Why Encourage Drought Planning?  
A Case Study of the 2016 Drought 

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Why plan?
Who once said,

“there are known knowns; there are things we know we know. We also know there are known unknowns; that is to say we know there are some things we do not know. But there are also unknown unknowns—the ones we don't know we don't know.”

It’s easiest to plan for known knowns, but also possible to plan for known unknowns and even (somewhat) unknown unknowns.
Drought Planning for the Farm or Ranch

https://drought.unl.edu/ranchplan
Planning Mitigation, Response, and Recovery

1. Prepare for drought by increasing the health of the overall operation and maximizing flexibility

2. Write a Drought Plan that includes WHAT to do during drought and WHEN

3. When conditions require it, implement the plan and don’t second-guess it

4. After drought, have a plan for restoring the health of all parts of the ranch operation

5. Monitor how the drought plan works, and improve it as you learn
The Drought Response Plan

On your critical date

Monitor and compare to "target points"

Take appropriate action (action plan)
Hazard Response and Unknowns

Sources of uncertainty

1. Difficulty in detecting drought; speed of development; wet/dry reversals; hope for recovery rain event
2. Uncertainty over disaster aid eligibility
3. Uncertainty about possible impacts
4. Uncertainty about future markets (ramifications of each response)
5. Time required to carry out response

Departure from normal level of precipitation → Recognition of drought condition → Establishing whether drought represents a risk to the operation → Identifying and choosing appropriate response → Carrying out response

Time
Departure from normal level of precipitation (may be perceived as a general trend but not immediately comprehended as drought)

Observation of relevant conditions (may or may not mean “drought” to observer)

Recognition of condition as an experience of drought

Establishing whether current (or predicted) drought severity represents a risk to the operation

Identifying and choosing among options for appropriate response

Carrying out response

Use of monitoring information or warnings

Evaluation of sensitivity to the drought event

Evaluation of adaptive capacity

Established procedures

Sources of uncertainty

Difficulty in detecting drought; speed of development; wet/dry reversals

Uncertainty over disaster aid eligibility

Uncertainty about feasibility of options

Uncertainty about future markets (ramifications of each response)

Time required to carry out response

Managing Uncertainty

PADM Process

Planning
A Case Study of the Effect of Planning: the 2016 Drought

And survey of agricultural producers, with funding support by NOAA SARP and NIDIS
Impacts


Perceived Harm of 2016 Drought

- Pasture hay yield (n=283)
- Range productivity (n=278)
- Range health or diversity (n=265)
- Animal reproduction (n=268)
- Animal productivity (n=270)
- Net income of operation
- Cash reserves or savings

0% 10% 20% 30% 40% 50% 60% 70% 80% 90%

- moderately harmful
- extremely harmful
How does having a Drought Plan affect Decision-making, Information Use, and Impacts?

PROPORTION OF LIVESTOCK PRODUCERS

No Drought Plan
39%

Yes Drought Plan
61%

NATIONAL DROUGHT MITIGATION CENTER
Effect of Drought Planning on Early Response to Drought

Did you take each response in response to drought conditions in 2016? In what month did you begin?

https://onpasture.com/2013/04/01/making-destocking-decisions-during-drought/

PERCENT OF LIVESTOCK PRODUCERS WHO DESTOCKED IN JULY 2016 OR EARLIER:
DROUGHT PLAN VS. NO DROUGHT PLAN

- NO DROUGHT PLAN: 7%
- YES DROUGHT PLAN: 19%
Effect of Drought Planning on Ranch Income

DROUGHT'S IMPACT TO NET INCOME

<table>
<thead>
<tr>
<th></th>
<th>Moderately Harmful</th>
<th>Extremely Harmful</th>
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<tbody>
<tr>
<td><strong>YES DROUGHT PLAN</strong></td>
<td>47.89%</td>
<td>20.42%</td>
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<tr>
<td><strong>NO DROUGHT PLAN</strong></td>
<td>39.08%</td>
<td>29.89%</td>
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SOURCE: TRADINGECONOMICS.COM | CFTC

NATIONAL DROUGHT MITIGATION CENTER
Takeaway Message: Encourage Drought Planning

https://drought.unl.edu/ranchplan
Resources for Extension and Other Advisors

https://drought.unl.edu/ranchplan/Overview/Resources/SAREWebinars.aspx
OUR PARTNERS