

SOIL FOR WATER FINAL EVALUATION

Welcome!

We'll get
started
soon!



NATIONAL CENTER
FOR APPROPRIATE
TECHNOLOGY



jg | RESEARCH &
EVALUATION

KNOWLEDGE SYSTEM MAPPING GOALS

1

Visually generate regenerative grazing network in Arkansas

2

Evaluate changes in attitudes, behaviors, and knowledge

3

Capture lessons learned from the project

BEFORE: DEFINING "REGENERATIVE GRAZING"

"It means a hundred different things to a hundred different people. Therefore, it doesn't mean much of anything."

Do we
need to
define soil
health?

element of hope baked into the
term "regenerative"

improves/maintains/rebuilds soil health

improved, more abundant forage

Rest and recovery of pasture

"Leaving the land better than you found it"

**Promotes health of animals,
ecosystem, producers**

Regenerative
grazing is another
framing/branding
of what's been
taught for years

Soil for Water definition: grazing
that improves soil health

AFTER: DEFINING "REGENERATIVE GRAZING"

Managing the grazing of your pastures so that you **build the soil and improve the** plants

You're a grass farmer not a livestock farmer

Works with nature and helps to improve soil health while also improving pasture diversity and animal health and production. It requires full recovery of pasture plants, short graze times, enough animal pressure to use but not overuse the forages. Outside inputs are minimized.

Implies something new. Regenerative= rebuilding or improving, sustainable could be maintaining status quo

Grazing to improve the health of the landscape, including soil, water, pasture, biodiversity, livestock, and community.

Grazing in such a way as to improve the soil's water management capacity, improve the carrying capacity of the pasture while supporting a variety of plant and animal life.

Managing livestock grazing so that forage plants are bitten once in a pasture and then move the herd to another pasture and not return until all the plants have recovered above and below the ground.

Conservation practice that promotes healthy soils, ecosystems, and diverse plants for managing livestock to maximize the producer's profits and herd health and production.

Careful attention to controlling stocking rates and grazing duration by **matching animal nutritional needs to forage supply** and nutrient content in ways that minimize the need for supplemental feeds (esp. from off the farm), minimize loss of soil and plant nutrients from the pastures, optimize legume content to obviate the need to import synthetic nitrogen fertilizer, maximize vegetative ground cover, and maximize uniformity and efficiency of recycling of nutrients from livestock back to soil.

Question: How is regenerative different from sustainable?

