

## Bioinformatics in crop improvement

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### Abstract

The past few years has witnessed a remarkable development in molecular biology with the help of advanced techniques in genomics. Bioinformatics is one of the important aids to the agricultural research and its allied industries which will helpful for improved pest management and smart agriculture, ultimately promoting sustainable agriculture. The use of advanced sequencing technique bioinformatics acts quite beneficial for scientists which give them access to important information regarding genomics. As a suitable interface between informatics and modern biology; it includes development, discovery and implementation of useful software that are helpful in analyzing the biological pathways in a better manner keeping primary goal of achieving development in agriculture and its allied sectors. This study gives an overview of emerging databases and computational tools used in agricultural bioinformatics for the study of crop improvement.

**Keywords:** Bioinformatics, agricultural research, sustainable agriculture, crop improvement.

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### Introduction:

The field of science employed for solving biological problems with the combination of powers from computers, algorithms from mathematics and statistics, with life science concepts is known as bioinformatics. This cross disciplinary area of science and its machinery comprising of organized development and its operation technology to knob organic information by assembling biological data. The rapid work in the field of genomics and proteomics has been generating a large amount of data in recent times. These data need computerized analysis for bringing up conclusions. Importance of this field grows with