

**Seeds Market Assessment, By Type [Heirloom, Open-pollinated, Hybrid], By Nature [GMO, Organic], By Crop Type [Cereals and Grains, Oilseeds and Pulses, Fruits and Vegetables, Others], By Trait [Herbicide-tolerant, Insect-resistant, Others], By Region, Opportunities and Forecast, 2017-2031F**

Market Report | 2024-09-30 | 222 pages | Market Xcel - Markets and Data

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**Report description:**

Global seeds market is projected to witness a CAGR of 5.20% during the forecast period 2024-2031, growing from USD 72.62 billion in 2023 to USD 108.94 billion in 2031. The market is expected to experience substantial growth, spearheaded by the demand for food production and improvements in farming technologies. The need for increased crop yields has been netted to a rising population and urbanization rate, pushing farmers towards using better quality seeds such as hybrid seeds. Such types of seeds usually possess favorable characteristics, including pest resistance, drought tolerance, and higher production capacity, leading to greater preference by cultivators and driving the growth of the market.

Hybrid seeds have become more popular than traditional seeds due to their ability to improve crop yield. Furthermore, genetically modified (GM) seeds are revolutionary in contemporary farming since they incorporate features that make them resistant to pests, diseases, and environmental stresses.

As part of the development of climate-resilient and high-nutrient crops, there is an increase in food security and sustainability concerns and technological advancements. Moreover, seed treatments may entail biological or chemical options, which protect seeds against pathogens and promote their germination.

At present, North America and Europe are experiencing a tremendous surge in the use of modern farming techniques. Also, some emerging economies in Asia-Pacific are expected to grow faster than others due to higher investments in agriculture and governments launching initiatives that aim at improving agricultural productivity.

The seeds market faces key challenges such as regulatory constraints regarding GMOs, volatility in commodity pricing, and public concerns about the loss of biodiversity. Despite these obstacles, the market plays a vital role in combating global food insecurity and tackling climate change.

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In January 2023, to help with the problem caused by Russia-Ukraine war, the U.S. Agency for International Development (USAID) and Bayer AG collaborated to supply premium vegetable seeds to Ukrainian farmers. Bayer AG made the donation in support of USAID's Agriculture Resilience Initiative for Ukraine (AGRI-Ukraine). The collaboration allowed a fresh supply of carrot seeds from Bayer AG to be distributed by USAID to the needy Ukrainian farmers.

In October 2023, Bayer AG launched ComandanTY Tomato and the TigerGrey Zucchini, belonging to Seminis seed range. Both the solutions aimed at improving the productivity of farmers and offering more quality and taste to the final consumers.

#### Increasing Adoption of High-Yielding Seeds Catalyze Market Expansion

Primarily, for farmers aiming at increasing crop productivity and satisfying food demands, high-yielding seeds are the key enablers in the global seeds market as they enhance yield. In particular, hybrid and GM varieties offer improved traits including disease resistance, pest tolerance, and improved capability to adapt to environmental stresses, such as drought and extreme weather conditions. Thus, it appeals to farmers who want to increase their output while minimizing risks. In December 2023, two new cotton varieties for 2024 were introduced by Corteva Agriscience's PhytoGen brand, PHY 137 W3E1 and PHY 475 W3FE. While PHY 137 W3E1 is an Upland variety that matures early to midway, PHY 475 W3FE is an easy-to-manage, mid-to-full season Upland variety. Both varieties possess genetic resistance against bacterial blight and root-knot nematodes.

Hybrid seeds ensure uniformity in crops and offer more yield than traditional seeds as they are developed by crossbreeding two parent plants with desirable characteristics. On the contrary, genetically modified seeds are enhanced through genetic engineering to improve their ability to resist pests, diseases, drought, herbicides, and other stress factors, thus reducing considerably the use of chemical inputs and manual labor. The use of such seeds with high fertility is evident in areas with food insecurity issues and difficult agricultural circumstances.

#### Innovations in Seed Biotechnology Fuel the Market Growth

The latest developments in seed biotechnology are transforming the agricultural sector as they improve the quality, yield, and resilience of crops. With the help of gene alteration technologies such as genetic engineering, genome editing, or molecular breeding, scientists are able to create seeds that are specifically tailored to overcome challenges such as pests, climate change, and nutritional deficiencies. For instance, in March 2024, Protealis NV, a leading provider of sustainable plant protein seeds and seed technology, introduced four new soy seed variants. Despite Northern Europe's shorter (colder) growing season, PRO Vesuvio, PRO Helicon, PRO Taranaki, and PRO Jacinto have been raised specifically to produce high yield and high protein content. Due to their ability to resist pests, tolerate herbicides, and withstand environmental stresses, such as drought and extreme temperatures, GM seeds are the most visible advances in seed biotechnology. It reduces the use of dangerous chemicals and promotes more sustainable agricultural practices. Additionally, CRISPR technology is another improvement that enables the precise editing of genes to modify crops into varieties with improved characteristics such as higher nutritional value, better disease resistance and faster growth rates.