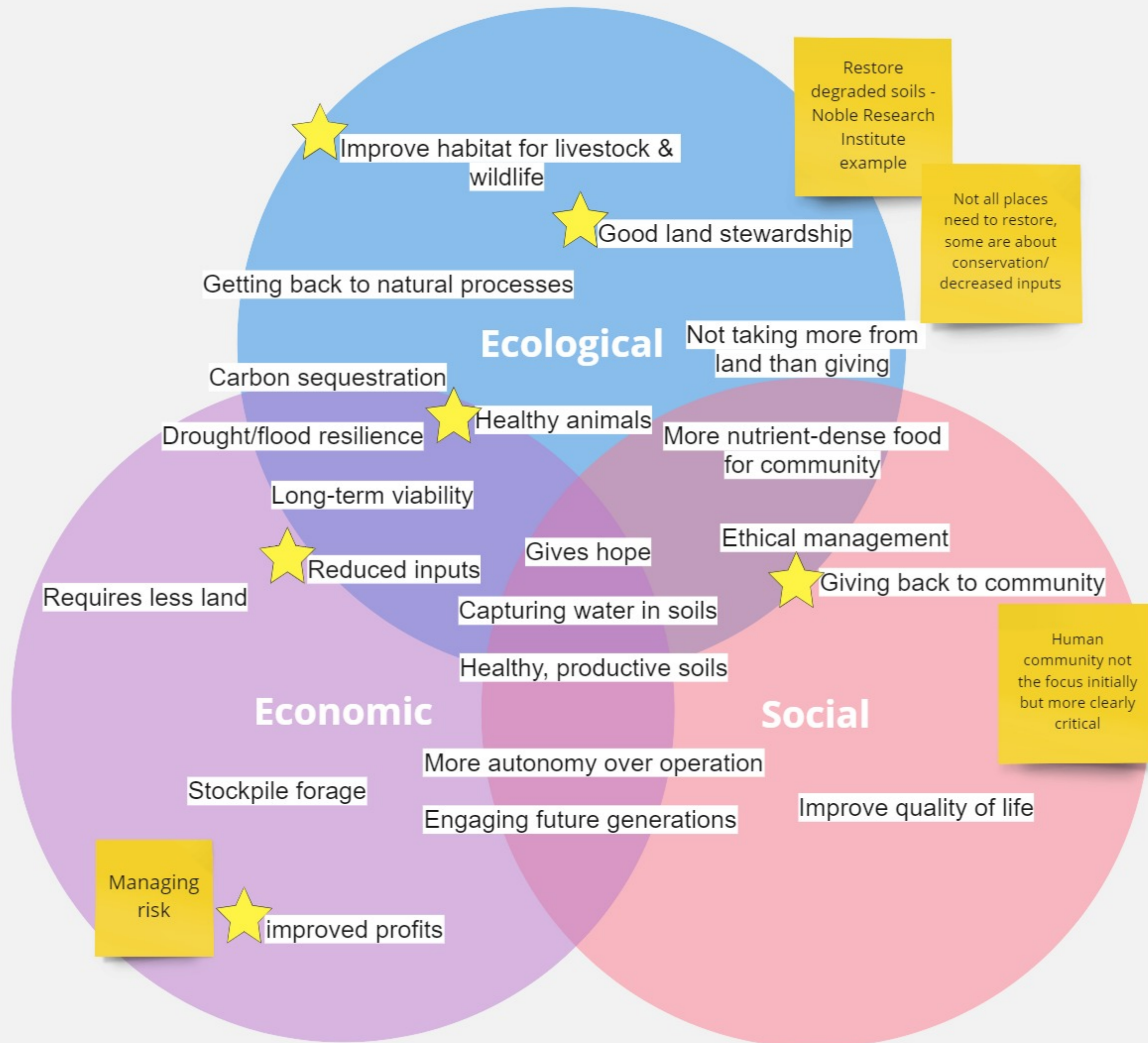
New word for old practices - is regenerative being co-opted faster than older terms? Marketing term versus actual practices

Examples:
Purina,
DiGiornio's

Top line:
rebuild, natural processes,
reduce use of outside inputs

Reduce use of external inputs is key

MOTIVATIONS FOR ADOPTION OF REGENERATIVE PRACTICES



BIGGEST BARRIERS TO ADOPTION

Not understanding what is needed to get started

Perception that it's expensive, difficult, time-consuming

Initial cost/reduction in income

Infrastructure \$ and fear of risk

Different from what neighbors/family do

Need to see it works/evidence of benefits

How has your understanding of barriers evolved?

Confusion about whether it's new and what is a simple definition

Cash costs for non-cash returns is a tough sell

Disconnect between knowing WHAT to do and HOW to implement

How has project addressed barriers?

Grazing school supports learning HOW, builds community

Lists of resources (spreadsheet)

Figuring out the water for livestock infrastructure is a bigger barrier than initially understood

Variation in soil characteristics = resources need to be specific to geographies

Requires a mind shift away from just the livestock to include the ecosystem (soil, water, plants)

Paying attention to what the land needs might mean fewer livestock, etc.

FACILITATORS OF ADOPTION

Item	Overall Rank	Rank Distribution
Hands-on learning opportunities (e.g. workshops and trainings)	1	
Trusted educator/messenger	2	
On-farm learning opportunities (e.g. pasture walks)	3	
Mentorship by experienced regenerative grazier	4	
Participation in grazing groups	5	
Promotion by agencies (e.g. NRCS, Extension)	6	
Promotion by universities, research groups	7	
Scientific research and evidence on the benefits of regenerative	8	

Lowest Rank Highest Rank

Success stories in media

Stories about what producers do and how/ why it is successful (example: Farm Family of the Year)

How has your understanding of facilitators of adoption evolved?

