

# **The Partners In Nitrogen Use Efficiency Project: The Monitoring of Nutrient Flows and the Assessment of BMPs on Five Farming Operations in Southern Ontario. (S08-burr161035-Oral)**

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## **Abstract:**

A Farm Gate budgetary approach to assessing nutrient management has been used to identify opportunities to improve nitrogen use efficiency and address environmental concerns. We developed an N budget calculation that accounted for nitrogen (N) gains, losses and flows on a whole farm, but allowed values for individual fields to be determined. Since 1997, data has been collected from five farming operations in southern Ontario, Canada, as part of the Partners In Nitrogen Use Efficiency (PINUE) project. The objectives include monitoring of the existing management on each operation, implementation of BMPs that would reduce excess N, and monitoring the resultant changes in the budget. In the first year of BMP implementation, nutrient management was conducted at the field level to obtain the maximum short-term gains in nutrient efficiency and hence groundwater quality. Although the BMPs involved reduced N inputs, no significant changes have been measured in the crop yields or in groundwater N concentrations. Reluctance to adopt farmstead BMPs such as improved manure storage, and the absence of external funding for their implementation has limited the options for additional improvements.

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