



A new hope for India to eradicate the problem of hunger and unemployment with its advancement in both urban and rural India

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Abstract

After the Yellow Revolution we have seen a drastic growth in the horticulture industry . The production of fruits and vegetables in India has amplified , every state is practicing horticulture , which can reduce the problem of food security and tackle climate change in India , Practiced both in the urban and rural sector , Urban horticulture has emerged today. It can reduce air pollution and maintain the temperature . India is the largest producer of bananas , mangoes , Lime and Lemon , papaya today . It has contributed to the GDP growth and provided employment to 42 % of the population but due to storage of cold storage in the country , 60 % of the products get rotten , we need more cold storage else we will not be able to eliminate the problem of food shortage in India and amplify our export and reduce the import . India's floriculture has improved over the years with increase demand for flowers for cultural , religion and decoration purpose , with women entering the horticulture industry , they can play a significant role in the development of rural economy and women empowerment .

Keywords: Yellow Revolution , horticulture , climate change , fruits , vegetables , floriculture , employment , employment , climate change

Introduction

Horticulture has been progressing at a rapid speed in today's world. Horticulture is one part of the agriculture which focuses on the growth of plants , fruits and vegetables , flowers and many more . It is sowing of plants in a garden , it is more about gardening in a sustainable manner . Horticulture has many branches which comprises of Pomology , Olericulture , Floriculture ,Plantation crops , Spices , Medicinal crops , Post harvesting crops and Landscape. Pomology means sowing of fruits , Olericulture is the cultivation of vegetables , Floriculture is sowing of plants, which are also used of decoration , home decoration , gifting , entertainment purpose and other . Plantation crops would include crops like coconut , rubber, coffee m Species crops like pepper , nutmeg and Cardamom, Medicinal Crops with is basically the owing of medicinal plants and Landscape which include sowing of ornamental plants .Viticulture is also a part of horticulture which refers to harvesting grapes , it can also be referred to as winegrowing .Horticultural crops make use of efficient natural resources than filed crops

because of the high biomass production, Horticulture provides employment opportunities and can help to eliminate poverty especially in dry hilly areas, coastal areas and rainfed areas, they have the capability to develop wasteland through strategic planning, moreover they don't require much water compared to other field crops. They play a very important role in nutrition security, they are environmental friendly, they are high value crops and have potential of value addition, today we have seen horticulture being practiced in the urban sector for increasing greenery in the region, urban gardening can help to reduce pollution and can reduce the temperature in the urban sector, oxygen production, reduces less soil, can help to regulate climate change. In the urban areas, horticulture can regulate both winter and summer climate conditions and maintain the ecosystem, Today many families have started kitchen gardens in the urban areas along with rural areas. Permaculture is being practiced by many urban families, these urban horticulture can help to reduce the problems of food security of any country, there have been colleges which are providing Masters and graduate degree in agriculture and horticulture. Green infrastructure can also capture more carbon dioxide. Horticulture was first started in London in 1806 with the foundation of Horticultural Society of London. Horticulture has a few problem also attached with it which includes non-availability of organic fertilizers, some plants require specific fertilizers, moreover it is very costly, requires high maintenance, high labour force, skilled labours and techniques are necessary. Horticulture in many countries have reduced the nutrition and food security problems farmers employment and income has doubled. The demand for flowers have also been increasing, Horticulture has massive employment facilitates today with high income rate. The garden crops are used on a daily basis by people across the world.

Research Methodology

For the purpose of this exploration, I have used an amalgamation of two of the archetypical social sciences research tools application –as they are authentic and brilliant method to assemble statistics from multiple appellants in a methodical and convenient way. Questions were asked to the common youth, public policy Analyst, urban people, farmers, rural women, survey, interviews –consisting of several interrogations which were dispersed among representative of each contender group.

