

Plant breeding efforts strained by climate change and booming food demand. Is CRISPR the answer?

Human population growth has increased the demand for food crops, animal feed, biofuel and biomaterials, all the while climate change is impacting environmental growth conditions. There is an urgent need to develop crop varieties which tolerate adverse growth conditions while requiring fewer inputs.

Plant breeding is critical to global food security and, while it has benefited from modern technologies, it remains constrained by a lack of valuable genetic diversity, linkage drag, and an effective way to combine multiple favourable alleles for complex traits.

Follow the latest news and policy debates on sustainable agriculture, biomedicine, and other 'disruptive' innovations. Subscribe to our newsletter.

[SIGN UP](#)

CRISPR/Cas technology has transformed genome editing across biological systems and promises to transform agriculture with its high precision, ease of design, multiplexing ability, and low cost.

We discuss the integration of CRISPR/Cas?based gene editing into crop breeding to advance domestication and refine inbred crop varieties for various applications and growth environments.

We highlight the use of CRISPR/Cas?based gene editing to fix desirable allelic variants, generate novel alleles, break deleterious genetic linkages, support pre?breeding, and for introgression of favourable loci into elite lines.

[Read the original post](#)