

# Plant Breeding

Plant breeding is the science of improvement of crop varieties with higher yield, better quality, resistance to diseases and shorter durations which are suitable to particular environment. In other words, it is a purposeful manipulation of plant species in order to create desired genotype and phenotype for the benefit of humans. In early days, plant breeding activities were based mainly on

skills and ability of person involved. But as the principles of genetics and cytogenetics have elucidated breeding methods such as selection, introduction, hybridization, ploidy, mutation, tissue culture and biotechnology techniques were designed to develop improved crop varieties.

## Objectives of Plant Breeding

- ❖ To increase yield, vigour and fertility of the crop
- ❖ To increase tolerance to environmental condition, salinity, temperature and drought.
- ❖ To prevent the premature falling of buds, fruits etc.
- ❖ To improve synchronous maturity.
- ❖ To develop resistance to pathogens and pests.
- ❖ To develop photosensitive and thermos-sensitive varieties.

## Steps in Plant Breeding

The main steps in plant breeding are given below

