

# Shortcuts costly when buying conservation from farmers: study

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Farmers in the U.S. and the European Union receive billions of dollars in government subsidies each year to make changes in their operations that will improve the environment. However, a new study by Paul Armsworth, assistant professor in ecology and evolutionary biology at the University of Tennessee, Knoxville, finds that these government programs may offer very poor value for money.

Armsworth led an international team of researchers examining the performance of farm subsidies. Their findings indicate that designing subsidy programs that actually deliver promised environmental benefits is easier said than done.

The study is published in the journal [Ecology Letters](#) today.

Under these programs, farmers are paid to change their management practices to improve conditions for wildlife. For example, they might be paid to reduce the number of livestock they keep or amount of fertilizer they apply. Payments are supposed to compensate farmers for costs they incur for making the changes.

The researchers found common shortcuts in the design of farm subsidies undermined their [environmental performance](#).

"Subsidy schemes of this sort are used all over the world," Armsworth said. "However, policymakers often make shortcuts when designing these schemes to make them easier to administer. For example, they

might pay participating farmers all the same amount or allow anyone to sign up regardless of how suitable their farm is for providing wildlife benefits."

Examining more than 40 farms in [northern England](#), the researchers conducted economic surveys. To understand wildlife impacts, they focused on how [bird species](#) respond to farm management actions. The survey results were analyzed using mathematical models that allowed researchers to explore different ways of designing farm subsidy programs.

The results revealed between 49 and 100 percent of the promised increase in bird numbers were often not met. Instead, most scheme designs greatly over-compensated farmers for costs they incurred and served primarily to increase farm profits.

By comparing alternatives, the researchers were able to identify which simplified policies were most problematic.

"Allowing payment rates to vary depending on where a farm is located is critical," Armsworth said. "Get that right and prospects for conserving wildlife on farms greatly improves."

Armsworth collaborated with researchers in Stirling, Copenhagen, Nottingham and Exeter on the research which was funded by the United Kingdom's Research Councils' Rural Economy and Land Use Programme, a collaboration between the Economic and Social Research Council, Natural Environment Research Council and Biotechnology and Biological Sciences Research Council, with additional funding from Defra and the Scottish Government.

Provided by University of Tennessee at Knoxville

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