



Earning Trust in Gene Editing

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The Center for Food Integrity

Analytical Excellence through Industry Collaboration
April 7, 2022

TO HELP TODAY'S FOOD SYSTEM
EARN CONSUMER TRUST



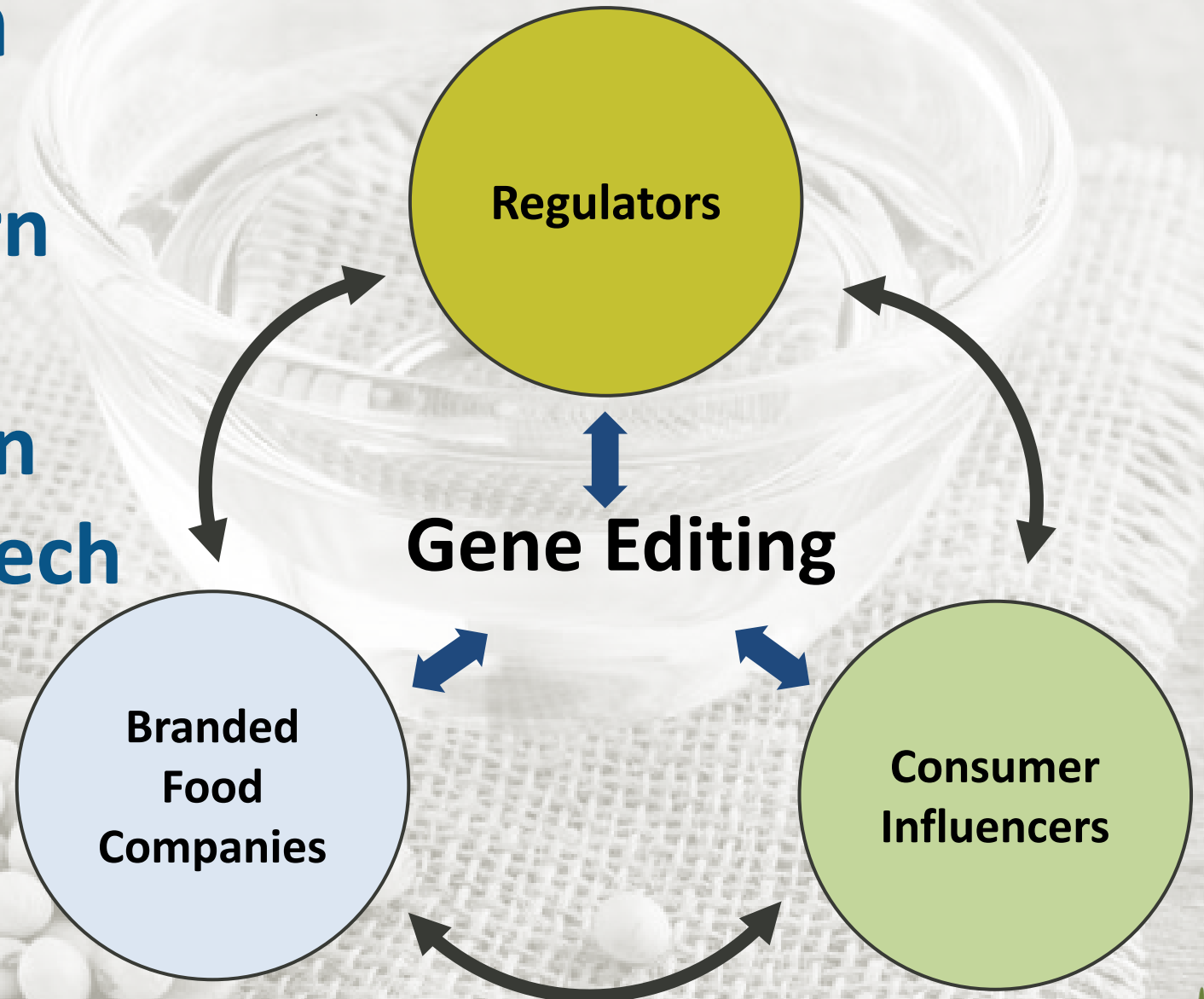
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Trust is the most valuable intangible asset



Beyond Regulation

Without a plan to earn public trust and food system acceptance, an R&D strategy for biotech is not complete.



How Does the Public Feel about Gene Editing?



