

## Making Decisions Before Drought Strikes

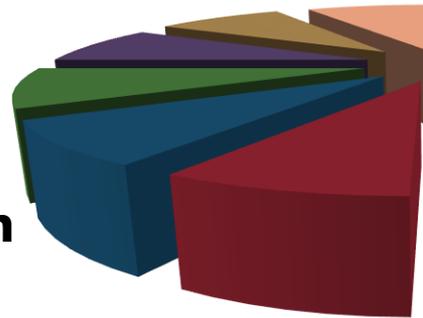


## The Drought Decision Calculator



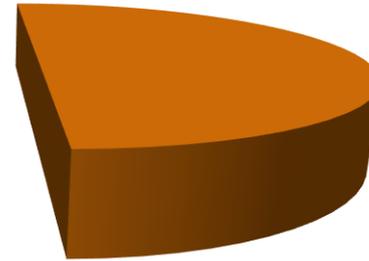
# Environmental Factors that Affect Forage Growth

**Other Factors:**  
Soil type  
Solar rad.  
Previous season



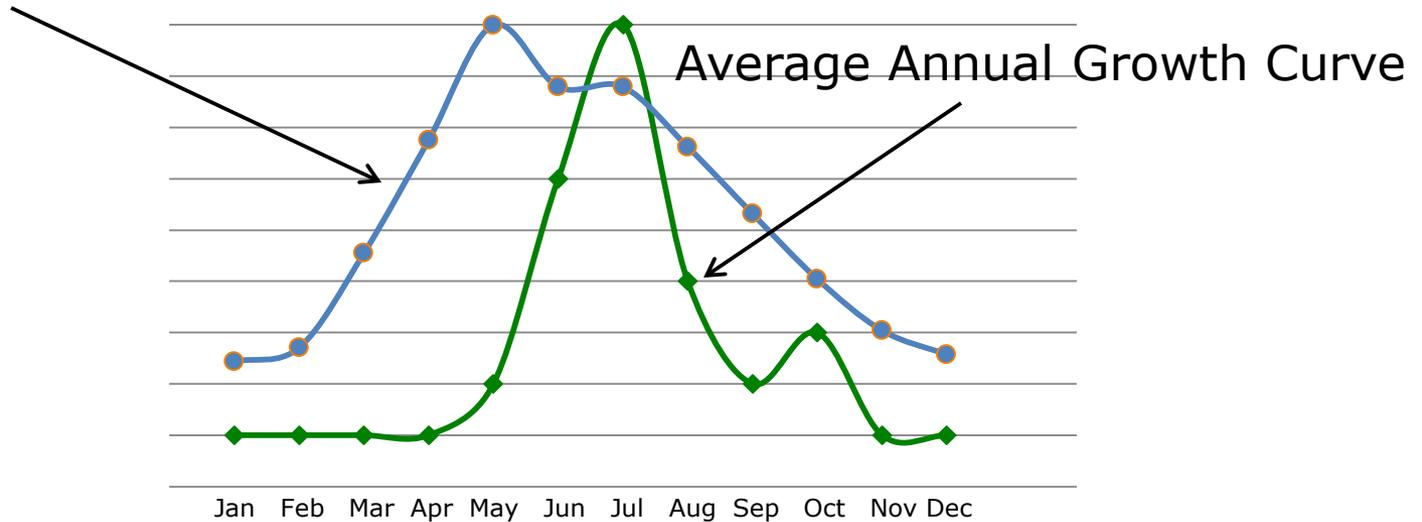
**Temperature**

**This Season's Precipitation**



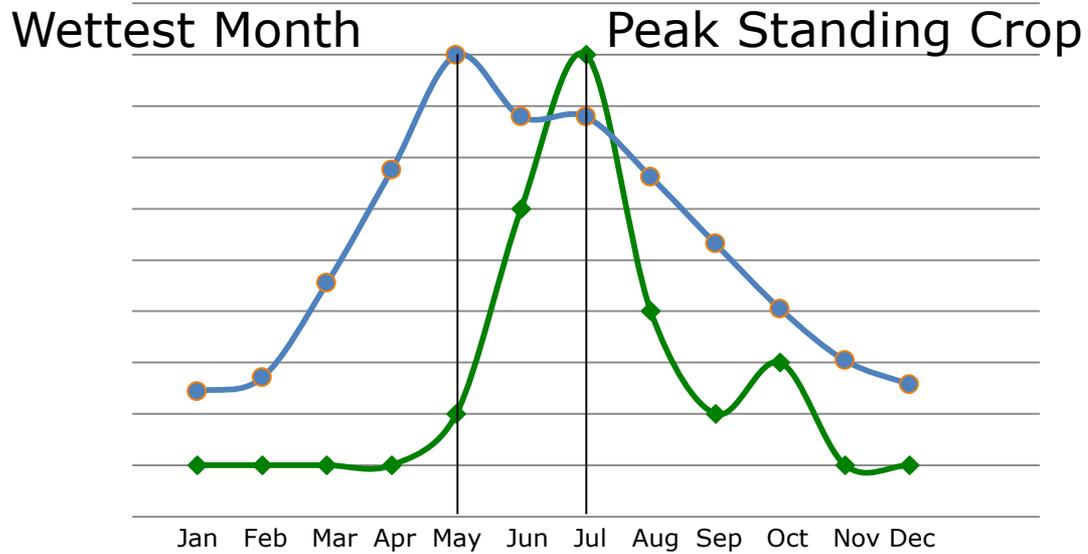
# Precipitation and Forage Growth

Long-Term Average Monthly Precipitation



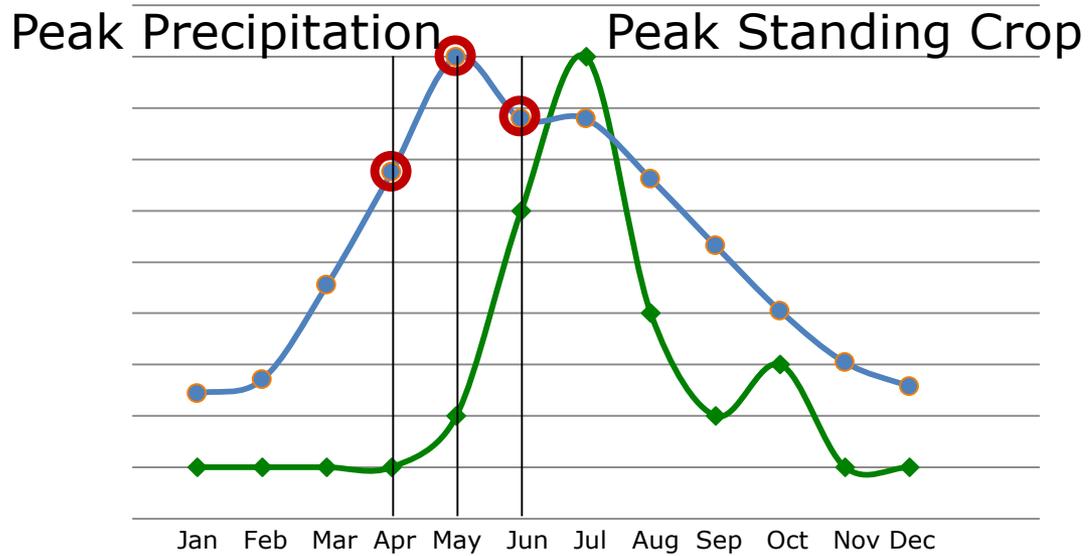
**Cheyenne, WY**  
**Average Precipitation = 15.1 inches**

