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## Emerging trend of employment in horticulture in Bihar: An overview

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### Abstract

Horticulture is science and arts of production utilization and improvement of horticulture crops such as fruits, vegetables, ornamental, plantation, medicinal and aromatic plants. It plays significant role in employment generation. This sector can change the fate and future of Bihar and can play important role in economic development of the nation.

**Keywords:** agents, bio-chemistry, employment, horticulture, physiology

### Introduction

Horticulture, the branch of plant agriculture dealing with garden crops, generally fruits, vegetables, and ornamental plants. The word horticulture comes from two Latin words which mean "garden" and "culture" Horticulture is the art and science of growing and handling fruits, nuts, vegetables, herbs, flowers, foliage plants, woody ornamentals, and turf. Horticulture is subdivision of agriculture which deals with gardening of plants. Agriculture deals with cultivation of crops and also animal farming whereas Horticulture deals with cultivation only.

Horticulture is the agriculture of plants, mainly for food, material, comfort and beauty for decoration. Horticulturists apply knowledge, skills, and technology to grow intensively produced plants for human food and non-food uses and for personal or social needs.

Horticulture crops are a source of variability in farm produce and diets. They are a source of nutrients, vitamins, minerals, flavor, aroma, dietary fibres, etc. They contain health benefiting compounds and medicines. These crops have aesthetic value and protect the environment.

It is the cultivation of garden plants, fruits, berries, nuts, vegetables, flowers, trees, shrubs and turf. Horticulturists work for plant propagation, crop production, plant breeding, genetic engineering, plant physiology, storage, processing and transportation. They work to better crop yield, quality, nutrition value and resistance to insects, diseases, and environmental pollution. Horticulturalists use modern methods for the production of seedlings and mother plants. These plants are propagated through different methods such as seeds, inarching, budding, veneer grafting, patch budding and soft wood grafting.

### Position of Horticulture in Bihar

The government of Bihar has taken several initiatives to accelerate agricultural growth as envisaged in agriculture road maps by enhancing investment in rural infrastructure and agricultural research, modernisation of value chains, improvement in access to credit and markets, natural resources management, flood and drought protection and access to modern technologies. Besides, the central government has been providing financial assistance to implement various agricultural development programmes in the state. Some of the centrally sponsored programmes include Rashtriya Krishi Vikas Yojana, National Mission on Oilseeds, National Horticulture Mission and Pradhanmantri Krishi Sinchayee Yojna. Despite all these initiatives, Bihar's agricultural growth has remained low and year-over-year growth is found to be highly volatile. Further, annual agricultural growth has shown a decelerating trend. All this has happened in spite of a stable political environment, improvement in investment on rural infrastructure and reforms in agricultural marketing.

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Growth diagnostic analysis begins with identification of the determinants of agricultural growth and examines how these determinants characterise the agriculture sector in the state of Bihar. It is surmised that an average farmer would attempt to maximise revenue from the cultivation of crops in a given piece of land. This is 44 important because the market orientation of farmers has increased with a rise in the amount of crop outputs sold and inputs purchased. Under this situation, farmers would tend to maximize the value of crop output (farm income) and minimize the input costs by adopting various outputenhancing and cost-saving technologies. The framework of growth diagnostics strives to identify the factors that influence both farm income and input costs associated with the pattern of input use.

With respect to agricultural land, Bihar has highly fertile alluvial soil and most of the cultivated land falls in the Gangetic plain. There is increased competition for land between agricultural and non-agricultural uses. The rising population density and urbanisation seem to put pressure on the existing stock of agricultural land. These factors tend to divert the agricultural land for nonagricultural uses such as residential plots and industrial buildings. However, proportion of nonagricultural land to total land area remained constant in Bihar. But the area under agricultural land has marginally declined in recent years. The land use patterns in Bihar are not dissimilar to the trend observed at the national level.

Over 90 per cent of the output of crops including paddy, wheat, maize, lentil, gram, mustard and banana is sold within the village to traders and commission agents. Farmers reported that they do not get a fair price for their agricultural produce. Most farmers reported that their poor economic conditions and the need for immediate cash after harvest compel them to sell at a lower price to traders. Further, government market facilities are not available near the village. Even if farmers take their produce to a distant market yard, they face the problem of paying extra to commission agents. Farmers also cannot store produce at their household due to lack of space and the necessary storage conditions to avoid spoilage of grains. With respect to procurement of food grains in Bihar, Primary Agriculture Cooperative Societies are entrusted with procurement of grains particularly paddy and wheat from the farmers at the government-announced minimum support price. Ground-level evidence through discussion with farmers shows that the procurement operation is limited to a certain amount and time, and these restrictions are considered to be highly arbitrary.

### **Horticulture and employment in Bihar**

Horticulture is the branch of agriculture that deals with the art, science and business of plant cultivation such as cultivation of plants, vegetables, flowers, fruits, herbs, shrubs, bushes, ornamental trees and landscaping for gardens, maintaining nurseries, green houses, gardens, orchards, plantations and their postharvest management. Horticulture is an extremely diversified field with unlimited career opportunities in a variety of areas and it also includes conservation of plants, restoration, landscape, design and construction. India is next to China in area and production of fruits and vegetable crops and has been contributing 10% of fruits and 14% of vegetables of the total world production. The horticulture sector constituted nearly 20 per cent of agriculture GDP and contributes 4 per cent in the

national economy. Horticulture with its offshoot floriculture has become a focus of export activity and India's exports of roses, carnations, gladioli, chrysanthemums, jasmine and other tropical plants and flowers are touching new heights.

