STEWARDSHIP
(ECONOMICS, PRODUCTIVITY, & THE ENVIRONMENT)

A FARMERS PERSPECTIVE…

Seth Watkins, Farmer; Clarinda, Iowa.

DEMMING THEORY

- When individuals and organizations focus on quality, over time quality increases and costs decrease.

- When individuals and organizations focus on costs, over time costs increase and quality decreases.

EXPERIENCES IN BUILDING A CONSERVATION AGRICULTURE SYSTEM

Why clean water, healthy soil, & happy cows matter

SOUTHWEST IOWA DEMOGRAPHIC

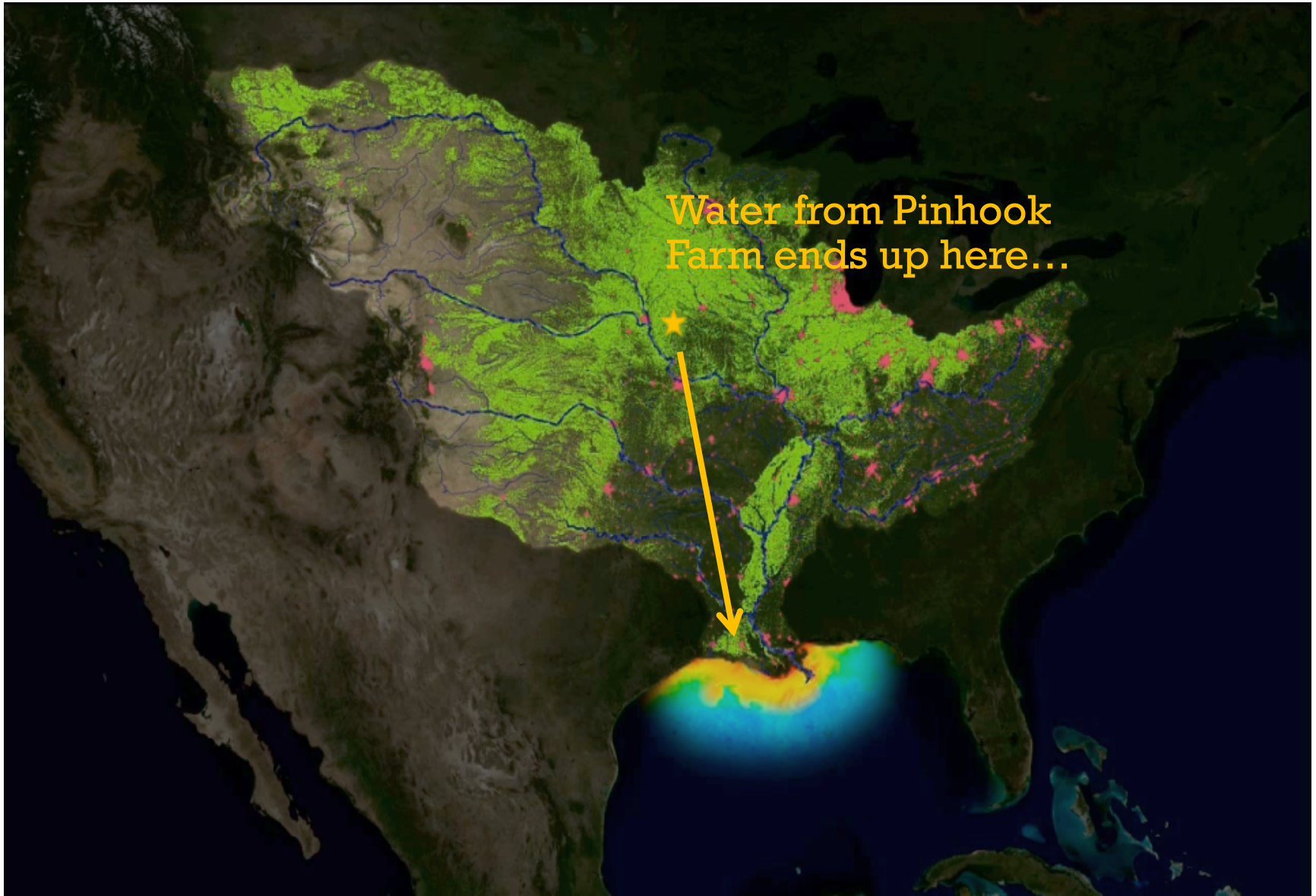
TO MANY NEGATIVE UNINTENDED CONSEQUENCES

Our land:

- Tends to be highly erodible
- Soil loss: 10 to 20 tons/acre
- Lower CSRs than some parts of the state
- High crop prices & policy encourage:
  - Clearing of woodlands
  - Farming HEL
  - Conversion of pasture to crops
- Significant weather events are increasing

Our demographic:

- Aging population
- Decreasing farmer population
- Declining enrollment in our schools
- Page County currently has the highest cancer rate in Iowa
- 10th highest poverty rate in Iowa
  - Increasing number of public school students receiving free and reduced lunch (46% to 68% in the districts we pay property taxes to.)