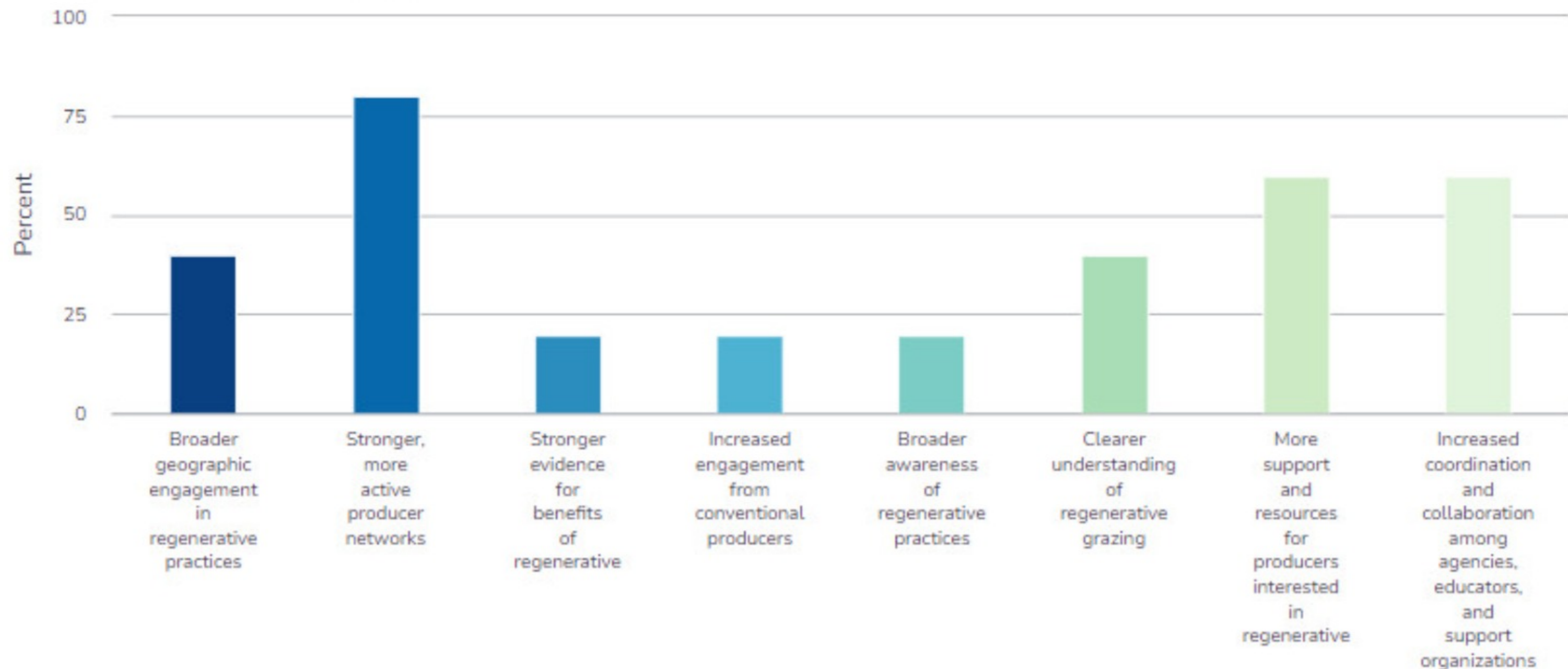
Make sure science/ research/ evidence is a backstop

