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Genetic Editing

Agriculture scientists, hobby gardeners, and even dog breeders have used genetic editing tools and techniques for decades. The latest advances in genetic editing hold incredible potential to improve human life as well as living conditions on Earth. CRISPR, a prominent and important genome-editing tool, has potential uses in combatting genetic diseases in humans and revolutionizing the GMO industry. CRISPR's relatively low cost is leading to questions about its potential uses. These resources explore recent information about genetic editing, GMOs, and CRISPR.

Read

"A New Technique That Lets Scientists Edit DNA Is Transforming Science—and Raising Difficult Questions" by Alice Park from *TIME Health*
http://time.com/4379503/crispr-scientists-edit-dna/

This article delves into the ethical concerns related to CRISPR and includes perspectives from several science and research institutes.

"Embryo Gene-Editing Experiment Reignites Ethical Debate" by Dina Fine Maron from *Scientific American*
https://goo.gl/teor8m

This article explores a recent research study involving the successful genetic editing of human embryos with CRISPR.

"Genetically Engineered Crops: Experiences and Prospects" by The National Academy of Sciences
https://goo.gl/vscQjk

This report summarizes research from 1987-2010 examining the potential positive and adverse effects of genetically engineered crops while also looking at advances in related technologies.

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Listen

"GMO…OMG?" from *Science Vs*
https://gimletmedia.com/episode/gmo-omg/

Gimlet Media's *Science Vs* podcast dives into the facts about scientific trends, fads, and fallacies. In this episode, listeners hear the debate about genetically modified foods and their potential safety implications.

"Update: CRISPR" from *Radiolab*
http://www.radiolab.org/story/update-crispr/

Radio program and podcast *Radiolab* combines its initial episode about CRISPR from nearly two years ago with an update on recent developments. Listeners hear from scientists involved in the discovery of the genome-editing tool.

"CRISPR vs. Climate Change" from *Base Pairs*
https://goo.gl/xQb8eG

From Cold Spring Harbor Laboratory, this podcast episode includes an interview with a plant scientist who shares how advances in agriculture with CRISPR can help curb the effects of climate change.

Watch

"Biologist Explains One Concept in 5 Levels of Difficulty—CRISPR" from *WIRED*
https://goo.gl/bZRhDW

Biologist Neville Sanjana explains CRISPR to five different people of differing ages and expertise.

Reflect and Share

1. What ethical considerations are associated with genetic editing?
2. How has genetic editing affected your life?
3. How should tools like CRISPR be regulated, and by whom?