

Results from Discovery Farms

Amber Radatz

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Lancaster, WI

Speaker's Task Force on Water Quality



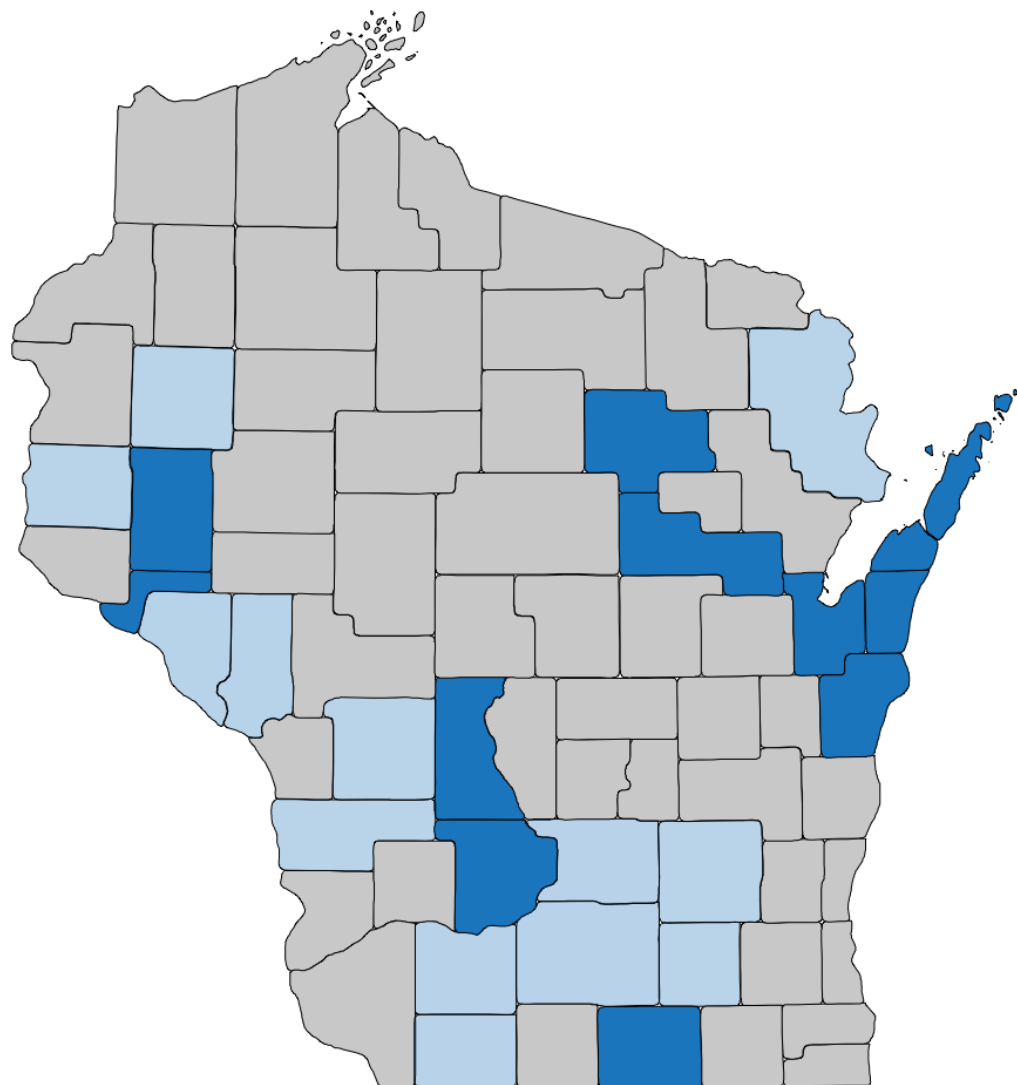
Extension

UNIVERSITY OF WISCONSIN-MADISON



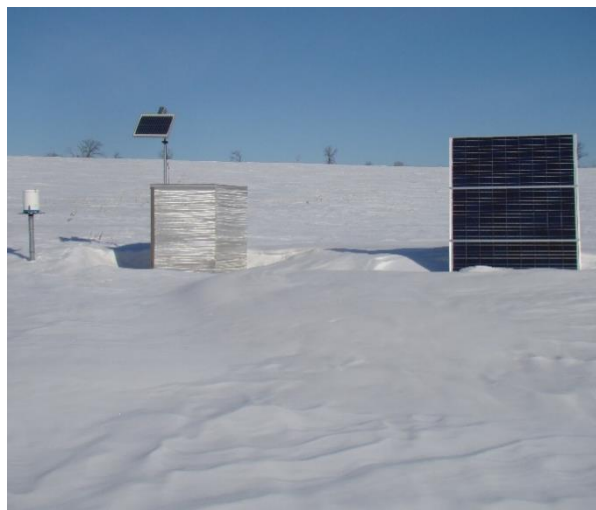
DISCOVERY
FARMS
WISCONSIN

At our core: A farmer-led water quality research and educational program