Objective of the Research Paper

The main areas of exploration in this paper incorporates

1. What is horticulture, its branches and benefits.
2. How has Horticulture worked in India and its achievement.
3. Future of Horticulture in India and what can we do to overcome the challenges

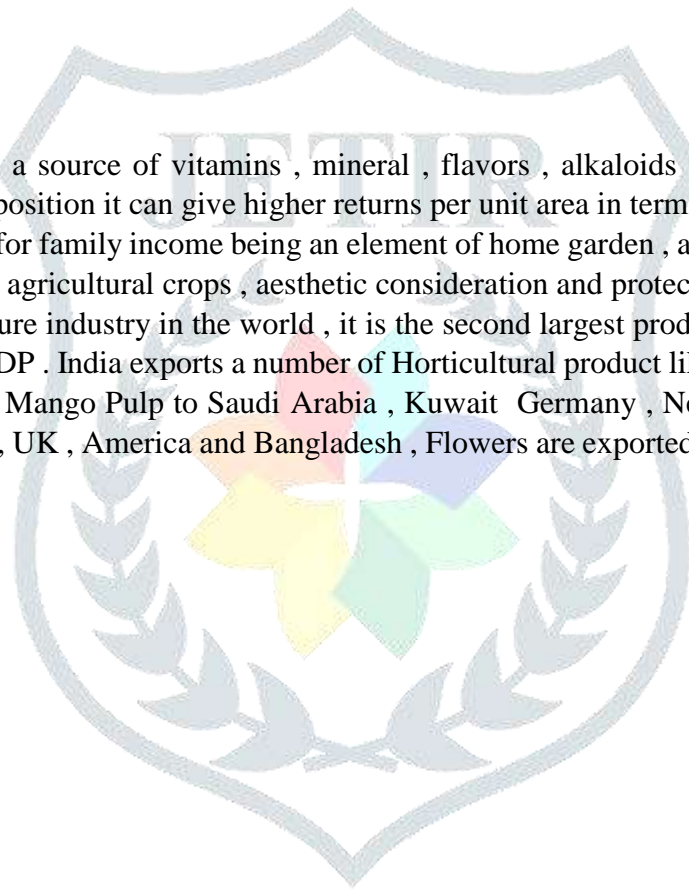
Literature Review

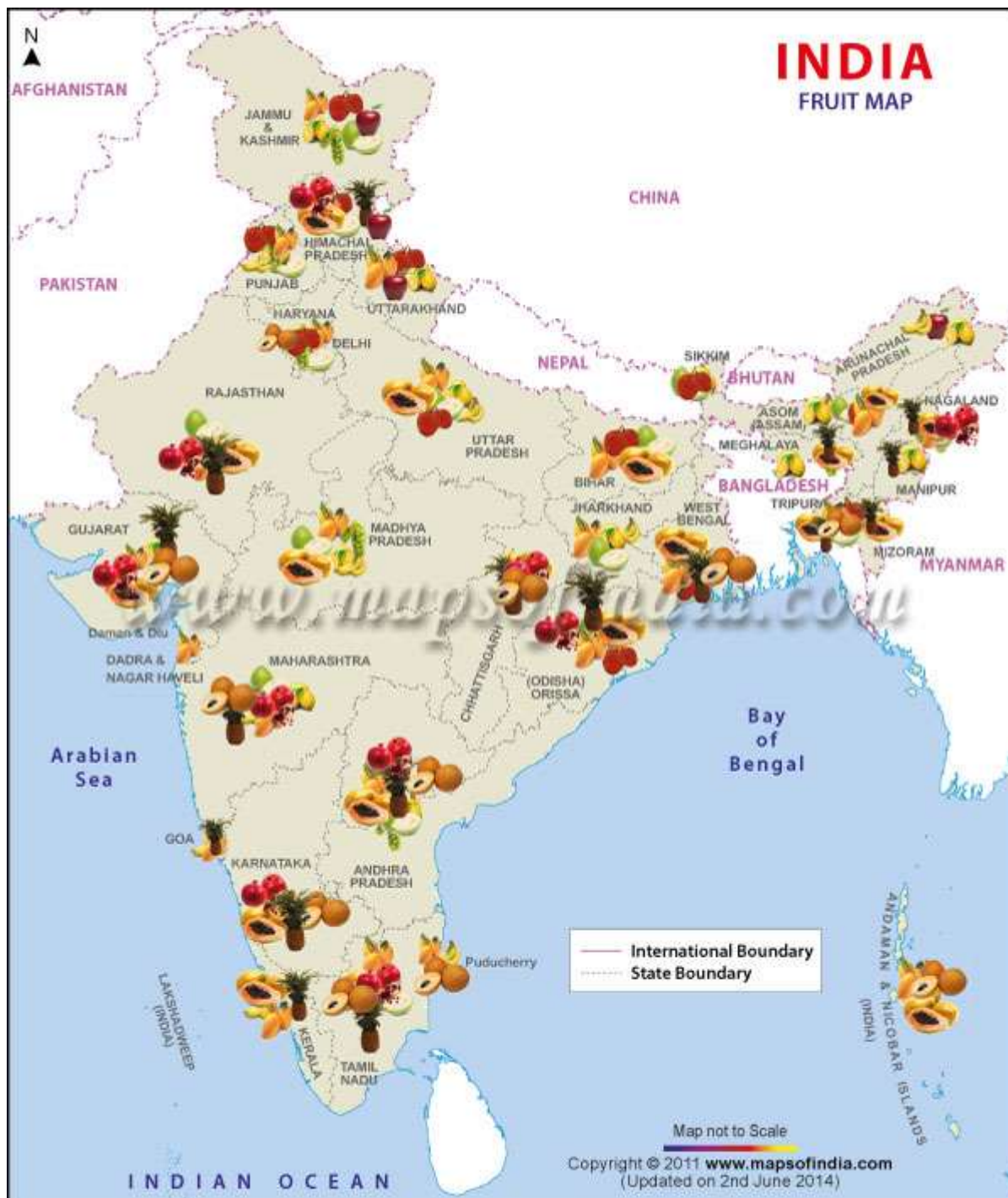
M.H Marigowda is regarded as the father of Indian Horticulture, In India horticulture has emerged as a major sector for development which has provided employment at the primary, secondary and tertiary levels, the crops and fruit are more resilient to climate change and help to double the income of small and marginal farmers, as water crisis is a big issue in India, 90% of the farmers have started practicing horticulture as it requires less amount of water and the chances of crop failure is also reduced, multiple crops can be grown at one time, it adds diverse options for balanced diet, Horticulture has emerged as the main source of drivers for many states. The sector has contributed to the GDP and allied forces. Mission for Integrated Development of Horticulture is being implemented for escalating the production rate of crops and minimizing post-harvest losses. Centrally Sponsored schemes for production of horticulture. The government of India contributes 60% for the development programmes and 40% is contributed by the states and for the North East region and Himalayas the government contributes 90%. The government over the years have introduced five schemes for the horticulture which are as follows: National Horticulture Mission, National Horticulture Board, Horticulture Mission for North East and Himalayas states, Coconut Development Board and Central Institute of Horticulture Nagaland. The production rate has escalated from 211.2 million tonnes for the year 2007-08 to 311.71 million tonnes from 2018 to 2019. India is the largest producer of Bananas, Mango, Lime and Lemon, Okra, Papaya.

Space technology has also been introduced in the Horticulture of India with schemes like Horticulture Area Production Information System web enabled information system by which data from states are reported and the maximum coverage area . Improved technique for production of plants with materials of high quality , Technology for allowing the water and nutrient efficiency through micro irrigation and fertigation has been introduced for a number of horticulture crops . Good Agricultural Practices for the development of medicinal plants . Environment friendly cool chamber at a less price was introduced for storage of fruits and vegetables .Micro Propagation techniques have been installed .After the yellow revolution we have seen rapid development in the horticulture industry in India. Today every state has its own horticulture research centre and institute for education and research . Under the National Horticulture board , Development of commercial horticulture through production and post-harvest management of horticulture , Market knowledge schemes for horticulture crops , Horticulture Promotion Scheme , Technology Development and transfer to encourage horticulture , capital investment for construction and subsidiary and Improvement of cold storage for horticulture items. In recent years the horticulture and floriculture have progressed with the help of research centres . Produces crops which harvest in a small span of time and moreover it is more intensive and commercial than other agricultural techniques

