



# Principles and Guidelines for Responsible Use of Gene Editing in Agriculture



Coalition for Responsible Use of Gene Editing in Agriculture



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## Introduction

Gene editing is a technology that has tremendous potential to benefit society through food production improvements. The precision, potential to solve a broad array of challenges facing society and the relative affordability of the technology has resulted in growing interest across many sectors of agriculture. Agriculture and food system leaders feel it is imperative to openly and transparently communicate with stakeholders about the responsible use of gene editing technology as more products begin to enter the marketplace. Agriculture and food system leaders remain committed to a safe, wholesome, abundant, affordable global food supply and put forth the following responsible use principles and guidelines to aid in earning and maintaining consumer trust in the use of gene editing.

*Gene editing makes precise, intentional and beneficial changes in the genetic material of plants and animals used in food production, which can improve their health and sustainability. This often mirrors changes that could occur in nature or through traditional breeding. Gene editing helps farmers keep pace with the growing demand for more and better food, while using less water, land, nutrients and other resources.*

The principles and guidelines in this document are recommendations. Each organization that chooses to research, develop or commercialize various applications of gene editing technology will be best suited to ensure they have organizational policies and practices that not only comply with any rules, laws or regulations but most importantly policies and practices that address their stakeholders'\* questions and feedback about the use of this technology. The guidelines in this document are equally applicable to both plant and animal-based agriculture.

The Center for Food Integrity's Coalition for Responsible Use of Gene Editing in Agriculture encourages the widespread adoption of the responsible use principles and guidelines by all entities utilizing gene editing technologies in agriculture.



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## Principles and Guidelines for Responsible Use of Gene Editing in Agriculture

**Principle One** – Organizations utilizing gene editing should work to ensure food safety, sustainability and nutritional quality. Additionally, the technology may be used to improve animal well-being and decrease potential environmental impacts.

### **Guidelines:**

1. Organizations should consider the characteristics of the product in determining the appropriate testing standards.
2. Industry standards or specifications for the crop, species or breed should be utilized in assessing product safety, nutrition and product quality.

**Principle Two** – Organizations utilizing gene editing should transparently share information and engage with stakeholders\* and consumers about the application of gene editing technologies.

### **Guidelines:**

1. Organizations should develop a stakeholder and consumer engagement plan. Even if an organization is primarily a research or development organization that has little interaction with stakeholders and consumers directly, it is useful to have a plan in place to engage those stakeholders and consumers that have an interest in your work.
2. Organizations should voluntarily engage with stakeholders and consumers who express a constructive interest in their work.
3. Due to the global nature of agriculture and food, organizations that are researching, developing, commercializing and/or importing gene edited animal and plant-based agriculture and food products should engage with stakeholders and consumers both domestically and globally.
4. Understanding that the use of gene editing is less familiar than conventional breeding methods (despite similarities), organizations should consider a dialogue to ensure their employees are prepared to engage in conversations about gene editing.

*\*Stakeholders are defined as organizations or individuals that express a constructive interest in an organization's activity and its potential impact on them or their customers.*



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**Principle Three** – Organizations utilizing gene editing should follow their organization’s best management practices through research and development prior to commercialization.

**Guidelines:**

1. Processes should be in place at each organization to maintain the integrity of all new varieties or lines of plants and animals developed using gene editing. Product integrity encompasses the overall quality and safety of new plant varieties and animals developed using gene editing. Product integrity will be ensured for the plants and animals resulting from gene editing research and development by maintaining them in a segregated manner consistent with established control and testing mechanisms, as well as meeting all internal and external policies, procedures and rules governing the new varieties or lines.
2. Due to the global nature of agriculture and food, organizations should have in place policies and practices that ensure plants (including seeds and pollen) and animals (including semen and embryos) developed using gene editing technologies are stored/housed, transported, cared for and exported in a responsible manner that does not jeopardize food safety, public health, animal well-being, the environment or international commerce.

**Principle Four** – Organizations utilizing gene editing should comply with all relevant laws, rules, and regulations that may govern plants and animals developed using gene editing technologies in the markets where they have business activities.