



# Evaluating Bulk Drying Options for Forest Residues

Forestry bioproducts such as harvest residue offer an excellent opportunity to produce clean energy. However, high moisture content and the presence of microorganisms can encourage material loss from rotting, freezing and self-heating fires and pose other health concerns. In this project, the Prairie Agricultural Machinery Institute (PAMI) team evaluated natural air-drying methods for large-scale biomass storage. By evaluating various air-drying methods for biomass, the team's objective was to make bioenergy operations more efficient, extend the lifespan of stored biomass, and reduce safety concerns.

## PROJECT TITLE

Evaluating bulk drying options for forestry residue using computation fluid dynamics

## ORGANIZATION

Prairie Agricultural Machinery Institute

## CONTACT

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## START DATE

1 April 2019

## END DATE

31 March 2020

## COLLABORATORS

CanmetENERGY; Manitoba Agriculture and Resource Development; PAMI Applied BioEnergy Centre

The project began with the consultation of the industry on their current management practices for biomass storage. Next, they designed various industrial-grade natural air-drying methods and submitted them to industry partners for review. The team evaluated shortlisted designs and issued a report that highlights the benefits of each method perks and suggests the best way to use them.

This project supports a steady supply of woody biomass to produce low-carbon energy for Canada's bioeconomy. It helps diversify forestry markets and can reduce energy costs for wood producers and processors. PAMI's work decreases the barriers to adopting new biomass technologies, thereby boosting the economic value of the benefits of forest products for producers across the country and making Canada's forest sector more competitive.

