Biochar Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The Biochar market is expected to grow at a CAGR of over 15% globally during the forecast period (2022-2027).

COVID-19 negatively affected numerous countries, which resulted in declining growth and production in several industries. However, the surging demand for food with the rising population is anticipated to increase the consumption of biochar in the agriculture industry.

Key Highlights
Over the medium term, increasing applications for plant growth and development and growing demand for organic foods in developing countries are expected to drive the demand for the market studied.
On the flip side, the risk of contamination and soil erosion is expected to hinder the market's growth in the coming years.
Furthermore, rising environmental awareness and government policies to adopt environmentally friendly products are expected to offer new growth opportunities to the industry growth over the forecast period.
North America is expected to dominate the market due to the growing demand for organic food across the region.

Biochar Market Trends

Growing Demand from Agriculture

Biochar is a solid byproduct of biomass pyrolysis. It is a carbon-rich, porous material used for various applications, the most important of which is soil improvement and remediation.
Biochar is primarily used in agriculture to improve soil fertility and plant growth and to provide crop nutrition. When used as a soil amendment, biochar improves the soil's physical and chemical properties, such as fertility and productivity.

It can retain applied fertilizer and nutrients and gradually release them to agronomic crops. The benefit of biochar is its capacity to hold onto water and nutrients in the surface soil horizons for extended periods as it prevents nutrients from evaporating from the crop root zone, thus increasing crop yields and lowering the need for fertilizer.
Hence, using biochar in production agriculture increases yields while decreasing negative environmental impacts.
Currently, China and the United States are the forerunners in using biochar for agricultural purposes.
The United States is one of the world's largest producing and consuming markets for agricultural products and one of the top agriculture exporters in the world. According to the US Department of Agriculture, in 2021, the total grain production in the country stood at 429.9 million metric tons, registering a growth of 2.8% compared to last year.
Agriculture has always been of great significance to Italy. Through various initiatives, the Italian government has been promoting the agricultural industry, aiming to stabilize production and finding ways to ensure that the sector is increasing healthily and sustainably.? The number one driving force behind the Italian industry is the agri-food market. The Italian federal government has actively supported agriculture for decades. There is broad political consensus on the need for property, labor, and tax reform to help the sector achieve its capacity.
As a result, the demand for the biochar market is expected to grow in agriculture applications in coming years.

Germany to Dominate the European Market

Germany is among the top countries which are actively practicing several biochar projects. NovoCarbo Biochar is an ongoing project started in November 2021. The project transforms wood residues from forest operations and waste wood into stable carbon in the form of biochar. The highly customizable biochar solutions can be used across several industries, including agriculture and soil amendment, water treatment, decarbonizing textiles such as carpet flooring, and as an additive in sustainable building materials.
The German demo site at Nationalpark Unteres Odertal converts low-nutritional grass from the wetlands into biochar. By implementing a first complete processing line, the grass is transformed into biochar by pyrolysis or hydrothermal carbonization (HTC).
Biochar is mainly used in agriculture as it improves overall farming productivity. Further, it has also gained popularity as an animal feed in livestock farming. Thus, the increasing use of biochar in applications such as agriculture, animal feed, and industry in Germany is driving the demand for biochar in the country.
In Germany, about half of the land is used for agriculture. It is the third-largest exporter of agricultural goods in the world. Grain is majorly cultivated on about one-third of the agricultural land of Germany, where wheat is the leading crop, followed by barley and rye.
According to Altech Agri-Food Outlook 2022, the country produced around 24.51 million metric tons of feed in 2021 compared to 24.93 million metric tons in 2020. The country is home to about five of the world's largest animal feed manufacturers, including AGRAVIS Raiffeisen AG, DTC Deutsche Tiernahrung Cremer GmbH & Co. KG, H. Broring GmbH & Co. KG, MEGA Tierernahrung GMBH & Co. KG, and Rothkotter-Mischfutterwerk.
However, in 2021, compounded feed production was severely affected due to the spread of the animal disease Avian Influenza (AI). The country was likely to experience flattened growth in the feed industry, with expected growth in 2022.

Biochar Market Competitor Analysis

The global biochar market is partially consolidated, with a few major players dominating a significant portion of the market. Some major companies (not in any particular order) are Biochar Industries, Biochar Supreme, Swiss Biochar GmbH, ArSta Eco, and Airex Energy, among others.

Additional Benefits:

The market estimate (ME) sheet in Excel format
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Table of Contents:

1 INTRODUCTION
1.1 Study Assumptions
1.2 Scope of the Study

2 RESEARCH METHODOLOGY

3 EXECUTIVE SUMMARY

4 MARKET DYNAMICS
4.1 Drivers
4.1.1 Increasing Applications for Plant Growth and Development
4.1.2 Growing Demand for Organic Foods in Developing Countries
4.1.3 Emergence and Usage European Biochar Certificate (EBC)
4.2 Restraints
4.2.1 Risk of Contamination and Soil Erosion
4.2.2 Other Restraints
4.3 Industry Value Chain Analysis
4.4 Porters Five Forces Analysis
4.4.1 Bargaining Power of Suppliers
4.4.2 Bargaining Power of Buyers
4.4.3 Threat of New Entrants
4.4.4 Threat of Substitute Products and Services
4.4.5 Degree of Competition

5 MARKET SEGMENTATION (Market Size in Volume)
5.1 Technology
5.1.1 Pyrolysis
5.1.2 Gasification Systems
5.1.3 Other Technologies
5.2 Application
5.2.1 Agriculture
5.2.2 Animal Farming
5.2.3 Industrial Uses
5.2.4 Other Applications
5.3 Geography
5.3.1 Asia-Pacific
5.3.1.1 China
5.3.1.2 Australia
5.3.1.3 South Korea
5.3.1.4 Rest of Asia-Pacific
5.3.2 North America

5.3.2.1 United States
5.3.2.2 Canada
5.3.3 Europe
5.3.3.1 Germany
5.3.3.2 Sweden
5.3.3.3 Austria
5.3.3.4 Switzerland
5.3.3.5 United Kingdom
5.3.3.6 Rest of Europe
5.3.4 Rest of the World

6 COMPETITIVE LANDSCAPE
6.1 Mergers and Acquisitions, Joint Ventures, Collaborations, and Agreements
6.2 Market Share (%)**/Ranking Analysis
6.3 Strategies Adopted by Leading Players
6.4 Company Profiles
6.4.1 Airex Energie Inc.
6.4.2 Biochar Industries
6.4.3 Biochar Supreme
6.4.4 Carbon Gold
6.4.5 Diacarbon Energy Inc.
6.4.6 Karr Group
6.4.7 Phoenix Energy
6.4.8 Sunriver Biochar
6.4.9 Swiss Biochar GmbH
6.4.10 The Biochar Company LLC
6.4.11 Vega Biofuels
6.4.12 Wonjin Group

7 MARKET OPPORTUNITIES AND FUTURE TRENDS
7.1 Numerous Upcoming Projects in United Kingdom
7.2 Other Opportunities

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