

Genetically Modified Crops Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, By Trait (Herbicide Tolerance, Insect Resistance, Stacked Traits, Others), By Technique (Gene Guns, Electroporation, Microinjection, Agrobacterium, Others), By Type of Modification (Transgenic, Cis-genic, Sub-genic, Multiple Trait Integration), By Crop Type (Soybean, Cotton, Maize, Oilseed Rape, Canola, Alfalfa, Others), By Application (Scientific Research and Agriculture Crops), By Region and Competition, 2020-2030F

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Report description:

Global Genetically Modified Crops Market was valued at USD 24.23 Billion in 2024 and is expected to reach USD 28.60 Billion by 2030 with a CAGR of 5.76% during the forecast period. The Genetically Modified Crops Market refers to the global industry involved in the production, distribution, and sale of genetically modified (GM) crops. These crops have been scientifically altered to introduce specific traits, such as increased yield, pest resistance, or enhanced nutritional content. The use of biotechnology in agriculture has revolutionized the way we approach food production, offering solutions to address the challenges posed by climate change and the increasing global demand for food. GM crops, encompassing a wide range of plants like corn, soybeans, and cotton, have played a crucial role in ensuring food security and sustainability. They have enabled farmers to achieve higher yields, reduce pesticide use, and mitigate the impact of environmental factors. Additionally, the genetic modifications in these crops have the potential to enhance their nutritional value, addressing malnutrition and improving the overall health of populations.

Key Market Drivers

Adoption of Sustainable Farming Practices

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The rise in the adoption of sustainable farming practices is projected to significantly boost the global demand for genetically modified (GM) crops. As the world grapples with the challenges of climate change, soil degradation, and water scarcity, sustainable farming emerges as a viable solution, presenting an opportunity for the enhancement of GM crops. A Pew Research Center study found that 57% of Americans perceive GMOs as unsafe for consumption, while 67% support mandatory GMO labeling. These findings highlight a strong consumer preference for transparency in food products, emphasizing the growing demand for clear labeling and informed purchasing decisions in the market.

These crops are engineered for increased yield, resilience to pests, and adaptability to harsh environmental conditions, allowing for more efficient use of resources. They not only promise to mitigate the adverse effects of traditional agriculture on the environment but also to ensure food security amidst a rapidly growing global population. Furthermore, GM crops can be modified for enhanced nutritional content, potentially addressing malnutrition issues prevalent in developing nations. The amalgamation of sustainable farming methods with the scientific advancements in GM crops symbolises a new era in agriculture, driven by a commitment to environmental preservation and global wellbeing. As more farmers worldwide recognise these prospects and switch to sustainable practices, the demand for GM crops is anticipated to rise. This trend, coupled with supportive government initiatives and technological advancements, is set to shape the future of farming on a global scale.

Key Market Challenges

Monopoly in Market

Monopolistic market structures can significantly impact the demand for genetically modified (GM) crops worldwide. When a single corporation or consortium controls the production and distribution of GM seeds, it can lead to inflated prices due to the lack of competition. These high prices can serve as a barrier to entry for small-scale farmers, particularly in developing regions, who may be unable to afford these costly seeds. Furthermore, monopolies often reduce the genetic diversity of crops available in the market, offering a limited selection of GM crops that may not be suited to all farming conditions worldwide. Reduced crop diversity and adaptability can ultimately lead to a decrease in global demand for GM crops, as consumers and producers alike seek more diverse and affordable agricultural solutions. The repercussions are particularly significant in the context of global food security, as reliance on a single source for seeds can leave global food systems vulnerable to disruptions, further decreasing the demand for GM crops. Hence, maintaining competitive markets is essential to ensure the affordability, diversity, and resilience of GM crops, thereby sustaining their global demand.