#### Oilseeds and Pulses Capture a Substantial Market Share

The substantial market is captured by oilseeds and pulses in the global seeds market, driven by the increasing demand for food and non-food utilities. For instance, soybean, sunflower, canola, and cottonseed form vegetable oils in addition to biodiesel and animal feeds, making them highly desirable crops. Moreover, oilseeds are rich in healthy fats and proteins that have further increased their demand due to the growing health consciousness and shift towards plant-based diets. In July 2024, with the addition of 19 new items for the 2025 growing season, BASF SE extended the range of its Xitavo soybean seeds. With new additions, there are now 46 products in the Xitavo soybean seed range, ranging in relative maturities from 0.0 to 4.8. This new source of germplasm for soybean seeds provides much-needed genetic diversity to assist improved yields, lower risk from heightened climatic difficulties, and reduce the strain of diseases that farmers generally face.

The central role of pulses such as lentils, beans, and chickpeas cannot be overemphasized in developing regions where they are considered as a major source of protein. In developed nations however, health-conscious markets have fueled an increasing demand for plant-based proteins, thus creating a high demand for pulses. Moreover, fixing nitrogen into the soil through putrefaction would lead to less reliance on non-natural fertilizers, promoting sustainable agriculture.

#### North America Dominates the Market Share

The global seeds market is dominated by North America, which is propelled by improved farming methods, high adaptation rates of biotechnology and substantial research and development capacity. Particularly, the United States and Canada are ahead of the

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region in seed production and innovation with huge investments directed to GM seeds and hybrid seeds. These are used extensively for crops such as corn, soybeans, and cotton, which are staple goods in local farming.

Besides, several prominent seed companies in North America make the market stronger. These market players invest heavily in creating seeds with better characteristics, including resistance to herbicides, insect pests, and drought, that help increase crop production and ensure food security. In March 2023, Corteva Inc., Bunge Global SA, and Chevron U.S.A. Inc. collaborated to launch exclusive winter canola hybrids that yield a lower carbon profile plant-based oil. The objective is to make more vegetable oil feedstocks available, mainly for the expanding domestic market for renewable fuels. With a sustainable crop rotation, the firms hope to give farmers a new source of income by introducing the winter canola crop.

Given the increasing global demand for quality seeds, North America continues to lead innovation and influence the future of the global seed market.

#### Future Market Scenario (2024 – 2031F)

□□The increase in the global food demands caused by population growth will accelerate the uptake of GM and hybrid seeds as these seeds have higher yields, better pest resistance, and greater adaptation to climate change.

□□There is a high anticipation of an increased demand for non-GM seeds, bio-fortified strains, and seed treatments that are kind to the environment.

□□Using innovative techniques, such as CRISPR Gene Editing, for crop production and precision farming tools will improve the quality of seeds and increase the yield, enabling farmers to manage various challenges of climate and achieve highest possible seed performance.

#### Key Players Landscape and Outlook

The key players in the global seeds market are shaping the industry's landscape through innovation, strategic mergers, and acquisitions. Major companies lead the market with robust portfolios that include genetically modified (GM) seeds, hybrid varieties, and advanced seed treatments. These firms invest heavily in research and development to create high-yielding seeds with improved traits such as pest resistance, drought tolerance, and enhanced nutritional content.

The market outlook for these key players is promising, with ongoing efforts to address global food security and sustainability challenges. Companies are focusing on expanding their product offerings and geographic reach to capture emerging markets in Asia-Pacific, Latin America, and Africa. Additionally, the rise of sustainable and organic farming practices is prompting these players to innovate in seed biotechnology and eco-friendly solutions.

Strategic partnerships, acquisitions, and mergers are a significant trend, as companies seek to leverage complementary strengths and access new technologies. For instance, in October 2023, Sakata Seed Corporation acquired Brazil-based Isla Sementes LTDA. By utilizing their respective sales networks, the two businesses, which have minimal overlap in terms of sales network, sales area, customer base, and product portfolio, hope to generate demand and attract new clients through this acquisition.

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22.4.6. DLF Seeds A/S

22.4.7. TAKII & CO., LTD.

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22.4.10. Corteva Agriscience

\*Companies mentioned above DO NOT hold any order as per market share and can be changed as per information available during research work.

23. Strategic Recommendations

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