



## CHALLENGES AND POTENTIALS OF BANANA CULTIVATION IN INDIA

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### **Abstract**

*Banana is one of the familiar and important horticulture crops where cultivated in tropical countries. It is considered as commercial crop in many countries. In India banana cultivation occupies an area of about 2lakh hectares, mostly in the southern states. Present investigation tries to assess the compound growth rate and instability in area, production, productivity in India and the export performance of Banana in the last ten years. This paper has describes about the growth and potential of export of Banana from India in the past decade and forecast the export trends for the major importing countries for the upcoming four years period. This paper is basically from compilation for secondary data from 2005-06 to 2016-17. The challenges have faced by the small Banana growers and large size banana growers in terms of Poly house cultivation and export performance by various varieties, such as; Elachi, Red Banana, Green moris are mostly cultivated from southern parts of India.*

**Key Words:** *Horticulture Crops, Banana Cultivation, Productivity, Export Performance.*

### **Introduction**

India is the major horticulture crop cultivation in the world. India's contribution in the world production of fruits & vegetables were 13.6 % & 14% respectively during 2013-14. (National Horticulture Database 2014). India is the world's major producer of bananas (29%), beside recording highest productivity in grapes (21.6 t/ha) in the world. Banana is considered one of the most important one both in terms of production, productivity and export potential in India. It is considered as the fourth important fruit crop in terms of economic importance after rice, wheat and milk. The feature of this fruit is entire season we can get it. It has reported to be grown in 130 countries in the world with a total production of 106.84 million tonnes in 2013-14.

However, production as well as exports and imports of Banana is highly concentrated in a few countries. India, China, Philippines, Brazil, Ecuador, alone produced more than 60 per cent of the total world Banana production. (Gowri, 2015). Banana is the largest produced and maximum consumed amongst the fruits cultivated in India and accounts for about 33.4 percent of the total fruit production in India. India ranks first both in terms of area and production of Banana in the world contributing around 15% of the total global area under Banana and about 29% of the total world's production. The average productivity of Banana in India is 37.90 Mt/ha. Compared to the world average of 21.20 Mt/ha. (NHB, 2014). The five important Banana producing states in the country are Maharashtra, Tamil Nadu, Gujarat, Karnataka and Andhra Pradesh. These five states contribute more than 70 percent of total Banana production in the country. Despite of, India produces the largest volume of banana; it occupies a negligible share in world export. India is exporting banana to 43 countries of the world and its proportion to total production is much lower as banana is regarded one of the vital component of fruits consumption in domestic markets (Verma and Singh, 2004) The potential of horticulture in raising agricultural production, value added, farm income and employment in the country has been recognized long ago. The Fourth Five Year plan (1969-74) recognized the importance of this sector (Chand et al., 2008) with budgetary supports. After a decade or so this sector was identified by the Government of India in the mid- 1980s as a promising emerging sector for agricultural diversification to enhance profitability through efficient land use, optimum utilization of natural resources and creating employment for rural masses (ICAR, 2005). As a result, India contributes 10-13 per cent of the total world production of fruits and vegetables occupying second place in the world (Chadha, 2004). Hence, the horticulture sector plays an important role in contributing to the world production. Diversification of agriculture in favour of horticultural crops brings new opportunities to agrarian sector. If carried out appropriately, diversification can be used as a tool to augment farm income, generate employment, alleviate poverty and preserve soil and water resources (Joshi et al 2004).



### Production of Banana

Banana which is normally grows under a good irrigation condition. The banana is an annual crop mostly grown on river based irrigation areas. In Tamilnadu, Maharashtra, Andhra Pradesh most of the farmers who cultivation in Drip irrigation methods.. The supply of banana is maintained throughout the year at present one plant yield one bunch containing thirty to fifty fruits arranged in four to eight clusters. Banana is cultivating not only in bulk cultivation for the land but also some of the small farmers having 50-100 plants for mixed crop or single trees. They are going to sale for leaf and banana fruit piece whenever they harvested and selling to nearest market. Because of banana is the most widely consumed fruit and it is available in all the seasons.

**Table-1: Area, Production and Productivity of Banana in India (State wise) during 2005-06 to 2014-15**

State	Compound Growth rate (% p. a.)			CV in %		
	Area	Production	Yield	Area	Production	Yield
Tamil Nadu	0.03	-1.13	-1.17	10.39	20.26	12.23
Maharashtra	0.14	-1.33	-1.45	5.28	10.17	10.43
Gujarat	3.18	5.64	2.38	10.27	23.07	13.04
Andhra Pradesh	2.67	10.98	5.80	5.80	23.07	13.04
Karnataka	6.27	6.37	0.08	22.20	21.56	9.18
Madhya Pradesh	6.36	11.54	5.14	30.01	34.33	18.94
Bihar	2.26	4.82	2.58	6.44	14.89	10.88
West Bengal	5.23	7.51	1.89	14.38	41.24	12.53
Assam	0.88	3.73	2.65	6.40	15.75	11.57
Odisha	1.19	3.58	2.37	8.01	14.42	7.88
Others	9.12	14.27	-2.35	26.45	39.43	39.67

Region wise Production and Productivity of Banana in major banana producing states of India for the period of 2005-06 to 2014-15 is presented in Table 1. The production in the states of Tamil Nadu and Maharashtra registered a negative growth rate in production and yield i.e. of - 1.13 and -1.17 per cent per annum respectively, during the period which seems mainly due to the negative growth rate in the yield in these states. Maharashtra and Gujarat recorded the highest growth rate in production of banana i.e., of 11.54 and 10.98 per cent per annum respectively. The highest growth rate in area of Banana was recorded in Madhya Pradesh and Karnataka of 6.36 and 6.27 per cent per annum respectively. The instability analysis in the area, production and yield of states reported in the table shows that the highest instability in the production was recorded in the states of West Bengal (41.24 %), Madhya Pradesh (34.33 %) followed by Gujarat (27.63 %) and the highest instability in the area was recorded in Madhya Pradesh (30.1 %) and Karnataka (22.20 %). This shows that the instability in production in Madhya Pradesh was mainly due to instability in the yield of Banana (18.94 %) in the state which was also the highest growth rate in the overall Banana growing states of India.

