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A Survey on Area, Production and Productivity of Mango in Aurangabad District

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Abstract

This survey has been carried out to discuss the mango area, production and productivity in Aurangabad district. Based on the results collected some conclusions are made about the production of mango. India's diverse climate ensures availability of all varieties of fresh fruits & vegetables. It ranks second in fruits and vegetables production in the world, after China. As per National Horticulture Database 2012 published by National Horticulture Board,

Keywords:-Area, Mango, Production, Productivity

Introduction

Agriculture is an important part of Indian economy. Indian agriculture is associated with the production of basic food crops. In the past time, India was largely dependent upon food imports but the successive efforts in agriculture sector of Indian economy have made it self-sufficing in food production. India ranks first among world's mango producing countries accounting for about 50% of the world's mango production other major mango producing countries include china, Thailand, Mexico, Pakistan, Philippins, Indonesia, Brazil, Nigeria and Egypt. India's share is around 52% of world production i.e. 12 million tonnes as against world's production of 23 million tonnes (2002-03). An increasing trend has been observed in world mango production averaging 22 million metric tonnes per year. Worldwide production is mostly concentrated in Asia accounting for 75% followed by south and northern America with about 10% share. Area under cultivation and production trends of mangoes in India major producing states are Andhra Pradesh, Bihar, Gujarat, Karnataka, Maharashtra, Orissa, Tamil Nadu, Uttar Pradesh and West Bengal. Other states where mangoes are grown include Madhya Pradesh, Kerala, Haryana, Panjab etc.

Climate and Soil

Mango is grown in both tropical and sub-tropical conditions. It can tolerate a wide range of climatic conditions. For growing mango on a commercial and profitable scale the temperature and rainfall have to be within a clearly defined range. In addition to altitude, temperature, rainfall and the wind velocity also influence growth and production of mango. Rainy or cloudy weather during flowering favours the incidence of powdery mildew disease and leafhoppers.

Mango grows well on all types of soil provided they are deep and well drained. Red loamy soils are quite ideal. Alkaline, ill drained and soils with rocky substratum are not suitable for successful cultivation of mango crop. In India, mango is grown on lateritic, alluvial, *kankar* and other types of soil. However, rich, medium and well drained soils give better results. Very poor, stony and soils with hard substratum should be avoided. The vigour and cropping behavior of a mango tree are affected by the soil type. In our country the best mango gardens are situated on the deep fertile alluvial soils of the Indo-Genetic plain. On shallow soils of hill slopes, mango trees grow to a large size but the yields are not satisfactory. On the laterite soils of the west coast and of Bidar (Karnataka) the trees are smaller and sandy loams of Telangana region India, produced trees of medium height. The red soils of Dharwad (Karnataka) and red laterites of Belgaum and Ratnagiri (Maharashtra) and Goa Island (India) are the best soils for mango. Best quality fruits are produced on soils containing 5 to 10 per cent lime and sufficient quantities of peroxide of iron. Under such conditions fruits develop bright reddish

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tinge. The deep black cotton soils are generally considered not suitable for mango cultivation, since soils are generally avoided for planting mango plants. Such soils need to be reclaimed by leaching out of salts using good quality water, replacing the harmful sodium from the soil with calcium or by establishing effective drainage course to avoid salt build up. Fruit crops are most sensitive than cereals and millets. Mango is rated as moderately tolerant to salts with 4-6 dsm^{-1}. The fertility of soil is dependent on its physical, physico-chemical and chemical characteristics

Varieties of Mango

Almost all our grafted varieties of mango have been selected from the naturally occurring superior chance seedlings, having in view their earliness or lateness and superior fruit quality.Some of these are still confined to the orchards of a few mango lovers and need to be utilized both commercially as well as in breeding work. All these varieties have a wide range of adaptability under north Indian conditions. For instance, there is no difference in the performance of the variety 'Langra' when grown at Varanasi or Saharanpur or for that matter even at Bulsar (Gujarat), although the 3 situations differ significantly in climatic and soil factors. However, performance of the north Indian varieties undergoes a marked change when grown under south Indian conditions. For instance, if 'Langra' and 'Dashehari' varieties of northern India are grown under south Indian conditions, the trees would flower and fruit very sparsely. However, south Indian varieties do flower and fruit under north Indian conditions but some of their characteristics might undergo a change. Although the trees tend to bear every year, fruit size is markedly reduced, accompanied by delayed ripening. Thus commercial varieties of mango, although having a wide range of adaptability, are specific to different regions of the country.

