



ORIGIN & DIFFUSION OF GRAPE ORCHARDS IN INDIA: A GEOGRAPHICAL ANALYSIS

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Abstract-In this paper an attempt has been made to origin and diffusion of grapevine in India. This study is based on secondary data collected from secondary records. The grape is one of the most delicious, refreshing and nourishing fruit. It is an important and an economic proposition for the farmers among the horticulture crops grown in India. In India, grape is presently cultivated over an area of 60,200 ha which makes 0.81 per cent to total area of harvest in the world. India stands at 24th position in the world for the area of harvest for grapes. So it needful to understand the origin and diffusion of grapevine in India. It is also study the grape cultivation zone in country Such type of study represents real situation of grape in country and helps to planners, agricultural scientists and research scholars.

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Introduction

India is the third largest producer of fruit farming. Total area under fruits in India is estimated to be 3.23 million hectares Solapur district has adopted grapevine cultivation on trial in 1960. The development of grapevine cultivation took place from 1980. The progressive grape growers of the region have innovated some new varieties like Tas-A-Ganesh, Manikchaman, and Sonaka by selection method from Thompson Seedless. Temporal development of grapevine cultivation in this area is the testimony of the gallant, innovative and industrious farmers. The semiarid climate of the zone promoted the development of grapevine cultivation. Grapevine cultivation has established credibility in providing productivity of land, generating employment opportunities, improving socio-economic conditions of grape growers, changing export potential and above all providing nutritional security.

Objectives

This paper has been attempted to find out origin and diffusion of grapevine in India. It is also assess the grapevine cultivation zone in India.

Database and Methodology

The secondary data has been used in this paper. The data relating to the area under grapevine crops has been taken from the Director of Horticulture, Maharashtra and Agriculture statistical information of Maharashtra State. Appropriate statistical technique has been used for analyzing the data. Figures and maps have been prepared to explain the pattern of diffusion.

Explanation

Grape is a juicy, smooth – skinned, berry that grows on a woody vine. Grapes grown clusters of few as 6 to as many as 300 berries. The berries may be black, green, blue, purple, red or white depending on the variety of plants. One of the oldest and most abundant of the oldest fruit crops, grapes are cultivated in six of the seven continents. About 60 million metric tons of grapes are harvested annually throughout the world. About 80 percent is used in making wine and 13 percent is sold as table grapes, which people eat fresh. The rest is used in order of importance, for drying into raisin, in making juice or jelly. Most grapes are grown in Europe, especially in the vineyards of France, Italy and Spain. California

produces about 90 percent of grape crop of the United states. Ontario is Canada's leading grape – production province. In India, grapes are grown in the inter tropical, tropical and subtropical zones, many for domestic consumption. Grapes are highly remunerative in India. Grapes are sensitive to climate and this influences their regional variation, rate of adoption and spatial distribution. Maharashtra is the leading state in the production of grapes in the whole country.

A. Importance of Grape

- Grapes are turned into jams and spreads , used in cooking and eaten raw as a snack food.
- Grape contain photochemical that may the reduce risk of heart disease, cancer and strokes.
- A cup of European table grapes provides about 20 percent of the recommended Daily Allowance(RDA) of vitamin 'C'. It also provides a fair amount of potassium and iron.
- Grape contains quercentin, a plant pigment that is thought to regulate the level of blood cholesterol and also reduce the action of platelets, blood cells that are instrumental in forming clots.
- Some researchers theorize that it is quercentin that lowers the risk of heart attack among moderate wine drinkers. The skin of grapes contains resveratrol a physiochemical linked with the reduction of heart disease as well as a lowered risk of cancer or stroke.
- Grapes also contain ellagic acid to protect the lungs against environmental toxins.

B. Origin and Diffusion of Grapevine India

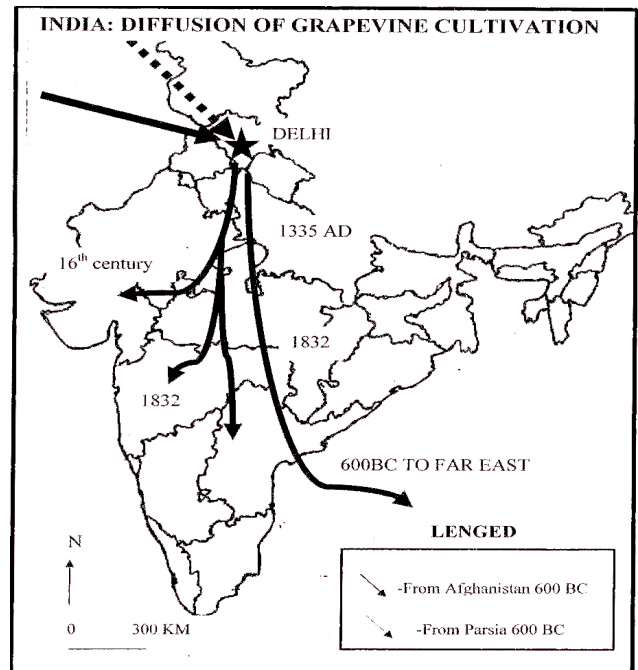
The history of grape culture is as old as that of man. Its great age is confirmed by grape seeds found in refuge mounds of the pile dwellers of the lakes in South central Europe. Details about grape growing and wine making are depicted in Egyptian mosaics of the fourth Dynasty (2440 B.C.). Well before the beginning of Christian era grape had attained considerable importance as a cultivable plant in southern Europe, countries bordering eastern Mediterranean and North Africa. Grape was introduced in medical treatises written much earlier.

