

CRISPR gene editing poised to address myriad agriculture-related climate change challenges

Many industries and fields of science are investigating innovative technologies to mitigate the effects of climate change—effects that are already evident as an alarming collection of environmental, social, and economic problems. CRISPR-Cas gene editing has been successfully applied in human therapeutics and diagnostics; its potential to play a significant role in reducing the impact of climate change is now being recognized.

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One of the main issues leading to high carbon dioxide emissions is the transport of food all around the world to meet increasing demand. If we apply CRISPR-Cas to enhance the yield of plants, to improve the nutritional value of the food products, and to extend the shelf life of fruits and vegetables, more varied and nutritious food may be produced close to consumers, which will minimize the need for food transport.

Food waste also has a significant impact on climate change, as up to 45% of food is wasted, producing billions of tons of carbon dioxide emissions globally each year. CRISPR-Cas can contribute to extending the shelf life of our food products, securing fruit and vegetables from pathogens by enhancing their natural defense mechanisms. This could replace existing methods of food preservation which are based on chemicals and high-energy processes.

[**This is an excerpt. Read the original post here.**](#)