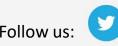


Welcome to *The Current*, the North Central Region Water Network's Speed Networking Webinar Series

# Using Social Norms to Promote Conservation Adoption 2PM CT

- 1. Submit your questions for presenters via the Q&A panel. There will be a dedicated Q & A session following the last presentation. The Q&A panel can be found via the Q&A icon at the bottom of the webinar screen.
- 2. If you are experiencing technical issues or have questions about the North Central Region Water Network or *The Current* Webinar Series, please use the chat feature. The chat feature is accessible via chat icon at the bottom of the webinar screen.
- 3. A phone-in option can be accessed by clicking the up arrow on the mute icon and clicking 'Switch to Phone Audio'.

This session will be recorded and available at northcentralwater.org.

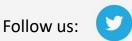






### Today's Presenters:

- Landon Yoder, Assistant Professor, School of Public and Environmental Affairs, Indiana University
- Bret Shaw, Associate Professor and Extension Environmental Communication Specialist, Department of Life Sciences Communication, University of Wisconsin-Madison
- Maggie Norton, Farmer Outreach Coordinator, Practical Farmers of Iowa







### Landon Yoder



Landon Yoder is a human-environment geographer who focuses on how farmers, government, and society cooperate to navigate tradeoffs between agricultural production and conservation, with a focus on water quality. His work combines both social and natural science data and spatial analysis to examine how biophysical conditions, social dynamics, and institutional arrangements jointly influence environmental change. His research has demonstrated the important effects of joint legal compliance and public monitoring data in promoting knowledge exchanges and drawing on social norms to promote the adoption of conservation practices in farming communities. His current research is focused on collaborative watershed governance among local governments in lowa, cover crop adoption by farmers in Indiana, and the use of farm-scale nitrate data on farmers' nutrient management.





# When Do Social Norms Matter for Farming?

Landon Yoder
Indiana University

## **Everglades Case Study**



63 interviews with farmers, extension, and regulators

1980s Water Quality

Everglades has < 10 ppb P

Drainage water = 100-1,000 ppb P

Invasive species & food web changes



# New Norms Emerged Around "Good Farming"





Shared Liability



Lots of Discussio

n



New Benefits Identified



Social Norms Change



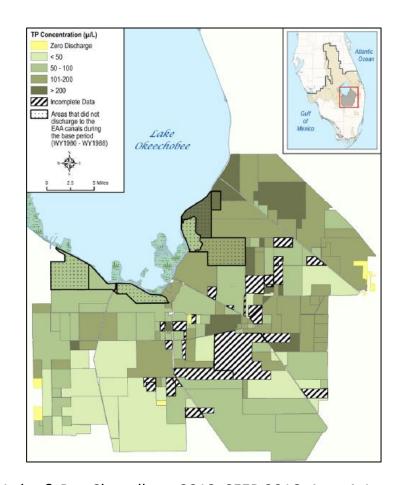
Pride & Peer Pressur

Yoder & Roy Chowdhury 2018

### Peer Pressure

"The [phosphorus reduction] numbers have been good. But initially, when the numbers looked good there was pride for the guys who had low numbers, and peer pressure not to be the bad guys."

~ Extension Agent



Yoder & Roy Chowdhury 2018; SFER 2016, App. 4-1

# Terminology: What is a social norm?

- Social (or Injunctive or Subjective) Norm: expected behavior
  - Expect repercussions for non-conformance, such as gossip, criticism, etc.
- Descriptive Norm: common behavior
  - Diverging from the norm is fine; no expected consequences
- Personal (or Moral) Norm: self-expectations for our own behavior
  - Essentially, whether we think we're living up to our own standards and values

# Do social norms matter for farming?

Lots of research on environmental behavior and conservation

Relatively little focused on row crop farming

# Social norms and conservation behavior

Lots of research on environmental behavior and conservation

- Social norms correlate with behavioral intentions often;
   62% of studies analyzed by Niemiec et al. (2020)
- Descriptive norm messages are more effective when an injunctive norm is part of the message; prevents overachievers from regressing (Schultz et al. 2007)

Relatively little focused on row crop farming

 Appeals to changing (dynamic) norms can generate changes even against the prevailing social and descriptive norms (Sparkman & Walton 2017)

## **Current Working Theory**

- Farmers' reputations are tied to highly observable management / behavior
  - High yield, straight crop rows, green color, no weeds, new equipment, etc.
- Implications for conservation?
  - Difficult for one individual to change other people's expectations by themselves
  - May be important to tap into perceptions of what practices are acceptable to try





Images: Iowa Farm Bureau (top); University of Toronto Scarborough (bottom)

# Avoiding Mistakes & Embarrassment

"Farmers do a lot of talking, you know. Like the other year, when one farmer had a super cover crop, but then the voles and the slugs and everything else went at it, and he had to replant the corn three times...neighbors talk. You need to do something different than what he did."