Area, Production and Productivity in India

India has been bestowed with wide range of climate and physio-geographical conditions and as such is most suitable for growing various kinds of horticultural crops such as fruits, vegetables, flowers, nuts, spices and plantation crops. The total annual production of such crops has touched over 149 million tonnes. India is the second largest producer of fruits (45.5 Million tonnes) and vegetables (90.8 Million tonnes) in the world, contributing 10.23 per cent and 14.45 per cent, respectively, of the total world production of fruits and vegetables. India enjoys the top position in production of mango, banana, sapota and acid lime. India accounted for about 53 per cent of world mango production. Mango is the most important fruit crop of India and comes next to banana, apple and oranges on the basis of global acreage and production. India is the largest producer and consumer of mangoes in the world. Mango accounts for over 23 per cent (45.5 Million tonnes) of the total fruit production and 41 per cent of the total fruit area (24.87 million ha) of the country.

Table 1: Area, Production and Productivity of Mango in India-1999-2009
(Area in '000ha., Production in '000MT & Productivity in MT./ha.)

Year	Area	Production	productivity
1999-2000	1486.9	10503.5	7.1
2000-2001	1519.0	10056.8	6.6
2001-2002	1575.8	10020.2	6.4
2002-2003	1623.4	12733.2	7.8
2003-2004	1906.7	11490.0	6.0
2004-2005	1970.4	11829.7	6.0
2005-2006	2080.7	12663.1	6.1
2006-2007	2154.0	13734.0	6.4
2007-2008	2201.0	13997.0	6.4
2008-2009	2309.0	12750.0	5.5

Source: National Horticulture Board, Ministry of agriculture govt. of India

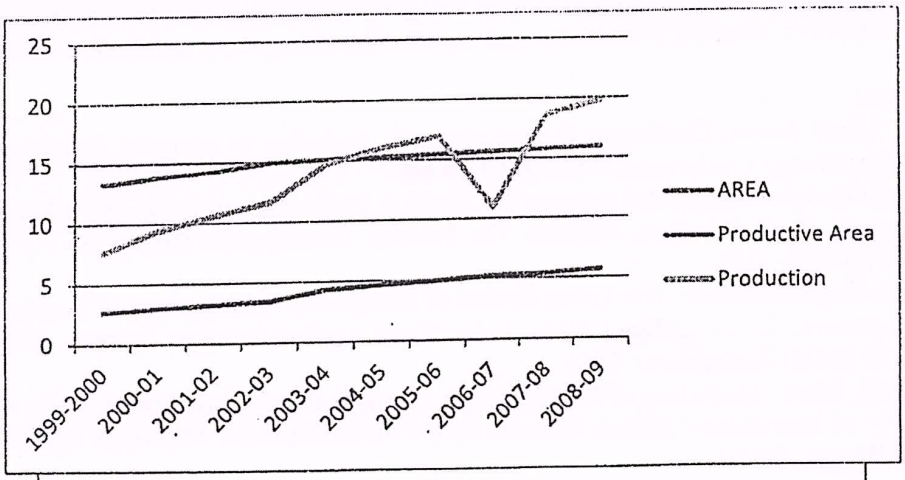
Area, Production and Productivity of Mango in Aurangabad Distrect

