

**BIOSECURITY IN AGRICULTURE:  
A SUGGESTED STRATEGY FOR THE PROTECTION OF SOURCE WATER  
AGAINST PATHOGENIC CONTAMINATION**

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**ABSTRACT**

To reduce the threat of pathogenic responses in humans, the Government of Ontario has introduced the *Clean Water Act*. The Act is intended to identify, characterize, and mitigate risks to vulnerable sources of drinking water. Applying the appropriate level of protection in those areas where land use activities contribute to the contamination of source water can be achieved through the use of biosecurity strategies comprised of operational measures to treat manure prior to storage and handling. Recent outbreaks of waterborne disease linked to manure management practices has resulted in an increased awareness of the potential risks that livestock operations pose to source water quality. This investigation demonstrated that currently available treatment technologies can significantly reduce pathogen concentrations in livestock manure; however the extent that these measures can be integrated into the proposed *Clean Water Act* is limited by the lack of controlled, replicated studies conducted at the commercial-scale.