We find references to grapes in Sanskrit literature Grapes were known to Ancient Aryas. They not only knew the cultivation but also seem to have had knowledge about how to make different kinds of beverages from it. Evidences of its cultivation in India in 1300 AD are available from some invaders from Afghanistan and Persia. During the historic event of changing the capital from Delhi to Daulatabad by Mohammad- Bin- Tughlak, grape were introduced the South in the 14th century. Ibn Batuta (1430) a Moorish traveler is reported to have seen well maintained vineyards in India. Mogal emperors gave considerable import once to grape culture. As a result in the 17th century, viticulture reached its peak in the Deccan during the regime of Aurangzeb, with the fall of Mogal empire viticulture in North entered into Deccan phase. In 1832, a French priest at Melpatti and Michaelputti villages introduced grapes into Madras. It was introduced into Mysore during the same period. Since this period grape culture became more popular in South India. Three varieties of grapes appear to have been introduced in 1338, known as Abi or Bhokari, Fakadi and Sahebi. Akbar

the great and Jahangir introduced more varieties into different tracts of Mogal empire Kabul, Kandahar, Kashmir, Sindh and Punjab became important centers of grapevine cultivation. In the Deccan grape cultivation reached the Zenith of glory during the time of later Mogals especially Aurangzeb. Then grape cultivation extended throughout to Daulatabad. Portuguese Christian missions at Aurangabad gave another great stimulus to the grapevine cultivation. The Bijapur and Ahmednagar kings about the year 1550 gave liberal grants.

Under the patronage of Pesewa of Pune the industry flourished in Maratha Empire for hundred years from 1717 to 1817. Later an added impetus was given by some educated and progressive growers in the field.

Commercial grape cultivation in India is of recent origin. Grape is one of the most remunerative fruits in India. Its production, productivity and quality have won international appreciation .The highest productivity of grape per unit area has also been recorded in the tropical region of India.



C. Major Grapevine Cultivation Zones

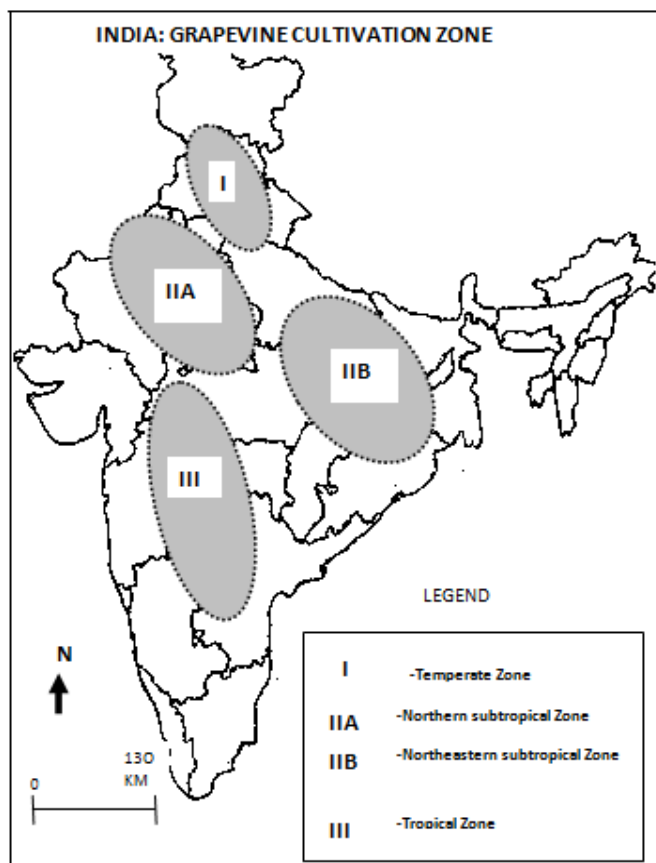
India is gifted with advantages like soil variation and different types of climate. Hence, it harvests a variety of fruits around the year. Different fruits can be grown successfully in temperate, subtropical and tropical zones. This heterogeneous climatic condition has formed six major grape cultivation zones as (Singh et al 1967, Patil et al 1978, Tawade 1981, Gaikwad 2005) which are follows.

- Temperate Zone:** The zone comprises Jammu and Kashmir, Kulu and Kangara valley in Punjab, Kotegrah and Nahan in Himachal Pradesh, Kumaon hill in Utter Pradesh and extreme north eastern part of Arunachal Pradesh. This zone extends from low lying hills of the Himalayas to the height of 3200 m. i.e. northern part of the nation . The average temperature of this region is 4°C to 10°C and falls below freezing point in winter.
- Subtropical Zone:** The zone lies from central cancer 23 ½

towards north . It has variations in climatic condition. Mid winter, dry and hot summer, medium sunlight and low rainfall are the characteristics of this zone and are suitable for grapevine cultivation. The zone is divided into two subdivisions.

- i) **Northern Subtropical zone**-This part of the zone comprises the chief region of Punjab, Uttar Pradesh , Hariyana and Rajasthan .
- ii) **Northeastern Subtropical zone**-Eastern part of India convincing West Bengal, Bihar, Assam and Meghalaya comes under this zone.

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- c. **Tropical zone** The zone comprises Madhya Pradesh, Maharashtra, Karnataka, and Kerala of South India. The region has average climatic conditions. This zone receives abundant of sunlight for long duration. It has mild winter and hot humid summer.

Concluding Remarks

Grapevine has diffused remarkable from its original areas to other parts of the country. It is different according to climate, soil, water, method of cultivation, varieties of grapes and technological development. The fruit is now mainly concentrated in the northern, central, southern and central eastern part of country. It is one of the most remunerative fruits in India. Its production, productivity and quality have won international appreciation .The highest productivity of grape per unit area has also been recorded in the tropical region of India.

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