

# Promoting Consumer Acceptance of New Genomic Techniques (NGTs)

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## EXECUTIVE SUMMARY

New Genomic Techniques (NGTs) offer significant opportunities for sustainable agri-food systems and a more circular bioeconomy in Europe, yet their market success hinges on consumer and stakeholder acceptance. Findings from the GeneBEcon project reveal limited awareness and mixed perceptions of NGTs among consumers in five representative European countries. When provided with unbiased information, consumers generally view NGTs neutrally or positively. While some consumers expect a price discount for NGT-derived products compared to conventional alternatives, they are also willing to pay a premium for products they associate with greater sustainability. Stakeholder insights highlight the need for transparent communication and the strategic promotion of consumer-oriented NGT benefits. This Policy Brief outlines key findings and actionable recommendations to enhance trust, understanding, and thereby acceptance of NGTs at the consumer level.





## INTRODUCTION

NGTs represent transformative tools to support the green transition, while adapting to and mitigating climate change, and ensuring food security. Despite their potential to deliver significant environmental and socio-economic benefits, public acceptance remains a barrier. Building on quantitative consumer surveys conducted in Germany, France, Denmark, Slovakia, and the United Kingdom (UK), and qualitative stakeholder discussions at EU level, this brief identifies barriers to acceptance and proposes actionable strategies for policymakers and supply chain actors.

This Policy Brief is based on an extensive report [published here](#) by GeneBEcon.

## CONTEXT AND RELEVANCE

Public acceptance of the use of biotechnologies like NGTs for food and agriculture has been historically influenced by misinformation, scepticism, and regulatory challenges, as was the case with Genetically Modified Organisms (GMOs) (Qaim, 2020). The lack of awareness and inconsistent communication strategies jeopardise their potential. Addressing these issues is critical for leveraging NGTs to support the EU Green Deal goals of more resilient, competitive and sustainable agri-food systems and a more circular bioeconomy.

## KEY FINDINGS

### QUALITATIVE SURVEY RESULTS

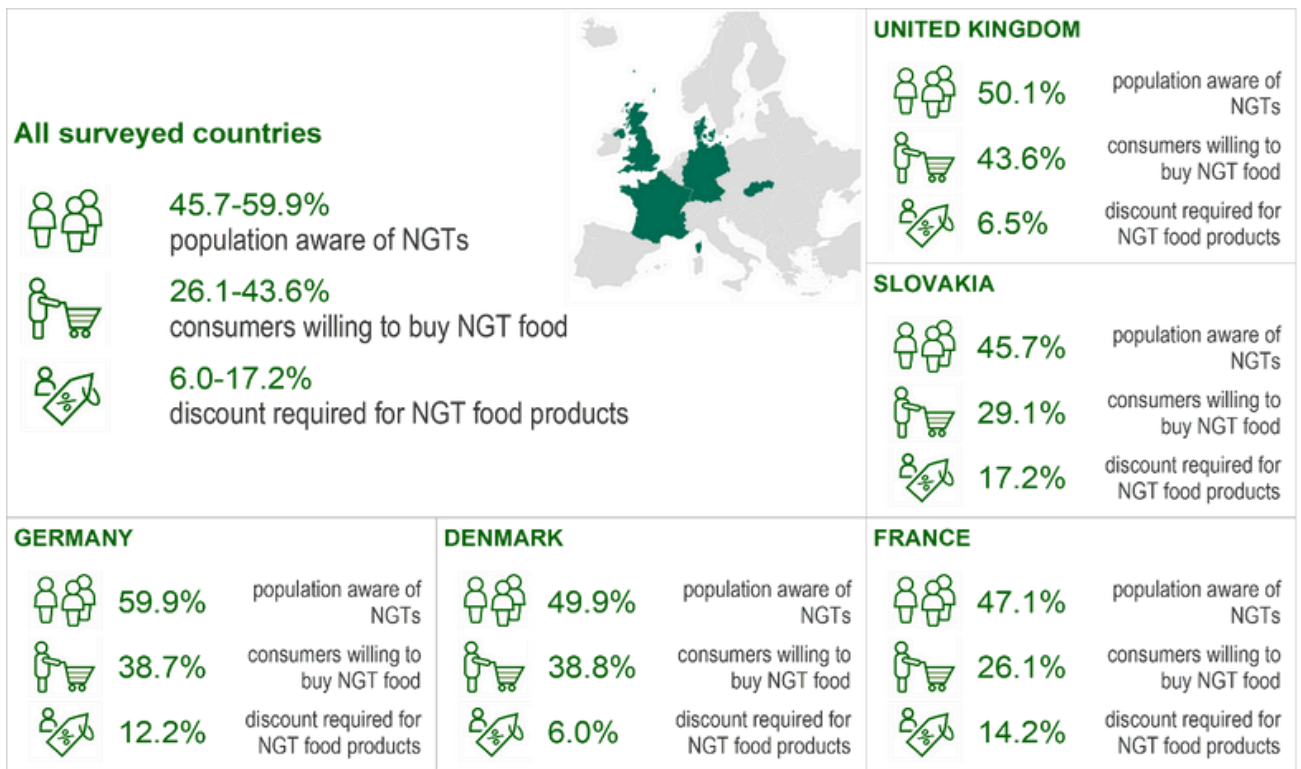
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The consumer survey was conducted in five European countries - Germany, France, Denmark, Slovakia, and the UK - with a representative sample of 1,000 participants per country. The survey results revealed:

