



Original Article

Analyzing the Spatio-Temporal Distribution of Pomegranate Cultivation in India

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Abstract

Agriculture is the backbone of Indian economy. It is not merely a main occupation, but a way of life, which is acting as a driving force for our economy through food for people, feed for livestock, income and employment. Globally, India occupies prominent position in certain crops in respect of their area, production and foreign trade. So, agriculture occupies most important place in Indian economy. India was adopted liberalization of economy in 1991. Due to severe economic crisis, the International Monetary Fund was granted a 'Structural Adjustment' loan for India. It's used for a structural change in the economy. These reforms can be classified into three areas like privatization, liberalization and globalization. Among these globalizations has discovered a new opportunity to developing countries for strong connection with developed country markets along with technology transfer. Globalization aims at the explanation of market from local level to worldwide through integration of the local economy with the global market as well as an optimum utilization of potential for expansion. Thus, Indian farmers are facing new challenges and competition from innovative, highly successful and profitable subsidized agriculturally developed countries. From the last two decades, Indian farmers are trying to adopt fruit farming as an alternative cropping pattern to traditional crops. Among fruit cultivation Pomegranate is a globally cultivated and most important fruit crop for various purposes. Therefore, present study analyzes the impact of globalization on Indian agriculture and spatio-temporal distribution of pomegranate fruit farming in India.

Keywords: Pomegranate, Fruit Farming, Globalization, Economy, Structural Change.

Introduction

Agriculture is not only important, but it also provides a base for development. Today, India ranks second worldwide in farm output. Agriculture plays most dominant role in the socio-economic landscape of India. According to the Food and Agriculture Organization of the United Nation's 2010 world agriculture statistics, India is the leading producer of many fresh fruits and vegetables in the world. Globalization makes the world a small village. Horticulture occupies about 28 percent of GDP in agriculture along with 54 percent of export share in agriculture. India exports major fruits like mango, grapes, orange, apple, banana, lemon as well as pomegranate. In this paper, an attempt is made to review the spatio-temporal scenario of pomegranate cultivation in India, in terms of area, production and productivity.

Objectives

The Present study aims to analyze the spatio-temporal growth, production and productivity of pomegranate cultivation in India.

Data Base and Methodology

The entire analysis for the present investigation is based on secondary data. The secondary data is collected from different websites, Project Reports, Articles, Research Papers, National Research Centre on Pomegranate (NRCP), Solapur, Maharashtra; Food and Agriculture Organization (FAO) of United Nations reports etc. The collected data is processed and presented through a table and map.

Study Region

India has been selected as the study region for the present analysis.

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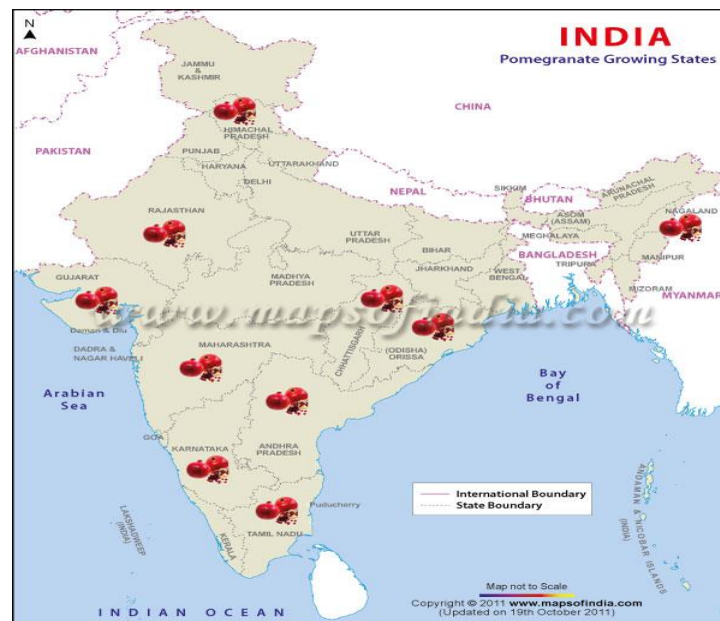
The country is situated north of the equator between $6^{\circ} 4'$ ($8^{\circ} 4'$ for mainland) to $37^{\circ} 6'$ north latitude and $68^{\circ} 7'$ to $97^{\circ} 25'$ east longitude. India is the 7th largest country in the world. The total area of the country is $32,87,263 \text{ km}^2$. India is divided into 28 states and 8 union territories. The current population of India is 1,46,04,93,271 as of Friday, March 29, 2025, based on the Worldmeter estimates. This population represents almost 17.78% part of the total world population. Today India ranks number one in the world in terms of population. India's population density is 492 persons per km^2

Pomegranate Cultivation

Pomegranate (*Punica granatum*) is a significant fruit crop which is primarily cultivated in arid and semi-arid

Area of Pomegranate in India

Map: Important Pomegranate Growing States in India



Source: NRCP, Vision 2050.