Results are from Wisconsin farms operated by Wisconsin's farm families

Weather • Soil



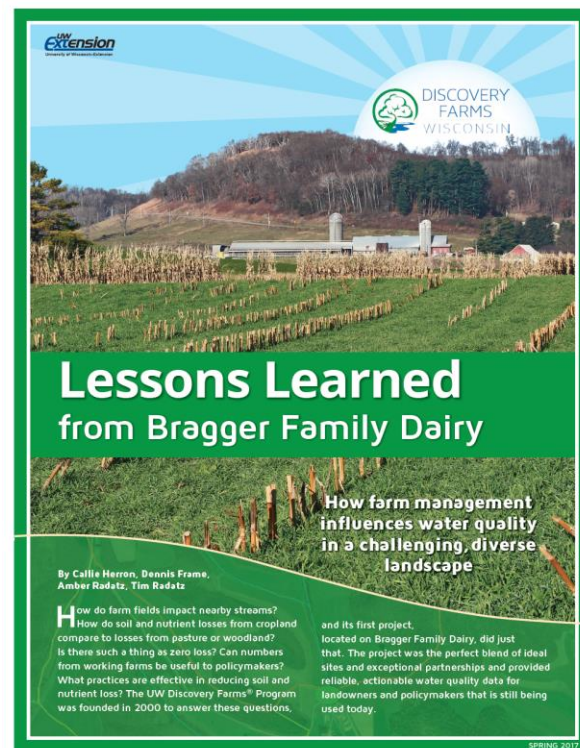
Runoff • Sediment



Nitrogen • Phosphorus



Presentations, events and written materials serve as valuable resources

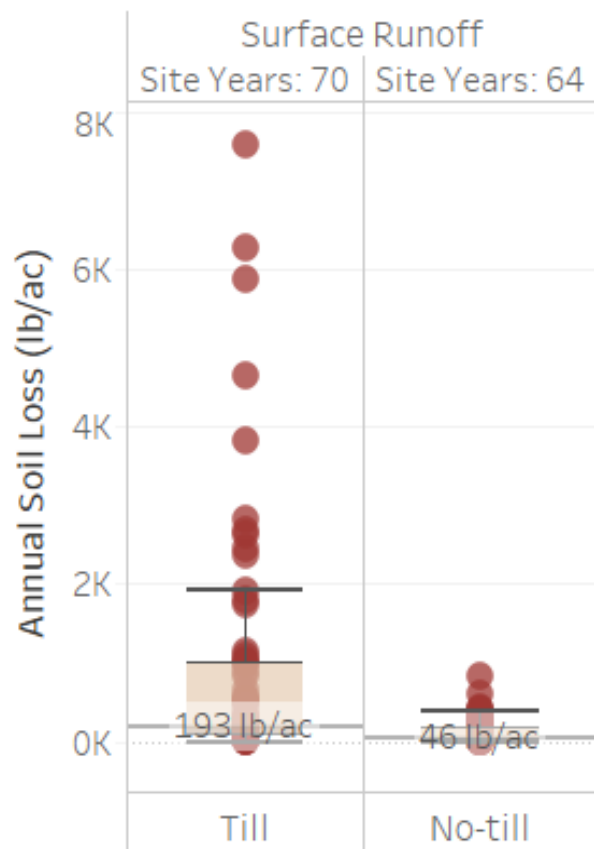


We work with farmers to monitor and understand their impact on surface water quality. The intersection of water quality and agriculture is complicated.