Research Synthesis by CFI

Perceptions of Gene Editing and Biotech, 2018, 2021 Refresh

Research Conducted By

American Seed Trade Association

Bayer CropScience

Biotechnology Information Organization

Corteva AgriSciences

Dalhousie University

FMI Foundation

Genus PIC

Iowa State University

Oklahoma State University

Pew Research Center

The Center for Food Integrity

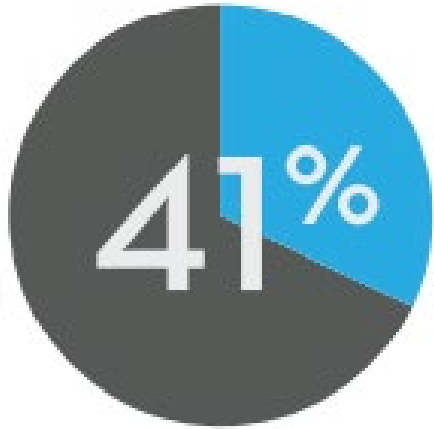
United Kingdom Genetic Alliance

University of Florida

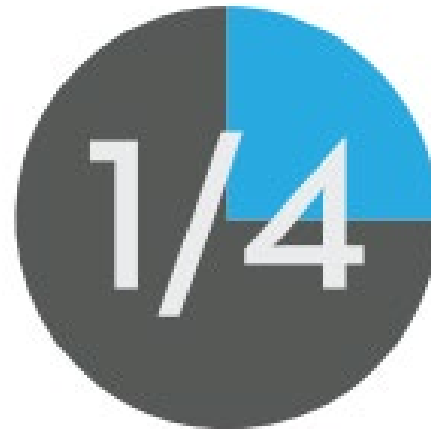
University of Saskatchewan



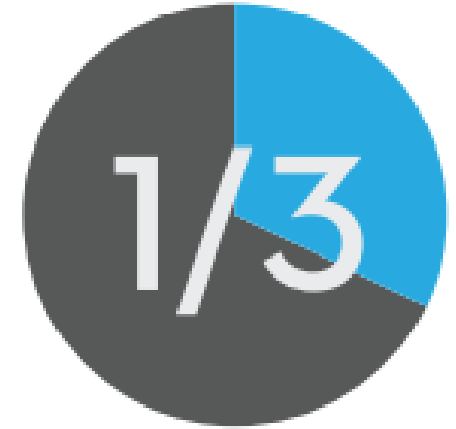
The Time to Engage is Now



of U.S. consumers have heard or read about gene-edited foods



of U.S. consumers care “a fair or great deal” about gene editing



of consumers rate their understanding as good to excellent

National Consumer Study
Iowa State, 2021



Limited Consumer Knowledge on Plant Breeding

- Some consumers had **no knowledge** that plants are bred
- There is **limited knowledge** about breeding methods used for several decades, like conventional selection and mutagenesis
- Most consumers are **unaware of the environmental benefits** brought by modern crop production

2015 Plant Breeding Focus Groups
American Seed Trade Association





The Opportunity

65% ARE INTERESTED
IN KNOWING MORE!

Most consumers have a
favorable perception of farmers



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**How do we take this
knowledge gap and curiosity
– and turn it into trust for
gene editing?**



5 Effective Communication Approaches & Conversation Starters



Gene Editing Communication Resource

Download
geneediting.foodintegrity.org



GENE EDITING
ENGAGE IN
THE CONVERSATION



GeneEditing.FoodIntegrity.org

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1

Demonstrate Benefits that Align with Public Desires

WHICH OF THE FOLLOWING BENEFITS ARE MOST IMPORTANT FOR AGRICULTURE TO DELIVER THROUGH GENE EDITING?



- ENVIRONMENTAL STEWARDSHIP
- DISEASE RESISTANCE
- ANIMAL HEALTH, WELL-BEING
- NUTRITIONAL BENEFITS
- TASTE
- SHELF LIFE
- CHOICE & VARIETY
- COSMETIC CHANGES
- FEEDING THE WORLD



Focus on Benefits To...



Consumers



Environment



Plants and animals

Not profit
Not yield
Not increased efficiency



2020 U.S. Consumer Research

After being given information about the benefits of gene editing, consumers said they are significantly more likely to purchase gene-edited foods



U.S. Consumer Research
FMI Foundation 2020



CONVERSATION STARTERS

*“Gene editing makes precise, intentional and beneficial changes in the genetic material of plants and animals, which can **improve health, nutrition and environmental stewardship.**”*





RESOURCE

innovature
NOURISHING TOMORROW

A CONVERSATION ABOUT INNOVATION
IN FOOD & AGRICULTURE

About The Basics Q SEARCH

OUR PLANET OUR HEALTH OUR FOOD LATEST

Gene editing innovations can benefit our planet, our health, and our food.