In terms of area under pomegranate cultivation and its production, India is leading country in the world. During the last decade the area of pomegranate farming has increased by 35.19%. It was 96.9 thousand hectares in 2003-2004 which become 1.31 lakh hectares in 2013-2014.

As per data, Maharashtra ranks number one with 68.7% of the total area of pomegranate cultivation in India;

parts of the world. Today, it is widely cultivated in India, Spain, Egypt, Afghanistan, Baluchistan, China, Japan, Russia, USA, Thailand, Morocco, Bulgaria, Burma, Pakistan etc. But it is believed that it was originated in Iran.

Real upsurge in pomegranate cultivation in India took place after globalization. The area under Pomegranate farming was 4.6 thousand hectares in 1990, which reached up to 1.31 lakh hectare in 2013-2014. Within the last 30 years our creative cultivators took factual advantage. Hence, pomegranate fruit has been shifted from typically temperate regions to arid and semi-arid regions of India. In India, several commercial and popular varieties of pomegranate like Ganesh, Arakta, Ruby, Bhagawa and Mridula are cultivated.

followed by Karnataka, Gujarat, Andhra Pradesh, Madhya Pradesh and Himachal Pradesh.

Production of Pomegranate

India is the biggest cultivator of pomegranate fruit crop in the world. Following table shows state wise production and productivity of pomegranate in India.

Table- Pomegranate: Productivity and Production in India, 2013-2014

Sr. no.	State	Area in Hectare	Production in Tone	Productivity (Tone/Hectare)
1.	Andman Nicobar	10	-	-
2.	Mizoram	10	20	2
3.	Chhattisgarh	140	510	3.642
4.	Nagaland	120	730	6.083
5.	Odisha	230	870	3.782



6.	Tamilnadu	400	13090	32.725
7.	Rajasthan	910	5630	6.186
8.	Telangana	1730	25970	15.011
9.	Himachal Pradesh	2200	2540	1.154
10.	Madhya Pradesh	2380	25290	10.626
11.	Andhra Pradesh	6000	90010	15.001
12.	Gujarat	9380	99330	10.589
13.	Karnataka	16620	134180	8.073
14.	Maharashtra	90000	945000	10.500
	Total	130130	1343170	10.321

Source: NRCP, Vision 2050.

In India, pomegranate production has increased by 102.43%, during the period from 2003-2004 to 2013-2014. Maharashtra ranks first (9,45,000 t) in production with 70.2% of the India's total Pomegranate production. Other states include Karnataka (1.34 thousand tone), Gujarat (99.33 thousand tone), Andhra Pradesh (90.01 thousand tone), Madhya Pradesh (25.29 thousand tone) and Tamilnadu (13.09 thousand tone).

Productivity of Pomegranate

India is leading in pomegranate area and production in the world. But its average productivity is 10.27 t/ha, which is comparatively low. Maximum productivity found in Tamilnadu (32.32 t/ha) subsequently both Telangana and Andhra Pradesh has 15 tone/hectare, Madhya Pradesh 10.626 tone/hectare, Gujarat 10.589 tone/hectare and Maharashtra - 10.500 tone/hectare. The very lowest Productivity has been recorded by Himachal Pradesh (1.15 tone/hectare).

Conclusion

In fact, India is the 3rd largest exporter of Pomegranate fruit in the world with 22.75% share after Turkey - 39.84% and Iran - 45.35%. Today, pomegranate is playing most important role in the socio-economic development of arid and semi-arid regions in India. It is the innovative farmers overcome on adverse physical condition. There is no doubt that pomegranate has become natural gift for drought prone area. However, spatial distribution of pomegranate farming in India is very uneven due to physiographic and climatic factors.

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Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

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