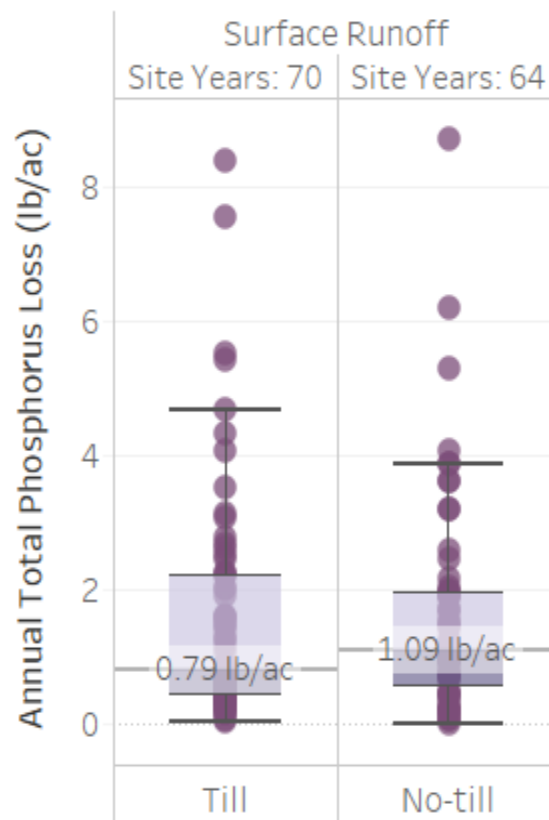
Every farm and every management system has areas that can be improved. Farmers are seeking continuous improvement.

Improvement depends on a balance of practices that protect both surface water and groundwater.

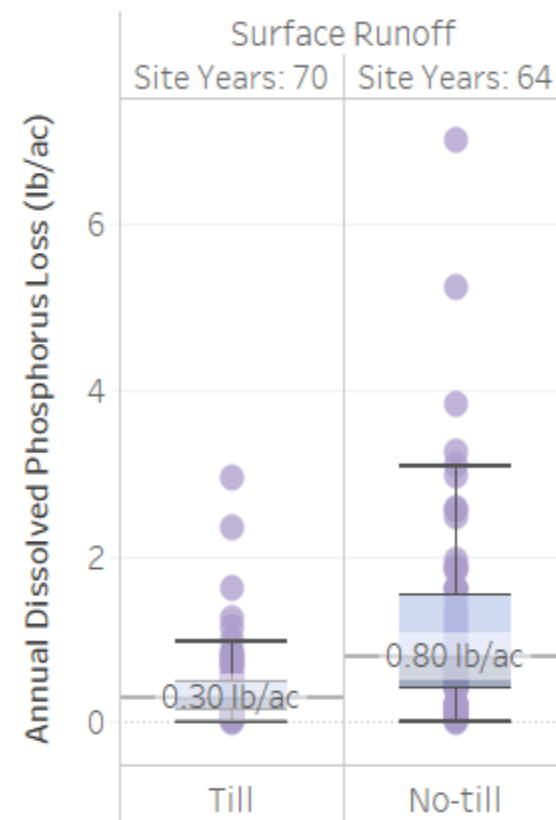
Controlling soil losses is the first step to managing phosphorus loss. but not the last.



Till median: 193 lb/ac
No-till median: 46 lb/ac



Till median: 0.79 lb/ac
No-till median: 1.09 lb/ac



Till median: 0.30 lb/ac
No-till median: 0.80 lb/ac

Nutrients are best applied close to when the crop needs them and NOT close to when a runoff event is likely



Photo: Andy Kieffer, Outagamie Co. LCD



- ✓ Sidedress manure
- ✓ Irrigation

- ✓ Cover crop taken for small grain

Nutrients should be **placed** below the soil surface but not with so much disturbance that soil loss becomes an issue