~ Farmer #2C (Indiana)

## Some Working Hypotheses

- New practices need to fit socially acceptable explanations for their use
- No-Till
  - Saves time and money > fits with view of good farming as efficient
  - Reduces yields > conflicts with view of good farming as maximizing yield
- Cover Crops
  - Adds value (weed control, soil health, etc.) > fits as strategic management
  - Causing weeds, slugs, replanting > conflicts as poor implementation

### Questions for Outreach?

Does a management decision have the potential for reputational gains or losses?

Can outreach be done in small groups to promote discussion and open up space for the value of a given practice to change?

Can experimentation (and mistakes) be promoted as a sign of good farming?

Can a conservation practice be framed to appeal to both a producer's personal standards and perceptions of good farming?

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### Thank You

For Questions:

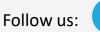
Landon Yoder yoderl@Indiana.edu



### **Bret Shaw**



Bret Shaw is Environmental Communication Specialist for the Division of Extension and an Associate Professor in the Department of Life Sciences Communication at the University of Wisconsin-Madison. He focuses on planning and evaluating social marketing campaigns dealing with behaving change for a variety of natural resource management issues such as water quality, land use and environmental conservation and assessing the impact of these social marketing campaigns. He has published broadly in the areas of environmental and health communication, and has worked in marketing, advertising, technology and journalism.







Department of Life Sciences Communication Division of Extension Office of Sustainability UniverCity Alliance



# Social norms and implications for encouraging agricultural practices to protect groundwater



Bret Shaw<sup>1,2</sup>, Theresa Vander Woude<sup>1</sup>, Chase Cummings,<sup>3</sup> Jessica McMahon<sup>4</sup>, and Kevin Trushenski<sup>4</sup>

<sup>1</sup>UW-Madison Department of Life Sciences Communication

<sup>2</sup>UW-Madison Division of Extension

<sup>3</sup>Dunn County Land and Water Conservation (prev. Pepin County Land Conservation & Planning)

<sup>4</sup>Pepin County Land Conservation & Planning Department



# UniverCity Year Pepin County

- Pepin County and UW-Madison
  - Economic development
  - Education
  - Environmental sustainability
- 2018-2021

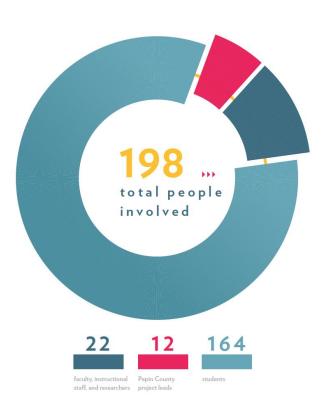
25 12
projects courses

9 indpendent research projects

6 UW-Madison schools & colleges

1 UW-River Falls department

1 UW-EauClaire department



## **About Pepin County**

### **Demographics**

Population: 7,265 (2019)

Number of farms: 448 (2017)

Average size: 239 acres (2017)

- Agriculture serves 29% of the county's workforce
- 39% of county's economic activity is related to ag



Pepin County, Wisconsin highlighted in red – Wikimedia Commons

## **About Pepin County**

### Landscape

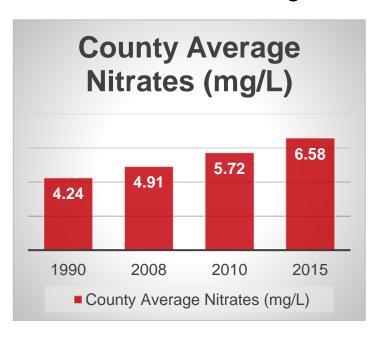
- 44% of bedrock is less than 10 feet from ground surface
- Drilled wells account for most of the county's water supply
- 20% are unconfined sand and gravel aquifers
- 69,472 acres of cropland (2017)
- Surface water total 2,962 acres (Lake Pepin not included)
- This is part of a much larger national/global problem of which this is a microcosm

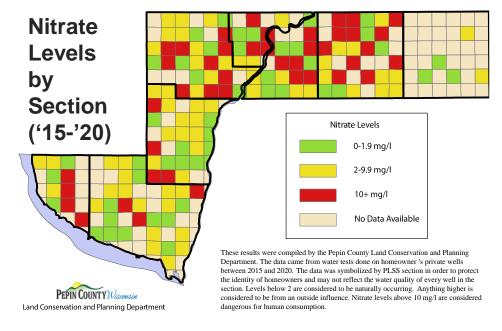


Flickr Creative Commons – Aaron Carlson

### **Nitrates**

- Found in human body, some foods, water, can harm health
- Continued monitoring of streams and wells





