

UPSC Civil Services Examination

UPSC Notes GS-III [Agriculture & Crops]

Topic: High Yield Crops - Benefits, Disadvantages, New Research

Agricultural crops that have been bred or fertilized and can be produced by genetic modifications to increase the rate of production are known as high yield crops. With the growing population, it has become important to produce high-yielding crops. New higher-yielding crops and seed grains are developed by several agricultural scientists which resulted in a tremendous increase in the global food supply and improved farming methods.

This article talks about the high-yield crops which is an important topic for [IAS Exam](#) and its three stages - Prelims, Mains & Interview. The topic is also included in UPSC Mains GS-III. IAS aspirants can also download the notes PDF at the end of the article.

Development of High Yield Crops in India

The Industrial Revolution dramatically changed the agriculture industry and produced significant changes. People involved in agricultural production left the farms to work in city factories. As such, fewer people were required for the production of more agricultural crops to gain an increasing number of consumers.

Production of high- yielding crops and improved variety of seeds was encouraged by the Central and the State Government. Indian Council of Agricultural Research, Punjab Agricultural University (Ludhiana) and G.B. Pant Agricultural University (Pantnagar) were also involved in developing and importing new hybrid varieties as per Indian conditions and requirements.

In order to produce higher yields of crops, numerous agricultural practices are required. One of the important criteria includes the selection and breeding of genetically superior cultivars.

The advances in the field of genetics have led to the possibility to breed some of the desirable characteristics into plants. These desirable characteristics have resulted from mutation and can be transferred from one plant to any other plant using recombinant DNA technology.

Scientists from the Indian Agricultural Research Institute (IARI), developed a new variety of arhar dal that produces 20 quintals/hectare yield. It matures in 120 days and is suitable for mechanical combine harvesting.

High Yield Crops- Advantages

There are several advantages of high yield crops due to their certain characteristics. Some of the advantages are mentioned below:

- Higher and improved yield of crops
- Most of the high yield crops are dwarf and hence, their plants are stronger and can withstand strong winds.
- The high yield crops give better response to fertilizers and thus, their production rate increases substantially.
- Early maturation.

Disadvantages of high yield crops

Although these crops are known for their high yielding property, the high yield crops also have some disadvantages:

- The high yield crops require more water and fertilizers as compared to the normal varieties of crops.
- They require frequent weeding.
- Continuous use of pesticides.
- The high yield crops, when compared with the traditional varieties are generally more susceptible to diseases.

What are High Yielding Variety Seeds?

High Yielding Variety Seeds (HYV seeds) are resistant to insects and diseases and have a high yielding capacity. These seeds are of better quality and are a better option for surplus and healthy production of crops. The high yielding variety seeds played an important role in the Green Revolution of India.

The high yielding seeds are generally flood and drought resistant and give better quality yielding.

In the Kharif season of 1966, the high yielding programme was launched in selected areas having assured rainfall.

