Pasture, Rangeland, Forage
Annual Forage
Crop Insurance

Are these Good Risk Management Options for Me?

Presented by RMA

Disclaimer

This information is provided for training only. Any discrepancy between the training material and the policy is not intended. The information provided in this training does not supersede policy and procedure. Any changes to the policy and procedures may make this training material obsolete. **If you use this training material check to assure it is still relevant.**

Who are we?

USDA, Risk Management Agency (RMA)

- Mission: To promote, support, and regulate sound risk management solutions to preserve and strengthen the economic stability of America's agricultural producers.
  - Operate and manage the Federal Crop Insurance programs.
- We merely administer the program. We do NOT sell crop insurance products. Only crop insurance agents sell.
- RMA web site: http://www.rma.usda.gov/

Life Insurance

- How many of you have life insurance?
- Are you hoping to collect on this insurance policy this year?

Health Insurance

- How many of you have health insurance?

- Do you have a basic, bare bones policy or the best money can buy?

Crop Insurance

- Crop insurance is like health insurance

- Do you want a bare bones policy or do you need more coverage?
  - The lower the deductible = higher premium
  - The higher price selection = higher premium

- The Government pays a portion of your crop insurance premium – and it is based on elections, not income!

Challenges

- Various plant species
- Timing of plant growth
- Lack of individual/industry data
- Vast range of management practices across the industry
- Publicly announced prices not available
- Crop continuously harvested via livestock
- Various livestock species and segments

Program Overview

AREA plan only

- Losses cover an area called a grid
- No individual coverage
  - Does NOT measure actual individual production
- Index – based on deviation from normal/historical
- No loss adjustments, records, etc.
- Timely payments
- Does not reward poor management practices
  - Producer cannot influence outcome/losses

PRF

Intended Use:

- Grazing
  - Established acreage of perennial forage
  - Intended for grazing by livestock
  - Acreage must be suitable for grazing
- Haying
  - Established acreage of perennial forage
  - Intended for haying
  - Acreage must be suitable for haying

Annual Forage

Intended Use: Feed or Fodder including, but not limited to:

- Grazing
- Haying
- Silage
- Green Chop
- Hay/Grazing
- Any other method that results in livestock feed