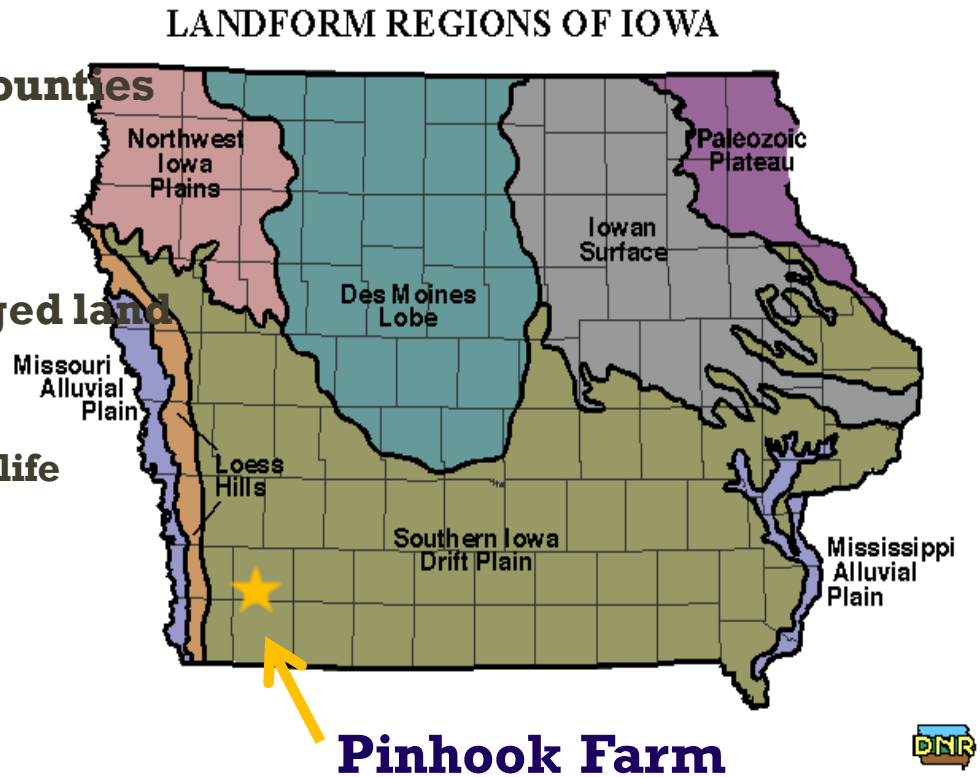

Water from Pinhook
Farm ends up here…

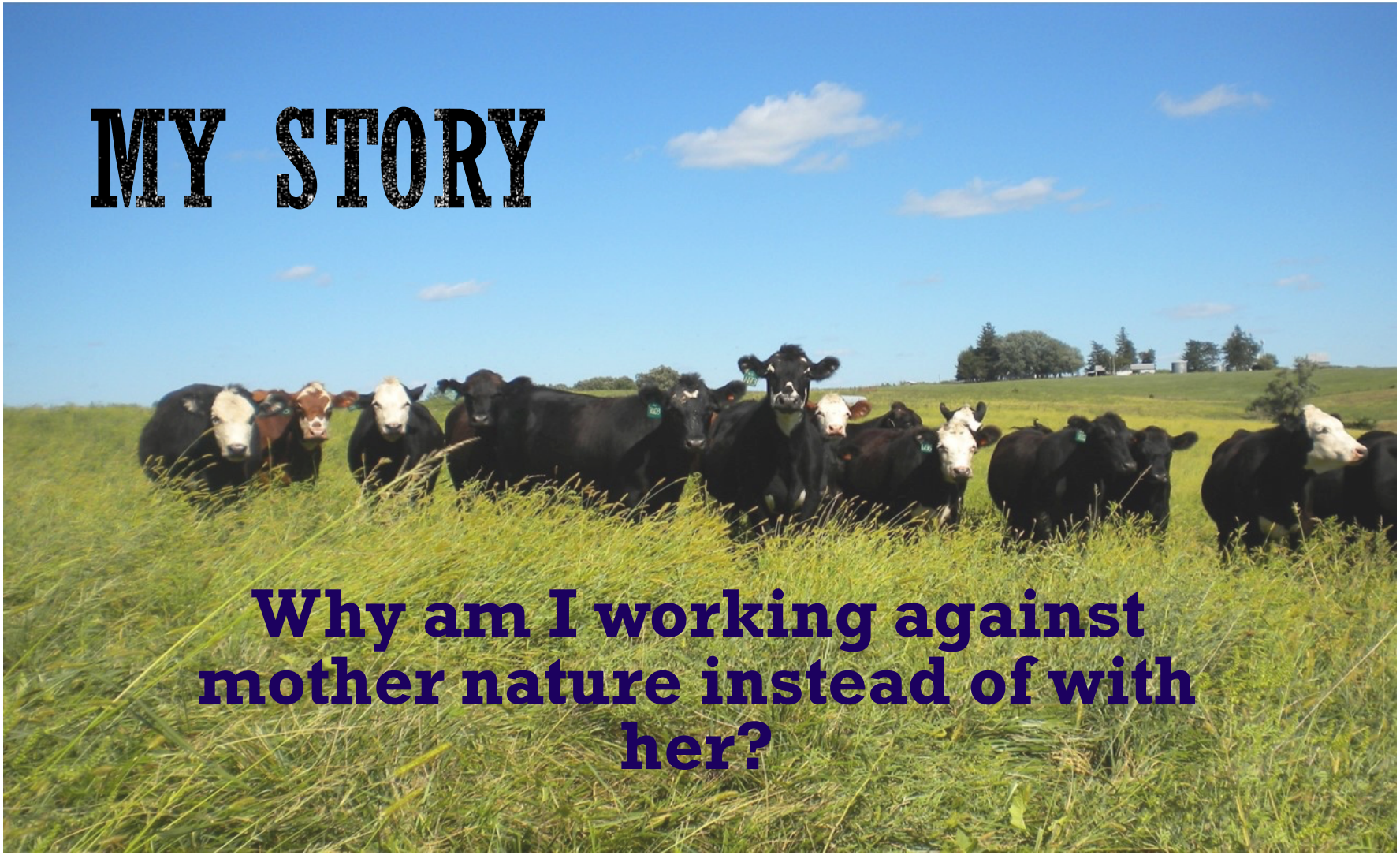
ABOUT PINHOOK FARM

- Founded in 1846.
- Located in Page, Taylor, & Adams Counties
- Home to 600 mama cows

- 3,300 acres of owned, rented, & managed land
  - 2,500 acres rotationally grazed pasture
  - 450 acres corn, oats, barley, & hay
  - 350 acres CRP and land set aside for wildlife

- Revenue Sources:
  - Cattle
  - Outfitting
  - Land mitigation for LEED credits
  - USDA subsidy payments
  - My wife's great job as a special education teacher




MY STORY
Why am I working against mother nature instead of with her?

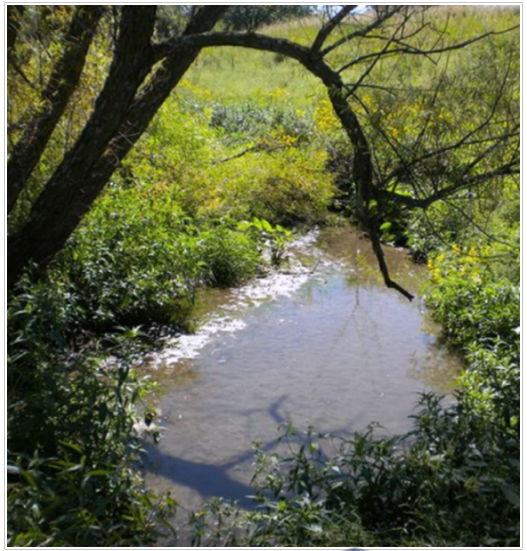
LATE-SEASON CALVING:

Where it all started

HAPPY COWS NEED CLEAN WATER…
AND SO DOES EVERYTHING ELSE

We built ponds!