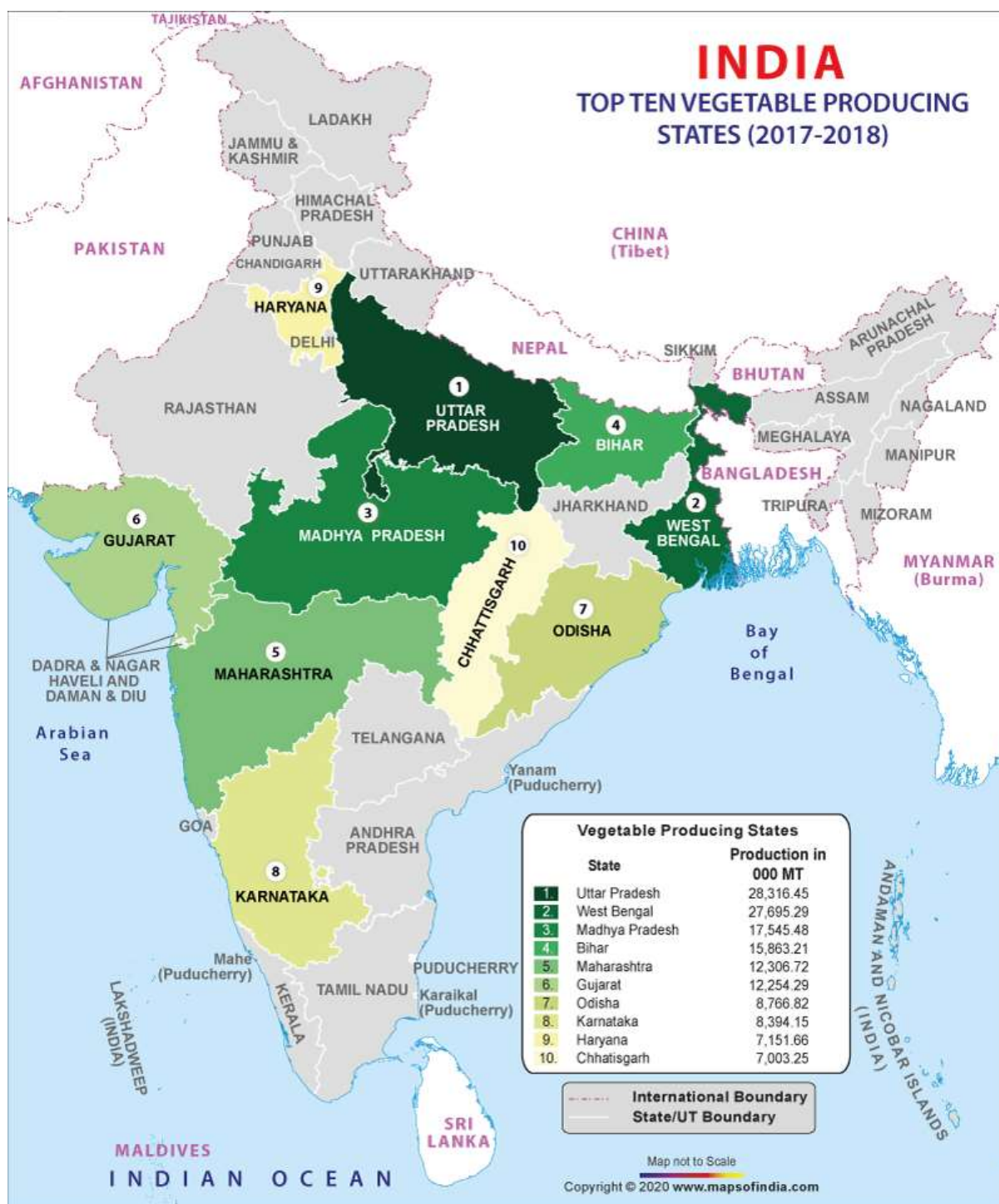
Findings

Horticulture can be used as a source of vitamins , mineral , flavors , alkaloids , fibres ,and as a source of medicine . As an economic position it can give higher returns per unit area in terms of energy, money and jobs, it can act as an replacement for family income being an element of home garden , as an foreign exchange earner has higher value compare to agricultural crops , aesthetic consideration and protection of environment .India is only of the leading horticulture industry in the world , it is the second largest producer of fruits and vegetables and contributes 30.4 % to GDP . India exports a number of Horticultural product like Fruits to Bangladesh , UK , Sri Lanka , Saudi Arabia , Mango Pulp to Saudi Arabia , Kuwait Germany , Netherland , Vegetables to Sri Lanka, Spain, Saudi Arabia , UK , America and Bangladesh , Flowers are exported to America , Japan , UK , , Germany and Netherlands .

