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Pilot-testing Performance-based Incentives for Agricultural Pollution Control

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Abstract Text:

Current programs for controlling nonpoint source (NPS) pollution in the United States consist in large part of cost-sharing best management practices and compensating farmers for idling selected tracks of working land. While important tools, they do not often encourage farmers to utilize the most cost-effective actions or inspire new and innovative solutions to reduce NPS pollution from their farming operations. This project is using performance-based incentives to provide participating farmers with the flexibility to implement the most cost-effective actions, specific to their farm and fields, for nonpoint source pollution reduction in Iowa and Vermont. The most important lessons learned from our preliminary results are that (1) the cost-effectiveness of various actions to reduce P loss and erosion vary greatly from farm-to-farm and field-to-field, with no one action showing consistent advantages, and (3) incentive payment levels should be set according to local calculations, budget constraints, and the extent of P loss reduction desired.

Impact Statement:

In Eastern Iowa, an average reduction of 0.88 lbs P per acre per year can be achieved for an average cost to the farmer of $-0.61 per pound of P reduction, suggesting that untapped win-win actions exist. The performance-based incentive payment of $10 per pound of P reduced results in a gain to farmers of $10.61 per pound P. In Vermont, an average reduction 0.26 lbs P per acre per year can be achieved for a cost to the farmer of $4.86. A $25 incentive payment to the Vermont participants results in a pollution reduction profit of $20.14 per pound of P reduced.