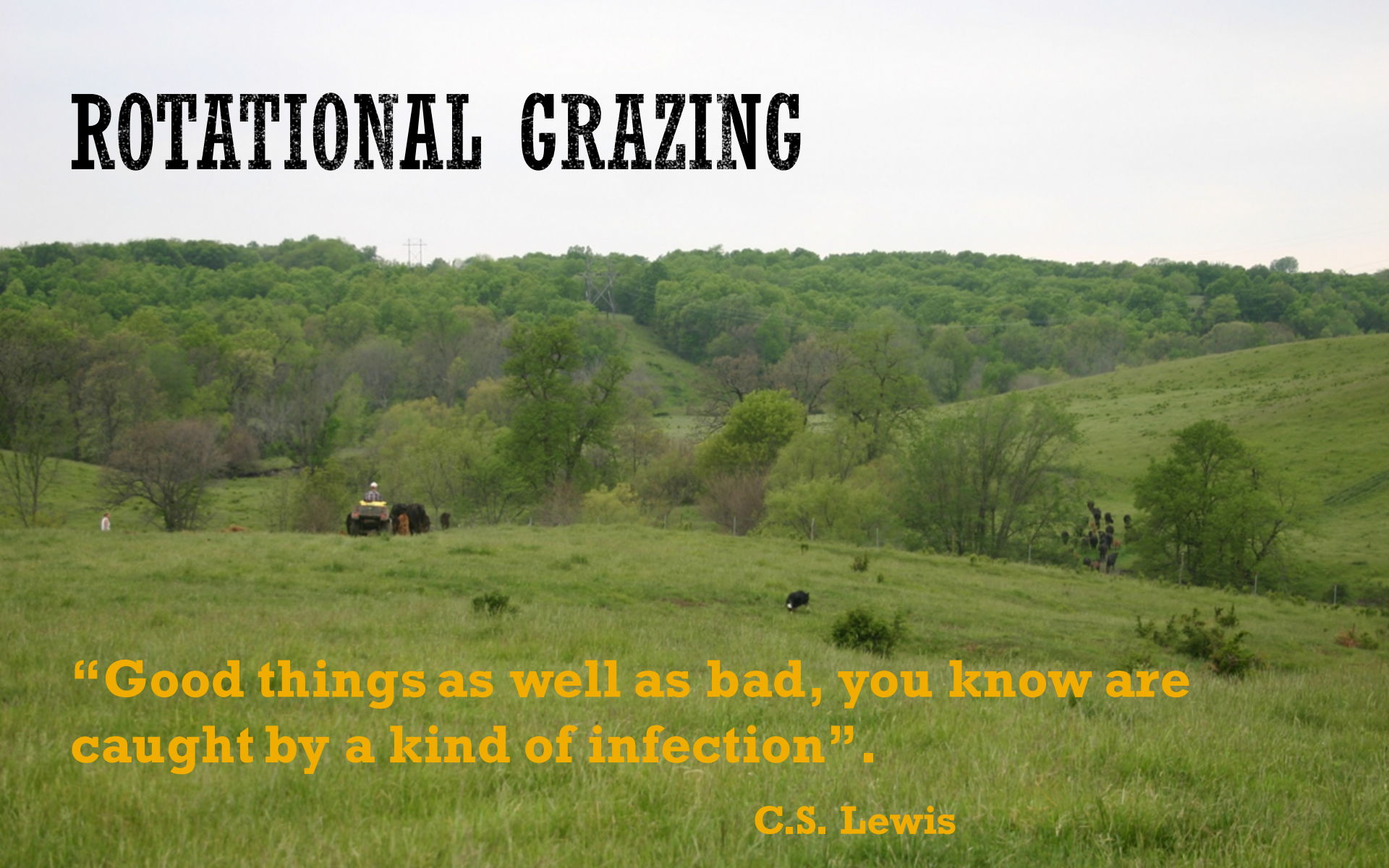
Clean water boosts weaning weights in calves by 25-50 pounds



Shallow water habitats & restricted riparian areas

ESTABLISHING LEGUMES & IPM

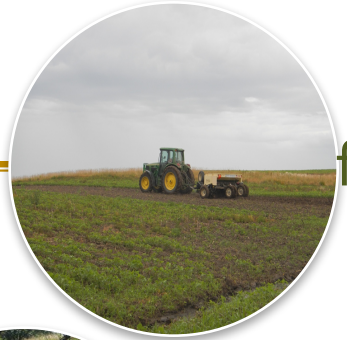
ROTATIONAL GRAZING



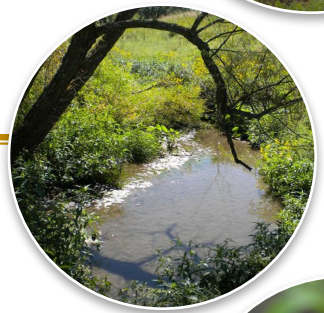
"Good things as well as bad, you know are caught by a kind of infection".

