

ROLE OF BIOTECHNOLOGY IN IMPROVING CROP YIELD AND ENHANCING FOOD SECURITY

RAJNEESH BHARDWAJ

Abstract

Biotechnology has had a huge impact on agriculture and ultimately enhanced our quality of life by studying, altering, and cloning various crops. Hybrid seeds, synthetic seeds, photosynthesis boosters, stress-resistant plants and crops, bio-fertilizers, and bio-pesticides are a few examples of potential applications. Biotechnology may be useful for managing livestock, preserving agricultural goods, and sustaining present crop yields while using fewer pesticides, herbicides, and fertilisers. In addition to improving traditional plant breeding techniques, biotechnology also provides a better replacement for food that is produced. When used in conjunction with other cutting-edge agricultural technologies, it offers a creative and environmentally friendly solution to meet consumer demand for sustainable agriculture. Biotechnology significantly increases agricultural output by enhancing disease prevention and drought and flood resistance. This not only satisfies the rising need for food but also aids in the financial success of farmers. Techniques based on biotechnology provide effective, cheap solutions to pest control problems. Producers have created a protein that effectively eliminates pest issues with cotton, maize, and potato crops.

Keywords

Biotechnology, Improving Crop Yield, Enhancing Food Security, Biotechnology Methods, Cutting-Edge Agricultural Technologies