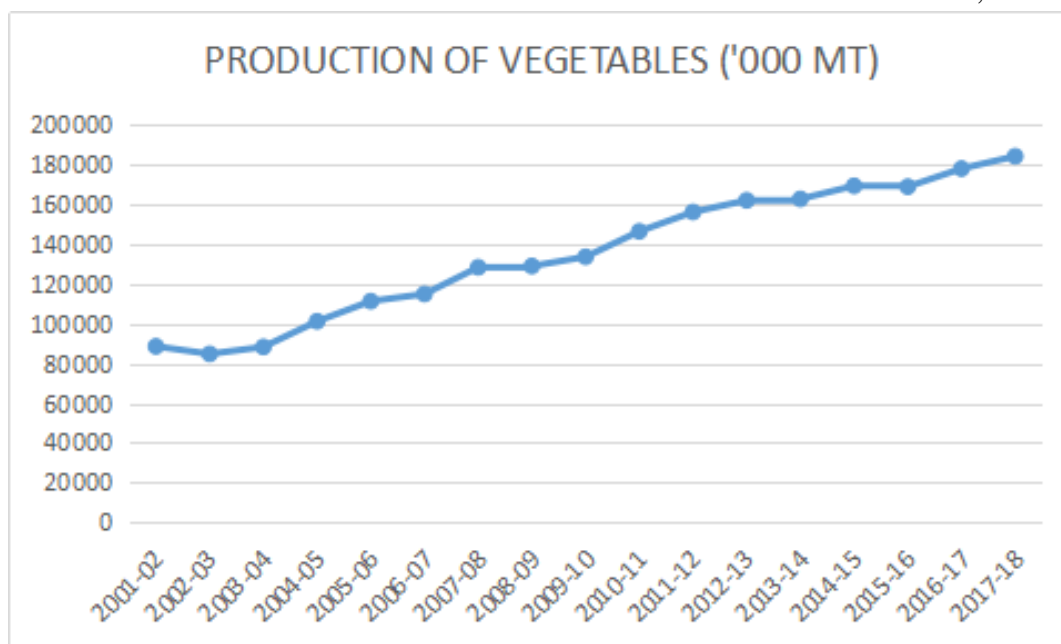
Figure 1. Trends of Area of Vegetables in India



From figure 1, we can observe that area under vegetable from 2001 till 2004 remains constant whereas from 2004-05 sudden increase was found which continues till 2017-18.

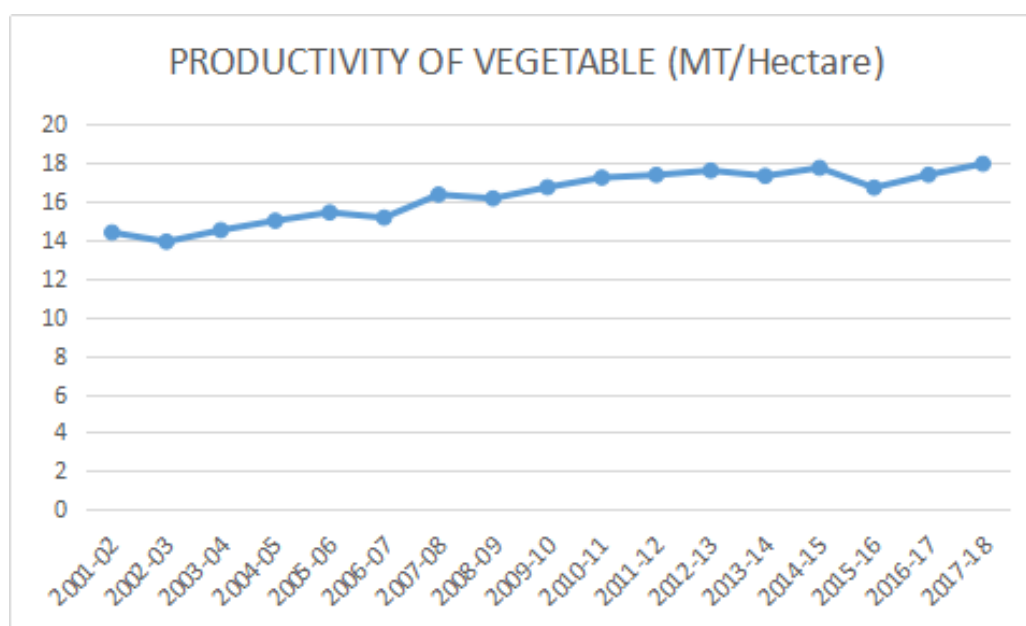
Year	A ('000 Ha)	P ('000 MT)	Pdy. (MT/Hectare)
2001-02	6156	88622	14.4
2002-03	6092	84815	13.92
2003-04	6082	88334	14.52
2004-05	6744	101246	15.01
2005-06	7213	111399	15.44
2006-07	7581	114993	15.17
2007-08	7848	128449	16.37
2008-09	7981	129077	16.17
2009-10	7985	133738	16.75
2010-11	8495	146554	17.25
2011-12	8989	156325	17.39
2012-13	9205	162187	17.62
2013-14	9396	162897	17.34
2014-15	9542	169478	17.76
2015-16	10106	169064	16.73
2016-17	10238	178172	17.4
2017-18	10259	184394	17.97

Figure 2. Trends of Production of Vegetables in India



The production trend of vegetable was depicted in figure 2. It shows a decline trend from 2001-02 to 2002-03 but regain it from 2003-04 and continuously showing positive trend till 2017-18.