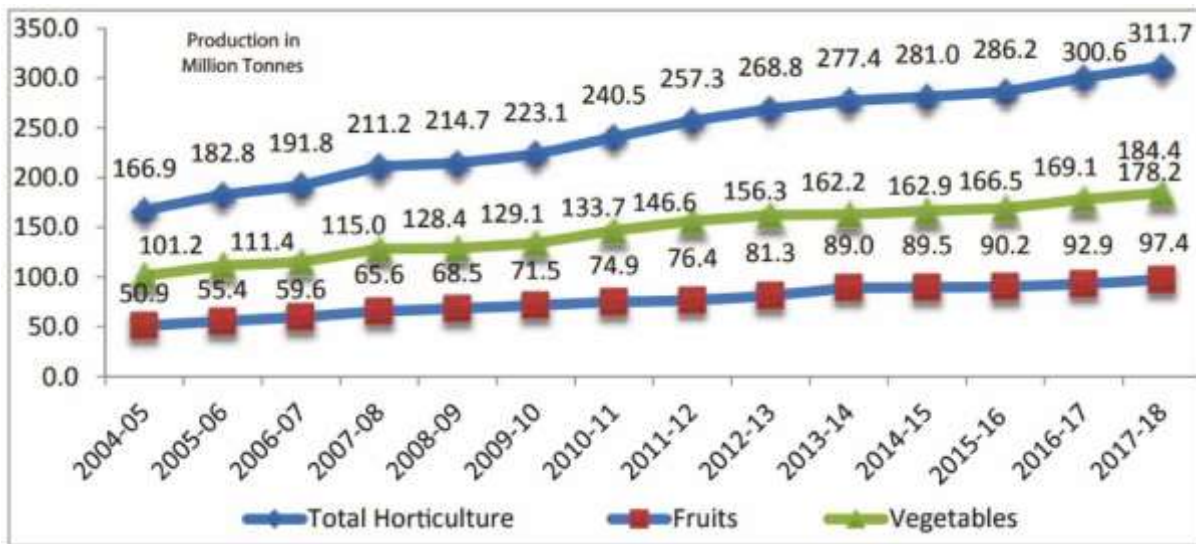




After Brazil India produces maximum fruits , India is the largest producer of Mangoes , Bananas apart from that the importance once include Jackfruits , grapes , apples , pear , Litchi , pineapple , sapota , papaya , guava , plums and citrus .India produces 10 % of the world fruits . The leading producer of fruit in India are Maharashtra , Bihar , Andhra Pradesh , Uttar Pradesh . Coming to vegetable crops , leaf crops , root crops , Solanaceaeous , leguminous , cruciferous are grown in the Indian temperate tropical and sub-tropical regions, The main vegetables grown in India includes Okra , cauliflower , carrot , cucumber , botte gourd , onion , tomato , peas , potato , beans , radish and many other . After China , India is the leading producer of vegetable , it produces 13.38% of the vegetables in the world , the leading states are Karnataka , West Bengal , Uttar Pradesh , Maharashtra , Odisha and Bihar for horticulture crops .