C.S. Lewis

NO-TILL FARMING

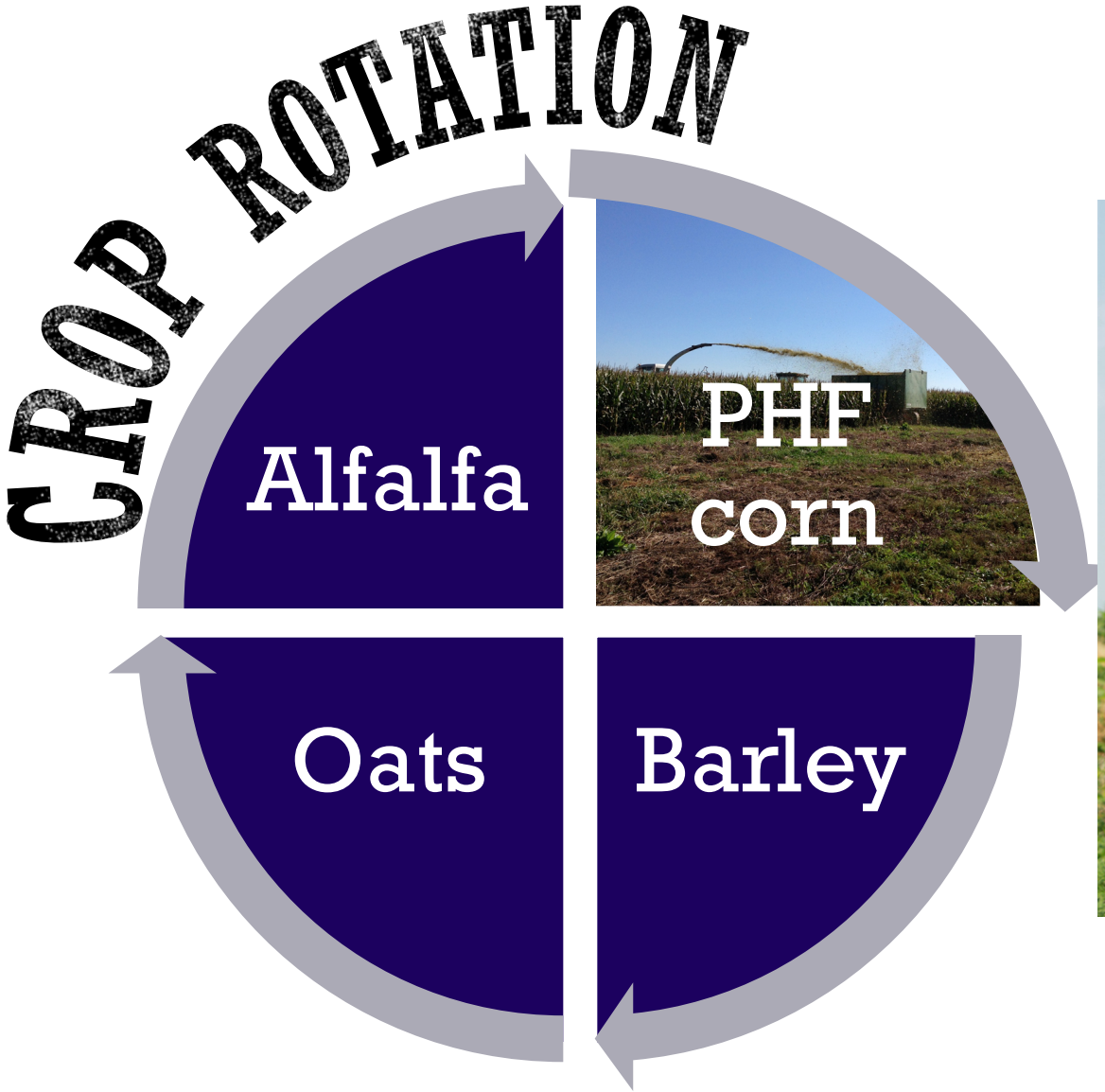


Reduces fossil fuel costs



Reduces runoff

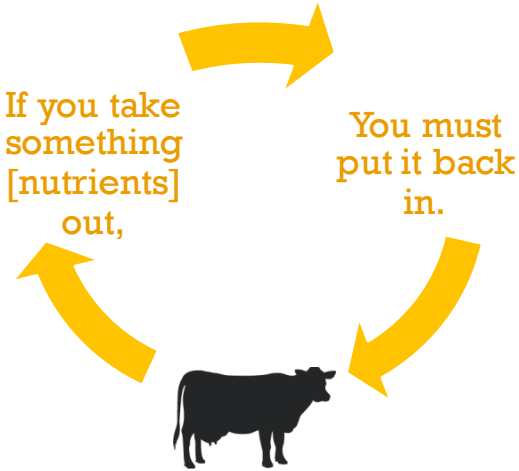
Restores microbial activity


CROP ROTATION
Alfalfa
PHF
corn
Oats
Barley

COVER CROPS

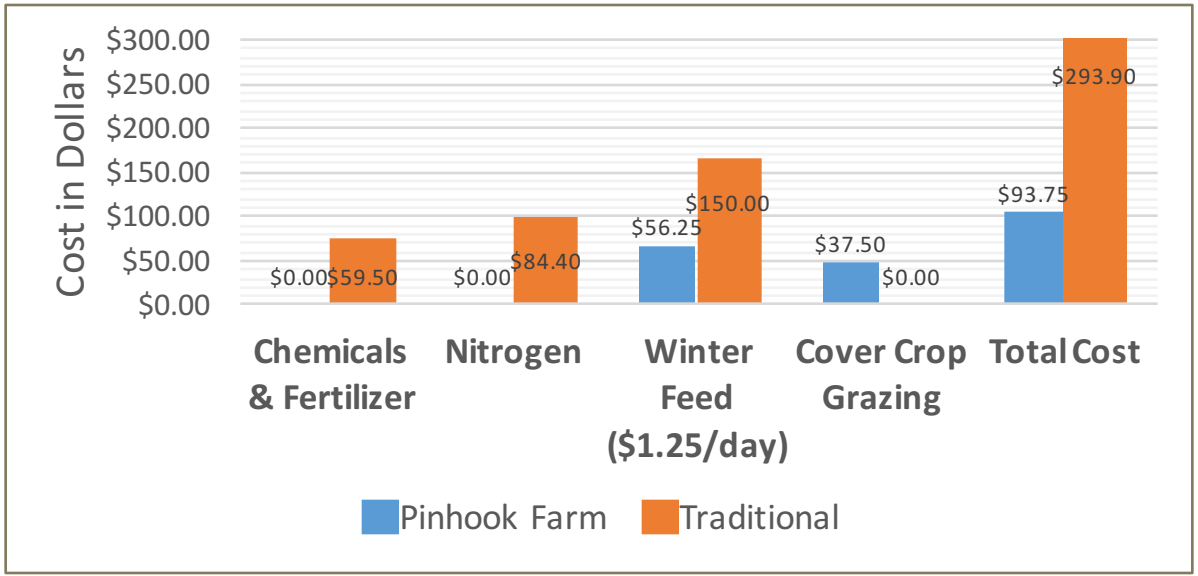
ESTABLISHING STRIPS

HIGH QUALITY FORAGE IN, HIGH QUALITY FORAGE OUT.



RESULTS

LOWER COSTS: PER COW COMPARISON



Pinhook Farm forage & grazing savings per cow:

$200.15

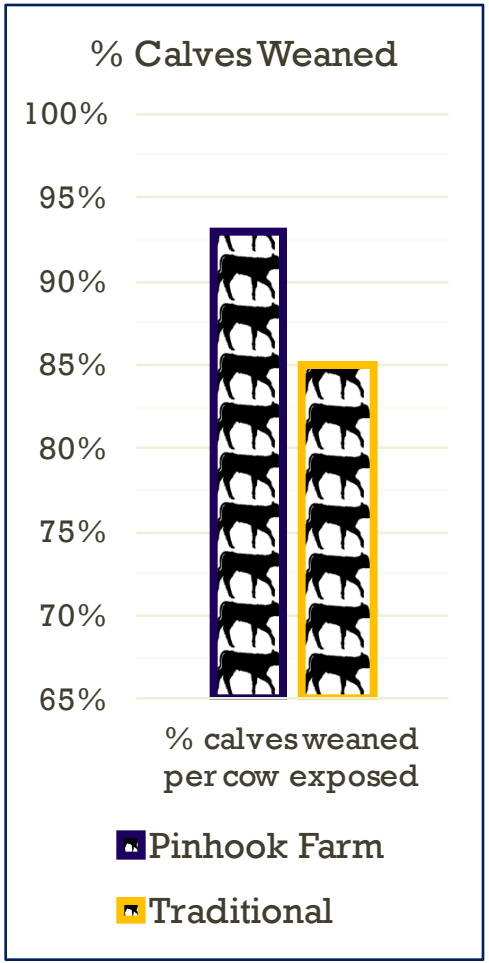
COST PER COW	Pinhook	Cost (Pinhook)	Traditional	Cost (traditional)
Chemicals & Fertilizer	-	$0.00	1 acre	$59.50
Nitrogen	-	$0.00	2 acres	$84.40
Winter Feed @ $1.25/day	45 days	$56.25	120 days	$150.00
Cover Crop Grazing	45 days	$37.50		$0.00
Sub Total:		**$93.75**		**$293.90**

