

# **Agrigenomics Market Size, Share, Trends, Analysis, and Forecast 2025-2034 | Global Industry Growth, Competitive Landscape, Opportunities, and Challenges**

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## **Abstracts**

Global Agrigenomics Market is valued at USD 6 billion in 2025. Further, the market is expected to grow at a CAGR of 11% to reach USD 15.3 billion by 2034.

The agrigenomics market is a rapidly growing field that applies genetic research and biotechnology to agriculture. By studying the genomes of crops and livestock, agrigenomics aims to enhance agricultural productivity, improve disease resistance, and create more resilient food sources. This market is crucial for addressing global food security challenges as it enables the development of genetically modified organisms (GMOs) and the improvement of traditional breeding methods. Agrigenomics is also integral to sustainable agriculture, as it enables more efficient use of resources, reduces the environmental impact of farming practices, and increases crop yields. Technologies like CRISPR gene editing are revolutionizing the field, enabling precise modifications to improve plant and animal traits.

In 2024, the agrigenomics market is witnessing a surge in innovations and collaborations between biotechnology firms, research institutions, and agricultural producers. CRISPR and other gene-editing technologies are being used to enhance crop resistance to pests, diseases, and environmental stresses, leading to the creation of crops that require fewer chemical inputs. Additionally, advancements in genomics are improving livestock breeding programs by enhancing traits like disease resistance, growth rates, and feed efficiency. The market is also seeing the increasing adoption of molecular breeding techniques, which enable faster and more accurate selection of desirable traits in plants and animals. However, public perception and regulatory

challenges surrounding GMOs remain an obstacle to widespread adoption in certain regions.

Looking ahead to 2025 and beyond, the agrigenomics market is expected to experience continued growth as genomic technologies become more accessible and cost-effective. The use of genomic selection and gene-editing tools will expand beyond GMOs, focusing on improving the nutritional content and disease resistance of crops. The integration of AI and machine learning with agrigenomics will also accelerate the development of tailored crops and livestock breeds that are better suited to specific climates and environments. As climate change continues to challenge traditional farming practices, agrigenomics will play a critical role in creating sustainable solutions that ensure global food security and agricultural resilience.

### Key Market Trends

**Advancements in Gene-Editing Technologies:** CRISPR and other gene-editing tools are enabling precise modifications in crops and livestock to improve yield and resilience.

**Integration of AI in Genomic Research:** AI and machine learning are being used to analyze large-scale genomic data and optimize breeding programs.

**Increased Focus on Sustainability:** Agrigenomics is driving sustainable agriculture through genetically modified crops that require fewer pesticides and fertilizers.

**Growing Acceptance of GMOs in Emerging Markets:** As the benefits of GMOs become clearer, developing countries are increasingly adopting genetically modified crops for food security.

**Collaboration Between Biotech and Agricultural Sectors:** Partnerships are accelerating research and development of agrigenomic technologies and their applications in farming.

### Key Market Drivers

**Global Food Security Challenges:** The need for increased agricultural productivity to meet the demands of a growing global population is driving the demand for agrigenomic solutions.

**Technological Advancements in Gene Editing:** Innovations in gene-editing technologies

are enabling more precise and efficient crop and livestock improvements.

**Focus on Sustainable Farming Practices:** Agrigenomics is crucial for developing crops and livestock that are more resilient and require fewer chemical inputs, promoting sustainability.

**Climate Change and Environmental Pressures:** The increasing need for crops and livestock that can withstand extreme weather conditions is driving the demand for genomic solutions.

### Key Market Challenge

**Regulatory and Ethical Concerns:** The acceptance of GMOs remains a challenge due to regulatory restrictions and public concerns about the safety and ethics of genetically modified organisms.