- **Limited Awareness:** Consumers are less familiar with NGTs compared to GMOs. In the five surveyed countries, awareness of NGTs ranged from 45.7% in Slovakia to 59.9% in Germany. Across all countries, twice as many respondents reported never having heard of NGTs compared to GMOs.
- **Impact of Information:** Impartial information fosters neutral or positive attitudes towards NGTs. After receiving unbiased information, 55% of respondents had a neutral view of NGTs, and 33.1% expressed positive opinions, compared to 42.6% who had a positive view of conventional breeding.



- Diverse Acceptance:** Acceptance of NGT-derived products varies by country, product category, age, gender, and education level. Acceptance of NGT-derived products varies across demographics and countries. The highest willingness to buy NGT-derived food was observed in the United Kingdom (43.6%), followed by Denmark (38.8%), while France had the lowest acceptance (26.1%). Consumers with university education and those aged 50+ were generally more open to purchasing NGT-derived products.
- Perceived Risks:** Informed consumers view NGTs as no riskier than conventional breeding methods. 24.1% of consumers expressed concerns about human health risks from NGTs, but the majority did not see them as riskier than conventional breeding.



- Trust Gaps:** Although trust in public health, food, and agricultural institutions varies across countries, a majority of respondents in every surveyed country report moderate or higher levels of trust. For example, in the UK approximately 84% of respondents and in France 76.4% of respondents indicated they trusted these sources, while Slovakia demonstrated the lowest trust, with around 58% expressed moderate or higher trust.



- **Price Sensitivity:** While some consumers expect a price discount for NGT-derived products relative to conventional options (with the magnitude of the discount varying across countries: highest in Slovakia, lowest in Denmark and the UK) some also indicated a willingness to pay a premium for products they associate with enhanced sustainability. These preferences were assessed through a Discrete Choice Experiment (DCE) which examined how consumers make trade-offs between different product attributes.
- **"The 'Value-action' Gap:** While consumers indicate that they read labels and express willingness to pay a premium for sustainable products, the survey results suggest that price and quality remain the dominant factors in purchasing decisions. This underscores a potential discrepancy between stated consumer preferences and actual market behavior - an effect that is well-documented in consumer research (Zhuo et al., 2023).

## **QUALITATIVE STAKEHOLDER FOCUS GROUP INSIGHTS**

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An online stakeholder focus group was held to assess the impact of consumer acceptance on business uptake of NGT-derived products. The focus group brought together seven key representatives from the EU biobased supply chain: members from farmers' cooperatives (1), breeding organisations (1), ingredient processing (1), food and drink processing (1), retail (2), and a related research project (1). Here are the key highlights that resulted from the focus group:

- **Market Challenges:** Consumer acceptance is critical for business uptake of NGT-derived products.
- **Sustainability and Competitiveness:** NGTs are recognised as being able to enhance the sustainability of EU agri-food production, food security, and competitiveness.
- **Consumer-Oriented Benefits:** Highlighting consumer-facing benefits of NGT-derived products is essential to increase awareness and acceptance of NGTs.
- **Regulatory Impact:** Mandatory labelling and strict traceability rules will increase costs, reduce demand, and prevent the introduction of NGT-derived products, thereby stifling market growth.
- **Improved Perception:** Consumers perceive NGTs more favourably than GMOs, reflecting greater appreciation for their benefits.