Key Market Trends

Increasing Demand for Nutritional Food

The escalating demand for nutritional food worldwide is expected to augment the demand for Genetically Modified (GM) crops significantly. With a ballooning global population and a rising awareness of the importance of healthy eating, the strain on natural food resources is mounting. GM crops, through their enhanced nutritional profiles and improved yield potential, present a viable solution. They are engineered to contain higher levels of essential nutrients, such as vitamins and minerals, fulfilling dietary requirements more effectively than conventional crops. Additionally, GM crops are more resistant to pests, diseases, and adverse weather conditions, ensuring a consistent supply of food regardless of environmental conditions. Furthermore, the capacity of GM crops to grow in less fertile or saline soils extends the arable land, increasing global food production potential. Thus, the growing demand for nutritional food is contributing to the increased adoption of GM crops to meet global food security and dietary needs.

Key Market Players

- [] BASF SE
- [] Monsanto Company
- [] Bayer CropScience LLC
- [] Syngenta AG
- [] The Dow Chemical Company
- [] DuPont de Nemours, Inc.
- [] Groupe Limagrain Holdings Corporation
- [] R Simplot Co.
- [] KAgri Genetics Ltd.
- [] Maharashtra Hybrid Seed Company Private Limited

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Report Scope:

In this report, the Global Genetically Modified Crops Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

-□ Genetically Modified Crops Market, By Trait:

- o Herbicide Tolerance
- o Insect Resistance
- o Stacked Traits
- o Others

-□ Genetically Modified Crops Market, By Technique:

- o Gene Guns
- o Electroporation
- o Microinjection
- o Agrobacterium
- o Others

-□ Genetically Modified Crops Market, By Type of Modification:

- o Transgenic
- o Cis-genic
- o Sub-genic
- o Multiple Trait Integration

-□ Genetically Modified Crops Market, By Crop Type:

- o Soybean
- o Cotton
- o Maize
- o Oilseed Rape
- o Canola
- o Alfalfa

-□ Genetically Modified Crops Market, By Application:

- o Scientific Research
- o Agriculture Crops

-□ Genetically Modified Crops Market, By Region:

- o North America
 - United States
 - Canada
 - Mexico
- o Europe
 - France
 - United Kingdom
 - Italy
 - Germany
 - Spain
- o Asia-Pacific
 - China
 - India
 - Japan
 - Australia
 - South Korea
- o South America

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- Brazil
- Argentina
- Colombia
- o Middle East & Africa
- South Africa
- Saudi Arabia
- UAE

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the Global Genetically Modified Crops Market.

Available Customizations:

Global Genetically Modified Crops market report with the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

-□ Detailed analysis and profiling of additional market players (up to five).

Table of Contents:

1. Product Overview
 - 1.1. Market Definition
 - 1.2. Scope of the Market
 - 1.2.1. Markets Covered
 - 1.2.2. Years Considered for Study
 - 1.2.3. Key Market Segmentations
2. Research Methodology
 - 2.1. Objective of the Study
 - 2.2. Baseline Methodology
 - 2.3. Key Industry Partners
 - 2.4. Major Association and Secondary Sources
 - 2.5. Forecasting Methodology
 - 2.6. Data Triangulation & Validations
 - 2.7. Assumptions and Limitations
3. Executive Summary
 - 3.1. Overview of the Market
 - 3.2. Overview of Key Market Segmentations
 - 3.3. Overview of Key Market Players
 - 3.4. Overview of Key Regions/Countries
 - 3.5. Overview of Market Drivers, Challenges, Trends
4. Voice of Customer
5. Global Genetically Modified Crops Market Outlook
 - 5.1. Market Size & Forecast
 - 5.1.1. By Value
 - 5.2. Market Share & Forecast
 - 5.2.1. By Trait (Herbicide Tolerance, Insect Resistance, Stacked Traits, Others)
 - 5.2.2. By Technique (Gene Guns, Electroporation, Microinjection, Agrobacterium, Others)
 - 5.2.3. By Type of Modification (Transgenic, Cis-genic, Sub-genic, Multiple Trait Integration)
 - 5.2.4. By Crop Type (Soybean, Cotton, Maize, Oilseed Rape, Canola, Alfalfa, Others)
 - 5.2.5. By Application (Scientific Research and Agriculture Crops)
 - 5.2.6. By Region

