



# USE OF FORESTRY RESIDUALS IN HIGH VALUE AND ORGANIC HORTICULTURAL CROP PRODUCTION

*Introductory Research Report E2007-25*

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## BACKGROUND

Demand is high for organic amendments in both the domestic and export market. The high-value horticultural sector is in need of new products to substitute for limited supplies of traditional amendments such as manures, bark and peat moss. At present, large volumes of composted forestry residuals, primarily pulp mill biosolids (PMB), are being produced in Atlantic Canada. The percentage of PMB that are composted in this region surpasses rates reported in Québec and Ontario. These composts typically meet or exceed Category A standards for organic content, foreign matter, trace element content, pathogens and maturity specified by Canadian standards (CCME 2005; BNQ 2005). For the organic horticulture sector, these composts offer the additional benefit of being free of modified DNA and other materials found in manure that are prohibited under organic standards.

Very large volumes of raw, bagged peat are currently exported to the US from Atlantic Canada, where the material is developed into a value-added professional growing media. Only 14% of the peat mined in New Brunswick is further processed locally. New provincial policies in NB require all new peat extraction to be directed toward production of value-added products only. The relatively abundant organic waste feedstocks in composted forestry residuals, and greater consistency of quality of composted compared to raw forestry residuals, provides a unique market and product development opportunity for Atlantic Canadian companies.

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## REFERENCES

- Canadian Council of Ministers of the Environment. 2005. Guidelines for Compost Quality. PN-1340 Ottawa, ON.
- Bureau de normalisation du Québec. 2005. Organic soil conditioners: composts. CAN/BNQ 0413-200-2005. Sainte-Foy, QC.

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## FUTURE WORK

Commencing in 2007, planned field and greenhouse trials will be conducted to:

- (i) Determine the suitability of composted PMBs and dehydrated compost as peat and/or pine bark replacements in development of novel professional growing media;
- (ii) Examine the persistence and biodegradation of selected organic contaminants during composting of PMBs under both commercial and laboratory conditions; and
- (iii) Quantify the benefits to soils and crops from use of composted PMBs as mulches and soil amendments in high-value horticultural field crop (blueberries, organic vegetable) production.

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