## RECOMMENDATIONS

- 1) **Promote Impartial Information:** Develop awareness campaigns to provide clear, unbiased information about NGTs to consumers. This should ideally be done by governments and public health agencies, food and agricultural institutions, and scientists.
- 2) **Build Trust in Supply Chains:** Strengthen trust and credibility of EU food supply chains to foster consumer confidence.
- 3) **Adopt a Unified Communication Strategy:** Coordinate professional communication efforts across supply chains, stakeholders, and public authorities to effectively convey the benefits of NGTs.
- 4) **Emphasise Consumer-Oriented Benefits:** Highlight tangible benefits, such as improved health and sustainability outcomes, in NGT product messaging.
- 5) **Establish an enabling regulatory framework for NGT-derived products,** which supported by transparent communication and coordinated stakeholder engagement, will promote consumer trust and facilitate the successful market introduction of NGTs.

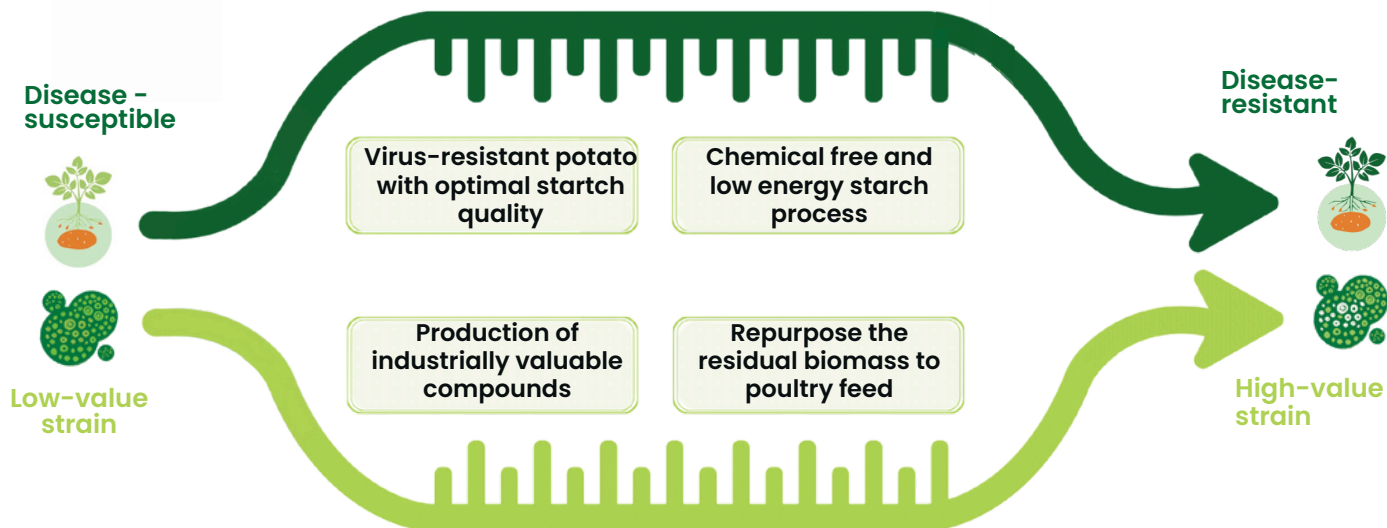
## CONCLUSION

The successful uptake of NGT-derived products into EU agri-food systems and the wider bioeconomy depends on fostering informed, positive perceptions among consumers. By addressing trust gaps, promoting consumer-oriented benefits, and ensuring transparent communication from trusted sources, policymakers and supply chain actors can pave the way for facilitating the uptake of NGTs. These efforts will not only enhance the competitiveness and resilience of EU agri-food systems and the wider bioeconomy, but it will also contribute to broader environmental and socio-economic sustainability objectives.

## REFERENCES

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# Capturing the Potential of Gene Editing for a Sustainable BioEconomy



## CONSORTIUM



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