PLUS, GREATER PRODUCTION

Production	Pinhook	Traditional
Steer weight @ 205 days	560 lbs.	560 lbs.
% calves weaned per cow exposed	93%	85%
Lbs. weaned per cow exposed @ $1.46	539.4 lbs.	476 lbs.
Revenue per calf @ $1.46	$787.52	$694.96

= GREATER REVENUE

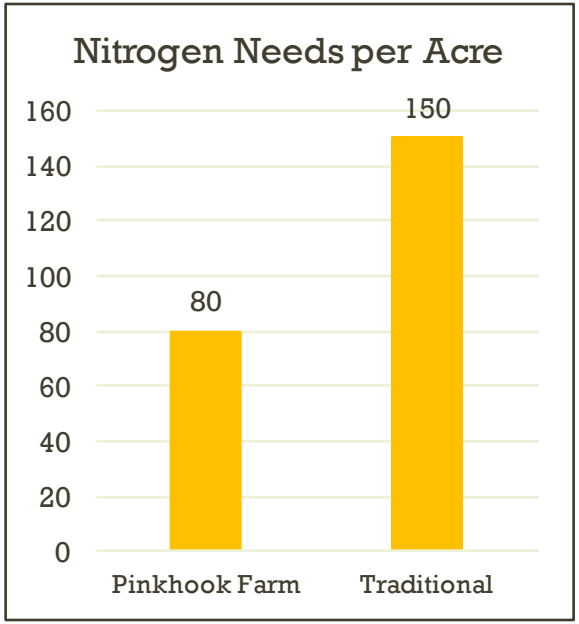
Production Difference in $:	$92.56
Cost Savings Advantage:	$200.15
Total Added Value:	**$292.71**



LOWER CROP INPUT COSTS

Per Acre Comparison:

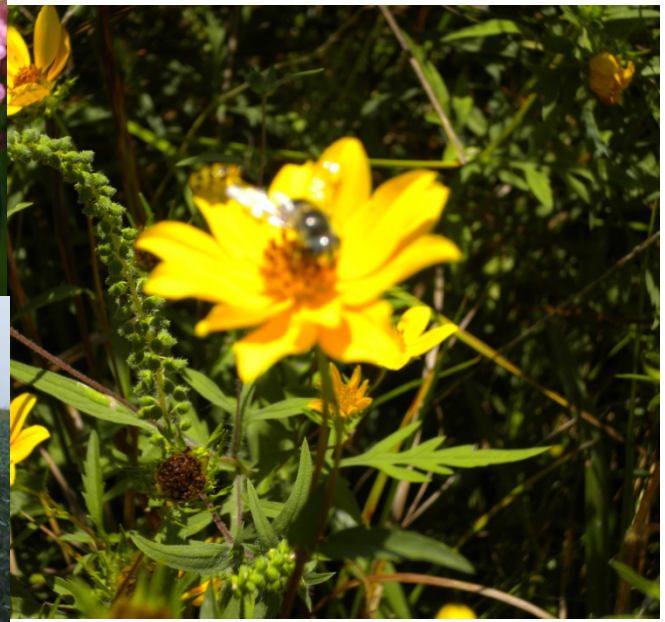
Input	Pinhook Farm	Traditional
Tillage	$0.00	$40.00
Nitrogen ($0.62)	$49.60	$93.00
Total:	$49.60	$133.00
Net savings:	**$83.40**	



- Current data shows production is neutral.
  - Drought years show higher yield due to increase of cover crops
  - Greater resilience allows more timely planting and harvest.
  - Greater return per farm by not farming some acres

ITS NOT JUST ECONOMIC BENEFITS…

More birds, pollinators…



…and wildlife

WHY DOES THIS WORK?

3 KEYS TO SUCCESSFUL FARM AND RANCH BUSINESSES

-Burke Tiechert

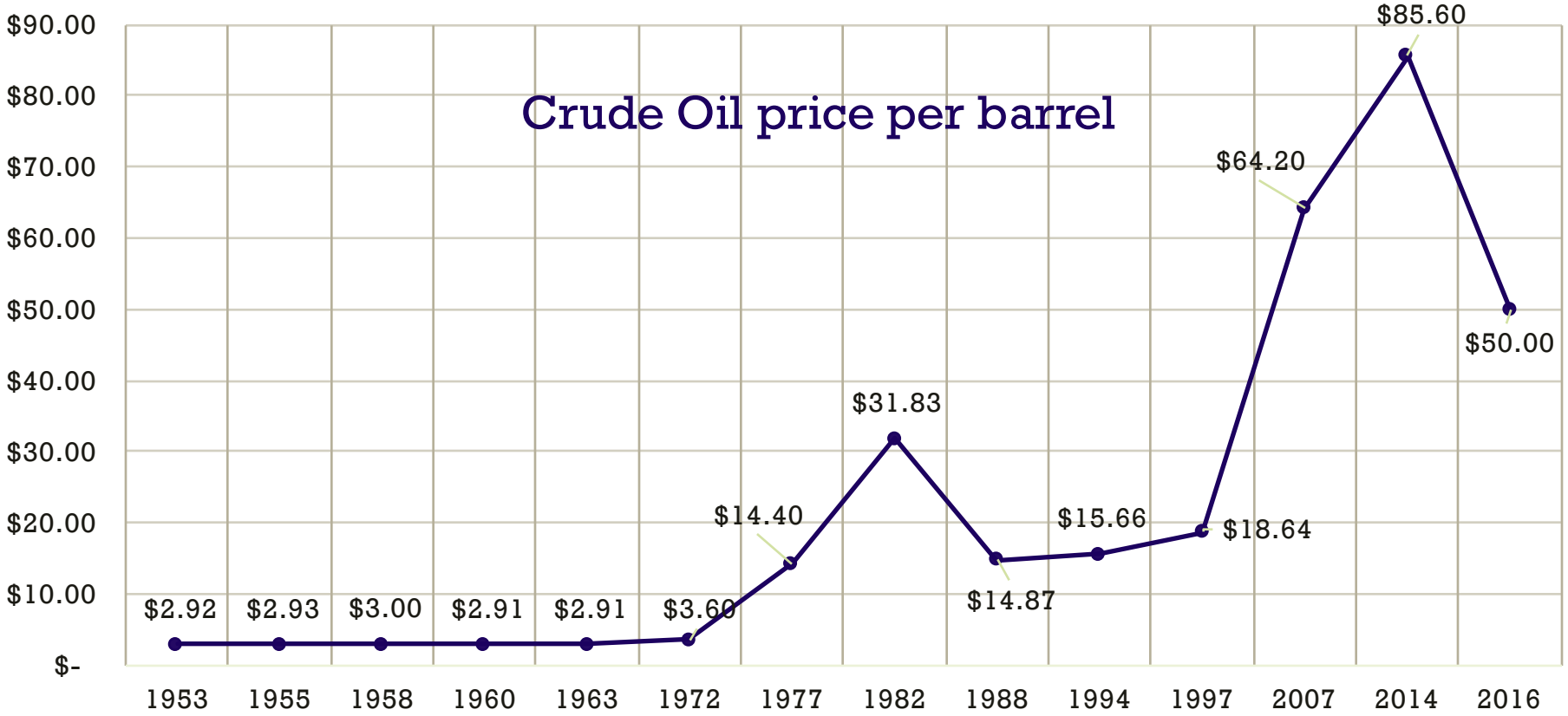
There is no sustainability without profitability.

