



Increase the Farmers' Income through Horticulture Cultivation in India

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The three major crops under vegetable section: onion, potato and tomato are the backbone of vegetable production. We should have a calendar of production for the various crops and analyze their condition likewise. Different states have their different capacities and agro-climatic conditions which favour some specific products. Such states should focus on their speciality and good channels should connect the country for the prominent flow in market. Integrated markets should be developed and shift from traditional to modern practices should be adopted.

Introduction

India occupies more than 17% of the population of World with only 2.4% land share. India is famous for agriculture farming. At the global level, it appears that we are slowly moving towards global food crisis. Recently published report of UN on the – 'Right to Food' estimated that nearly one billion people sleep without food across the world and among every six seconds a child dies of malnutrition. Agricultural production is an important contributor to India economy and providing nearly 67% of the country's employment. Over the past few years, horticulture has made remarkable progress in terms of expansion in area and production under different crops, increase in productivity, crop diversification, technological interventions for production and post-harvest and forward linkages through value addition and marketing. Despite several challenges and opportunities namely tumultuous weather, seasonal cyclones, occasional drought, demographic pressure, industrialization, urbanization and unprecedented use of insecticide & pesticide and compulsion for migration of rural masses to urban areas, especially for their livelihood. Production of horticulture crops like vegetables and fruits is likely to touch a record 305.4 million tonnes (mt) in 2017-18, about 1.6% higher than the previous year and 8% higher than the previous five years' average, while, foodgrain output is 277.49 million tonnes, exceeding the previous record of 275.11 million tonnes during 2016-17.

The Indian agricultural land covers area of 140 million hectares, out of which, 17% of area is dedicated to horticultural crops. This contributes 30% of total agricultural GDP of India, producing approximately 20% of grade A produce which can be hiked to more with better practices. For the last five years, horticultural produce is surpassing the produce of other agricultural commodities, which stood at 271 million tonnes this year. The area under horticulture crops is 25.1 million hectare with the production of 305.4 million tonnes.

Horticulture is not merely a diversification in agriculture but forms an integral part of food, nutritional security and poverty alleviation and also an essential part of economic security. India, like many other countries, is very concerned about food security, thus agricultural and

horticultural development has become primary area of focus in the current development programs.

Importance of Horticulture

- 1) **Higher per unit area yield:** The yield per hectare of horticulture crops is very high than the yield of field crops. There is more yield obtained from the land of an fruit area. e.g. paddy gives a maximum yield of only 30 q/ha, while Banana gives 300 to 500 q/ha, Pine apple 450 q/ha and Grapes 90-150 q/ha. In present scenario, the shortage of fruits and vegetables can be met out by growing more fruits/vegetables.
- 2) **Higher returns per unit area:** There is more income will be obtained from per unit area of land e.g. Well kept orchard of apple, grapes and sweet orange can give as much as Rs. 25,000 per ha as net income.
- 3) **Labour remains engaged for the whole:** An opportunity for maintaining labours throughout the year like the cereals where one cannot keep him self and employ the labours during the slack season.
- 4) **Best utilization of waste land:** Some fruit crops can offer best utilization of waste land crops like wood apple, custard apple, karonda, litchi etc. can be grown in such areas.
- 5) **Annual calories requirements:** To meet the annual calories requirements of food per year one would have to cultivate about 0.44 ha of wheat or 0.03 ha of banana or 0.06 ha of mango for satisfying human need. Thus mango produces about 9 times more food energy than the wheat produced per unit area.
- 6) **Raw material for industries:** Fruit farming is the base for several industries like canning, essential oils, etc which in turn provide employment to more persons.
- 7) **Efficient use of undulating lands:** Fruit growing can be practiced in places where the gradient is uneven or where the land is undulating and agronomical crops cannot be cultivated. In Konkan region, mango and cashew are cultivated on large scales on hilly and hill back area.
- 8) **Energy source:** Fruits and vegetables are the important energy giving material to the human body to meet out the daily requirement of nutrients.

Economic Profitability

Fruits and vegetables are rich sources of vitamins and nutrients. Flowers' beautifying every event and festival makes one of most interesting arms of Agriculture. The horticulture section is doing well in India when compared with others food crops, since it fetches good price because of its nature of seasonality. The estimation of the potential profits can be drawn by the fact that a farmer producing wheat of 1 kg gets 10 times higher prices for the same produce in horticulture section. Fruits like banana fetches as much as 30 folds more remuneration. Flowers (seasonal) can draw upto 30-35 times of remuneration. Considering this high potential, the concept of doubling farmers' income can work magically with horticultural crops. There is a need of shift from traditional crops and cropping pattern to horticulture crops like fruit and vegetables. Fruits perform better than vegetables on comparing it with other sections of horticulture. India produces abundant mango, banana, papaya and pomegranate depending on the agro climatic condition. But pomegranate performs better when compared with the other fruits. With the accreditation of nurseries, quality material is rendered at the farms. Star rating and graded nurseries has been helping the farmers.

Export Potential

Export in Indian horticulture section has been gaining heights. In the year, 2014-15 the export reached at a worth Rs. 28,628 crore. Fruits and vegetables alone accounted for Rs. 7.7 crore of export. Flower recorded an export value of Rs. 460 crore. The majority of exports are seen in cashew and spices. The cashew processing capacity of Indian peninsular region is huge. But due to non availability of raw nuts, the processing industries import raw nuts, crush them and gain profits. Government is also trying hard to increase the cashew production in the country, being focused on Southern states of Telangana, Karnataka, Tamil Nadu and Gujarat and Chhattisgarh. Cashew is one of the most remunerating crops rendering Rs. 180-200 for per kg of nuts.

Future Prospects

The condition of cold storage in the country is very pathetic. Dearth of power availability makes the cold storages un-functional and the harvest faces 20-30% of post harvest losses which is suffered by the farmers. This loss can be compensated by using cold storages. Every other fruit/vegetable type uses different process/method for the protection and preservation of produce. We are falling short of various components of cold storage like packed houses, ripening chambers and cold vans etc. Horticultural produce can be stored from 20 days to 6 months using these cold storages. The advancements also face gaps when we talk of storage houses for potato, tomato and onion, which are considered to be wonderful crops. But provisions and efforts are being taken by the government and in another 2-3 years, proper systems are to be developed for the preservation of these the supernatural crops. For setting up a cold storage of capacity 1-2 metric tonnes, an investment of Rs. 6-8 crore is needed.

Conclusion

The first and foremost thing for doubling farmer's income is to create market for farmers and provide market access and links for growing their business. Alternative sources of income along with horticultural crops should be created like apiculture, where the honey bees helps for the pollination and also draws extra income to the farmers through honey production. The Govt. is also promoting Mission for Integrated Development of Horticulture (MIDH) scheme to support the various components of horticultural crops. Starting with nursery development, covering sustainable irrigation practices, emphasizing on subsidies for storage structures till market linkages, etc, all the prospects are taken care of under this scheme.