### Market Segmentation

#### By Service Offerings

Genotyping

DNA Fingerprinting

Assessment of Genetic Purity

Trait Purity Assessment

Gene Expression Analysis

Other Service Offerings

#### By Technology

Real-Time PCR

qPCR

Microarrays

Next Generation Sequencing

Capillary Electrophoresis

Other Technologies

By Sequencer Type

Sanger Sequencing

Illumina Hi Seq Family

PacBio Sequencers

Solid Sequencers

Other Sequencer Types

By Application

Crops

Livestock

By Geography

North America (USA, Canada, Mexico)

Europe (Germany, UK, France, Spain, Italy, Rest of Europe)

Asia-Pacific (China, India, Japan, Australia, Vietnam, Rest of APAC)

The Middle East and Africa (Middle East, Africa)

South and Central America (Brazil, Argentina, Rest of SCA)

What You Receive

Global Agrigenomics market size and growth projections (CAGR), 2024- 2034

Impact of recent changes in geopolitical, economic, and trade policies on the demand and supply chain of Agrigenomics.

Agrigenomics market size, share, and outlook across 5 regions and 27 countries, 2025- 2034.

Agrigenomics market size, CAGR, and Market Share of key products, applications, and end-user verticals, 2025- 2034.

Short and long-term Agrigenomics market trends, drivers, restraints, and opportunities.

Porter's Five Forces analysis, Technological developments in the Agrigenomics market, Agrigenomics supply chain analysis.

Agrigenomics trade analysis, Agrigenomics market price analysis, Agrigenomics Value Chain Analysis.

Profiles of 5 leading companies in the industry- overview, key strategies, financials, and products.

Latest Agrigenomics market news and developments.

The Agrigenomics Market international scenario is well established in the report with separate chapters on North America Agrigenomics Market, Europe Agrigenomics Market, Asia-Pacific Agrigenomics Market, Middle East and Africa Agrigenomics Market, and South and Central America Agrigenomics Markets. These sections further fragment the regional Agrigenomics market by type, application, end-user, and country.

Who can benefit from this research

The research would help top management/strategy formulators/business/product development/sales managers and investors in this market in the following ways

1. The report provides 2024 Agrigenomics market sales data at the global, regional, and key country levels with a detailed outlook to 2034, allowing companies to calculate their

market share and analyze prospects, uncover new markets, and plan market entry strategy.

2. The research includes the Agrigenomics market split into different types and applications. This segmentation helps managers plan their products and budgets based on the future growth rates of each segment
3. The Agrigenomics market study helps stakeholders understand the breadth and stance of the market giving them information on key drivers, restraints, challenges, and growth opportunities of the market and mitigating risks
4. This report would help top management understand competition better with a detailed SWOT analysis and key strategies of their competitors, and plan their position in the business
5. The study assists investors in analyzing Agrigenomics business prospects by region, key countries, and top companies' information to channel their investments.

#### Available Customizations

The standard syndicate report is designed to serve the common interests of Agrigenomics Market players across the value chain and include selective data and analysis from entire research findings as per the scope and price of the publication.

However, to precisely match the specific research requirements of individual clients, we offer several customization options to include the data and analysis of interest in the final deliverable.

Some of the customization requests are as mentioned below –

Segmentation of choice – Our clients can seek customization to modify/add a market division for types/applications/end-uses/processes of their choice.

Agrigenomics Pricing and Margins Across the Supply Chain, Agrigenomics Price Analysis / International Trade Data / Import-Export Analysis

Supply Chain Analysis, Supply–Demand Gap Analysis, PESTLE Analysis, Macro-Economic Analysis, and other Agrigenomics market analytics

Processing and manufacturing requirements, Patent Analysis, Technology Trends, and Product Innovations

Further, the client can seek customization to break down geographies as per their requirements for specific countries/country groups such as South East Asia, Central Asia, Emerging and Developing Asia, Western Europe, Eastern Europe, Benelux, Emerging and Developing Europe, Nordic countries, North Africa, Sub-Saharan Africa, Caribbean, The Middle East and North Africa (MENA), Gulf Cooperation Council (GCC) or any other.

Capital Requirements, Income Projections, Profit Forecasts, and other parameters to prepare a detailed project report to present to Banks/Investment Agencies.

Customization of up to 10% of the content can be done without any additional charges.

Note: Latest developments will be updated in the report and delivered within 2 to 3 working days.

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