Horticulture Sector in India

Why in News?

- Recently, Department of Agriculture, Cooperation and Farmers Welfare released the Third Advanced Estimate (2018-19) of Area and Production of various Horticulture Crops.
- As per the report, the total horticulture production in the country is estimated to be 313.85 million tonnes which is 0.69% higher than the horticulture production of 311.71 million tonnes in 2017-18.
- The area under horticulture crops has increased to 25.49 million hectares in 2018-19 from 25.43 million hectares in 2017-18.

The Department of Agriculture, Cooperation & Farmers Welfare (DAC&FW) is one of the three constituent departments of the Ministry of Agriculture & Farmers Welfare, the other two being Department of Animal Husbandry, Dairying & Fisheries (DAHD & F) and Department of Agricultural Research and Education (DARE).
What is Horticulture?

- Horticulture is the **branch of agriculture** concerned with **intensively cultured plants** directly used by man for food, medicinal purposes and aesthetic gratification.
- In simpler words, it is cultivation, production and sale of vegetables, fruits, flowers, herbs, ornamental or exotic plants.
- The term Horticulture is derived from the Latin words *hortus* (garden) and *cultūra* (cultivation).
- **L.H. Bailey** is considered the **Father of American Horticulture** and **M.H. Marigowda** is considered the **Father of Indian Horticulture**.

Classification

- **Pomology**: Planting, harvesting, storing, processing, and marketing of **fruit and nut** crops.
- **Olericulture**: Producing and marketing **vegetables**.
- **Arboriculture**: Study, selection and care of individual **trees, shrubs or other perennial woody plants**.
- **Ornamental Horticulture**: It has two subparts-
  - **Floriculture**: Production, use and marketing of **floral crops**.
  - **Landscape Horticulture**: Production and marketing of **plants used to beautify** the outdoor environment.

Features of Horticulture in India

- Horticulture sector has become one of the major drivers of growth as it is **more remunerative than the agricultural sector** (food grains mainly).
- This sector provides **employment possibilities** across primary, secondary and tertiary sectors.
Horticulture crops, fruits are more resilient to change in weather conditions and the vegetables augment the income of small and marginal farmers.

Water utilisation is very low, minimising the risk of crop failure and it can be done on smaller farms.

Multiple crops are planted simultaneously to get more yield and to use the maximum of the fertilisers.

This sector enables the population to eat a diverse and balanced diet for a healthy lifestyle.

It became a key driver for economic development in many of the states in the country where Division of Horticulture of Indian Council of Agricultural Research is playing a pivotal role.

Indian Council of Agricultural Resource (ICAR)

- An autonomous organisation under the Department of Agricultural Research and Education (DARE).
- Formerly known as Imperial Council of Agricultural Research, it was established on 16 July 1929.
- Headquartered at New Delhi.
- It is the apex body for coordinating, guiding and managing research and education in agriculture including horticulture, fisheries and animal sciences in the entire country.

Achievements

- In the last few decades, this sector has gained prominence over contributing a growing share in Gross Value Addition of the Agriculture and allied sectors.
- Mission for Integrated Development of Horticulture (MIDH) is being implemented by adopting an end to end approach for increasing production of horticulture crops and reducing post-harvest losses.

Mission for Integrated Development of Horticulture (MIDH)

- Centrally Sponsored Scheme for the holistic growth of the horticulture sector covering fruits, vegetables and other areas.
- Under MIDH, Government of India contributes 60% of the total outlay for developmental programmes in all the states (except North Eastern and Himalayan states where GOI contributes 90%) & 40% is contributed by State governments.
- It has five major schemes on horticulture-
  - National Horticulture Mission (NHM)
  - Horticulture Mission for North East and Himalayan States (HMNEH)
  - National Horticulture Board (NHB)
  - Coconut Development Board (CDB) &
  - Central Institute of Horticulture (CIH), Nagaland
National Horticulture Board (NHB)

- It was set up in 1984 on the basis of recommendations of the "Group on Perishable Agricultural Commodities", headed by Dr M. S. Swaminathan.
- Headquartered at Gurugram.
- Objective is to improve integrated development of Horticulture industry and to help in coordinating, sustaining the production and processing of fruits and vegetables.

- The production of fruits and vegetables has overcome the production of food grains in the country.
- The total horticulture production has increased from 211.2 million tonnes in 2007-08 to 311.71 million tonnes in 2018-19.
- India is the second largest producer of fruits and vegetables in the world with first rank in the production of Banana, Mango, Lime & Lemon, Papaya and Okra.
Horticulture Statistics at a Glance- 2018

- Important publication of the Ministry of Agriculture and Farmers Welfare.
- The Horticulture Statistics Division in the Department of Agriculture, Cooperation and Farmers’ Welfare has taken various initiatives to improve the database of horticulture crops.
- Horticulture Area Production Information System (HAPIS) is a web enabled information system by which data from the states/districts is reported, minimising the time-lag and maximising the coverage area.
- Coordinated programme on Horticulture Assessment and MANagement using geoinformatics (CHAMAN) with the objective to develop & firm up scientific methodology for estimation of area & production under horticulture crops through Remote Sensing and Sample Survey Techniques.

- The varieties tolerant/resistant to various biotic and abiotic stresses have been developed in different fruits, vegetables, medicinal and aromatic plants.
- Improved techniques for production of disease free quality planting materials have been developed. Micro propagation techniques have been standardized for various fruits, spices and other vegetatively propagated plants.
- Technology for enhancing the water and nutrient efficiency through micro irrigation and fertigation has been developed for a number of horticultural crops.
- Good Agricultural Practices (GAP) are developed for various plants, especially medicinal.
- Farm mechanization to increase harvesting and processing efficiency and to reduce crop loss has been implemented by developing horticulturalists.
- Low cost environment friendly cool chamber was developed for on-farm storage of fruits and vegetables.
For dissemination of technologies, region and crop specific training and demonstration programmes are being taken up.

Challenges

- Horticulture does not enjoy a safety net like the Minimum Support Price (MSP) for foodgrains.
- Lack of good cold chain storage and transport networks to extend the life of perishable products.
- Very less or limited input by machinery and equipment so it is tough to minimise the time restraints.
- Higher input costs than foodgrains make it a difficult set up, especially when there is no support from the local governments to the smaller farmers.
- It gets challenging for marginal farmers to cope with the high price fluctuations.
- Limited availability of market intelligence, mainly for exports makes it a tougher option to choose.

Suggestions

- Achieve technology led development in Horticulture.
- Post harvest & value addition in horticulture crops.
- Modified atmosphere packaging for long storability & transportation of fruits & vegetables.
- Insect pollinators for improving productivity and quality of the crops.
- Development of varieties for cultivation in non-traditional areas.
- Nutrient dynamics and interaction.
- Bioenergy and solid waste utilisation to make horticulture more efficient and eco-friendly.
- Plan, coordinate and monitor R&D programmes at national level as well as to serve as knowledge repository in Horticulture sector.

Way Forward

- The diversification in the agricultural sector mainly of the horticulture sector has become a major source of positive growth for the sector itself and for the nation.
- It has emerged as a promising source of income acceleration, employment generation, poverty alleviation and export promotion.
- India can emerge as a far bigger producer and exporter if sufficient emphasis is given to resource allocation, infrastructure development, more R&D, technological upgradation and better policy framework for horticulture sector.
- Horticulture sector with strong forward and backward linkages as an organised industry can stimulate and sustain growth.

For Mind Map