

**Research Poster Abstract from the
*Structure and Performance of Agriculture and Agri-products Industries (SPAA) Network
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ABSTRACT SPAA-04

The more technically efficient are also environmentally more efficient!

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This poster is based on a forthcoming article in Applied Economics about technical and environmental efficiencies. The analysis is based on a sample of 210 farms located in the Chaudière watershed (Quebec), where water quality problems are particularly acute because of the production of undesirable outputs that are jointly produced with agricultural products. The joint technology is approximated by a flexible translog functional form estimated using a full information maximum likelihood method. Technical and environmental efficiencies are disaggregated across farms and account for spatial variations. Our results show that there is a significant correlation between the two types of efficiencies. We compute the cumulative Malmquist productivity index and the Fisher index. We show that producers with a higher level of education and operating larger farms tend to be more efficient technically and environmentally. We also investigate the changes in technology, profitability, efficiency, and productivity in response to the adoption of 2 selected best management practices (BMPs) whose objective is to reduce water pollution. We found significant differences across BMPs regarding the direction and the magnitude of their effect.