



Social & Economic Considerations

Module 8

Anna Cates
UMN-Extension
MN Office for Soil Health

Getting soil health adopted

- “Requires not only an understanding of the physical resource data but also social data.”

NRCS Social Sciences Institute

- Awareness and a deeper knowledge of key human consideration can assist with implementation and long term adoption and adaptation.
- What is the current perception of soil health in your region?
- What keeps people from implementing; how have they overcome these obstacles?

How To Impact Change

Adoption

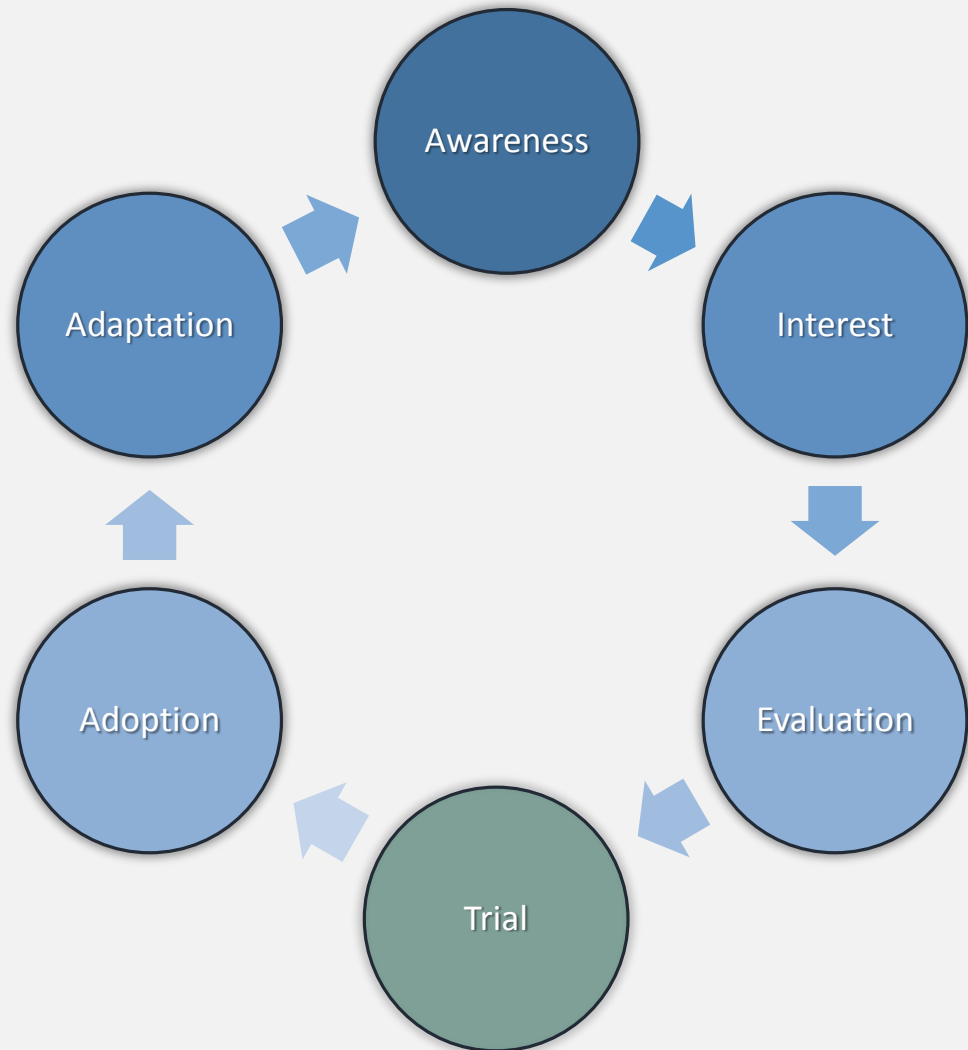
Behavior associated with an individual's or group's decision on whether or not to accept new ideas, practices or products

Technology Transfer

The process by which the adoption of a new idea, practice, or product spreads throughout a group, community or society

Stages of adoption

The producer can return to any one of these stages at any time during the adoption process



Stages of adoption

- As a planner where do you fit in the six stages?
 - In all of them
- What stage can you fail the landowner?
 - Any stage: by lack of follow through or interest after the initial contact at the awareness stage or anytime thereafter when the producer seeks assistance.



