

**Plant Genomics Market Report by Type (Molecular Engineering, Genetic Engineering, Genome Editing, and Others), Technology (DNA/RNA Sequencing, Genotyping, Marker-Assisted Selection (MAS), Bioinformatics, and Others), Trait (Yield Improvement, Disease Resistance, Herbicide Tolerance, and Others), Application (Cereals and Grains, Oilseeds and Pulses, Fruits and Vegetables, and Others), and Region 2025-2033**

Market Report | 2025-03-01 | 140 pages | IMARC Group

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**Report description:**

The global plant genomics market size reached USD 10.6 Billion in 2024. Looking forward, IMARC Group expects the market to reach USD 18.5 Billion by 2033, exhibiting a growth rate (CAGR) of 6.01% during 2025-2033.

Plant genomics refer to numerous genetic manipulation methods that are used to improve plant quality and aim to determine the manner genetic composition of plants affects plant breeding. With numerous advancements in plant genomics, crop protection may be improved by preventing mycotoxin contamination in plants and allowing crops to survive extreme temperatures. The availability of faster growing plants contributes to maintaining food security and ensuring that nutrients are available in the market. Plant genomics also plays an instrumental role in reducing the spread of diseases through the development of genetically modified crops. Molecular diagnostics, molecular markers, genetic engineering, tissue culture, and the development of beneficial microbes are the main areas of genomics that are employed to improve the quality of crops.

**Plant Genomics Market Trends:**

The market is majorly driven by the rising prevalence of protein deficiency among individuals, resulting in the augmenting

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demand for protein-rich plants. The market is experiencing an increase in the demand for fruit, vegetables, and cereals of high quality due to the increasing population. Also, extensive research and development (R&D) activities conducted for developing numerous advanced plant genomics methods are creating a positive outlook for the market. Apart from this, favorable initiatives taken by the government bodies of several countries promoting improved plant and crop growth programs are providing an impetus to the market. Additionally, the widespread loss of vegetative cover is resulting in the implementation of alternative scientific methods to improve vegetation and increase plant productivity. The market is further propelled by the shifting preference toward genomics over automated instruments due to its cost-efficiency and the growing costs of automated instruments. Some of the other factors contributing to the market include the escalating demand for a bio-based economy to improve food security, rapid urbanization, considerable growth in the food and beverage (F&B) industry, the rising trend of veganism and an enhanced focus on sustainable development.

#### Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global plant genomics market report, along with forecasts at the global, regional and country level from 2025-2033. Our report has categorized the market based on type, technology, trait and application.

#### Breakup by Type:

- Molecular Engineering
- Genetic Engineering
- Genome Editing
- Others

#### Breakup by Technology:

- DNA/RNA Sequencing
- Genotyping
- Marker-Assisted Selection (MAS)
- Bioinformatics
- Others

#### Breakup by Trait:

- Yield Improvement
- Disease Resistance
- Herbicide Tolerance
- Others

#### Breakup by Application:

- Cereals and Grains
- Oilseeds and Pulses
- Fruits and Vegetables
- Others

#### Breakup by Region:

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- North America
- United States
- Canada
- Asia-Pacific
- China
- Japan
- India
- South Korea
- Australia
- Indonesia
- Others
- Europe
- Germany
- France
- United Kingdom
- Italy
- Spain
- Russia
- Others
- Latin America
- Brazil
- Mexico
- Others
- Middle East and Africa

#### Competitive Landscape:

The competitive landscape of the industry has also been examined along with the profiles of the key players being Agilent Technologies Inc., BGI Genomics, Eurofins Scientific SE, Florigenex Inc., GENEWIZ Inc. (Azenta Inc.), Illumina Inc., Keygene N.V., LC Sciences, Neogen Corporation, Novogene Co. Ltd., NRGene Technologies Ltd., Oxford Nanopore Technologies plc and Qiagen N.V. Kindly, note that this only represents a partial list of companies, and the complete list has been provided in the report.

#### Key Questions Answered in This Report:

- How has the global plant genomics market performed so far and how will it perform in the coming years?
- What has been the impact of COVID-19 on the global plant genomics market?
- What are the key regional markets?
- What is the breakup of the market based on the type?
- What is the breakup of the market based on the technology?
- What is the breakup of the market based on the trait?
- What is the breakup of the market based on the application?
- What are the various stages in the value chain of the industry?
- What are the key driving factors and challenges in the industry?
- What is the structure of the global plant genomics market and who are the key players?
- What is the degree of competition in the industry?

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