### Research Questions

- ➤ What <u>practices</u> are farmers receptive to that reduce nitrate contamination in the groundwater?
- What are their <u>incentives</u> or <u>barriers</u> to adopting these practices?
- Who do farmers want to hear from about these practices?
- What are the <u>social norms</u> around these practices?
- ✓ More effective efforts to protect groundwater and support agriculture

### Methods

- Literature review, phone interviews
- 28-question survey mailed to 91 operations w/



#### Pepin County Agricultural Operation Questionnaire

This survey includes questions about your farming operation, as well as your opinions about approaches to reducing nitrate leaching.

First, we would like to ask about your operation's practices and needs.

1. Do you have any crop acreage on your farm? (e.g., cash crops, hay, vegetable, fruit, etc.)

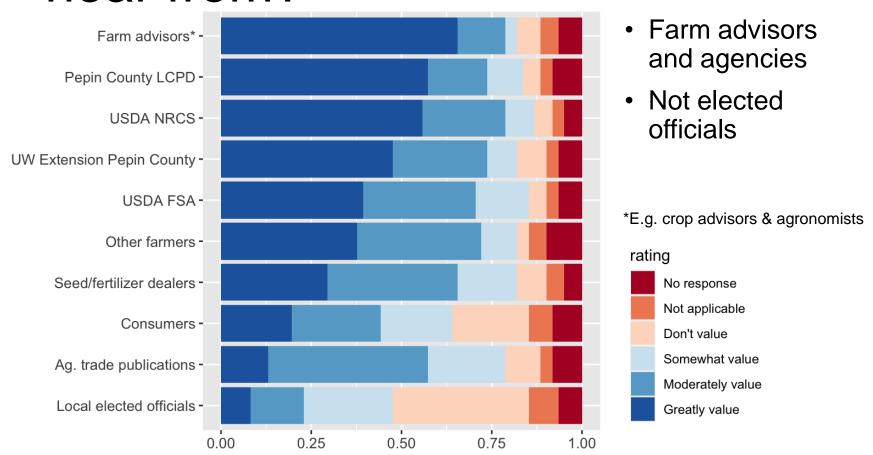
○ No - skip to question 6

- 2. Which of the following practices, if any, have you used in the past three years? Check all
  - ☐ Amending soil with compost
  - ☐ Applying manure to actively growing crop
  - ☐ Applying microbial or biological inoculants to soil
  - ☐ Applying nitrogen according to gridded soil tests
  - ☐ Planting crops requiring less nitrogen
- ☐ Experimenting with nitrogen application rates
- ☐ Growing cover crops
- ☐ Removing underperforming parts of a field from production
- ☐ Split application of nitrogen
- 3. What practice(s), if any, would be most likely to decrease your overall nitrogen use? Check all that apply.
  - ☐ Amending soil with compost
  - □ Applying manure to actively growing crop
  - Applying microbial or biological inoculants to soil
- ☐ Applying nitrogen according to gridded soil tests □ Planting crops requiring less nitrogen
- ☐ Growing cover crops
- ☐ Experimenting with nitrogen application rates
- ☐ Removing underperforming parts of a field from production
- ☐ Split application of nitrogen

How would they decrease your nitrogen use? If they would not, why?

Flickr farm tour, YPF

# Who do farmers want to hear from?



### What are the social norms?

 "People would prefer to follow a social norm on condition that (a) they expect others to follow it and (b) they believe that, in turn, they are

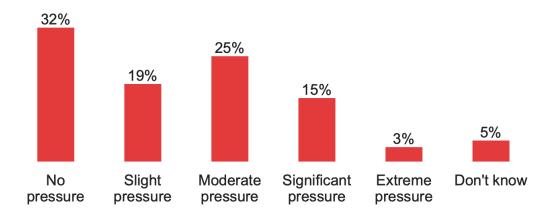


Erin, Filcki

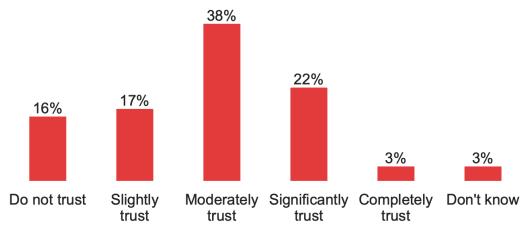
Referencing Bicchierri (2006), in Le Coent, P., Preget, R., & Thoyer, S. (2018). Do farmers follow the herd? The influence of social norms in the participation to agri-environmental schemes. Center for Environmental Economics - Montpellier.

