Recent developments in genetically modified (GM) foods and ingredients hold potential to solve problems such as food insecurity and malnutrition.

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WHAT CONSUMERS WANT AND WHY

- Educate consumers about the benefits of genetic modification to increase acceptance in food and drink
- Ensure GM foods deliver tangible benefits for consumers
  - Graph 1: factors that prompt choosing a food/drink product with genetically modified ingredients over one without, 2022

PRODUCT INNOVATION TRENDS

- North America is the region with the highest percentage of GMO-free claims in food and drink
  - Graph 2: % of food and drink launches with a GMO-free claim, 2018-22
- Global variations in GMO regulations impact the use of GM ingredients in foods
- Many GM foods and ingredients are approved in the US

THE PATENT LANDSCAPE

- There has been a drastic decrease in patent publication trends related to GMOs since 2018
  - Graph 3: patents related to genetically modified plants and crops, published each year, 2013-23
- The US stands out with the highest number of granted patents related to GM plants and crops
- Bayer AG dominates GM plants and crops-related granted patents
  - Graph 4: top 10 organisations with granted patent families for genetically modified plants and crops, 2023

Consider GM crops for better nutrition

- Use nutrition to motivate consumers to choose GM foods
- Gene-modification technology can help improve the nutritional profiles of food crops
- Utilise genetic modification to produce celiac-friendly wheat
- Genetically modified plants hold promise as an alternative to oily fish for providing omega-3 fatty acids
- Tackle micronutrient deficiencies with genetically modified plants

Consider GMOs as the future of sustainable food

- Genetic modification can produce crops that withstand climate change
- Some consumers agree genetically modified food is good for the environment and can tackle food shortages
- Salt- and drought-resistant GM crops may help overcome issues related to food security
- Researchers are developing GM crops that tolerate extreme environments
- GMOs can help tackle food wastage and reduce the carbon footprint of foods
**Patent insights: focus on benefits of GM foods**

- GMOs may enable the development of crops that do not require the use of pesticides or chemical fertilisers, thereby helping to reduce pollution
- GM crops could form part of the solution to overcoming food shortages

**Use GM to produce functional ingredients**
- Some US consumers are willing to try 'lab-grown' dairy and meat
- Researchers are developing GM microbial and plant cells for the production of dairy and meat
- GM microorganisms could become useful sources of functional micronutrients

**KEY TAKEAWAYS**
- Key takeaways

**APPENDIX**
- Research methodology
- Key examples of patents related to GMO
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