We believe in what's possible when innovation and nature work together to help sustain our planet for generations to come.

LEARN THE BASICS

Stay Informed
Get updates from Innovature on the latest developments in gene editing.

SIGN UP

[Innovature.com](https://www.innovature.com)



2 Lead With Human Health Connection

Advancements in human medicine are *the strongest* entry in conversations about gene editing in food



2 Lead With Human Health Connection



In a survey of 1600 people, two-thirds believe gene editing for human therapeutic purposes is acceptable.

Scheufele et al. 2017



CONVERSATION STARTERS

*“Gene editing shows great potential to cure or prevent disease **in humans** – and gene editing **can also help plants and animals resist disease.**”*





VIDEO RESOURCE



Hosted by Digital Influencer
Lynne Feifer
365 Days of Baking & More



Part I
What is CRISPR Technology?
Dr. Rudolphe Barrangou
North Carolina State University



Part II
How Can CRISPR Treat Disease?
Dr. Nazia Tabassum
Shakir Cannon, advocate
Erin Brenneman, farmer



Part III
How Can CRISPR Improve Food?
Dr. Jessica Lyons
University of CA.-Berkeley



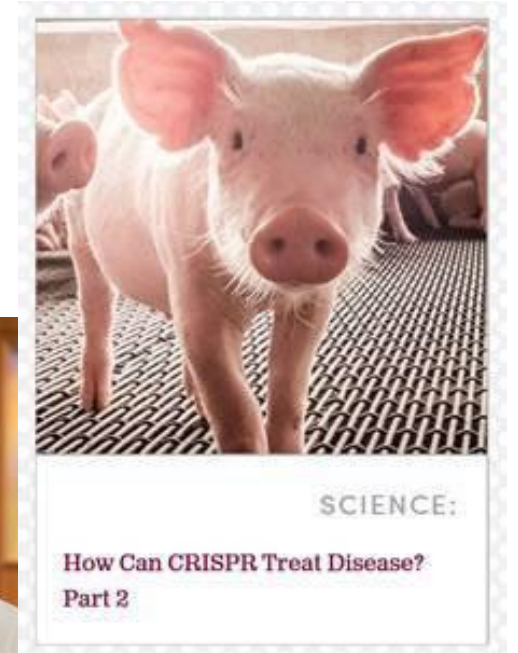
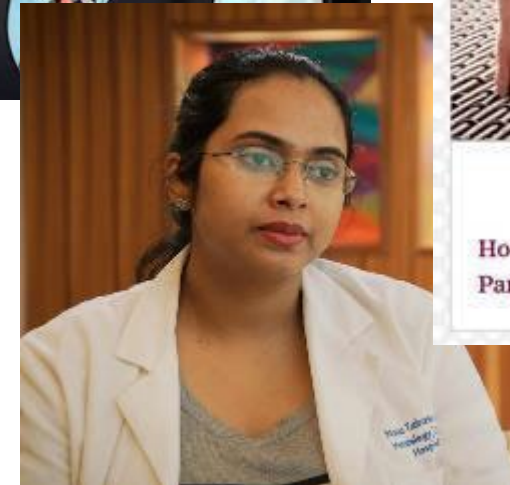
Post-Viewing Consumer Ratings

CREDIBLE 64%

POSITIVE 63%

SUPPORT 60% +15%

CLEAR 64%



When given credible, clear, interesting and understandable information, support shifted significantly.



3

Talk about evolution, not revolution



Talking about how gene editing can **revolutionize** food production doesn't resonate with consumers.