# Precipitation and Forage Growth



**Cheyenne, WY**  
**Average Precipitation = 15.1 inches**

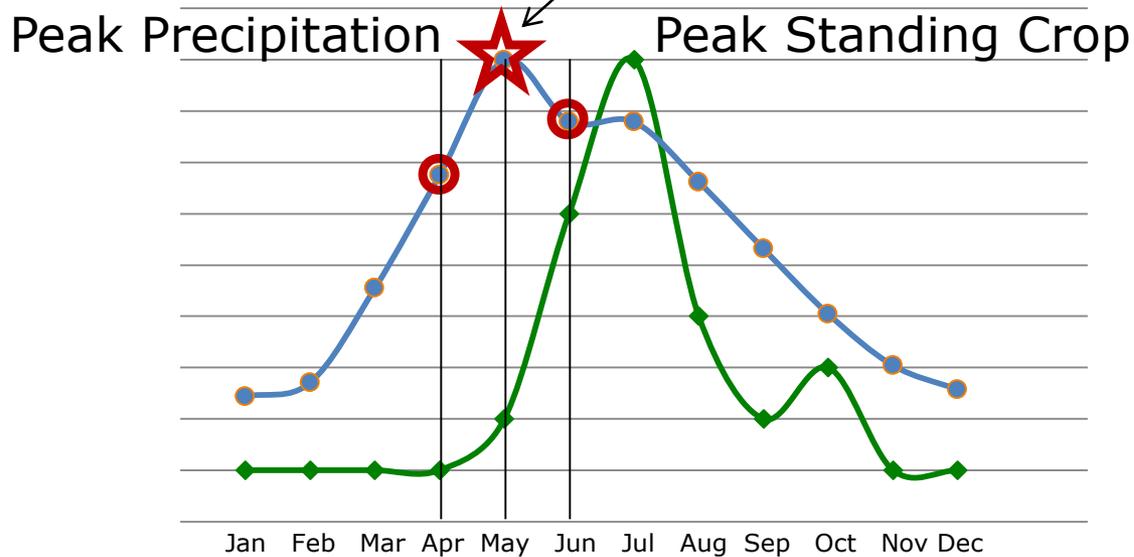
# Precipitation and Forage Growth



**Cheyenne, WY**  
**Average Precipitation = 15.1 inches**

# Precipitation and Forage Growth

~30% of annual variation in forage production is explained by May precipitation



So What?

**Cheyenne, WY**  
**Average Precipitation = 15.1 inches**

## **Precipitation and Forage Growth**

What does a knowledge of May precipitation really Mean?

Does a reduction in May precipitation by 50% mean a 50% reduction in peak standing crop?

What if both May and June have 50% of average precipitation? Does that mean there is no forage growth?

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**DROUGHT DECISION CALCULATOR**  
**RFA-5084 Agreement Number: 051E08310221**

United States Department  
Of Agriculture



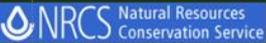
Risk Management Agency



Agricultural Research Service



NRCS Natural Resources  
Conservation Service




**Protect America's Greatest Resource: Farmers and Ranchers**

Wyoming

Cheyenne

test

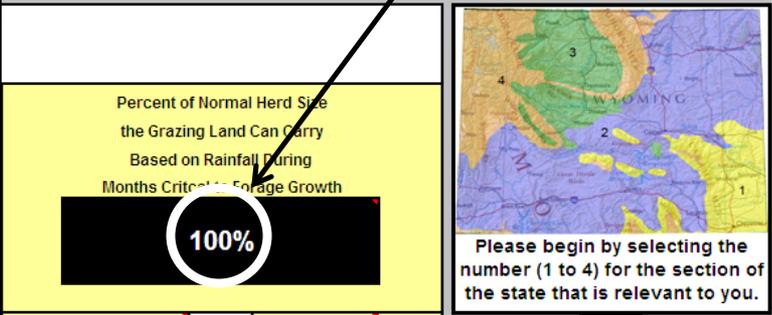
100% of Potential

Long-Term Average	2006		2007		Change Year
January	7.19	January 7.19	January 7.19		
February	8.53	February 8.53	February 8.53		
March	17.73	March 17.73	March 17.73		
April	28.76	April 28.76	April 28.76		
May	39.96	May 39.96	May 39.96		
June	33.95	June 33.95	June 33.95		
July	33.95	July 33.95	July 33.95		
August	28.09	August 28.09	August 28.09		
September	21.57	September 21.57	September 21.57		
October	15.22	October 15.22	October 15.22		
November	10.20	November 10.20	November 10.20		
December	7.86	December 7.86	December 7.86		
<b>Total</b>	<b>253.0</b>	<b>Total 253.0</b>	<b>Total 253.0</b>		

The Carry Over Effect is already accounted for in the percentage shown on the right.

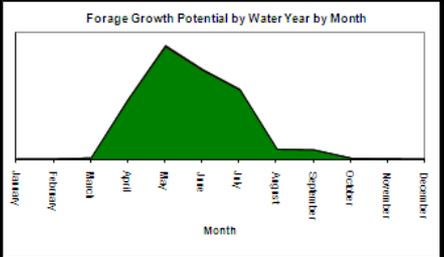
Percent of Normal Herd Size the Grazing Land Can Carry Based on Rainfall During Months Critical to Forage Growth

100%



Please begin by selecting the number (1 to 4) for the section of the state that is relevant to you.

Carry Over Effect\* 0% Positive



Red indicates below average rainfall. The more red during the growing season the lower the forage growth potential.

1

Precipitation for the Whole Year - Percent of Average 100%

**Rainfall Probability Tool**

Choose an appropriate weather station  
Adams 7 SSW

Choose the month of interest  
June

Enter the amount of rainfall  
0 in.

