# 88TH ADVISORY FORUM STOCKHOLM, 27-28 JUNE

# NEW GENOMIC TECHNIQUES



# PRESENT AND FUTURE GMOS ...

- Stable Integration
- Transgene expression
- No control as to 'landing site' for transgene in host plant
- EU regulations since early 2000s

#### GM plants...



- Increased target specification and precision
- Increased innovation in plant modification
- Tailored to consumer needs
- Increased focus on nutrition

EGTs (before 2001)

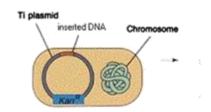
# Physical methods





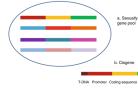


#### Biological methods

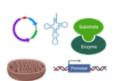


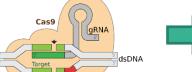
#### **NGTs**

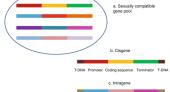
#### SDNs/Base editing... Cis/Intragenesis











# **EFSA GMO OPINIONS**

EFSA has worked on the topic of NGT since 2012

### The questions addressed were:

- New hazards, potential risks?
- Potential risks in comparison to conventional breeding and EGT
- Are EFSA guidelines adequate for risk assessment?
- Identify possible updates needed

https://www.efsa.europa.eu/en/topics/topic/new-advances-biotechnology



# **EC PROPOSAL-JULY 2023**

This initiative will propose a legal framework for **plants obtained by targeted mutagenesis and cisgenesis** and for their food and feed products.

The European Commission asked for EFSA scientific advice to support their ongoing policy initiative on new genomic techniques.

• <u>Criteria for risk assessment of plants produced by targeted mutagenesis, cisgenesis and intragenesis</u>

Stakeholder Event on 'The safety of plants derived from New Genomic Techniques: looking into future risk assessment challenges'

12 December 2022, 14.00 - 17.00 (CET)

Online





# NEXT

 EFSA is working on a Scientific opinion on new developments in biotechnology applied to microorganisms (LINK) and to animals (including synthetic biology and new genomic techniques) (LINK)

- Continue exchange of knowledge with MS GMO network
- Hold a dedicated session at the AF in October to share experience?



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