### What are the social norms?

 How much social pressure do you feel to adopt practices that reduce nitrate leaching to groundwater?



 How much do you trust that other farmers are adopting practices that reduce nitrate leaching to groundwater?



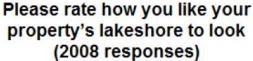
# Can social norms be increased?

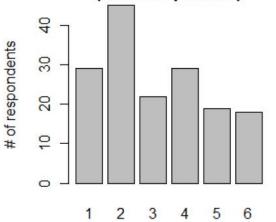
Case Study from campaign to encourage lakeshore property owners to adopt more natural shorelines

 Social norms about desirability of natural shorelines increased

<u>+</u>		
	2008	2013
	(1-Not at all, 5 = extremely)	(1=strongly disagree; 5=strongly agree)
My neighbors think leaving the shoreland area of my property in a natural, uncut state is a good idea	2.96	3.27
My neighbors think leaving my shoreline property in a way that attracts more fish and wildlife is a good idea.	3.17	3.65

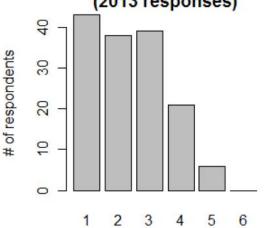
# Increased preference for natural landscaping





1=completely natural, 6=controlled by me

# Please rate how you like your property's lakeshore to look (2013 responses)



1=completely natural, 6=controlled by me

# How can social norms be changed?

- Farmer-led soil conservation networks
- Demonstration farms
- Workshops
- One-on-one interactions with farm advisors and county land and conservation departments telling stories about other farmers
- Social media
- Highlighting fields using best practices with signage



Pepin County seal, Flickr CC

## Acknowledgements

### **University of Wisconsin**

Office of Sustainability - Catherine Middlecamp; UniverCity Alliance - Gavin Luter

Division of Extension - John Exo, Patricia Malone, Kevin Masarik, Michael Travis

Department of Life Sciences Communication - Richard Heinrich

Pepin County - Maria Nelson

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### Maggie Norton



Maggie joined Practical Farmers of Iowa in 2019 and leads the farmer-to-farmer speaking and outreach program. With help from staff, Maggie seeks out and encourages emerging farmer-leaders to take a more active role in peer learning, outreach and media opportunities. She provides farmers with resources, support and coaching to help them become more effective and confident storytellers and educators. Maggie completed her Master of Science in rural sociology and sustainable agriculture at Iowa State University.









practicalfarmers.org



## **MISSION**

Equipping farmers to build resilient farms and communities.



"Get along, but don't go along." - Dick Thompson



# Farmer-to-farmer learning

- Cooperators' Program
- Field days
- Annual conference
- Mentorships
- Meet-ups and socials
- Farminars
- Email discussion lists
- Videos
- Publications (blogs, e-newsletters, magazine)















Operation Type, Size

Experience, Land Tenue Management Approach

Perspectives, Beliefs, etc.



## **VALUES**

- Welcoming everyone
- Farmers leading the exchange of experience and knowledge
- Curiosity, creativity, collaboration and community
- Resilient farms now and for future generations
- Stewardship of land and resources

# **PFI Participation** → **Adoption**

Does the farmer-to-farmer model lead to an adoption norm?

**Hypothesis**: More participation in PFI results in higher adoption of conservation practices.



Participation in PFI has the strongest statistical association with conservation practice adoption relative to other factors (e.g., age, county, participation in EQIP, land tenure, farm size, etc.).



# **PFI Participation** → **Adoption**

Does the farmer-to-farmer model lead to an adoption norm?

## Q: What is the most important part of PFI to you?

## **Preliminary themes**

Contributes to a diversity of knowledge sources

Trustworthy information (farmer-led, skin in the game, autonomy of network)

Culture (no secrets, inclusivity, curiosity, not political)

Field days (side conversations, seeing is believing, learning from others' mistakes)

Networking and the diversity of membership





# Farmer-to-farmer model

- + Big tent
- = Healthy, resilient lowa





### **Question and Answer Session**

We will draw initial questions and comments from those submitted via the chat box during the presentations.

### **Today's Speakers**

Landon Yoder – <u>yoderl@iu.edu</u>

Bret Shaw – <u>brshaw@wisc.edu</u>

Maggie Norton – <u>maggie n@practicalfarmers.org</u>







### Thank you for participating in today's *The Current*!

Visit our website, northcentralwater.org, to access the recording and our webinar archive!

Upcoming webinar from our soil health team, The Soil Health Nexus:

**Teaching Soil Heath from a Pit** 

Next Wednesday, June 16<sup>th</sup> at 2pm CT

https://soilhealthnexus.org/

