

## Crop Diversification

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### Introduction

**Crop Diversification** is the addition of new crops or cropping systems to agricultural production on a particular farm taking into account the different returns from value-added crops with complimentary marketing opportunities.

In the successive years of the green revolution, food security was fulfilled at the national level due to the stupendous efforts of the Indian Council of Agricultural Research (ICAR).

### Types of Diversification

There are mainly two types of crop diversification prominent in India. They are:

1. **Horizontal Diversification** - This relates to multiple cropping or mix of crops instead of cultivating a single crop. Horizontal Diversification is especially useful for small farmers who hold a small piece of land. This allows them to earn more by escalating cropping intensity.
2. **Vertical Diversification** - It refers to the incorporation of industrialisation along with multiple cropping. In this kind of Diversification, farmers take a further step and invest in activities like horticulture, agro-forestry, livestock rearing, culture of aromatic plants, etc.

### Reasons for crop Diversification

The demand for high-value crops is increasing in India, and this paves the way for farmers to experiment with several cropping combinations. Apart from that, some other reasons make diversification an excellent choice for small and marginal farmers of India.

These include:

- **Climate Change** - Diversification reasonably controls the damage that can occur from the unfavourable weather condition. This process safeguards the farmers from the loss of crops in such a situation.



- **Facilitate Several Employment Alternatives** - Almost half of the employment of India revolves around the agriculture sector. Diversification creates new job opportunities for rural people other than traditional farming.
- **Increases of Income** - Opting for Diversification will undoubtedly increase the income and will let the farmers live a comfortable life.
- **Exportation** - Diversification, especially of non-farming products, makes a sizeable export provision for its unique characteristics. India is now on the front line in exporting several agricultural products to multiple countries. This contributes to the overall growth of the economy.

#### **Benefits of Diversification**

- It helps in reducing risk factors as it ensures that the farmers do not lose all of their resources if the weather does not favour the crop production.
- Since multiple crops can be harvested from a small field, the production increases ten-fold, which ensures a substantial amount of income.
- The agriculture sector is already crowded in India; therefore, it makes provision for additional employment in rural areas.
- The importance of crop diversification lies in the fact that it effectively increases soil fertility and controls pest incidences.
- The boost in rural employment impacts the overall economy of the nation, as agriculture in India falls into the primary sector of the country.

#### **Impact of Diversification**

- Increase in production of high-value crops.
- Better livelihood for farmers and instrumental for lowering the poverty level.
- Scopes for varied employment.
- Empowerment of women.
- Sustainable water usage.

#### **Constraints in Crop Diversification**

Crop diversification in the country is taking the form of increased areas under commercial crops including vegetables and fruits since independence. However, this has gained momentum in the last decade favouring increased area under vegetables and fruits and also to some extent on commercial crops like sugar cane, cotton and oilseeds crops specially

soybean. The major problems and constraints in crop diversification are primarily due to the following reasons with varied degrees of influence:

- i. Over 63 percent of the cropped area in the country is completely dependent on rainfall.
- ii. Sub-optimal and over-use of resources like land and water resources, causing a negative impact on the environment and sustainability of agriculture.
- iii. Inadequate supply of seeds and plants of improved cultivars.
- iv. Fragmentation of land holding less favouring modernization and mechanization of agriculture.
- v. Poor basic infrastructure like rural roads, power, transport, communications etc.
- vi. Inadequate post-harvest technologies and inadequate infrastructure for post-harvest handling of perishable horticultural produce.
- vii. Very weak agro-based industry.
- viii. Weak research - extension - farmer linkages.
- ix. Inadequately trained human resources together with persistent and large scale illiteracy amongst farmers.
- x. Host of diseases and pests affecting most crop plants.
- xi. Poor database for horticultural crops.
- xii. Decreased investments in the agricultural sector over the years.