



## Biochar Market Summary

Biochar is a fine-grained carbon-rich product created through the gasification process by heating organic materials under conditions of no oxygen. Biochar is a highly-porous, carbon material that resembles the core structure of the incoming feedstock with the majority of the non-carbon materials removed.

The North American biochar market in 2016 is estimated at 396,200 tons with nearly 94% of the market in the United States (368,400 tons). The primary North American markets in 2016 were (Inkwood, 2017):

- **Agriculture:** 336,200 tons
- **Industry:** 60,800 tons

Biochar is an effective component for agricultural activity as it retains and increases the soil nutrients. The large surface area provided by the porous structure of the material provides an excellent site for bacterial and fungi growth. Advantages include:

- Soil carbon sequestration and enhancement
- Increased moisture retaining capacity
- Increased nutrient retention and cation exchange capacity
- Reduced nutrient leaching
- Increased soil microbial activity
- pH amelioration
- Enhanced porosity and structure of soil

In industrial processes, significant research is being conducted to validate biochar performance in industrial settings, including:

- Additive in building materials
- Potable water and wastewater treatment plants
- Storm water management
- Filter media for managing air quality
- Catalyst for chemical reactions



Forest Wood Biochar – West Biofuels



Almond Shell & Hull Biochar – West Biofuels

The price for biochar has averaged \$1,200 - \$1,500 per ton over the last several years (Inkwood, 2017) (International Biochar Initiative, 2015). In the agricultural sector, biochar competes with several products that provide similar benefits, most notably chemical fertilizers, perlite, and vermiculite. Since 2010, research into biochar has dramatically risen, with under 300 bibliographic references in peer-reviewed research to more than 1,500 in 2015 (International Biochar Initiative, 2016).

Source:

Inkwood Research. "North America Biochar Market Forecast 2017-2025." 2017

International Biochar Initiative. "State of Biochar Industry 2014." March 2015.

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