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The Multiple Roles and Progress of Epigenetics in the Field of Agriculture Biotechnology

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Abstract

In our life plants are essential part of our ecosystem, because they provide us clean and pure air, food and oxygen. But plants are continually exposed to each ecological stressor like salinity, drought, pest attack, different diseases and pollution which is created by human beings. The population in the world is increasing day by day as a result cultivated land is reduced due to the construction of buildings. The number of plants is also decreased which had badly impact the natural environment and shortage of food. Genetic modifications occurred naturally and farmers are cultivating these plants with desirable traits and taking benefit from this phenomenon for the purpose of feeding the population of entire world human beings. Many scientists are performing an important role in the genetic modification of crops and their discoveries compromise the incredible ability for good performance of crops without alteration of the gene. Their exploration, obviously, is in epigenetics. By normally changing the gene expression of the plant, without modifying the genome, the desired traits should be obtained like high yield, good quality food and resistant crops that have the ability to withstand in hard conditions through epigenetic processes. The entirety of this is to get conceivable cheap, time-saving crops which are not harmful to the climate. In further exploration, epigenetics field may bring to the table for genuine outcomes to fulfill the food requirement of growing world. The study of epigenetics is an intense fascination for those who want to comprehend the fundamental science of epigenetic, gene expression and their possible application for crop improvement. Soon, we will see a solid role of epigenetics in crop yield improvement, so far food creation, sustenance, and human wellbeing. In this, we tried our best to summarize the progress of epigenetics in the field of Agriculture Biotechnology.

Biography

I am doing PhD in Biology from the Zhengzhou University of China. My research work is on genome editing of wheat by using Crispr/Cas technology.

