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Poster 4

HEALTH, WATER QUALITY AND THE ADOPTION OF HOUSEHOLD DEFENSIVE MEASURES AND BEST MANAGEMENT PRACTICES ON QUEBEC FARMS

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The objective of this study is to measure the benefits stemming from improvements in water quality through a household defensive behavior approach applied to a sample of Quebec farmers. Data about farmers' perceptions about the environment and water quality, farm characteristics, socio-demographic characteristics and economic performance indicators have been collected to analyze the adoption of environment-friendly best management practices (BMPs) and investment in defensive measures to address water quality concerns at the household level (e.g., a water treatment system). The survey was conducted in 2013 and features 1000 respondents. We accounted for the possibility that decisions about BMPs and household defensive measures be correlated when estimating our defensive behavior model to see how each type of investment impact on the health of farm household members as proxied by the number of days when sickness symptoms associated with consumption of water unfit for drinking purposes. Our results show that the number of days when sickness symptoms associated with water unfit for human consumption were observed within farm households, expenditures on drinking water and the adoption of BMPs are linked. Higher expenditures on drinking water correlates with higher BMP adoption and the adoption of BMPs tends to reduce the number of sick days. Thus the cost associated with the implementation of BMPs is in part offset by additional revenues arising from fewer sick days.