

**Research Poster from the
Linking Environment and Agriculture Research Network (LEARN)
*Enabling Research for a Competitive Agriculture***



Abstract LEARN-04

Feasibility of an Environmental Marketing Conception for Alberta Pork

Al Mussell and Claudia Schmidt
George Morris Centre

The environmental sustainability impact of farm and food products is coming under scrutiny and is becoming an element of product marketing. At the same time, the choices of technology and production practice that affect sustainability are inherently made in an economic context. To study environmental sustainability economics in pork, an agronomic model of feed production, hog production, and pork processing/rendering was developed. The model traces the path of environmental indicators from basic inputs to finished pork product in a cost and returns context. The model is employed to facilitate a comparison between Alberta and Iowa in pork environmental indicators and economics.

The model results show that based on hog diet specifications and cropping alternatives, the feed production enterprise covers a much larger land base in Alberta compared with Iowa. As a result, feed production in Alberta generates a larger environmental impact, especially based on N₂O emissions. Acidification rates were essentially equal between the two regions, and eutrophication potential was zero as the system did not release excess phosphorus. Scenarios are explored in which the costs of Alberta matching and exceeding Iowa greenhouse gas emissions are assessed. The study concludes that an Alberta environmental label for pork would need to be supported by agronomic measures to improve environmental performance, at increased cost.