This is the percent chance you have of receiving this amount of rainfall or more in  
June  
81%

The rainfall probability tool only works with weather station data not user provided data.

**How to Modify Weather Station Data**

If you would like to use weather station data but make changes to it, please push the button and re-name the file - thanks

Push Me

To use previously saved data select from the list below

ellen

\*Carry Over Effect is calculated based on rainfall in certain months of the previous year but not the whole year. Carry Over Effect MAY be offset by above average rainfall in April, May, and June of the current year.

Wyoming

Cheyenne

test

# 19% Reduction

Long-Term Average	2006		2007		Change Year
January	7.19	January 7.19	January 7.19		
February	8.53	February 8.53	February 8.53		
March	17.73	March 17.73	March 17.73		
April	28.76	April 28.76	April 28.76		
May	39.96	May 39.96	May 20.00		
June	33.95	June 33.95	June 33.95		
July	33.95	July 33.95	July 33.95		
August	28.09	August 28.09	August 28.09		
September	21.57	September 21.57	September 21.57		
October	15.22	October 15.22	October 15.22		
November	10.20	November 10.20	November 10.20		
December	7.86	December 7.86	December 7.86		
<b>Total</b>	<b>253.0</b>	<b>Total 253.0</b>	<b>Total 233.0</b>		

The Carry Over Effect is already accounted for in the percentage shown on the right.

Percent of Normal Herd Size the Grazing Land Can Carry Based on Rainfall During Months Critical to Forage Growth

81%

Carry Over Effect\* 0% Positive



Please begin by selecting the number (1 to 4) for the section of the state that is relevant to you.

1

**Rainfall Probability Tool**  
 Choose an appropriate weather station  
 Adams 7 SSW

2 Choose the month of interest  
 June

3 Enter the amount of rainfall  
 0 in.

This is the percent chance you have of receiving this amount of rainfall or more in  
 June  
 81%

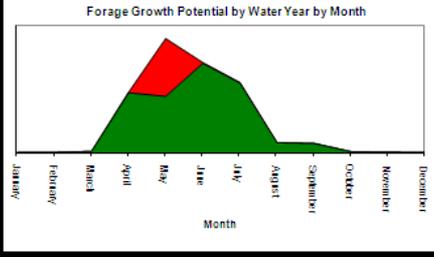
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ellen



Red indicates below average rainfall. The more red during the growing season the lower the forage growth potential.

Precipitation for the Whole Year - Percent of Average	81%
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Wyoming

Cheyenne

test

34% Reduction

Long-Term Average	2006	2007
January	7.19	7.19
February	8.53	8.53
March	17.73	17.73
April	28.76	28.76
May	39.96	20.00
June	33.95	17.00
July	33.95	33.95
August	28.09	28.09
September	21.57	21.57
October	15.22	15.22
November	10.20	10.20
December	7.86	7.86
<b>Total</b>	<b>253.0</b>	<b>216.1</b>

Over Grazing During Drought Conditions Will Reduce Next Year's Forage Regardless of Next Year's Rainfall

The Carry Over Effect is already accounted for in the percentage shown on the right.

Percent of Normal Herd Size the Grazing Land Can Carry Based on Rainfall During Months Critical to Forage Growth

66%

Carry Over Effect\* 0% Positive



Please begin by selecting the number (1 to 4) for the section of the state that is relevant to you.

1

**Rainfall Probability Tool**

Choose an appropriate weather station  
Adams 7 SSW

Choose the month of interest  
June

Enter the amount of rainfall  
0 in.

This is the percent chance you have of receiving this amount of rainfall or more in  
June  
81%

The rainfall probability tool only works with weather station data not user provide data.

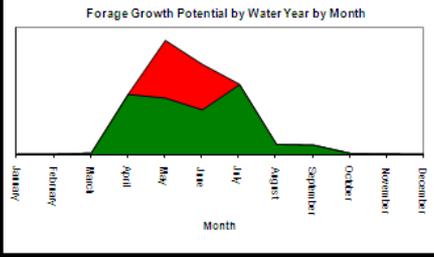
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ellen



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Precipitation for the Whole Year - Percent of Average 67%

\*Carry Over Effect is calculated based on rainfall in certain months of the previous year but not the whole year. Carry Over Effect MAY be offset by above average rainfall in April, May, and June of the current year.

Drought Decision Calculator will be available soon  
for the following states:

North Dakota  
South Dakota  
Nebraska  
Montana  
Wyoming  
Colorado  
Utah  
New Mexico  
Nevada