“A Drought Plan: An Agency’s Approach to Assist Producers in Putting Their Thoughts Into Action”

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Thoughts Into Action

- Kansas Natural Resources Conservation Service (NRCS) drought approach and justification
  - Drought conditions have existed since August of 2010
  - Drought impacts noticed by public late spring of 2011
  - Concerns primarily limited to what happened that year
  - Very few “forward looking” thoughts
Thoughts Into Action

- Kansas NRCS drought approach and justification
  - Began drought awareness meetings through:
    - Regional grazing groups
    - Kansas State University Extension meetings
    - Conservation district meetings
    - Conservation edition articles
    - Special workshops and grazing schools
    - Agricultural and range magazine articles
Thoughts Into Action

- Information and education
  - Encouraged producers to identify truth and fact
  - Encouraged producers to better understand their ranch and their management
  - Provided sources of information
Thoughts Into Action

- **Dealing with reality or at least what we know!**
  - What type of forages do I manage and what do they produce?
  - What is my average rainfall and when does it typically occur?
  - How do the forages I manage react to shortages of moisture and extreme temperatures?
Thoughts Into Action

- Dealing with reality or at least what we know!
  - 70% of annual rainfall occurs during the growing season (April through September)
  - 70% of annual production on rangeland occurs by July 1
  - July 1 is typically thought of as the middle of the grazing season
Thoughts Into Action

Dealing with reality or at least what we know!

- Plants do not know what the date on a calendar is!
- Once a plant starts to grow, it continues towards maturity
- Forage not produced due to a response to the climate or management cannot be recovered
# Thoughts Into Action

## Region Precipitation—January 2011 through November 2012

<table>
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<tr>
<th>Region</th>
<th>Average Precipitation</th>
<th>2011</th>
<th>Departure</th>
<th>% Average</th>
<th>2012</th>
<th>Departure</th>
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</table>
Thoughts Into Action

Stocking Rate Reductions in Hardland Soils

- Percent of Normal Rainfall between March and May
- Percent Reduction in Stocking Rates

Graph showing the relationship between percent reduction in stocking rates and percent moisture.
Thoughts Into Action

Collateral Thoughts

- Wrapping our (NRCS) heads around the drought
  - Be positive, but honest
  - Be understanding of the stress load
  - Do not be a source of additional stress
Thoughts Into Action

- **Drought is—**
  - Stressful
    - Especially to humans
      - We pass some of that stress on to the plant community
  - Not easy to escape
    - Duration of the drought
    - Opportunities to relieve stress are important
  - Mind consuming
    - Every conversation begins with weather
  - A learning opportunity
Thoughts Into Action

First steps of relieving some stress

- Are you currently operating under the guidance of a grazing plan?
- It is really hard to manage something without knowing everything you can about what you are managing
- Learn how to measure what you are trying to manage
Thoughts Into Action

- **Dealing with reality or at least what we know!**
  - Get a grasp of what you are managing
  - Forage Inventory—types, amounts, and availability
    - Rangeland—native plant communities
    - Pastureland—smooth brome, fescue, etc.
    - Cropland—crop aftermath, cover crops, etc.
  - What is the risk or their reliability?
Thoughts Into Action

- **Dealing with reality or at least what we know!**
  - What does my herd or animal inventory look like...specifically!
  - ✔ Cow/calf—spring or fall, age, genetics, disposition, and SIZE
  - ✔ Yearlings—size and duration of possession
Thoughts Into Action

- Dealing with reality or at least what we know!
  - Does my forage and animal inventory match?
  - How does that answer look on the ground?
Thoughts Into Action

- **How to approach a drought plan**
  - Define the ranch or forage enterprise
  - Define the animal enterprise
Thoughts Into Action

How to approach a drought plan

- Define the ranch or forage enterprise
- Define the animal enterprise
- Define the ranch’s risk possibilities and ability to endure those risks
- Financial
- Forage health
- Moisture management
- Animal health and genetics
- Additional land or resource availability
Thoughts Into Action

How to approach a drought plan

- Define the ranch or forage enterprise
- Define the animal enterprise
- Define the ranch’s risk possibilities
- Define trigger dates during the calendar year
  - Beginning of dormancy (October)
  - April 1
  - June 15 through July 1
  - August 15
Thoughts Into Action

- How to approach a drought plan
  - Beginning of dormancy (October)
    - How did the plant communities I manage finish the growing season?
  - High vigor—no planned changes in stocking rate
  - Low vigor—reduction in initial stocking rates next spring
Thoughts Into Action

How to approach a drought plan

- April 1
  - Beginning of the growing season
  - Are the soils moist or recovered from a moisture deficit?
  - If moisture deficit exists, additional stocking rate reductions may be necessary
Thoughts Into Action

How to approach a drought plan

- June 15 through July 1
  - 60% to 70% of production has occurred
  - If precipitation is less than average (80%) and productivity is less than average, additional stocking rate reductions likely necessary
  - Native plant species begin transition from vegetative to reproductive
Thoughts Into Action

- **How to approach a drought plan**
  - **August 15**
    - 75% of the grazing season is past
    - 90% of the forage production has occurred
    - Extensive grazing pressure resulting in diminished root reserves or leaf area may affect how the plant will finish the growing season and how it will start the next
Thoughts Into Action

- **How to approach a drought plan**
  - Define the ranch or forage enterprise
  - Define the animal enterprise
  - Define the ranch’s risk possibilities
  - Define key dates during the calendar year
  - Identify decisions to be made when certain conditions present themselves
Thoughts Into Action

- How to approach a drought plan
  - Identify decisions to be made when certain conditions present themselves
    - De-stocking (sale or re-location)
    - Removal of yearling animals
    - Culling of targeted herd individuals
    - Use of set aside forage resources
    - Early weaning
Thoughts Into Action

- **How to approach a drought plan**
  - Define the ranch or forage enterprise
  - Define the animal enterprise
  - Define the ranch’s risk possibilities
  - Define key dates during the calendar year
  - Identify decisions to be made when certain conditions present themselves
  - WRITE THEM DOWN—MENTAL MODELS DON’T WORK！！！！！
Thoughts Into Action

- **Drought is not just stressful to the clientele!**
  - Thousands of questions
  - Living in reality
  - Personal experience
  - Steep learning curve for the agency as well as the client
  - Do not over-think simple principles
“Yes ... I believe there’s a question there in the back......”
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