Remsburg, SARE

Attributes promoting technology adoption

Personal

- Above average income
- Formal education
- High participation in ag groups
- Greater reliance on mass media
- Willing to take risks

Farm

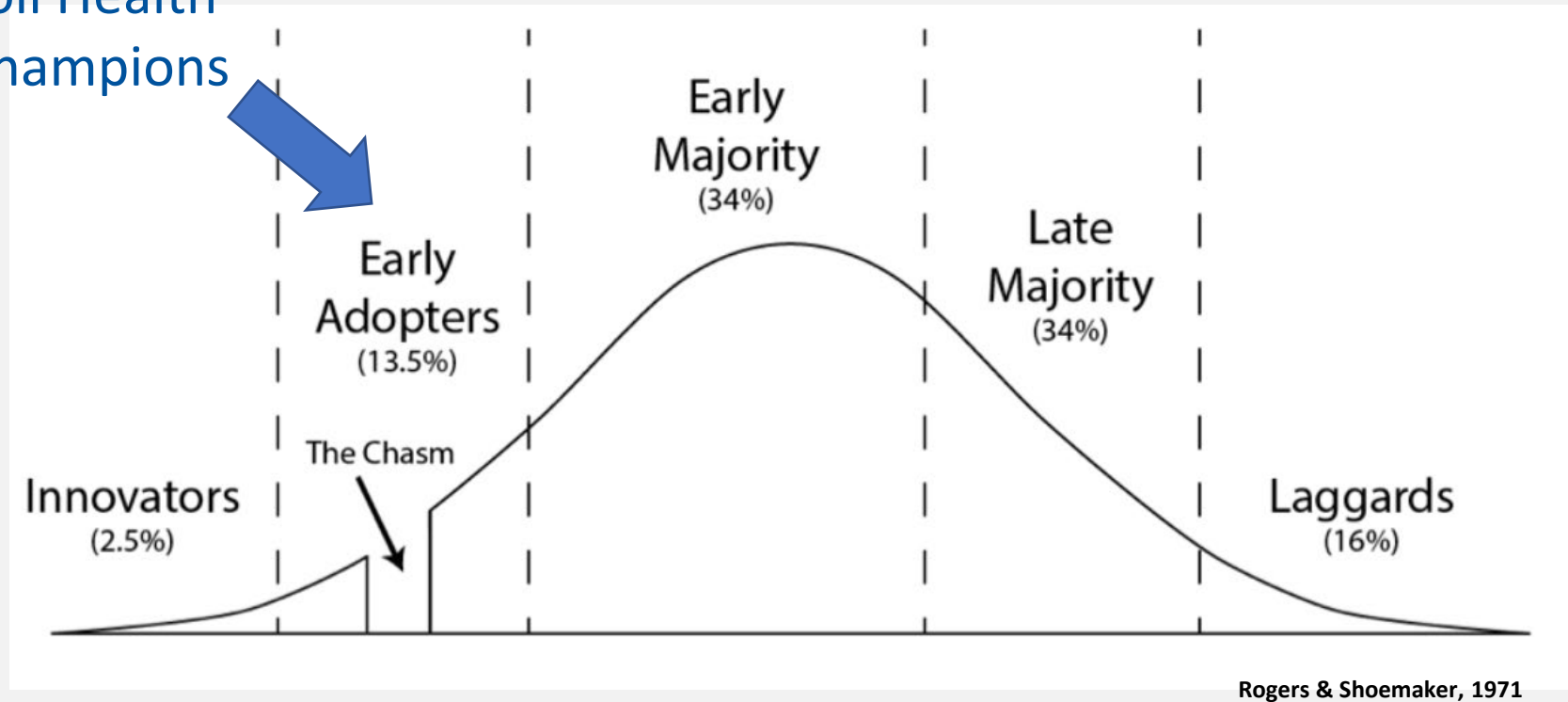
- Owner operator
- Smaller scaled farms and low to medium gross sales may be more likely to adopt soil health

Practice

- Economically feasible
- Observable; easy to use
- Compatible with producer beliefs
- Flexibly fit with the rotation