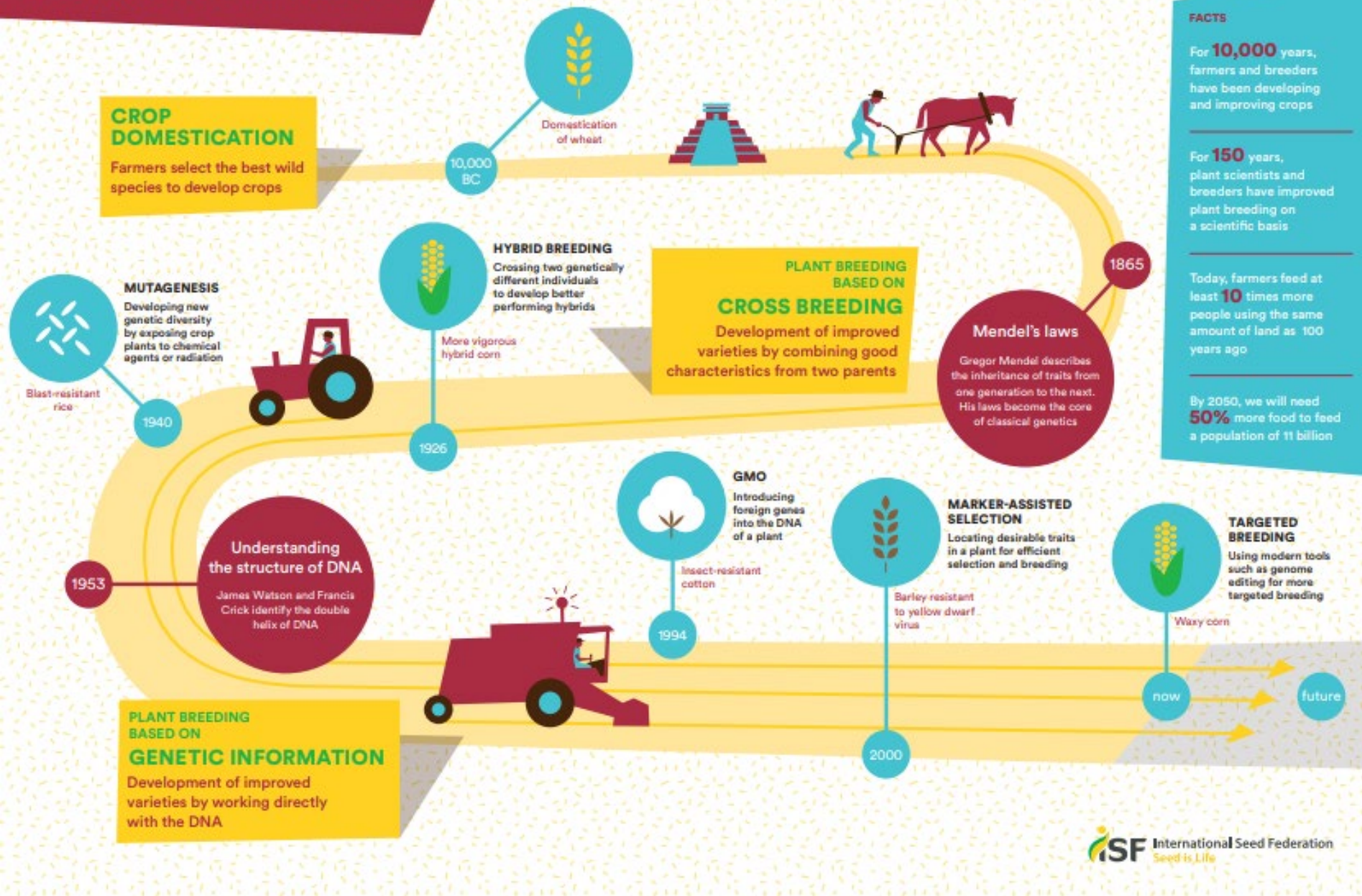
CONVERSATION STARTERS

*Farmers and scientists have **used genetic selection for more than a century** by breeding plants with the desired characteristics. Gene editing is simply the **next evolution in improving plants** to be hardier, healthier, and more nutritious and environmentally friendly.*



MILESTONES IN PLANT BREEDING

RESOURCE



FACTS

For **10,000** years, farmers and breeders have been developing and improving crops