SUSTAINABLE: ECOLOGICALLY SOUND

Farms are living systems. Living systems are sustained by Natural Resources. Specifically soil, sunlight, rainfall, & Ingenuity.

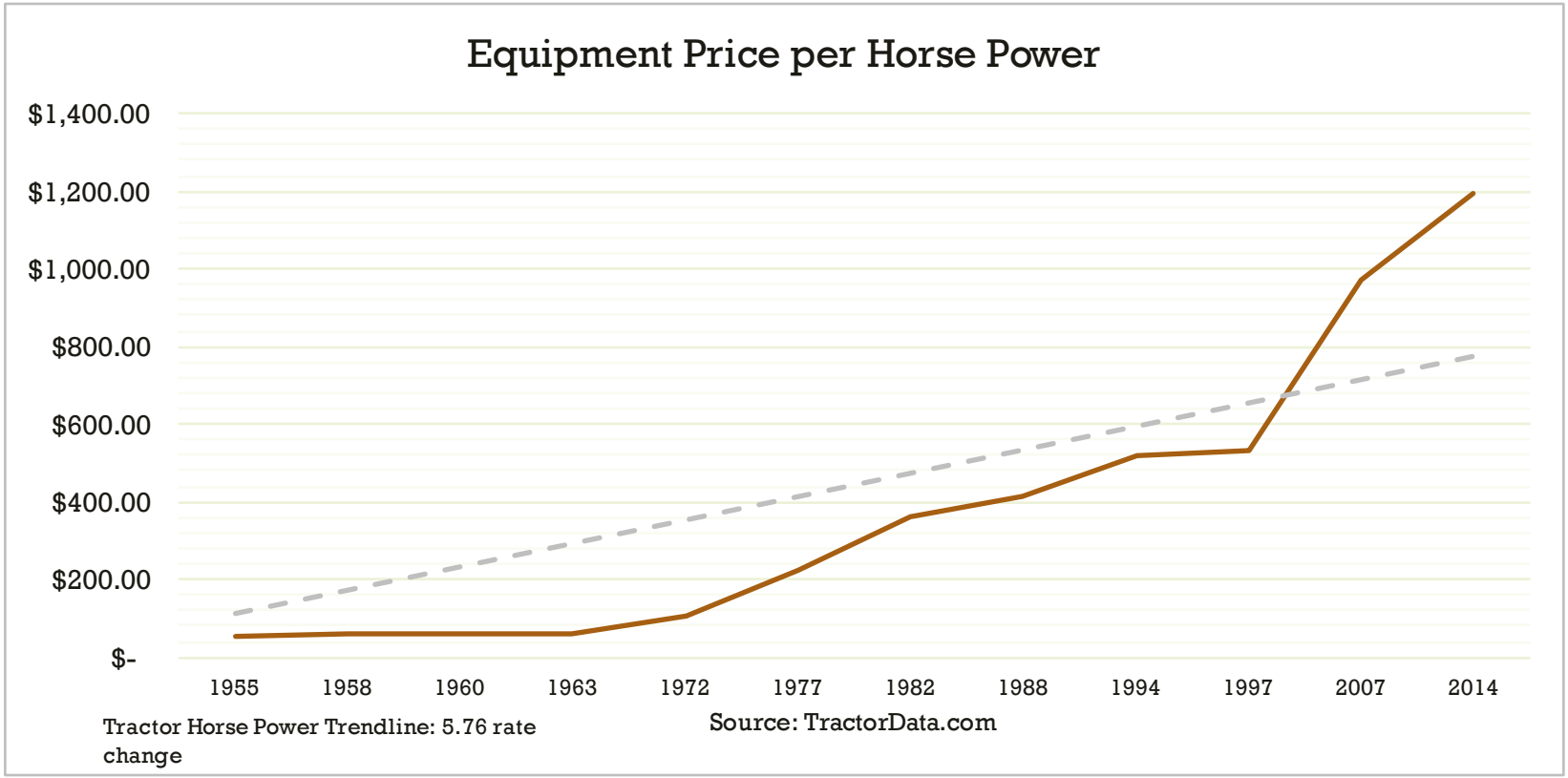
Living systems cannot be sustained by finite resources, specifically oil & iron (equipment). Because over time the costs of these resources exceed the costs of the products we produce.

