HORTICULTURE

A POTENTIAL SECTOR FOR DIVERSIFICATION

The Hon'ble Union Agriculture Minister Shri Shivraj Singh Chouhan on 05th August 2024 announced that an amount of Rs 18,000 crore expenditure would be incurred on setting up 100 export-oriented horticulture clusters in next five years. His announcement may be seen in the context that Government of India (GoI) has launched a program on Cluster Development of Horticulture to enhance global competitiveness of Indian horticulture. The Ministry has identified 12 horticulture clusters for the pilot launch of the Programme. These are a few examples that amply reflects potential of the sector and Government's commitment.

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Indian Horticulture Scenario

India is the second largest producer of fruits and vegetables in the world, after China. The Indian horticulture contributes ~33% to agricultural Gross Value Added (GVA), while using about 13% of the gross cropped area. The horticultural production (Second Advance Estimates for 2023-24) is estimated to be 352.23 million ton, and has surpassed food grain production, from a much less area (28.63 million ha for horticulture against 127.6 million ha for food grains).

Productivity also is much higher vis a vis productivity of food grains (12.49 ton/ha against 2.23 ton/ha). Productivity of horticultural crops has increased by 38% during 2004-05 to 2021-22. The major subsectors of horticulture viz., fruits and vegetables are estimated to contribute a production of 112.63 million ton and 204.96 million ton, respectively.

Challenges in Horticulture Sector

While the total production is high, the productivity is lower vis a vis the major countries. There is a necessity to address the issues of quality planting material, availability of productive varieties, and spruce up extension network for technology transfer.

Climate change is a big challenge for horticultural crops. With rising temperature, snow line is likely to recede to higher altitude areas in the hills making the lower areas unsuitable for temperate fruits. Unseasonal intense rainfall during flowering and fruiting period may lead to higher flower drop and poor fruit-setting. More frequent drought incidents may adversely affect the growth of fruits trees and may lead to poor harvest. Higher incidences of pests and diseases make produce unfit for marketing and consumption.

In urban India, the Monthly Per Capita Expenditure (MPCE) on cereals and pulses is Rs 325 and on fruits and vegetables Rs 491, and share of expenditure on fruits and vegetables in total food expenditure is 19.4% as compared to 9.3% on cereals. In rural India, the MPCE on cereals and pulses is Rs 261 and on fruits and vegetables Rs 343 and share of expenditure on fruits and vegetables in total food expenditure is 19.6% as compared to 10.6% on cereals. (NSS Report No. 591: Survey on Household Expenditure: 2022-23)

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Lack of post-harvest infrastructure such as cold chain facilities and logistics is leading to reduced shelf life, market value of and huge post-harvest losses. Around 15-20% of the fruits and vegetables in India are wasted along the supply chain or at consumer level.

Role of credit is critical in promotion of horticulture sector that require long term investments. Owing to several reasons, credit off-take in horticulture sector is not commensurate to potential.

With an export of Rs 11,412 crore during 2021-22 for fresh fruits and vegetables, India is ranked 14th in vegetables exports and 23rd in fruits exports, and its share in the global horticultural market is a mere 1%. India has great poten-

tial for increasing exports of fresh fruits and vegetables.

Government Initiatives

Mission for Integrated Development of Horticulture (MIDH) is a Centrally Sponsored Scheme, launched from 1st April 2014, for holistic growth of horticulture sector covering fruits, vegetables, root & tuber crops, mushrooms, spices, flowers, aromatic plants, coconut, cashew, cocoa, and bamboo. GOI contributes 60% of total outlay in all the states, 90% in North-East and Himalayas and 100% in Union Territories. Horticulture Cluster Development Programme is another central sector programme aimed at growing and developing identified horticulture clusters to make them globally competitive.

Recognizing the need to take advantages of economies of scale, the GoI is implementing a central sector scheme to form 10000 FPOs with an outlay of Rs 6,300 crore. The scheme aims to promote the formation and strengthening of FPOs and development of entrepreneurship among the farmers. Horticultural sector with many subsectors offers great scope for FPOs to take advantage of this support.

The Union Cabinet, on 09 August 2024 approved Clean Plant Programme (CPP) with an outlay of Rs 1,766 crore to revolutionize India's horticulture sector. The CPP will address virus infestation in horticultural crops, affecting both productivity and quality. Key components of the programme are establishment of nine world-class Clean Plant Centres (CPCs) equipped with advanced diagnostic therapeutics and tissue culture labs; and implementation of a robust certification system under the Seeds Act 1966.

Way forward

- Cultivation of high yielding varieties. A rich number of varieties have already been developed by scientific institutes, which must be taken to cultivation. Also, adopting cropping systems such as high-density plantation, mixed cropping / multi layered cropping systems will boost productivity.
- Alignment of Research towards building climate resilience. Development of drought / heat resistant varieties, protected cultivation through low-cost poly houses and net houses, adoption of agronomic practices that reduce impact of climate change, micro irrigation, integrated pest and disease management, natural farming practices, etc. be promoted on a mission mode.
- Optimization of production through advances in technology such as precision agriculture techniques. This involves using data and sensors to monitor crops, soil conditions, and weather patterns, enabling farmers to take informed decisions and increase efficiency, reduce costs, and improve sustainability.
- Promotion of low-cost decentralized processing technologies and near farm primary processing infrastructure.
- Engagement with FPOs, FPO federations, SHGs and SHG Federations and new age agri startups in the value chain of horticulture crops. Providing common post-harvest infrastructure such as cold storage, integrated pack houses, ripening chambers, etc. to these farmer groups will enable economies of scale and orient production to high end processing and exports.
- Improvement of marketing facilities in small towns and connect to distant markets, promotion of digital marketing channels such as e-NAM, ONDC, etc. on a campaign mode and incentivizing farmers / FPOs / SHGs on branding and labelling.
- Access to credit on easier terms, interest subvention for long term investments and credit linked capital subsidies.
- Technology transfer by gearing up Government's extension machinery and adoption of digital means to reach farmers. Research institutions should strive to transfer technologies on modern farming techniques, good agricultural practices, and market-oriented production. Collaboration of research institutions and agricultural extension agencies is critical.
- Rooftop gardens and vertical farming systems will gain momentum in future. Aeroponic and hydroponic systems have made it easier to grow a variety of vegetables in limited space.

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To achieve demand-driven horticultural production, improved productivity, effective credit and risk management, and more efficient marketing network, there is a need for multi-stakeholder partnerships involving horticulturists, government, consumers, agro-based industry, and academia/research. As India aims to become the world's food basket, which includes fruits and vegetables, the journey needs to be supported by joint efforts to achieve income and livelihood advancements of horticultural farmers.

**Disclaimer: This is the personal viewpoint of the author and does not represent the opinion of NABARD in any way.*