

IN THE MIDST OF CHANGE
CHALLENGES AHEAD FOR THE CANADIAN AGRI-FOOD SECTOR
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À LA CROISÉE DES CHEMINS:
LES DÉFIS À VENIR POUR LE SECTEUR AGROALIMENTAIRE CANADIEN

ABSTRACT 7

Economic and Environmental Tradeoffs of Ontario's Dairy Farming Systems

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Dairy farming is one of the largest agricultural sectors in Ontario, making up 20% of the province's overall agricultural production and earning \$1.7 billion in milk receipts (Ontario Ministry of Agriculture and Rural Affairs, 2011a). Although the dairy sector plays a significant role in the provinces' economy, it is also one of the largest emitters of greenhouse gas (GHG) emissions in agriculture in Ontario.

As it is the largest contributor to the province's economy, the dairy sector has the challenge of finding low-cost means of reducing GHG emissions that do not significantly impact farm income. To remain competitive and profitable but also produce in an environmentally friendly way, dairy farms have to apply inputs as efficiently as possible while simultaneously reducing GHG emissions as efficiently as possible. In this context, the tradeoff between the economic efficiency and environmental efficiency of Ontario dairy farms has become a relevant topic worth addressing.

The purpose of this study is to: (i) estimate economic and environmental efficiency measures for the dairy sector in Ontario, (ii) identify the barriers to achieving efficiency, and (iii) identify the private and public policy initiatives that will help support a shift toward an efficient dairy farming system. The data for this study is from the Ontario Dairy Farm Accounting Project. A directional distance function approach is used to estimate economic and environmental efficiency.