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- 5.2.7. By Company (2024)
- 5.3. Market Map
- 6. North America Genetically Modified Crops Market Outlook
 - 6.1. Market Size & Forecast
 - 6.1.1. By Value
 - 6.2. Market Share & Forecast
 - 6.2.1. By Trait
 - 6.2.2. By Technique
 - 6.2.3. By Type of Modification
 - 6.2.4. By Crop Type
 - 6.2.5. By Application
 - 6.2.6. By Country
 - 6.3. North America: Country Analysis
 - 6.3.1. United States Genetically Modified Crops Market Outlook
 - 6.3.1.1. Market Size & Forecast
 - 6.3.1.1.1. By Value
 - 6.3.1.2. Market Share & Forecast
 - 6.3.1.2.1. By Trait
 - 6.3.1.2.2. By Technique
 - 6.3.1.2.3. By Type of Modification
 - 6.3.1.2.4. By Crop Type
 - 6.3.1.2.5. By Application
 - 6.3.2. Canada Genetically Modified Crops Market Outlook
 - 6.3.2.1. Market Size & Forecast
 - 6.3.2.1.1. By Value
 - 6.3.2.2. Market Share & Forecast
 - 6.3.2.2.1. By Trait
 - 6.3.2.2.2. By Technique
 - 6.3.2.2.3. By Type of Modification
 - 6.3.2.2.4. By Crop Type
 - 6.3.2.2.5. By Application
 - 6.3.3. Mexico Genetically Modified Crops Market Outlook
 - 6.3.3.1. Market Size & Forecast
 - 6.3.3.1.1. By Value
 - 6.3.3.2. Market Share & Forecast
 - 6.3.3.2.1. By Trait
 - 6.3.3.2.2. By Technique
 - 6.3.3.2.3. By Type of Modification
 - 6.3.3.2.4. By Crop Type
 - 6.3.3.2.5. By Application
 - 7. Europe Genetically Modified Crops Market Outlook
 - 7.1. Market Size & Forecast
 - 7.1.1. By Value
 - 7.2. Market Share & Forecast
 - 7.2.1. By Trait
 - 7.2.2. By Technique
 - 7.2.3. By Type of Modification

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- 7.2.4. By Crop Type
- 7.2.5. By Application
- 7.2.6. By Country
- 7.3. Europe: Country Analysis
 - 7.3.1. Germany Genetically Modified Crops Market Outlook
 - 7.3.1.1. Market Size & Forecast
 - 7.3.1.1.1. By Value
 - 7.3.1.2. Market Share & Forecast
 - 7.3.1.2.1. By Trait
 - 7.3.1.2.2. By Technique
 - 7.3.1.2.3. By Type of Modification
 - 7.3.1.2.4. By Crop Type
 - 7.3.1.2.5. By Application
 - 7.3.2. United Kingdom Genetically Modified Crops Market Outlook
 - 7.3.2.1. Market Size & Forecast
 - 7.3.2.1.1. By Value
 - 7.3.2.2. Market Share & Forecast
 - 7.3.2.2.1. By Trait
 - 7.3.2.2.2. By Technique
 - 7.3.2.2.3. By Type of Modification
 - 7.3.2.2.4. By Crop Type
 - 7.3.2.2.5. By Application
 - 7.3.3. Italy Genetically Modified Crops Market Outlook
 - 7.3.3.1. Market Size & Forecast
 - 7.3.3.1.1. By Value
 - 7.3.3.2. Market Share & Forecast
 - 7.3.3.2.1. By Trait
 - 7.3.3.2.2. By Technique
 - 7.3.3.2.3. By Type of Modification
 - 7.3.3.2.4. By Crop Type
 - 7.3.3.2.5. By Application
 - 7.3.4. France Genetically Modified Crops Market Outlook
 - 7.3.4.1. Market Size & Forecast
 - 7.3.4.1.1. By Value
 - 7.3.4.2. Market Share & Forecast
 - 7.3.4.2.1. By Trait
 - 7.3.4.2.2. By Technique
 - 7.3.4.2.3. By Type of Modification
 - 7.3.4.2.4. By Crop Type
 - 7.3.4.2.5. By Application
 - 7.3.5. Spain Genetically Modified Crops Market Outlook
 - 7.3.5.1. Market Size & Forecast
 - 7.3.5.1.1. By Value
 - 7.3.5.2. Market Share & Forecast
 - 7.3.5.2.1. By Trait
 - 7.3.5.2.2. By Technique
 - 7.3.5.2.3. By Type of Modification

