Farmers’ incomes can vary a great deal from year to year for a number of reasons. In addition to strong fluctuations in the market prices for crops and livestock, farmers may also be faced with crop or livestock losses due to severe weather conditions, outbreaks of infectious disease, crop blights, and insect infestations. In Canada and many other countries, safety net programs exist to protect farmers against unpredictable and catastrophic losses. Different safety net programs have different ways of deciding which farmers should get assistance, and how much compensation they should receive. Some, such as the Canadian Farm Income Program (CFIP) and the Canadian Agricultural Income Stabilization (CAIS) program, track individual farmer’s incomes over the years and use that history to determine when farmers need assistance. Other programs compare farm incomes to those of an “average” or representative farm, which is determined by mathematical modelling or by averaging farm incomes across a region. For these safety net programs to be effective, however, program developers need a clear understanding of the natural variation in farm incomes and profit margins, both between farms and over time.

What is this research about?
Farmers’ incomes can vary a great deal from year to year for a number of reasons. In addition to strong fluctuations in the market prices for crops and livestock, farmers may also be faced with crop or livestock losses due to severe weather conditions, outbreaks of infectious disease, crop blights, and insect infestations. In Canada and many other countries, safety net programs exist to protect farmers against unpredictable and catastrophic losses. Different safety net programs have different ways of deciding which farmers should get assistance, and how much compensation they should receive. Some, such as the Canadian Farm Income Program (CFIP) and the Canadian Agricultural Income Stabilization (CAIS) program, track individual farmer’s incomes over the years and use that history to determine when farmers need assistance. Other programs compare farm incomes to those of an “average” or representative farm, which is determined by mathematical modelling or by averaging farm incomes across a region. For these safety net programs to be effective, however, program developers need a clear understanding of the natural variation in farm incomes and profit margins, both between farms and over time.

What did the researchers do?
The researchers collected information on farm finances from the Statistics Canada Tax Data Program (from 1998-2004), and from the Farm Financial Survey (for 1997, 1999, and from 2001-2004). Information about farm size, type, and province were taken from the Statistics Canada Whole Farm Database. Each farm’s profit margin (total revenues minus expenses) was calculated as a ratio relative to sales or assets. Profit Margin/Assets measures the farmer’s “return on investment” (for new equipment, for example), while Profit Margin/Sales is a way of looking at how much profit a farm makes for its size. Each farm was placed into one of four categories (quartiles) based on total sales.

What you need to know:
Farm income stabilization programs should not rely on farm size alone to determine payment, since size does not accurately predict farm profitability. While profitability varied a great deal in all size categories, farms in the highest sales bracket had both the highest – and the lowest – profit margins.
What did the researchers find?
Regardless of farm type or province, there was more variation in farm profits within a sales category than across sales categories. In other words, farm size (as measured by sales) did not predict profitability well, because profitability varied a great deal for both small (low sales) and large (high sales) farms. The variation of profitability increased with farm size, however, indicating that there are some very profitable small farms and some unprofitable large farms. These findings suggest that farm income stabilization programs should not focus on farm size alone.

How can you use this research?
Farm insurers can use this research to develop farm insurance programs that more accurately assess farm profitability and fluctuations in farm income.

Farm income stabilization programs can use this research to develop payment guidelines that do not focus on farm size alone, and instead consider the variation in profitability for farms of all sizes.

Keywords:
Farm income, income variability, profitability, crop insurance, safety net programs, income stabilization

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