



The Center for
Behavioral and Experimental
Agri-Environmental Research

Non-operating Landowners and Conservation Practices in the Upper Mississippi River Basin

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[CBEAR](#) is collaborating with Purdue University and The Nature Conservancy to run randomized controlled field trials to test innovative ideas aimed at increasing the extent of conservation practices on the farmlands of non-operating landowners (farmland owners who do not farm themselves and rent their lands to other farm operators).

For more information about the context, see this [document](#) from our partners at The Nature Conservancy.

Below is a list of some of the reports that have been written by the project team. Contact CBEAR at info@centerbear.org for copies of these reports.

- 1. Rented Farmland: The Missing Piece of the Nutrient Management Puzzle in the Upper Mississippi River Basin?** Yuta J. Masuda, Seth C. Harden, Pranay Ranjan, Chloe B. Wardropper, Collin Weigel, Paul J. Ferraro*, Sheila M.W. Reddy*, Linda S. Prokopy*

Runoff from agriculture in the Upper Mississippi River Basin causes downstream environmental impacts, including a large dead zone in the Gulf of Mexico. To reduce these impacts, governments incentivize farmers to adopt conservation practices. Yet despite decades of assistance, adoption remains low. One overlooked reason for low adoption is the high percentage of farmland that is rented. On rented lands, the transaction costs of conservation are higher and the misalignment of incentives between landowners and the public is greater. Moreover, most landowners in the Basin are not farm operators themselves, and thus are missed by traditional forms of conservation outreach. By changing the marketing and design of conservation programs to target non-operating landowners and their tenants, efforts to abate agricultural pollution in nutrient-laden watersheds will be more successful. We outline a vision for change and argue that legislation can create incentives for collaborative experimentation to more rapidly design programs that work.

- 2. Conservation behavior and effects of economic and environmental message frames.** Reddy, S, C Wardropper, C Weigel, Y Masuda, S Harden, P Ranjan, J Getson, L Esman, PJ Ferraro, L Prokopy. 2020 (forthcoming). *Conservation Letters*.

Emphasizing the economic and environmental benefits of conservation is business-as-usual for environmental organizations seeking to influence conservation behavior, but these message frames are rarely tested. We embedded a large message framing experiment into the recruitment for a conservation agriculture program targeting farmland owners in the Mississippi River Basin. We found that framed

messages do not increase enrollment in the agricultural program—the desired conservation behavior—compared to a control message and may decrease enrollment among farmland owners not already using conservation practices (i.e., cover crops).

3. Using a randomized controlled trial to develop conservation strategies on rented farmlands. Collin Weigel, Seth C. Harden, Yuta J. Masuda, Pranay Ranjan, Paul J. Ferraro, Linda S. Prokopy, Sheila M.W. Reddy

Addressing the environmental impacts of large-scale agriculture requires innovative approaches to conservation program design and evaluation. We used a randomized controlled trial and a sample of 2,225 landowners in the Mississippi River Basin to test a new conservation program that targets a growing but overlooked population—non-operating landowners (NOLs). To spur adoption of conservation practices on farmland rented out by NOLs, the program provided NOLs with ready-to-use lease language and a financial incentive. The program’s design was informed by field work, the behavioral science literature, and the social science literature on barriers to conservation on farmland. We cannot detect an effect on conservation practices from the lease language or the incentive. The take-up rate for the incentive was one-tenth the expected rate based on NOL responses to a hypothetical offer in a survey. The results underscore the importance of assessing program performance by rigorously testing programs in real conservation settings.