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- 7.3.5.2.4. By Crop Type
- 7.3.5.2.5. By Application
- 8. Asia-Pacific Genetically Modified Crops Market Outlook
 - 8.1. Market Size & Forecast
 - 8.1.1. By Value
 - 8.2. Market Share & Forecast
 - 8.2.1. By Trait
 - 8.2.2. By Technique
 - 8.2.3. By Type of Modification
 - 8.2.4. By Crop Type
 - 8.2.5. By Application
 - 8.2.6. By Country
 - 8.3. Asia-Pacific: Country Analysis
 - 8.3.1. China Genetically Modified Crops Market Outlook
 - 8.3.1.1. Market Size & Forecast
 - 8.3.1.1.1. By Value
 - 8.3.1.2. Market Share & Forecast
 - 8.3.1.2.1. By Trait
 - 8.3.1.2.2. By Technique
 - 8.3.1.2.3. By Type of Modification
 - 8.3.1.2.4. By Crop Type
 - 8.3.1.2.5. By Application
 - 8.3.2. India Genetically Modified Crops Market Outlook
 - 8.3.2.1. Market Size & Forecast
 - 8.3.2.1.1. By Value
 - 8.3.2.2. Market Share & Forecast
 - 8.3.2.2.1. By Trait
 - 8.3.2.2.2. By Technique
 - 8.3.2.2.3. By Type of Modification
 - 8.3.2.2.4. By Crop Type
 - 8.3.2.2.5. By Application
 - 8.3.3. Japan Genetically Modified Crops Market Outlook
 - 8.3.3.1. Market Size & Forecast
 - 8.3.3.1.1. By Value
 - 8.3.3.2. Market Share & Forecast
 - 8.3.3.2.1. By Trait
 - 8.3.3.2.2. By Technique
 - 8.3.3.2.3. By Type of Modification
 - 8.3.3.2.4. By Crop Type
 - 8.3.3.2.5. By Application
 - 8.3.4. South Korea Genetically Modified Crops Market Outlook
 - 8.3.4.1. Market Size & Forecast
 - 8.3.4.1.1. By Value
 - 8.3.4.2. Market Share & Forecast
 - 8.3.4.2.1. By Trait
 - 8.3.4.2.2. By Technique
 - 8.3.4.2.3. By Type of Modification

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- 8.3.4.2.4. By Crop Type
- 8.3.4.2.5. By Application
- 8.3.5. Australia Genetically Modified Crops Market Outlook
 - 8.3.5.1. Market Size & Forecast
 - 8.3.5.1.1. By Value
 - 8.3.5.2. Market Share & Forecast
 - 8.3.5.2.1. By Trait
 - 8.3.5.2.2. By Technique
 - 8.3.5.2.3. By Type of Modification
 - 8.3.5.2.4. By Crop Type
 - 8.3.5.2.5. By Application
- 9. South America Genetically Modified Crops Market Outlook
 - 9.1. Market Size & Forecast
 - 9.1.1. By Value
 - 9.2. Market Share & Forecast
 - 9.2.1. By Trait
 - 9.2.2. By Technique
 - 9.2.3. By Type of Modification
 - 9.2.4. By Crop Type
 - 9.2.5. By Application
 - 9.2.6. By Country
 - 9.3. South America: Country Analysis
 - 9.3.1. Brazil Genetically Modified Crops Market Outlook
 - 9.3.1.1. Market Size & Forecast
 - 9.3.1.1.1. By Value
 - 9.3.1.2. Market Share & Forecast
 - 9.3.1.2.1. By Trait
 - 9.3.1.2.2. By Technique
 - 9.3.1.2.3. By Type of Modification
 - 9.3.1.2.4. By Crop Type
 - 9.3.1.2.5. By Application
 - 9.3.2. Argentina Genetically Modified Crops Market Outlook
 - 9.3.2.1. Market Size & Forecast
 - 9.3.2.1.1. By Value
 - 9.3.2.2. Market Share & Forecast
 - 9.3.2.2.1. By Trait
 - 9.3.2.2.2. By Technique
 - 9.3.2.2.3. By Type of Modification
 - 9.3.2.2.4. By Crop Type
 - 9.3.2.2.5. By Application
 - 9.3.3. Colombia Genetically Modified Crops Market Outlook
 - 9.3.3.1. Market Size & Forecast
 - 9.3.3.1.1. By Value
 - 9.3.3.2. Market Share & Forecast
 - 9.3.3.2.1. By Trait
 - 9.3.3.2.2. By Technique
 - 9.3.3.2.3. By Type of Modification