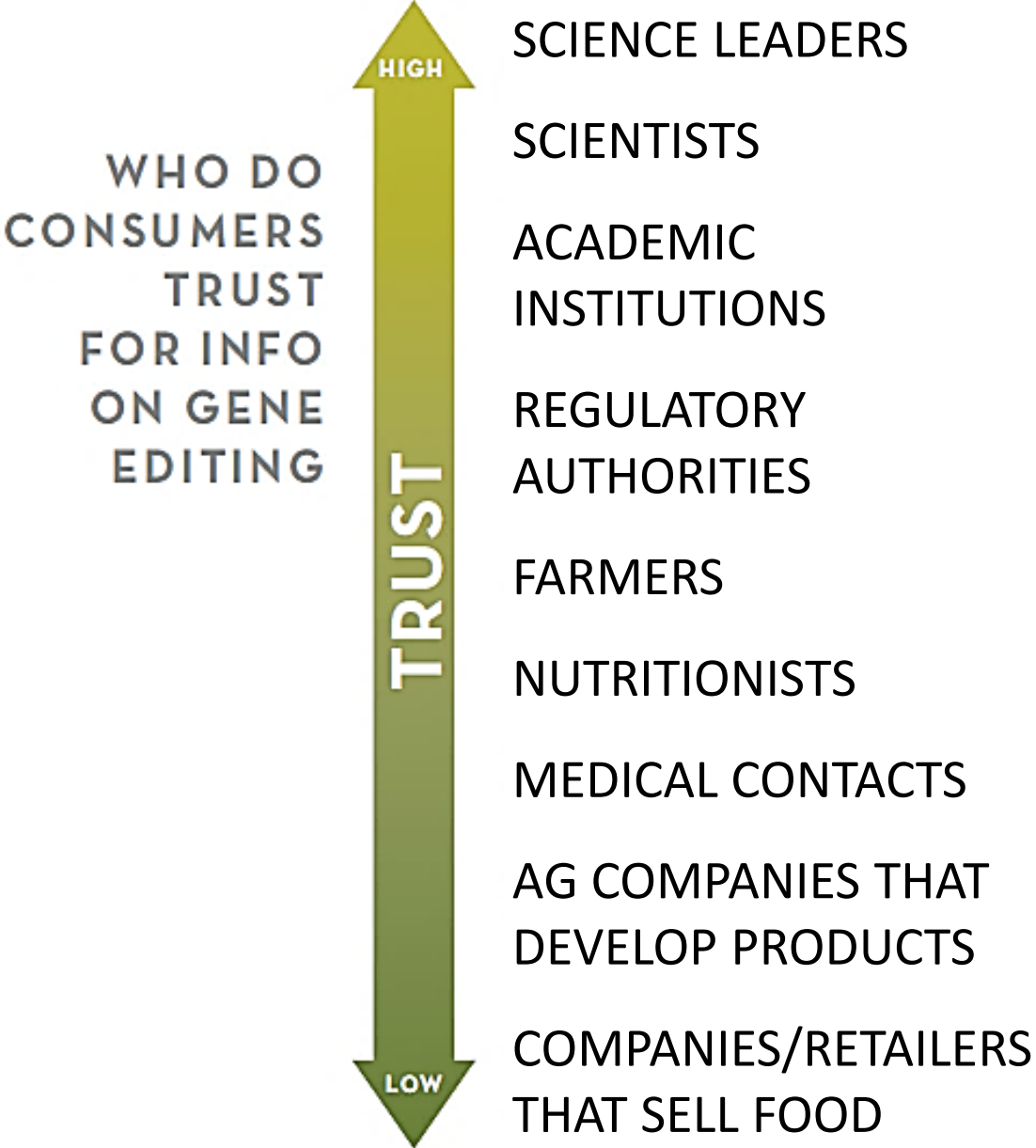
For **150** years, plant scientists and breeders have improved plant breeding on a scientific basis

Today, farmers feed at least **10** times more people using the same amount of land as 100 years ago