### **Government Sector Employment**

The job opportunities are accessible for the students within the country after graduation. The nationalized banks, reserve bank, state bank put forward an opportunity for post graduates in agriculture and horticulture as agriculture officers, field officers and rural development officers. Different agriculture universities also employ horticultural postgraduates for distinct posts from concerned field of their specialization. However, for a number of posts for the post of associate professor, assistant professor and other teaching posts but candidates should qualify national eligibility test (NET) conducted by UGC/CSIR/ICAR while for senior level posts doctoral degree in concerned field is an essential requisite (Singh *et al.*) Scientist. This examination conducted by the agriculture scientist recruitment board (ASRB), ICAR, New Delhi. Horticulture officer and Assistant horticulture officer this examinations conducted by public service commission of concerned state. Technical assistant, horticulture inspector / food inspector / marketing inspector, the eligibility of this examination is B.Sc. (Agriculture) or B.Sc. (Horticulture) and examination conducted by concerned state government.

### **Private Sector Employment**

Horticulture graduates can become a horticulturist in industries, hotels, golf courses & construction companies. Marketing jobs are also offered by various seed, weedicides, pesticide and insecticide companies. Creativity, it has very satisfying and diversity – one can be a hands-on gardener, a hard core plant scientist or a garden designer. Horticulture offers a contemporary, challenging career.

Research: many scientists are engaged in developing new and improved types of vegetables, fruits and ornamentals. Apart from these, horticultural scientists also devote considerable time to improve the aesthetics of ornamentals and the quality of products.

- **Chemical industry:** The horticulture industry depends on large amounts and varieties of chemicals, including fertilizers, pesticides and growth hormones. Many companies are involved in producing chemicals that are used to enhance plant production and the quality of produce.
- **Production of essential oils:** Many firms are involved in extraction of medicinal and aromatic plants essential oils which is used in confectionary, cosmetic, medicine, beverage and food industries at large scale.
- **Machinery:** The engineers design and produce tool and machinery for use in the production of horticultural plants. Machinery and implements are available for preparing, harvesting, storing and packing.
- **Distribution:** Horticultural products are transported from the areas of production to marketing outlets.
- **Computer in horticulture:** Computers are widely used in the horticultural field such as landscape designing, crop modelling and soil modelling equipment automation, public information, record keeping and databases.

### Self-Employment and Entrepreneurship Development

After graduation and post-graduation a horticultural graduates can start the their own agriculture clinic which are envisaged to provide expert advice and services to farmers on technology, cropping practices, protection from pests and diseases, market trends, prices of fruits and vegetables crops and also clinical services for animal health which would enhance productivity of crops/animals and increased income to farmers. A graduate also can start the business of nursery raising of fruit plants, ornamental plants, aromatic and medicinal plants and bonsai by the plant material using various techniques.

Central and state agriculture universities are providing horticultural education at different levels such as college level (B.Sc., M.Sc. and Ph.D.) and farm level (farmer's training, farmer seminar, training bulletins, vocational training, and farmer tour). A large number of jobs require knowledge and training in horticulture and a good job requires degree from college or university. College level education provides depth knowledge of the field and offers job opportunities at supervisory or managerial levels while post-graduation and doctorate level degree provide very good jobs in the field of horticulture to conduct research or impart teaching. The majority of horticulture positions require a minimum of either a two or four-year degree.

### Conclusion

Horticultural Commodities pass through different stages, right from the farmer to the consumer. There is a need to strengthen the supply chain with appropriate value addition. This is especially important if farmers diversify from cereals to fruits and vegetables. Development of the agro and food processing industry at a cluster level where adequate raw materials are available will enhance value addition, generate employment and increase the income of farmers.

Investment in the education of farmers is crucial to motivate them to grow new crops, adopt new methods of cultivation and improve marketing practices of horticulture products public extension activities on different aspects of horticulture production and marketing services need to be strengthened. There is a need to strengthen the horticulture extension system with adequate manpower and build their capacity on integrated value chain approach for better price realisation and increasing income of the farmers.

### References

1. Chand R, Kumar P, Kumar S. "Total Factor Productivity and Contribution of research investment to Agriculture Growth in India." National Centre for Agriculture Economics and Policy Research, New Delhi 2019.
2. Department of Agriculture, Cooperation & Farmers Welfare, Horticultural Statistics at a Glance, Oxford University Press, New Delhi 2015.
3. Ministry of Finance, Government of India Economic Survey, Oxford University Press, New Delhi 2015.
4. Department of Agriculture, Cooperation & Farmers Welfare, Horticultural Statistics at a Glance, Oxford University Press, New Delhi 2017.
5. Gulzar F, Nusrat R. Understanding and Boosting Horticulture Industry: An Evaluative Study of Horticulture Sector of District Kupwara in J&K. Shrinkhala 2015.
6. Kannan E. "Total Factor Productivity Growth and its Determinants in Karnataka Agriculture." ISEC Working Paper, Institute for Social and Economic Change, Bangalore 2019.
7. Government of Bihar, Economic Survey. Finance Department, Government of Bihar, Patna 2019.
8. Kumar P, Kumar A, Mittal S. "Total Productivity of Crop Sector in the Indo Gangetic Plain of India: Sustainability Issues Revisited." Indian Economic Review 2020.