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- 9.3.3.2.4. By Crop Type
- 9.3.3.2.5. By Application
- 10. Middle East and Africa Genetically Modified Crops Market Outlook
 - 10.1. Market Size & Forecast
 - 10.1.1. By Value
 - 10.2. Market Share & Forecast
 - 10.2.1. By Trait
 - 10.2.2. By Technique
 - 10.2.3. By Type of Modification
 - 10.2.4. By Crop Type
 - 10.2.5. By Application
 - 10.2.6. By Country
 - 10.3. MEA: Country Analysis
 - 10.3.1. South Africa Genetically Modified Crops Market Outlook
 - 10.3.1.1. Market Size & Forecast
 - 10.3.1.1.1. By Value
 - 10.3.1.2. Market Share & Forecast
 - 10.3.1.2.1. By Trait
 - 10.3.1.2.2. By Technique
 - 10.3.1.2.3. By Type of Modification
 - 10.3.1.2.4. By Crop Type
 - 10.3.1.2.5. By Application
 - 10.3.2. Saudi Arabia Genetically Modified Crops Market Outlook
 - 10.3.2.1. Market Size & Forecast
 - 10.3.2.1.1. By Value
 - 10.3.2.2. Market Share & Forecast
 - 10.3.2.2.1. By Trait
 - 10.3.2.2.2. By Technique
 - 10.3.2.2.3. By Type of Modification
 - 10.3.2.2.4. By Crop Type
 - 10.3.2.2.5. By Application
 - 10.3.3. UAE Genetically Modified Crops Market Outlook
 - 10.3.3.1. Market Size & Forecast
 - 10.3.3.1.1. By Value
 - 10.3.3.2. Market Share & Forecast
 - 10.3.3.2.1. By Trait
 - 10.3.3.2.2. By Technique
 - 10.3.3.2.3. By Type of Modification
 - 10.3.3.2.4. By Crop Type
 - 10.3.3.2.5. By Application
- 11. Market Dynamics
 - 11.1. Drivers
 - 11.2. Challenges
- 12. Market Trends & Developments
 - 12.1. Merger & Acquisition (If Any)
 - 12.2. Product Launches (If Any)
 - 12.3. Recent Developments

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- 13. Porter's Five Forces Analysis
 - 13.1. Competition in the Industry
 - 13.2. Potential of New Entrants
 - 13.3. Power of Suppliers
 - 13.4. Power of Customers
 - 13.5. Threat of Substitute Products
 - 14. Competitive Landscape
 - 14.1. BASF SE
 - 14.1.1. Business Overview
 - 14.1.2. Company Snapshot
 - 14.1.3. Products & Services
 - 14.1.4. Financials (As Reported)
 - 14.1.5. Recent Developments
 - 14.1.6. Key Personnel Details
 - 14.1.7. SWOT Analysis
 - 14.2. Monsanto Company
 - 14.3. Bayer CropScience LLC
 - 14.4. Syngenta AG
 - 14.5. The Dow Chemical Company
 - 14.6. DuPont de Nemours, Inc.
 - 14.7. Groupe Limagrain Holdings Corporation
 - 14.8. JR Simplot Co.
 - 14.9. JKAgrri Genetics Ltd.
 - 14.10. Maharashtra Hybrid Seed Company Private Limited
 - 15. Strategic Recommendations
 - 16. About Us & Disclaimer
- Figures and Tables

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