Adopter categories for community

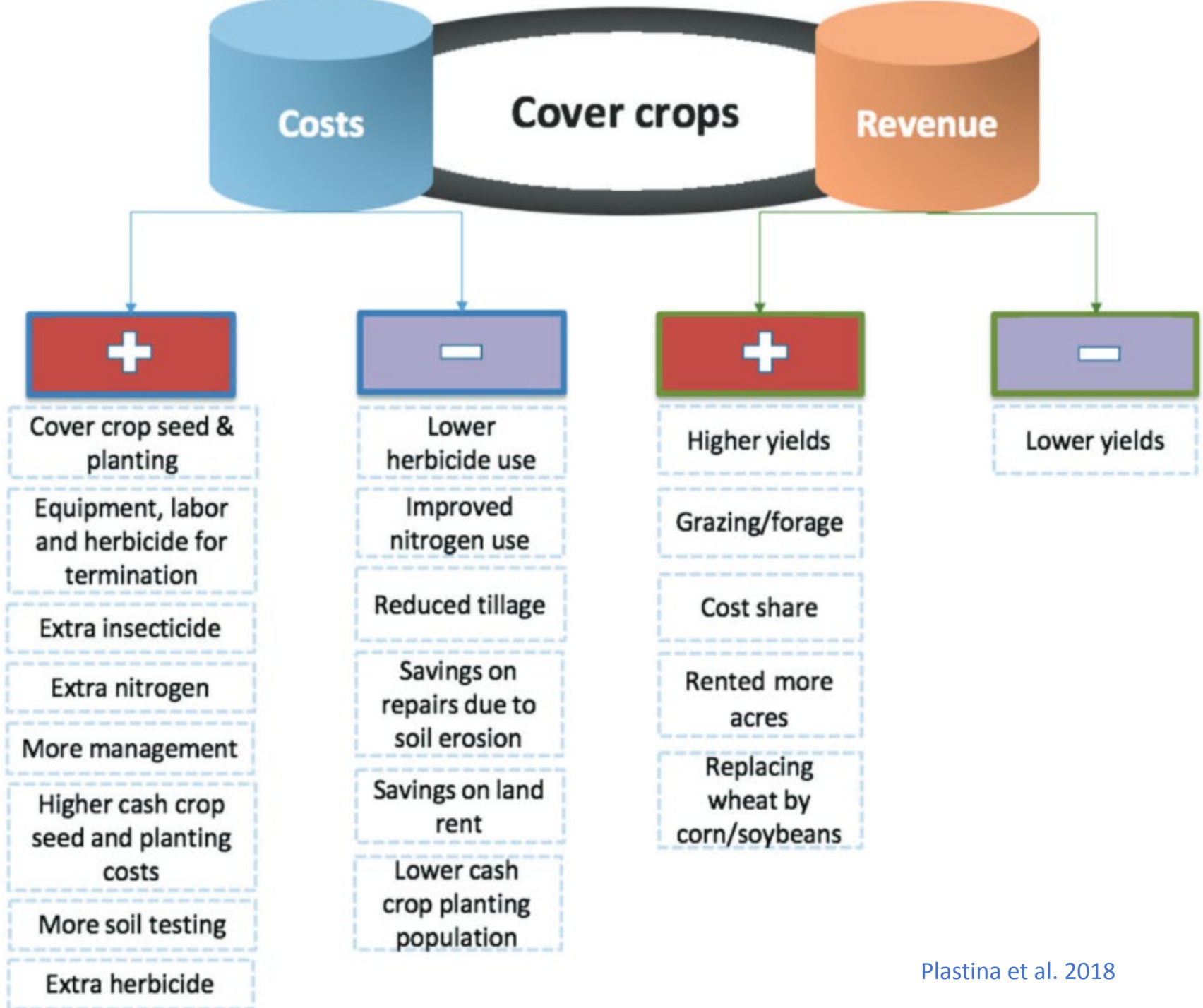
Soil Health
Champions



What are Some Obstacles to Soil Health Adoption?



- ↓ Technical Info
- ↓ Soil Health Social & Financial Support in Community
- Aversion to Risk
- ↑ Management Level
- ↑ Organizational Barriers with Various Agencies
- ↓ Landlord-Tenant Relationships
- Economic Obstacles



Sources of changes in net profits	Cover crops followed by corn	Cover crops followed by soy	Cover crops in corn-soy rotation	Cover crops followed by corn or soy
	Over-wintered			Winter-killed
A. Change in revenue	16.16	59.81	29.34	35.58
B. Changes in costs	36.91	34.69	41.12	29.16
Net change in Profit (A-B)	-20.76	25.13	-11.78	6.43
Change in profit without cost share	-46.09	-2.95	-42.92	-37.41