**Table-2: Banana Export from India during 2005-06 to 2016-17.**

Year	Quantity (In MT)	Value (In Lakh)	Unit Value (Rs./Kg)
2005-06	14411.00	2336.1	16.21
2006-07	11475.00	1606.7	14.00
2007-08	16662.6	2607.94	15.65
2008-09	30401.5	5545.44	18.24
2009-10	54319.2	13025.47	23.98
2010-11	56304.6	10005.4	17.77
2011-12	45582.00	9155.00	20.08
2012-13	50004.00	13064.00	26.13
2013-14	36108.00	15683.00	43.43
2014-15	63,274.40	24,194.77	38.24
2015-16	93,673.10	35,613.04	38.02



2016-17	110871.9	38,852.57	35.04
<b>CGR (%)</b>	<b>18.53</b>	<b>26.40</b>	<b>6.64</b>
<b>CV (%)</b>	<b>60.24</b>	<b>83.74</b>	<b>40.70</b>

The position of export quantity, value and price of Banana is presented in Table 2. It could be seen from the table that, for the overall period of twelve years (2005-06 to 2016-17), 18.53 per cent and 26.40 per cent of growth was achieved in export quantity and value, respectively. The growth rate of unit value Realized from Banana export for overall period was 6.64 per cent. The results clearly indicate that the export performance of Banana is good. The instability indices were constructed for quantity and value of Banana exports and the results are presented in Table 2. It is evident from the Table 1 that the Coefficient of variation for the total quantity and value of export for the overall period was 60.24 per cent and as 83.74 per cent of Banana, respectively.

### Challenges

At the beginning of banana cultivation by farmers they have spent more amount in terms of input, land, reclamation, trilling etc; The new varieties introduced for Tissue culture Banana, farmers concentration for traditional Banana are very less. Even, some of the medicinal value varieties such as, Elachi, Hill region, varieties in Madhya Pradesh, Maharashtra, Tamil Nadu, Karnataka, Andhra Pradesh. As results domestic users (consumers) are expecting such varieties in the market. But, hybrid varieties have procured by the farmers as well as traders. The export value banana also required such varieties. In southern region Andhra Pradesh Karnataka, Tamil Nadu, Kerala states farmer who cultivating Red Banana which is occupied 25 % of the total Banana cultivation (other type of variables). The European countries have expecting more red Banana from India. But, the supply is very less than others varieties. The reason in high cost of maintenance and organic manure for Red Banana cultivation. It has more medicinal value fruits. Similarly, hill region medicinal banana (Ex; In Tamil Nadu, Dindigul District has more cultivation, namely SIRUMALAI, BANANA. In Karnataka static namely Elachi in more occupied in Mysore region) in more potential demand for European countries. Instead of hybrid varieties, the horticulture board may concentrate for this medicinal value Banana to the farmers. This can be more export promotion for Banana cultivation in India. Cultivation of banana and its production assumes critical importance now a-days due to the increase in population and rise in the level of income of the people and consequent changes in the pattern of consumption. Banana plays a unique role in developing countries like India both in economic and social sphere for improving income and nutritional status particularly of rural masses. Several problems are associated with the cultivation and marketing of banana. These problems affect the production of banana as well as the profitability of banana cultivation.

### Issues of Banana Cultivation

Banana Cultivators had to face some problems at the time of banana cultivation. The problems were severity of diseases, severity of pests, scarcity of labour, problems caused by natural calamities and the high cost of production.

Non availability of pest resistant quality suckers, unawareness of the different diseases that affect banana plant and of the pesticides to be used to control the diseases, lack of knowledge about crop insurance scheme and its usefulness, inadequate finance to meet the cost of production are some of the problems faced by the growers during cultivation. Unless adequate steps are taken to minimize these problems, the production of banana may be severely affected. According to trade sources, during the months of March to May, supply exceeds demand in market which leads to decline in prices. Because of the excess supply, traders and farmers search for new markets for banana.

Absence of a large number of organized markets, dependence on pre-harvest contractors for marketing their bunches, inadequate transport facilities at reasonable cost, increased dependence on internal demand etc., are some of the marketing problems faced by the growers that necessitated this study. The problem of growers in marketing the product is very high. They have to cultivate, harvest, transport and market. The intermediaries have to make payments before or after harvest, transport and market the products. There may be many problems in these different stages. The problems may relate to production or transportation, preservation, price, area,



transportation and other related aspects. Banana is a perishable product. The product might need some tweaking by the person who grows the product to respond to customer complaints. The person who handles human resource issues might be asked to develop compensation plans that reward sales people who build significant relationships that have tremendous potential but are slow to close.

### **Conclusion**

The agricultural growth strategy of the past has intensified the interclass inequalities. This should be considered by the Government. The Government can pay attention by providing transport facilities, maintaining good roads and providing subsidies for suckers and fertilizers, export promotion council for Red Banana and medicinal value varieties. As a result, the small and medium farmers may be benefited. By analyzing various research results together, the Government may create awareness among the farmers about organic method of banana cultivation and may encourage more farmers to cultivate this valuable food, which is very much essential need for farmer's economic benefit and consumer's health based benefit.

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