Needs knowledge translation to support change

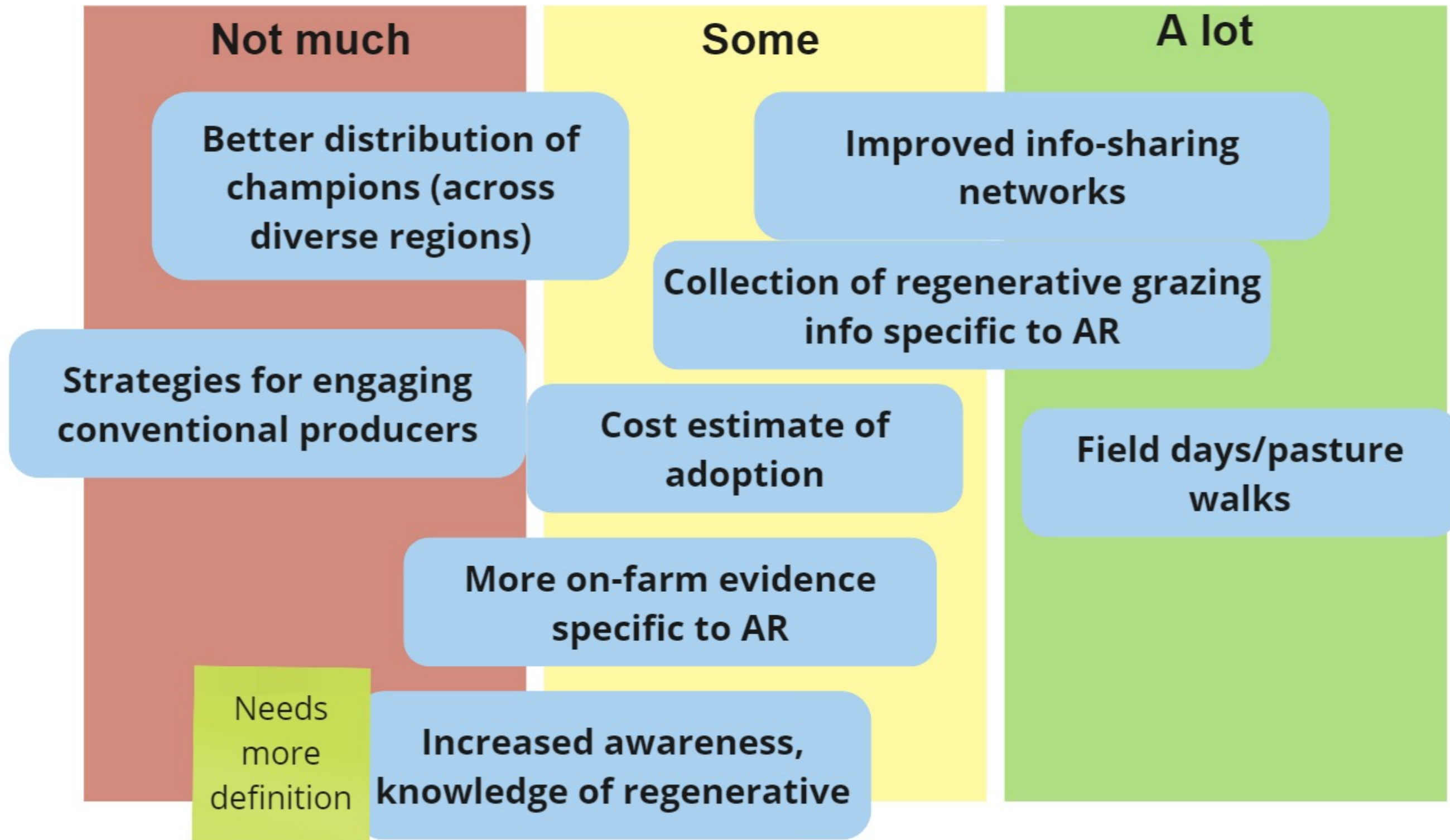
How has project supported facilitators?

Connecting research to hands-on learning and stories - cooperative extension, etc.

22. From your perspective, what have been the benefits/outcomes of the Soil for Water project in your state? (Check all that apply)