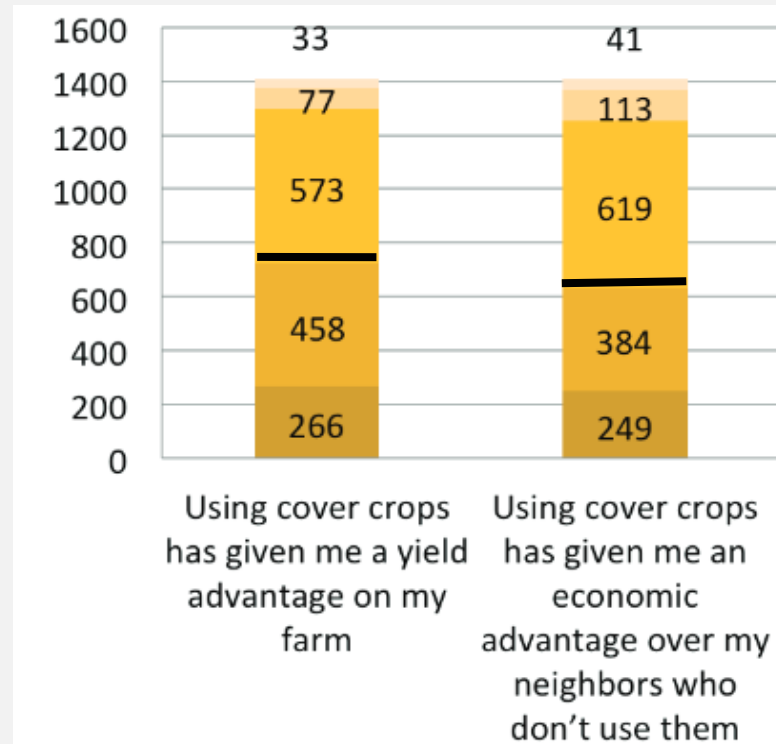
Zooming in on corn after rye

Sources of changes in net profits	Mean (\$/acre)	1 st Quartile (\$/acre)	Median (\$/acre)	3rd Quartile (\$/acre)
A. Changes in revenue	16.16	-16.50	25.00	43.36
B. Changes in Costs	36.91	48.65	30.90	23.77
C. Net change in profit (A-B)	-20.76	-65.15	-5.90	19.59
Net change in profit without Cost-Share:	-46.09	-82.15	-30.90	-5.41

Plastina et al. 2018

...unless cover is used as forage,
or environmental benefits quantified (Roth et al. 2018)

Some farmers see economic gains with cover crops

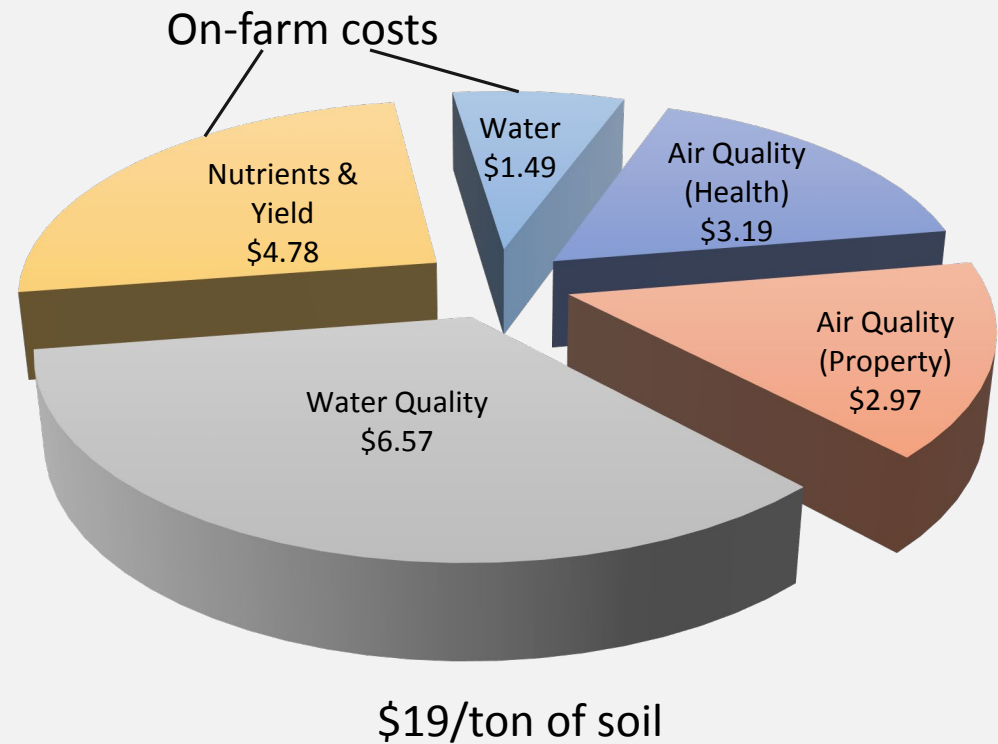


Strongly Agree
 Agree
 Neutral
 Disagree
 Strongly Disagree



Example Erosion Costs

Degrades organic matter levels
and other fines first



Soil Quality Inst., 2003

Change will last longer if producers choose it

- Be supportive
- Go slow
- Introduce them to other successful farmers
- Run the numbers

