

Climate-Scenario Planning

Rick Stowell, Extension Specialist – Animal Environment

Sometimes the road ahead isn't all that obvious...



Scenario planning is not same as case studies



Why scenario planning?

Uncertainty
& Risk



Scenario Planning: Where it started

A technique for thinking about change, preparing for the future, stimulating creativity, and coping with uncertainty.

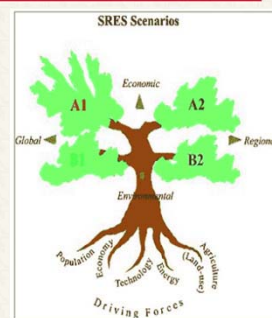
- Military planning
- Business planning
- Natural resources planning



Scenario Planning: Depictions of future situations

Not a forecast
Grassroots-driven
examples of what
could happen

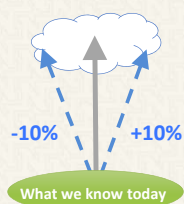
Allows us to
examine multiple
possibilities for the
future.



IPCC, 2007

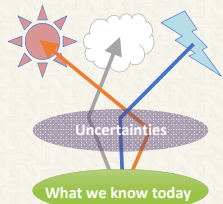
Scenario Planning: Flexible long-term planning

- Forecast planning
- One future



GBN 2010

- Scenario planning
- Multiple futures

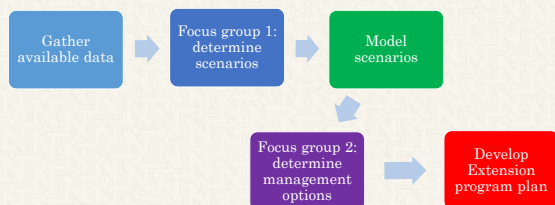


Scenario Planning for Resilient Beef Systems

UNL Climate Issue Team & Beef Team
South Dakota State University Extension
Funded by: USDA North Plains Climate Hub



Our Process: Work w/beef system stakeholders



Our process Phase 1: Gather a team

University of Nebraska

- Biological Systems Engineering
- Animal Science
- Agronomy
- Climatology
- Extension – Climate and Beef teams

South Dakota State University

- Agricultural and Biosystems Engineering
- Extension

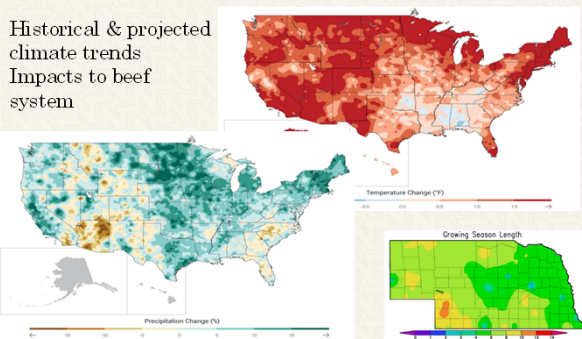
Funding

- USDA Northern Plains Climate Hub
- USDA NIFA Animal Agriculture in a Changing Climate



Our process Phase 1: Gather available data

Historical & projected climate trends
Impacts to beef system



Focus groups

• Participants

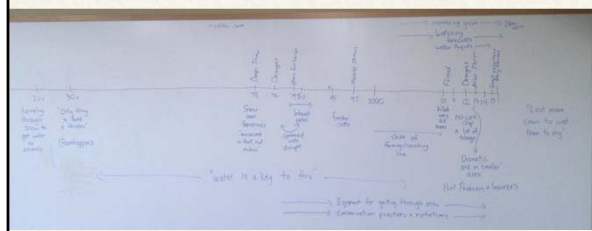
- 15-20 participants
- beef farmers and ranchers
- veterinarians/animal health professionals
- equipment manufacturers
- lenders/insurance

• Locations



Focus group 1: Engagement

- Ground rules
- Begin by sharing their weather stories



Your turn: Weather stories

- 1 minute – Jot down 1 or 2 weather events that influenced your life/career personally
- 2 minutes – Share one event with your table
- 2 minutes – Group feedback



Let's hear your experiences...

What weather event has had the most impact on your operation?

"We keep getting clobbered.
It's just not normal anymore."