PROGRESS ON PRIORITIES FROM FIRST MAPPING



BEFORE

KEY

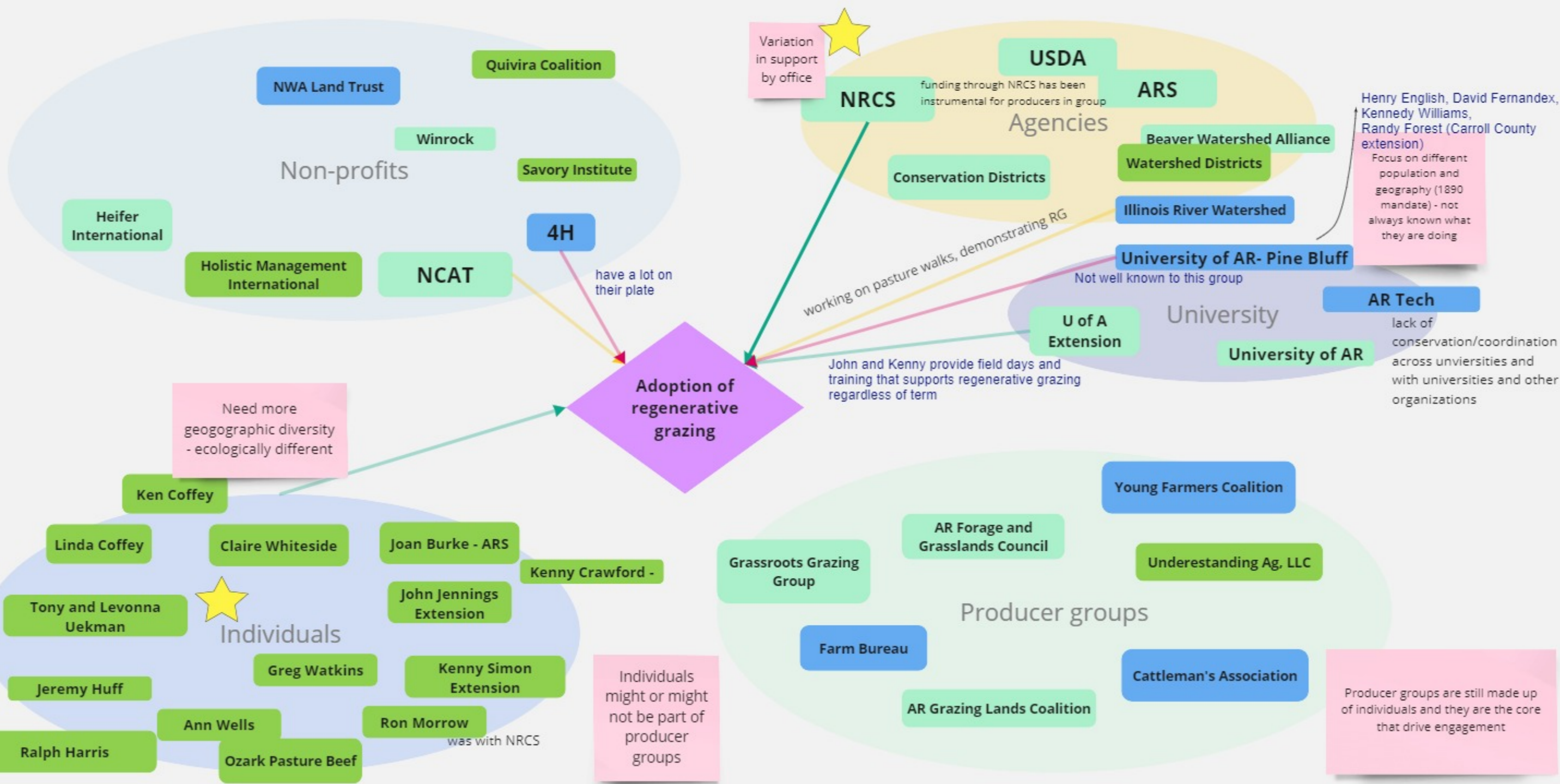
ACTORS

- Leading the way
- Room to improve
- Both

RELATIONSHIPS

- Provides Resources (\$, time, etc.)
- Provides research/evidence
- Provides training/mentorships