COSTS OF FINITE RESOURCES EXCEED THE COSTS OF THE PRODUCTS WE PRODUCE

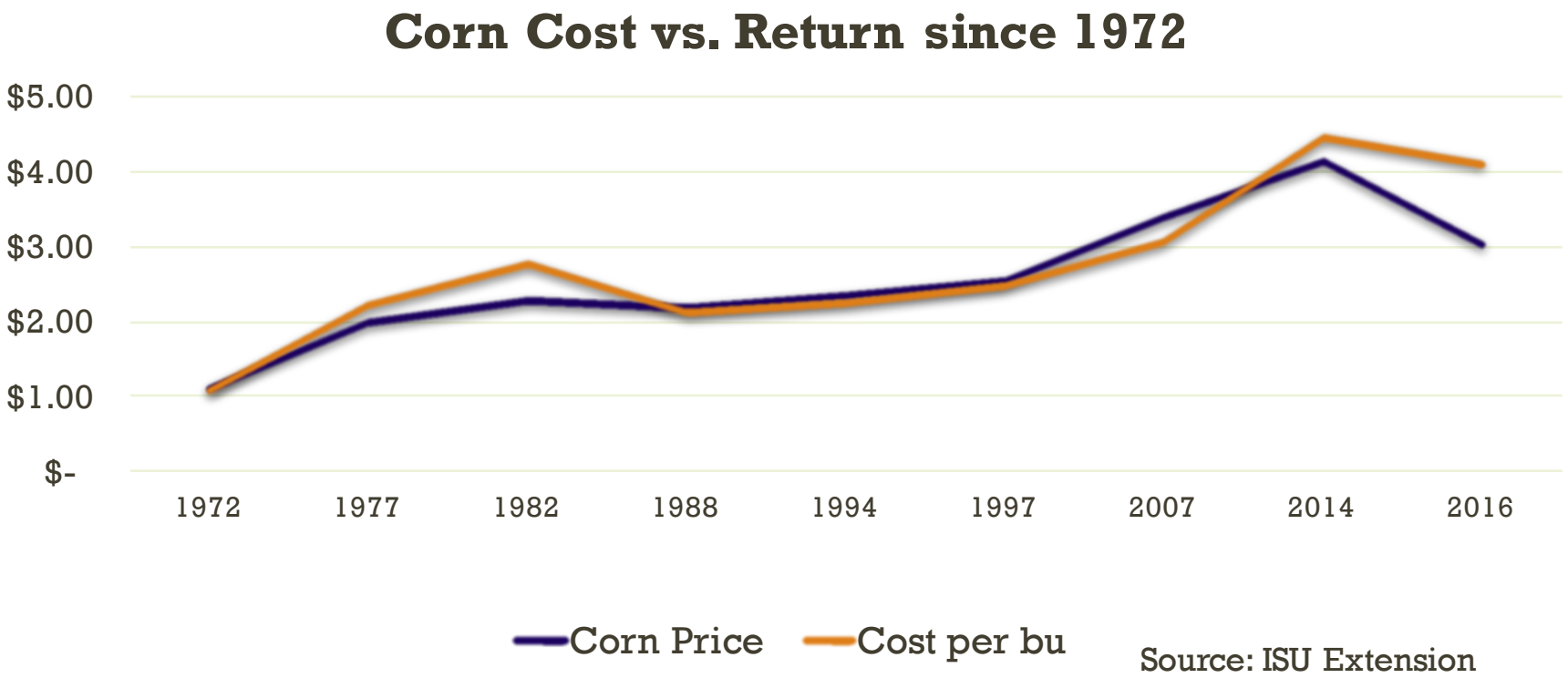


Source: WTRG Economics

COSTS OF FINITE RESOURCES EXCEED THE COSTS OF THE PRODUCTS WE PRODUCE



INCREASING COSTS, DECREASING RETURNS



Source: ISU Extension

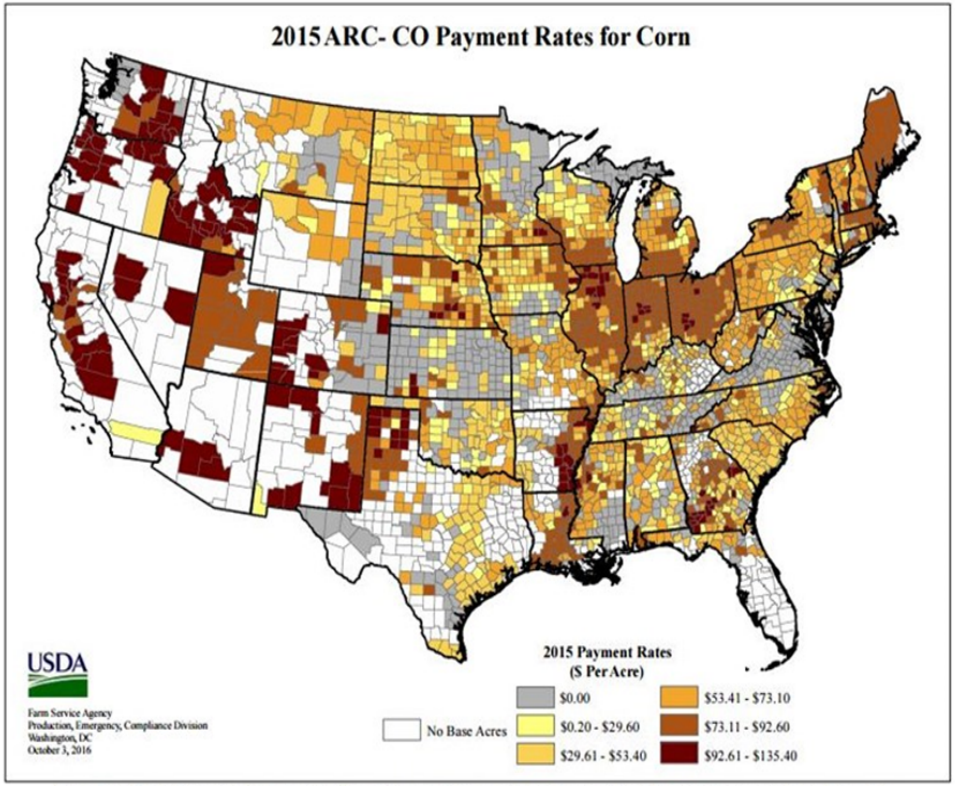
THIS IS NOT A LONG TERM SUSTAINABLE SOLUTION.

Poor Policy Destroys Ingenuity

When prices fell our solution was to use more finite resources to raise more corn and expect the US taxpayers to sustain our farms with entitlements.

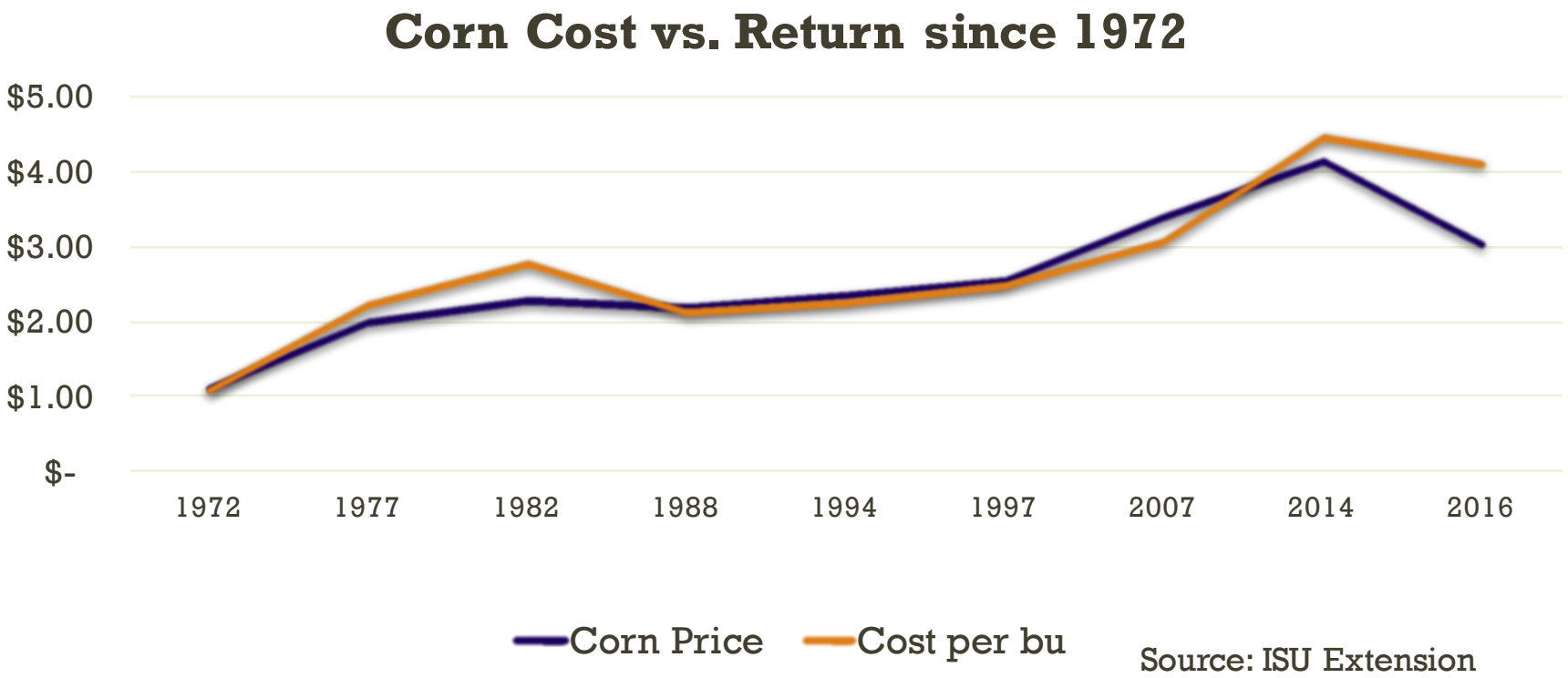
150 years of linear thinking has gotten us:

- Increased finite resource use and cost
- Disincentivezed investment in soil, land and overall environmental health



Map includes all and non-irrigated yields. Maps is intended for Farm Service Agency (FSA) business purposes only. Map depicted only serves as a general reference map.

STEWARDSHIP OF OUR NATURAL RESOURCES IS THE SUSTAINABLE SOLUTION TO THIS PROBLEM



Source: ISU Extension

SUCCESSFUL FARMS ARE SOCIALLY RESPONSIBLE

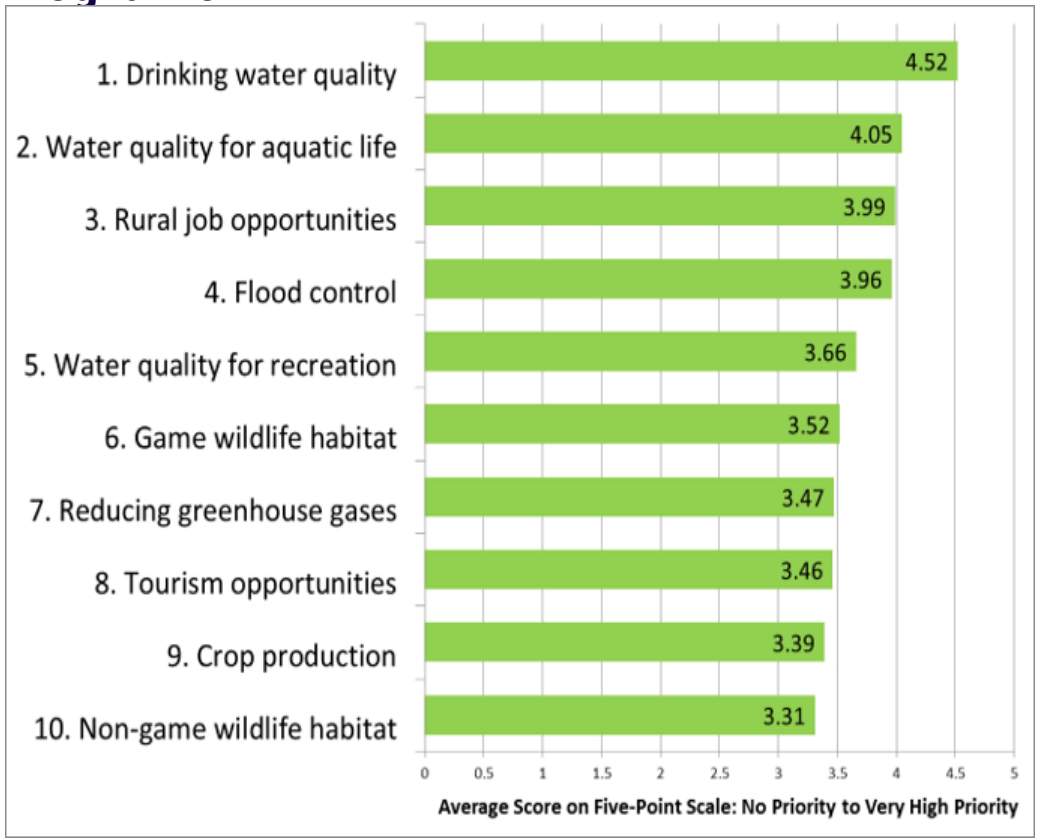
Thinking of others & listening to our customers

This may be the most important of all.

WHAT DO OUR CUSTOMERS WANT?

(WHAT THE OTHER 98% OF OUR POPULATION WANTS MATTERS TO ME)

Consumers' top 10 Priorities for Agricultural Policies and Programs:



Unpublished data by
J.G. Arbuckle and J.Tyndall

WHAT WOULD HELP?

4 THINGS I WOULD LIKE TO SEE HAPPEN FOR IOWA AGRICULTURE.

- **Recognize that agriculture is complex and complex issues are best addressed with a Systems Thinking approach.**
- **Return to teaching Agriculture as an Art and a Science.**
- **Pass IWILL & Fund The Leopold Center.**
- **Identify and develop 3 new crops, markets, and distribution networks so Iowa Farmers can utilize multi species rotations.**

3 THINGS I WOULD LIKE TO SEE IN THE 2018 FARM BILL.

- **Enforce conservation compliance & make soil health the criterion for determining crop insurance rates. Not production history.**
- **Incorporate GIS Technology so we identify and invest in most appropriate land use.**
- **End EQUIP funding for CAFOs**

THANK YOU FOR PROTECTING THE THINGS WE LOVE

RESOURCES TO LEARN MORE ABOUT CONSERVATION & OUR FOOD SYSTEM.

Plate of the Union: www.plateoftheunion.com

The Worst Hard Time: The Untold Story of Those Who Survived the Great American Dust Bowl -By Timothy Egan

Collapse: How Societies Choose to Fail or Succeed -By Jared Diamond

Dirt: The Erosion of Civilizations -By David Montgomery

Hollowing Out the Middle: The Rural Brain Drain and What It means for America -By Maria Kefalas and Patrick J. Carr

King Ranch Institute: krirm.tamuk.edu