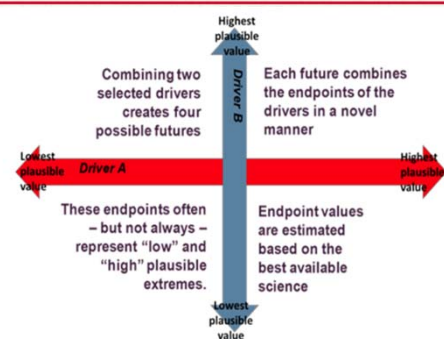
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Focus group 1 process

- **Short (10-20 min) presentations**
 - Local and regional climate trends & projections
 - Potential impacts to the beef system
 - Process for creating scenarios
- **Small groups (5-7) work through scenarios**
 - Our team transcribed

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Our Process: Phase 2: Determine scenarios



Developing Stories: Depictions of potential futures



Potential Beef Futures

(as told by Nebraska and South Dakota farmers and ranchers)

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Sorting and Prioritizing

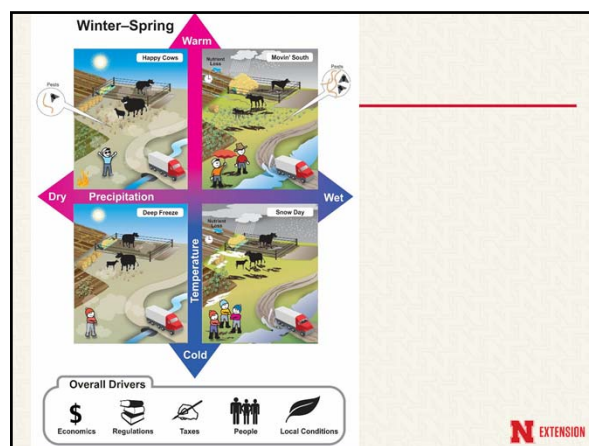
- **Season**
- **Climate Drivers**
 - 20 total but 84% of impacts were with two
 - Precipitation & Temperature
- **Area of farm impacted**
- **Positive or negative impact**
- **Frequency discussed**

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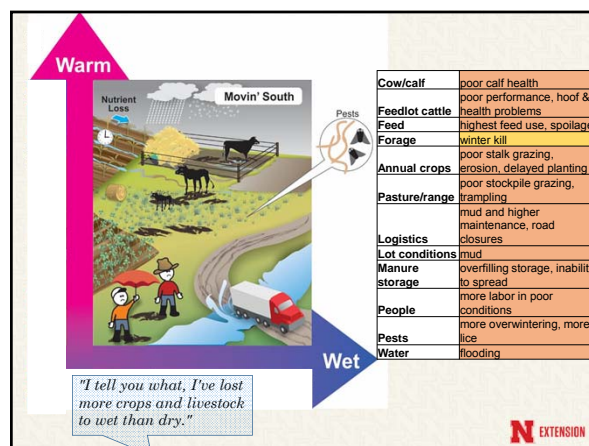
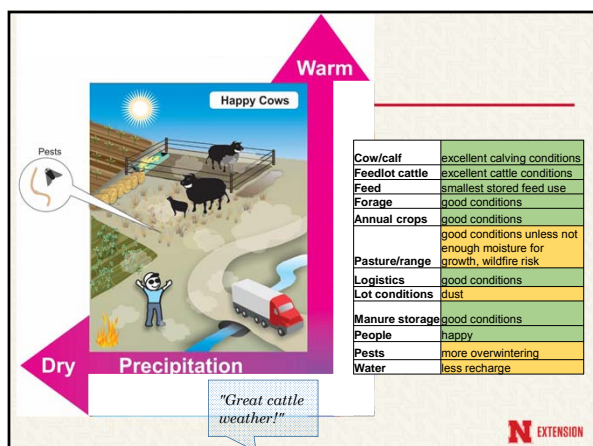
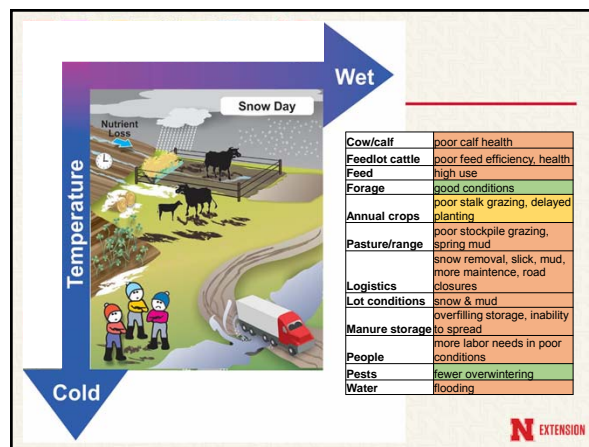
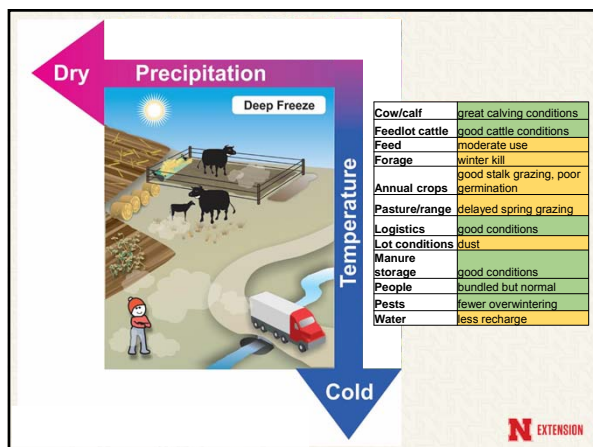
Overall drivers