Strong
Neutral
Weak



AFTER

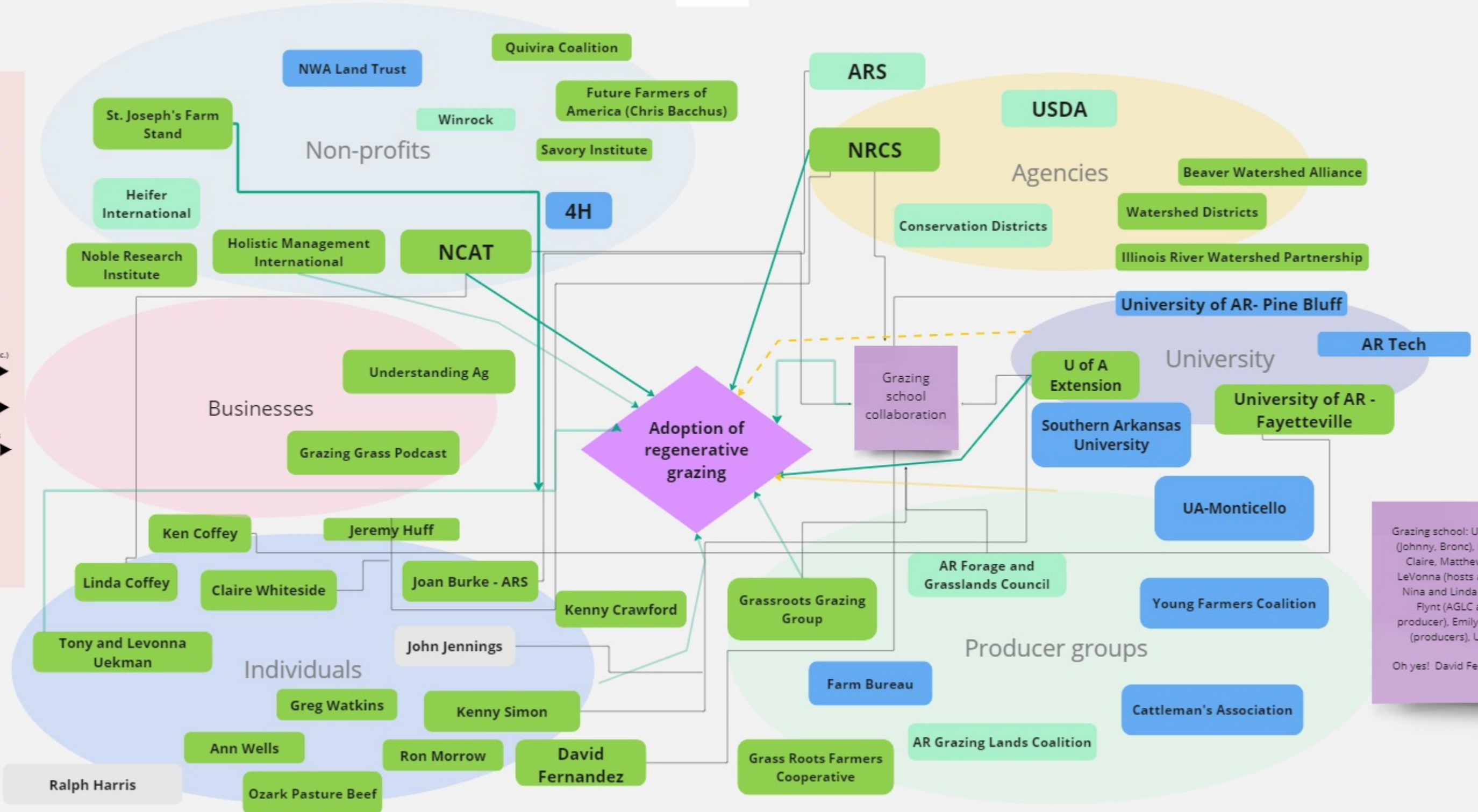
KEY

ACTORS

- Leading the way (Green)
- Room to improve (Blue)
- Both (Light Green)

RELATIONSHIPS

- Provides Resources (\$, time, etc.) (Solid black arrow)
- Provides research/evidence (Dashed black arrow)
- Provides training/mentorships (Thin black arrow)
- Strong (Thick green line)
- Neutral (Thin yellow line)
- Weak (Thin red line)

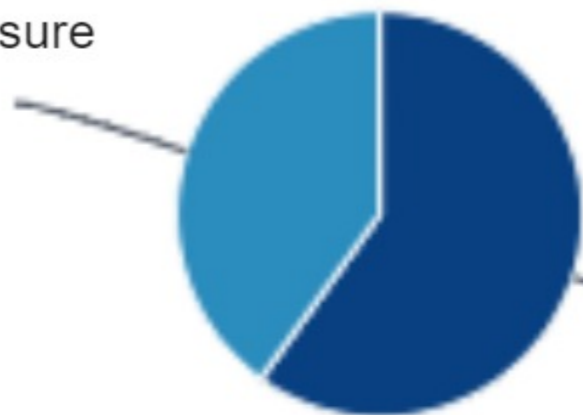


Grazing school: U of A Extension (Johnny, Bronc), NRCS (Jeremy, Claire, Matthew), Tony and LeVonna (hosts and teachers), Nina and Linda (NCAT), Matt Flynt (AGLC and ARGC, producer), Emily, Gary, Juanita (producers), U of A (Ken), Oh yes! David Fernandez, UAPB

WHAT'S NEXT?

Are you interested in continuing to collaborate w/ your state beyond the project?

40.0% Not sure



60.0% Yes

How can the work continue?

Keep communication channels going - word out about field days, etc.

Who needs to be involved?

Youth/ youth-serving orgs (FFA, 4-H, etc.)

Young/ new and beginning farmers and ranchers

Need a single place to collect resources from across partners/actors (AgLook?)

THANK YOU!

