

Could bamboo be the next source of renewable energy?

June 21 2023



Credit: Pixabay/CC0 Public Domain

An article in *GCB Bioenergy* describes why bamboo may be an attractive resource in efforts to develop environmentally friendly renewable energy to replace fossil fuels.

The authors note that bamboo grows rapidly, absorbs [carbon dioxide](#), and releases large amounts of oxygen into the atmosphere. They describe various processes—such as fermentation and pyrolysis—that can be performed to convert its raw material into bioethanol, biogas, and other bioenergy products. A [tool](#) with limitations is currently available for selecting the most appropriate bamboo species for different bioenergy production processes.

"We conducted a review of energy conversion methods for bamboo biomass and found that bioethanol and biochar are the primary products obtained," said first author Zhiwei Liang, of the Hungarian University of Agriculture and Life Science.

"Since the chemical composition of [bamboo](#) varies across different species, future research efforts should focus on gathering a more extensive collection of quantitative data for selecting species advantageous for minimizing biomass pre-treatment time and cost."

More information: Potential use of bamboo resources in energy value-added conversion technology and energy systems, *GCB Bioenergy* (2023). [DOI: 10.1111/gcbb.13072](https://doi.org/10.1111/gcbb.13072)

Provided by Wiley

Citation: Could bamboo be the next source of renewable energy? (2023, June 21) retrieved 12 May 2024 from <https://techxplore.com/news/2023-06-bamboo-source-renewable-energy.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.