Figure 3. Trends of Productivity of Vegetables in India

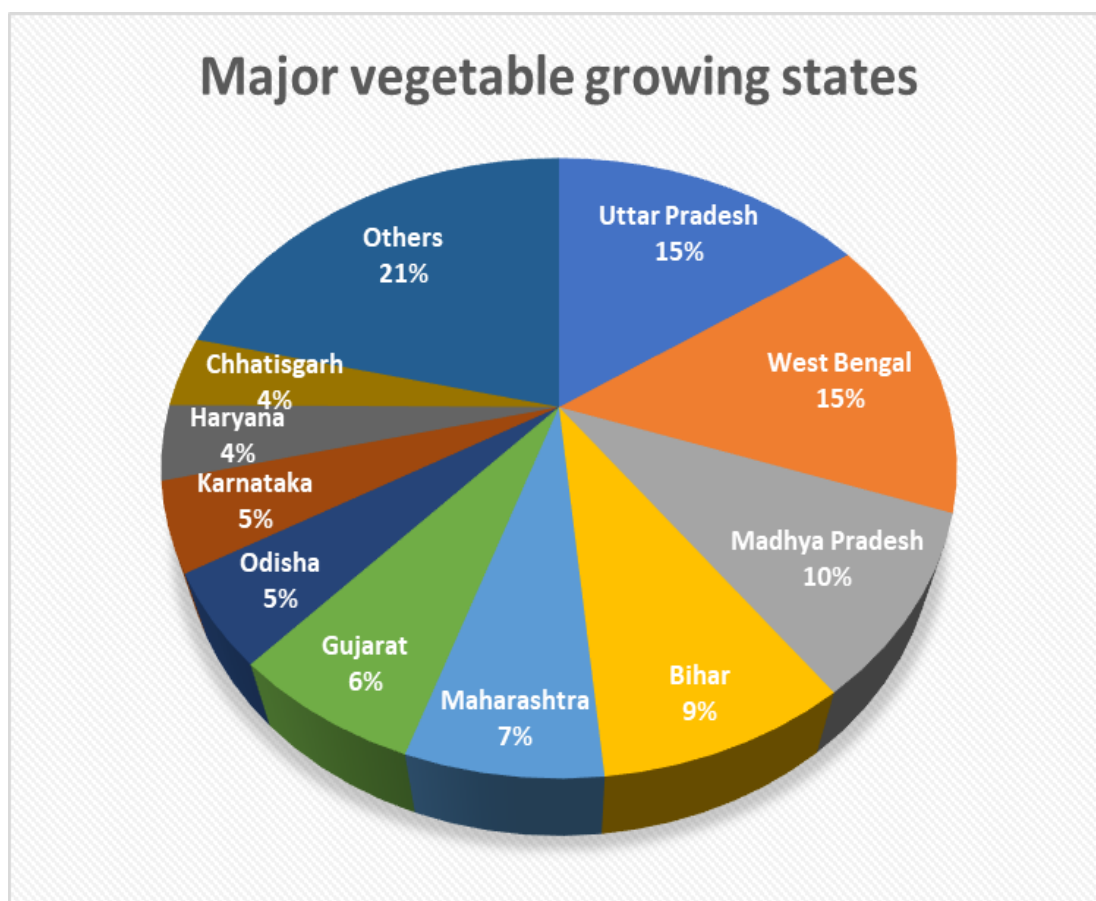


An irregular trend was observed in figure 3 depicting the productivity of vegetables. We observed downfall in the year 2002-03, 2006-07 and 2015-16, respectively.

Table 2. Major vegetable producing states

State	Share (%)
Uttar Pradesh	15.4

West Bengal	15
Madhya Pradesh	9.5
Bihar	8.6
Maharashtra	6.7
Gujarat	6.6
Odisha	4.8
Karnataka	4.6
Haryana	3.9
Chhatisgarh	3.7
Others	21.2



From table 2, we can observe that among the different states, Uttar Pradesh shares the highest percentage of area under vegetable followed by West Bengal and Madhya Pradesh.

Extent of area and production of major vegetables in India

Table 3. Area and Production of major vegetables

Crops	2017-18	
	Area ('000 ha)	Production ('000 MT)
Beans	228	2277

Bittergourd	97	1137
Bottlegourd	157	2683
Brinjal	730	12801
Cabbage	399	9037
Capsicum	24	326
Carrot	97	1648
Cauliflower	453	8668
Cucumber	82	1260
Chillies (Green)	309	3592
Elephant Foot Yam	30	774
Mushroom	198	487
Okra/Ladyfinger	509	6095
Onion	1285	23262
Parwal/Pointed gourd	20	310
Peas	540	5422
Potato	2142	51310
Radish	209	3061
Pumpkin/Sitaphal/ Kaddu	78	1714
Sweet Potato	131	1500
Tapioca	173	4950
Tomato	789	19759
Others	1580	22320
Total Vegetables	10259	184394

As per table 3, among the major vegetable grown in India, potato occupies the highest area of 2.14 mha followed by onion i.e 1.28 mha. In terms of production, potato production is about 51.3 mt and that of onion is 23.3 mt, respectively.

4. CONCLUSION

India is a second largest producer of vegetables after China. Among all the vegetables, potato, onion, tomato and brinjal contribute maximum area and production. The vegetables are restricting to particular geographical condition so there is a need to increase the crop diversification to enhance the productivity, nutrition and food security. Potato is regarded as the king of vegetable because of its ease in availability, more consumption, etc.

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