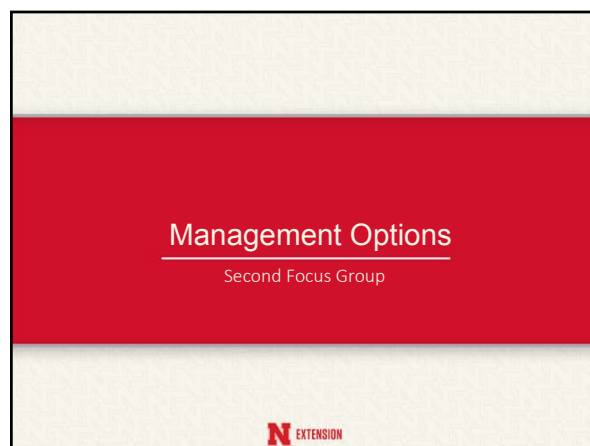
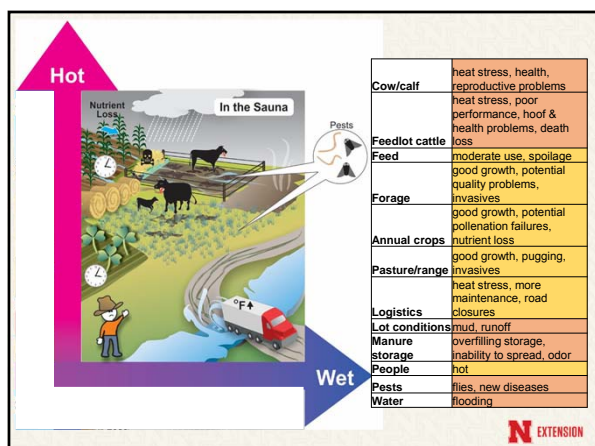
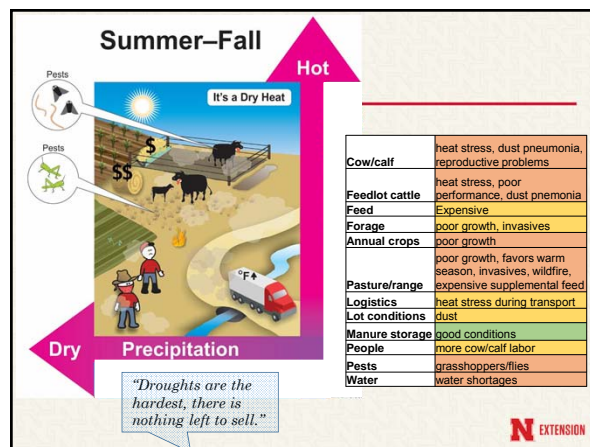
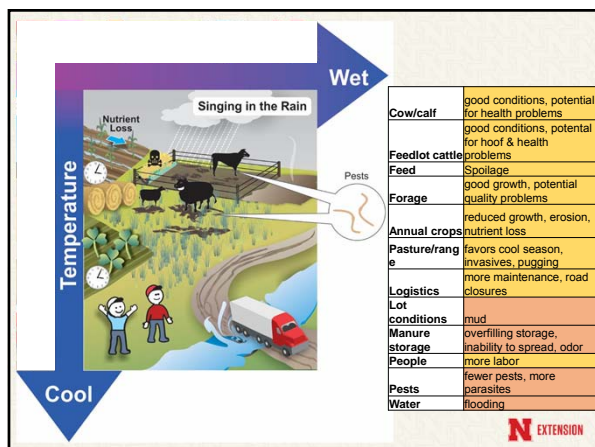
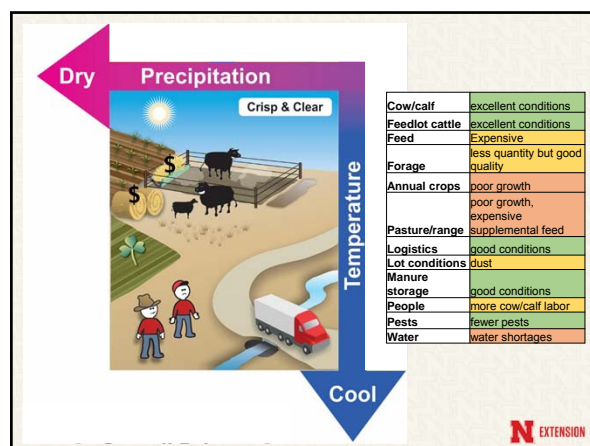
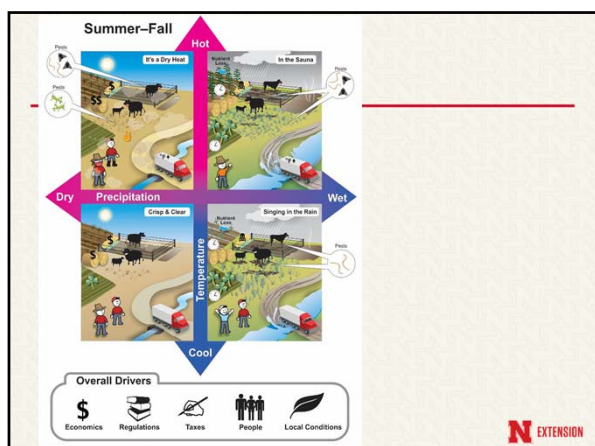
- Economics
- Regulation & tax implications
- People
- Local ranch conditions