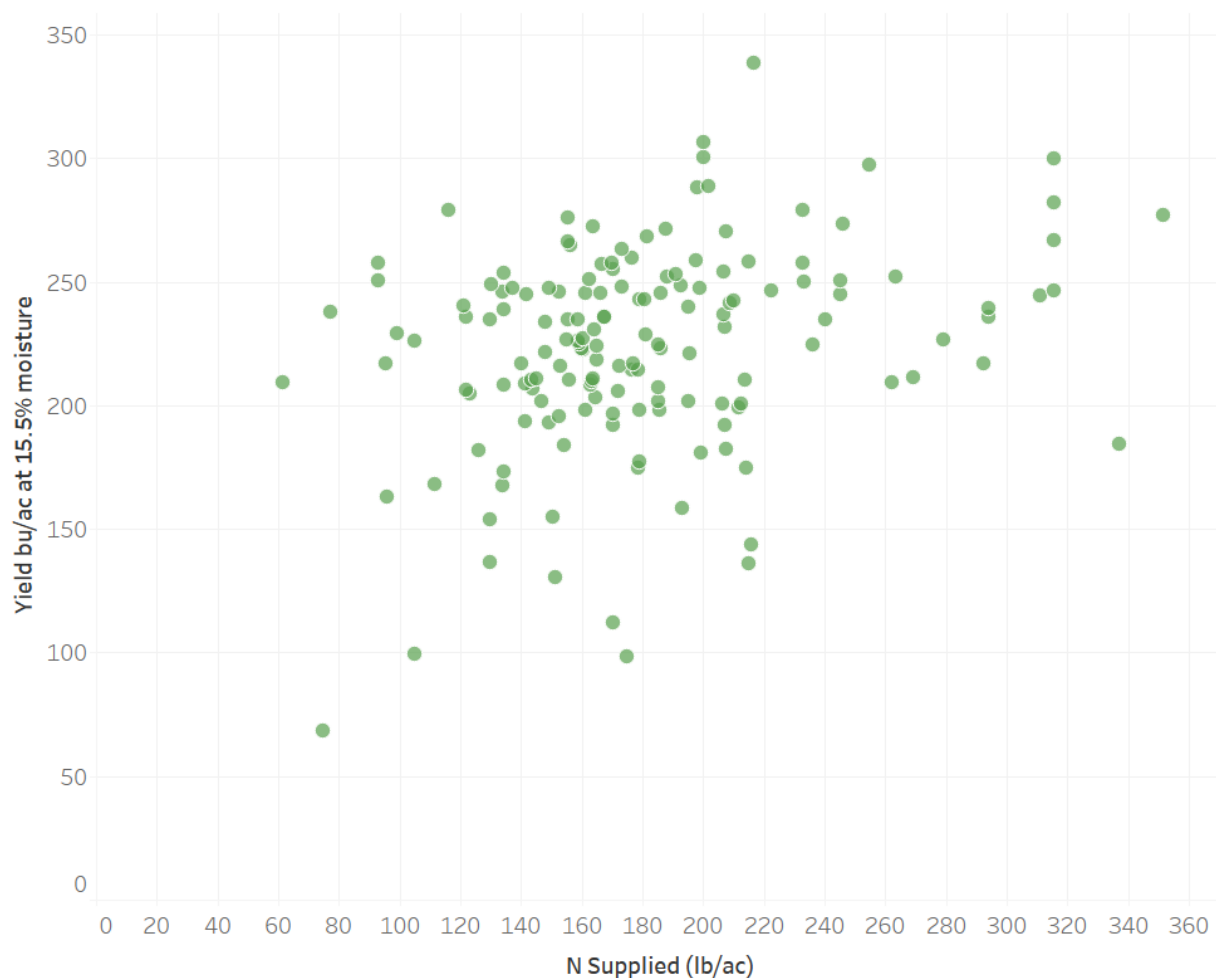
- ✓ Low disturbance incorporation
- ✓ Into a living cover



We must equip farmers to be researchers for themselves to arrive at real solutions. Nitrogen Use Efficiency is one way to do that.



Corn production in Wisconsin isn't like corn production in other states, so using tools and recommendations developed elsewhere doesn't work



Key lessons from Discovery Farms results

#1

Controlling soil losses is the first step to managing phosphorus loss.

#2

Equally important is timing of manure and fertilizer application. Placement of nutrients also needs attention.

#3

Land use and soil characteristics influence runoff and losses. Some of those things are under your control, some are not.

#4

Nitrogen use and corn production are unique in Wisconsin, and need a larger farmer-driven database to uncover solutions.

Amber Radatz

amber.radatz@wisc.edu

608-317-0001