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Send any additional thoughts/feedback to us or Linda

Arkansas: final knowledge system mapping summary

Defining regenerative grazing

- Discussion about difference between sustainable vs. regenerative
 - o Regenerative captures the renewal, creation of something whereas sustainable could theoretically mean maintaining the status quo
- Reflection on the fact that words become coopted (i.e. Purina, Digiorno's now use term regenerative as marketing strategy)
- New word for old practice
- Considering these observations, how to move regenerative forward without focusing too much on the word/name and more about the principles it is meant to embody
- Before/after: similar observations/questions that the term is simply a rebranding of something that's been done for a long time. After had more emphasis on holistic landscape effects, not just soil and forage health, and reduced off-farm inputs
 - o Looking at landscape as a whole (plants, soil, water, animals, wildlife) and leveraging ecology/natural processes to maximize benefits, minimize off-farm inputs
- Convergence on the need to define what is meant by regenerative, but keep it simple, focused on the principles (less about the term and more about what it means)

Barriers to adoption

- Top barriers mostly remain the same (Against status quo, high initial investment, perception that it's labor-intensive)
- Lack of evidence/info about benefits of adoption seemed less important in after discussion
- After: the fact that it is place-specific and the returns on investment may not necessarily be cash (but broader benefits to farm) can make it difficult to sell producers on it
- It's true that the infrastructure needs for water can be significant/may be bigger barrier than originally anticipated
- Additional barrier for people who may be interested in regenerative but don't know how to make the changes needed---they know they need to do x to improve soil health, but don't know how to achieve it...related to confidence
- AR team worked to address barriers through grazing school—making it clear HOW adoption is really achieved while also building supportive community, providing lists of resources, doubling down on GGG

Facilitators to adoption

- Hands-on, on-farm learning opportunities, and trusted educator/messenger as top three facilitators
 - o Promotion by agencies, universities, and scientific research as bottom of ranking
 - o Discussion of this focused on the fact that the research and evidence are fundamental, but need to be translated through trusted educators (producers) and hands-on educational opportunities---science as backstop, on-farm/hands-on as method/tool for conveying science
- Importance of success stories in local media

Progress on priorities

- Not much: Better geographic distribution of champions, strategies for engaging conventional producers
- Some: Increased awareness & knowledge of regenerative, more on-farm evidence specific to AR, cost estimate of adoption
- A lot: field days/pasture walks, collection of regenerative grazing info specific to AR, improved info-sharing networks

Map

- New actors:
 - o Non-profits: FFA, Noble Research Institute, St. Joseph's Farmstead
 - o University: Southern Arkansas University, UA-Monticello
 - o Producer Groups: Grassroots Farmers Cooperative
 - o Individuals: David Fernandez,
 - o Businesses: Understanding Ag, Grazing Grass Podcast
- More actors characterized as "leading the way" than in first round of mapping, where many were categorized as leading the way by some and room to improve by others
- New partnerships:
 - o Grazing School: UA Extension, UA Pine Bluff, NRCS, ARS, GGG, AR Forage and Grasslands Council, NCAT
 - o "When anyone has a field day, whether it be GGG or NRCS or whoever, it usually goes out through email too, like NRCS and the conservation districts and the extension offices and all that, where they can get everyone involved in anything that's going on and let them know that it's available and giving them all the details. And so almost every event is publicized through all the different places."
- Universities are more involved/doing more to promote regenerative

What's next

- How can work continue: Keep communication going—leverage existing communication channels/partnerships to get word out about field days, pasture walks, trainings
 - o Need central location for collecting resources across partners/actors
- Who needs to be involved:
 - o Youth/youth-serving orgs (FFA, 4H)
 - o Young and new/beginning farmers

Overall observations

- GGG continues to be a vital, organizing force for peer-peer opportunities
- The grazing school was a major achievement of working group that helped to solidify key partnerships, connect producers with mentors and resources, strengthen the regenerative grazing network, and provide effective on-farm training
- As a result of stronger partnerships, marketing and communications about regenerative educational opportunities are more coordinated
- Agency role in regenerative adoption (especially NRCS) has improved

- Pipeline between research (universities/extension) and practice is stronger, through grazing school and collaborative educational events
- Reaching conventional producers and expanding geographic reach continue to be challenges
 - o See opportunities in focusing on young, new/beginning producers