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Focus group 2: Process

- Same ground rules
- Start discussion of what has made their operation resilient
- Overview of scenarios



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Focus group 2: Brainstorming Management Options

- Doing now
- Might consider
 - Need more educational materials
 - Need more research



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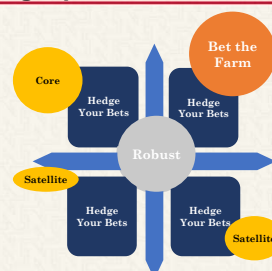
Being Proactive

- Note one thing you already do, or might consider doing to make your operation more resilient

"Cannot control the weather, but can manage the outcomes."

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Focus group two: Categorizing Options



Adapted from Global Business Network (GBN)



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Extension Program Planning

- Identified gaps – a long list of topics
 - Extension resources?
 - Research?
- Ongoing prioritization of new programming or resources

"It takes a team to be resilient."



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Look into our Crop and Beef Systems Scenario Planning

<https://weather-ready.unl.edu/>

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Rick's Takeaways

- **Took edge off of process of engaging stakeholders**
 - Stakeholders want to be more resilient
 - Differing grassroots viewpoints arise
 - How become more resilient?
 - What's sustainable?
- **Need to consider benefits to participants**
 - Most liked system thinking
 - Most also looking for specific info or recommendation



Questions?

Rick Stowell: rstowell2@unl.edu
Crystal Powers: cpowers2@unl.edu