By 2050, we will need **50%** more food to feed a population of 11 billion

worldseed.org

4 Leverage expert spokespeople who are credentialed and relatable, show integrity and share values



5

Share analogies and visuals

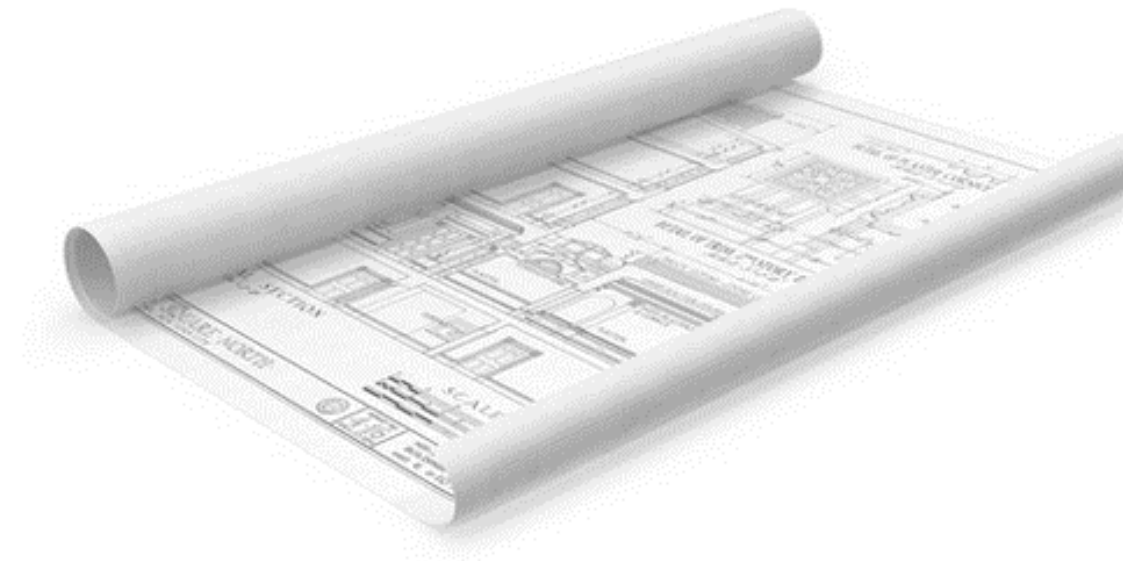
“With gene editing you can turn genes off and on, similar to a light switch.”





Effective Analogy

“Like the blueprints to build a house, DNA provides the information for building every living thing. Builders can make small changes to a blueprint – like moving a cabinet or adding a feature – without impacting the foundation. Likewise, scientists can make small, targeted beneficial changes in a segment of DNA.”





Effective Analogy

“DNA is like a long encyclopedia of information. Scientists can identify the exact page, the exact paragraph and even the exact letter they want to study. They then use gene editing tools to make corrections or improvements to that precise area of the genome – the exact letter, without changing other words in the book.”



Key Takeaways



Concern about risks often outweigh potential benefits



Consumers have more questions about the use of science in animals



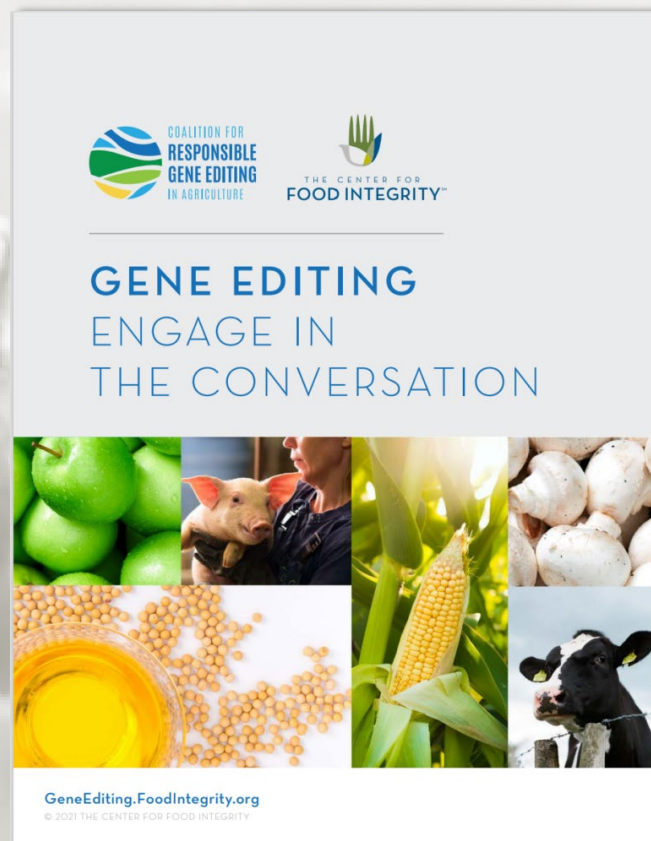
Gen Zs more comfortable with using technology to solve food production challenges



Describe gene editing in easy-to-understand terms, focusing on the why before the how



Gene Editing Communication Resource



Download
geneediting.foodintegrity.org

[Bestfoodfacts.org](https://bestfoodfacts.org)



The Outcome When We Earn Trust ...

**An environment where gene
editing in agriculture and food can
grow and prosper**





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Thank you!

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