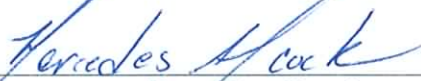


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Report No. 06-020-02-R01

**STATE OF THE ART**  
**STATUS OF BIOFIBRES IN CANADA: 2006**

Prepared by:



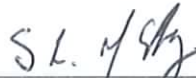
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Industry Canada Life Sciences Branch,  
Department of Agriculture and Agri-Food Canada

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## **EXECUTIVE SUMMARY**

This State of the Art report describes Canada's current capabilities in the biofibres sector with a focus on biofibres produced from agricultural crops being used in composite manufacturing in connection with ground transportation applications. Information surrounding agricultural material entering the pulp and paper industry or the bioenergy sector was not included in this report.

There are few Canadian companies currently involved in the ground transportation sector; however, there is a sizable amount of work being performed in developing fibres for this end market.. Research groups including Canadian universities and the National Research Council are supporting the ground transportation/automotive sector. Initiatives are underway or in proposal form to drive biofibres into this market. Several companies outside of Canada who provide products to the ground transportation/automotive markets were identified and company profiles, end applications and fibre types are included in the report. This is not an exclusive listing as the focus was on those companies using agricultural crops which could be grown in Canada.

In terms of Canadian capabilities, nineteen (19) companies were identified that are involved in the biofibre sector. This list includes companies which; are Canadian owned, are foreign owned but operate facilities in Canada, produce or are developing biofibre product, and sell technology or consulting services related to the biofibre industry. The majority of these companies are involved in some form in the construction industry. Hemp and flax were identified as the most frequently used crops amongst the companies as well as being the most versatile in the number of market sectors they can satisfy. Individual profiles of the companies are provided that describe their capabilities in more detail. As many of the companies use multiple fibre sources, and can supply multiple markets, the individual profiles of each of the companies are grouped by the maximum fibre length they can manufacture or primarily use. There are organizations developing uses for biofibres outside the ground transportation industry and these organizations and developments are briefly described.

This State of the Art report is the first phase of a larger project, the Sector Profile. The second phase will include a market assessment that will define generic market opportunities from information gathered as part of this report together with a detailed needs assessment of the primary target market, the ground transportation industry and secondary co-product markets. Phases 1 and 2 will lead to the preparation of a report and a workshop, targeting industries and investors enabling them to gain a better understanding of the biofibres industry and identify technology gaps, commercialization opportunities and market potential. Knowledge collected in the first two phases will be used to identify three prime opportunities for Canada which will be expanded into detailed business cases in the third phase. The business cases will include additional data collected to support each unique case including patent literature, crop assessments and technology selection.

The Sector Profile is one of the deliverables in the Composites Innovation Centre's Biofibre Initiative sponsored by the Agricultural Policy Framework (APF), Science and Innovation Broker Program coordinated through the Department of Agriculture and Agri-Food Canada. This State of the Art report was primarily funded by Industry Canada Life Sciences Branch (Contract No. 5018229).