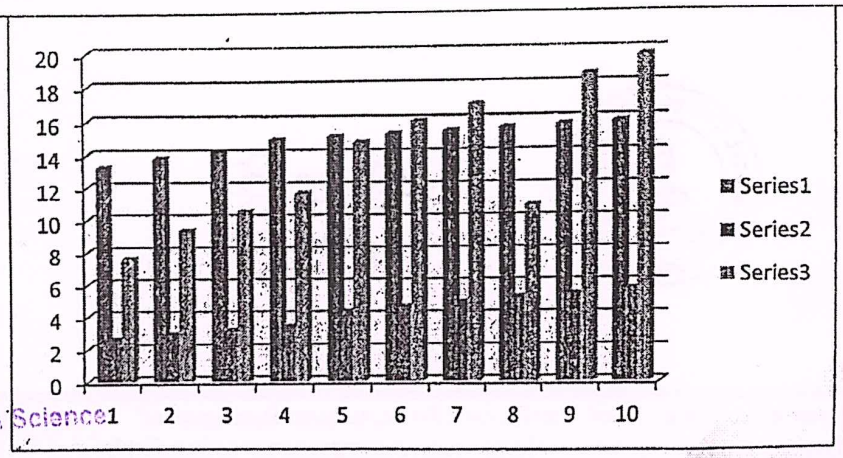
It can be observed from the table 2 that the area, production and productivity of mango in Aurangabad district are showing a steady growth with increasing trend. However, the average yield per hectare has almost remained different variations during the period under study.

Table 2: Area, Production and Productivity of Mango in Aurangabad Distrect-1999-2009

YEAR	AREA	PRODUCTIVE AREA	PRODUCTION (MT)	YIELD
1999-2000	13.26	2.64	7.61	2870
2000-01	13.81	2.96	9.36	3200
2001-02	14.25	3.19	10.54	3300
2002-03	14.91	3.42	11.65	3400
2003-04	15.1	4.33	14.74	3400
2004-05	15.25	4.63	15.99	3450
2005-06	15.41	4.91	16.94	3450
2006-07	15.57	5.21	10.85	3465
2007-08	15.74	5.37	18.66	3475
2008-09	15.91	5.67	19.73	3480
CAGR.%	2	11.42	15.92	2.12

	area	productive area	production	yield
AM	14.921	4.233	13.607	3349
SD	0.875156	1.097705182	4.162445996	190.3622
C.V.in%	5.865267	25.93208557	30.59047546	5.684151





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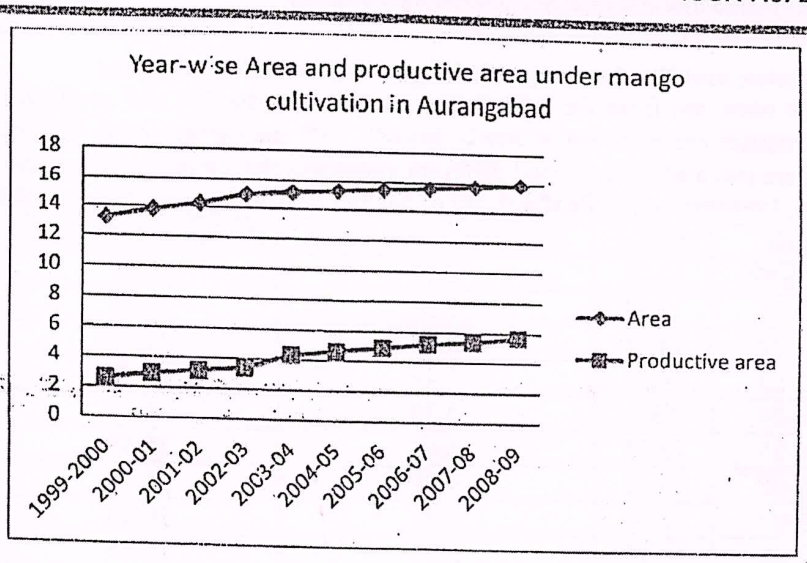

Conclusion

Mango production has great potential in Aurangabad a deeper understanding of the challenges faced in production and marketing is necessary for a focused approach to solutions. Producers should be organized to take advantage of economies of scale. Further research is required on better yielding varieties Quality parameters of fresh fruit are decided on the basis of appearance factor (i.e. size, shape, pattern, gloss, colour and physical defects),Kinesthetic factor (feel and sense) and sensory measurements (subjective methods). Adequate infrastructure, efficient logistic management, human resources development and multidisciplinary research are essential to enhance quality of export of fresh mangoes. Only integrated and concerted efforts of growers, suppliers, shippers, transporters and exporters can bring about satisfactory results.

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