Flowers sowing has been a part of India since ages , it is used for cultural and religious purpose apart from social purpose . India is famous for growing traditional flowers like Jasmine, chrysanthemum , marigold , crossandra ,lilies aster , tuberose . The commercial plants include Orchids , rose , carnation , gerbera . The leading states includes Tamil Nadu , Sikkim , Andhra Pradesh , Maharashtra , Meghalaya , West Bengal .The major plantation crops include cocoa , rubber, coffee , oil palms , tea , cashew vanilla etc , the main states for plantation crops are Andhra Pradesh , Goa , Assam, Kerala , Karnataka . Species constitute a significant part of horticulture which includes black pepper , chilli , coriander , ginger , turmeric etc growing mostly in Kerala, Gujarat , Rajasthan , Karnataka , Tamil Nadu , Odisha . Medicinal and Aromatic plants- India has more than 9500 species for medicinal plants some of them are mint , davana , patchouli , and medicinal plants like Periwinkle , ashwagandha , coleus.



India provides all the facilities required for horticulture like Diverse conditions , Landforms , Climate , Soil , Irrigation facility , Labour , Market and government encouragement . Floriculture refers to the cultivation of flowers and ornamental plant for sale . India is known for the art of growing flowers , there is a steady demand for cut flowers like roses , orchids , gladiolus , lilies , carnations and anthurium , the production of these flowers has gained significant progress , it is an intensive types of agriculture , the returns per unit area obtained floriculture are higher than any other branch of agriculture . In India , floriculture is adopting a variety in its production , thus there is a higher potential for the development of agriculture . Plantation crops and floriculture crops have helped in improving the conditions of the farmers .Horticulture can exploit great variability of Agro-climatic conditions , it can help to meet the need of the growing population in terms of fruits , vegetables , spices , beverages to meet the minimum nutritional needs , it also helps to meet the requirement of processing industry , to reduce import and amplify export , to reduce the problems of farmers and increase the labourers which will also help to eradicate the problem of unemployment to a great extent.

Andhra Pradesh has planned to make 50 % of its agricultural land into fruit cultivation , 12 cold storages on the highway run by private companies , every 20 Km there is a cold storage from Hyderabad Andhra Pradesh highway , this is nowhere seen in India , as 60 % of the food is rotten , this 60 % could save a lot of lives and provide them with food .

Way Forward

Horticulture is taking India's economy to new horizons , it has a lot of scope in India because of its soil and climatic conditions , but due to cold storage problems have of the fruits and vegetables turn rotten , we need to create infrastructure for cold storage and maximized are horticulture industry in every state as they provide the main source of food and nutrition to the body . With India facing massive water crisis . Horticulture industry can keep the food security safe , as most of the agriculture crops in India require huge amount of water , more the rise in horticulture industry, the more employment opportunities people will have and help to eradicate poverty issue in India . Development of horticulture in the non-traditional areas , promote urban horticulture in all states and permaculture which also help to reduce food and nutrition security in India .Amplify the issue of technology in horticulture and bring in more professional and the use of agricultural engineering into the region , horticulture can improve the lives of rural poor people and make it the area pollution free and they can produce food for themselves in ample amount . The problem of obesity , malnutrition and undernourishment can end by promoting horticulture in the local regions of rural India , the women should be initiated to work in horticulture industries . Women group can start their growing of fruits and vegetables for nutrition gardens to horticulture development which will also make rural women part of rural economy and hence promote women empowerment of countryside .

Conclusion

India's horticulture has escalated over the years, the government has increased its budget for the development of Horticulture, It is at the second position in the world after China in the production of Fruits and vegetables. Its export rate is also high, the floriculture is progressing with flowers being used for decoration, outdoor show, as gifts. It has increased the employment rate by 42% and decline unemployment by 58% in 2018. Horticulture is the new version in India to improve food security in India and provide employment to its people, tackle climate change, reduce air pollution, maintain the temperature and make the urban area greenery.

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