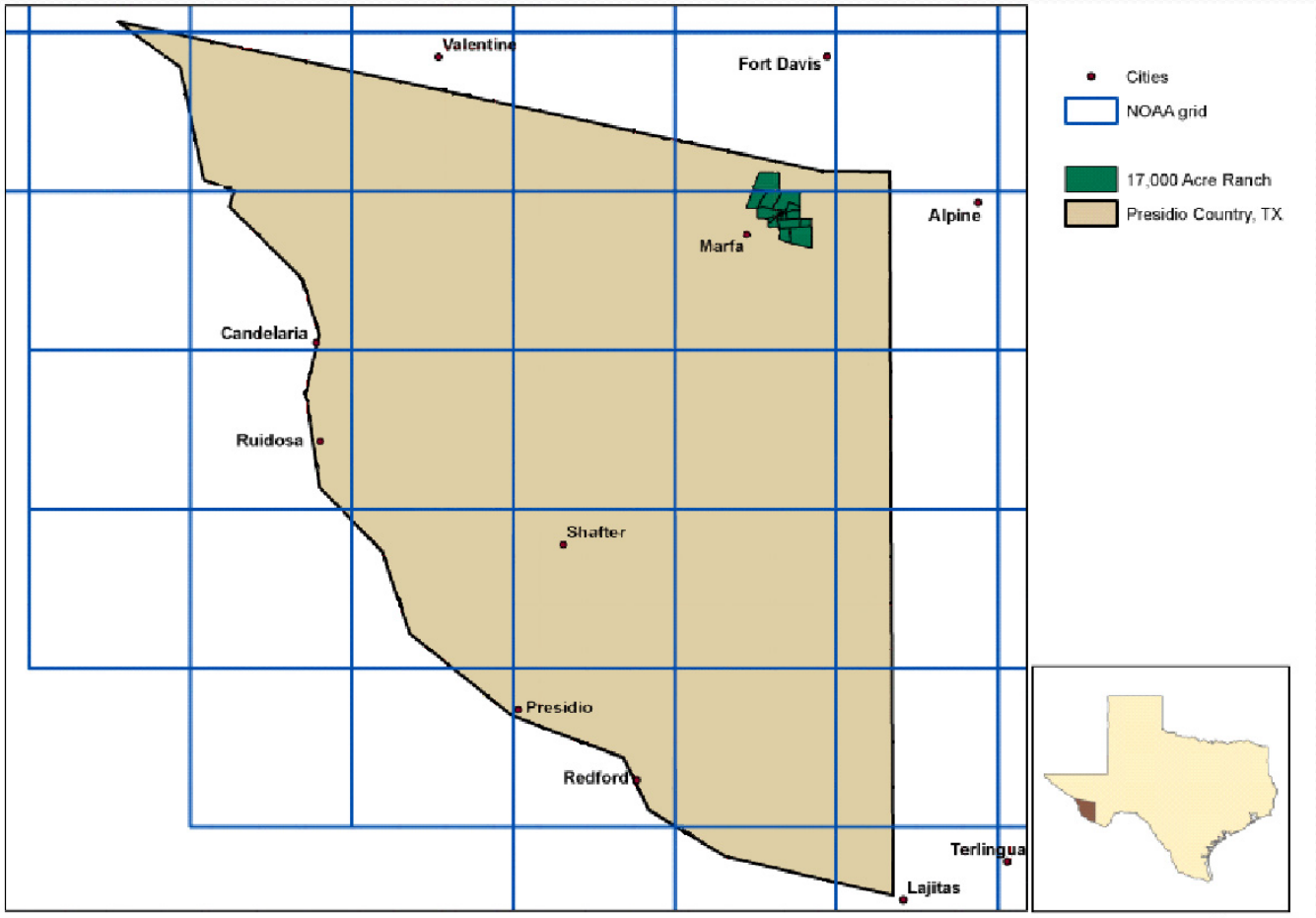
Rainfall Index Overview

Rainfall Index Program

- Area Based Plan
  - Approximately 0.25 degree grid vs. county area
- Utilizes NOAA **Climate Prediction Center** data
  - Utilizes multiple point data, not a single point system
- Deviation from Normal 1948 to present
- Single Peril vs. Multiple Peril
  - Lack of Precipitation is the only cause of loss
- Review of Historical Indices is critical

Grid Overview

- Area of insurance = 0.25° grids



Rainfall Index Overview

Index Intervals

- Multiple Intervals offered – (11 intervals)
- Crop Year divided into 11, 2-month intervals
  - 1st Interval begins with January-February
- Ability for producers to manage appropriate timing risks
  - Correlate to individual growth patterns and production seasons and practices
- The 2-month intervals provide for greater reaction to precipitation events vs. a yearly average

Rainfall Index Overview

Index Intervals

- The purpose of the program is to insure against lack of precipitation
  - Precipitation correlates to plant growth.
- PRF Producers must select at least two 2-month intervals
- Annual Forage – Index Intervals are offered based on fall planted and spring planted
  - Must insure three intervals within those offered for the applicable growing season with no more than 40% in each

Index Interval Selection

- Is it a good strategy to insure in each index interval?
- Should you just have your crop insurance agent figure it out and make those selections?
- What information would you need to consider?
- Would consulting your Ag Extension Agent or land grant university be worthwhile or useful?
- Should you consider your prominent forage species in each grid?

Index Interval Selection

K-STATE Kansas State University

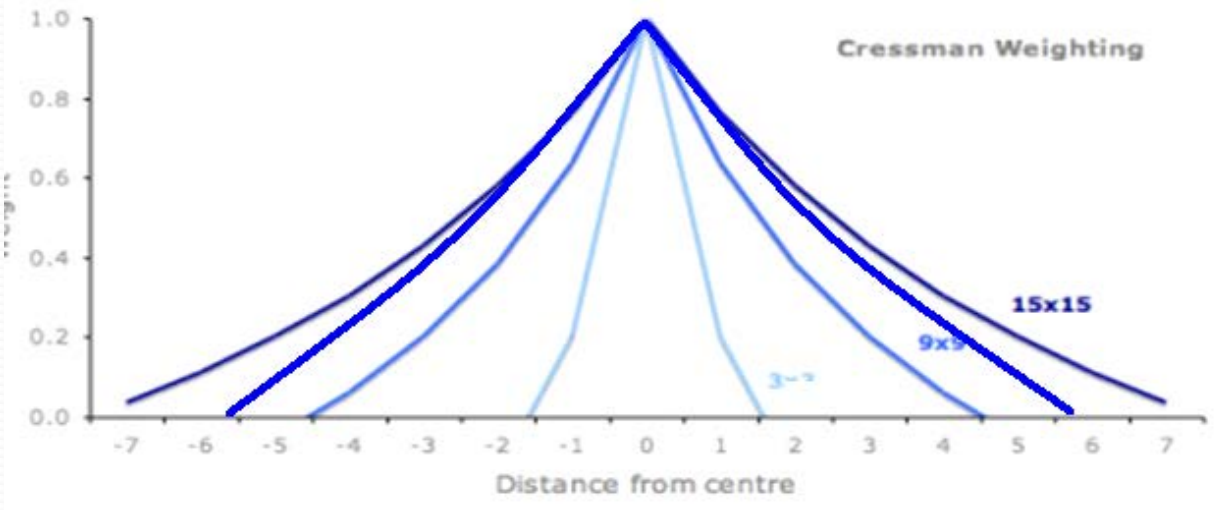
% Growth

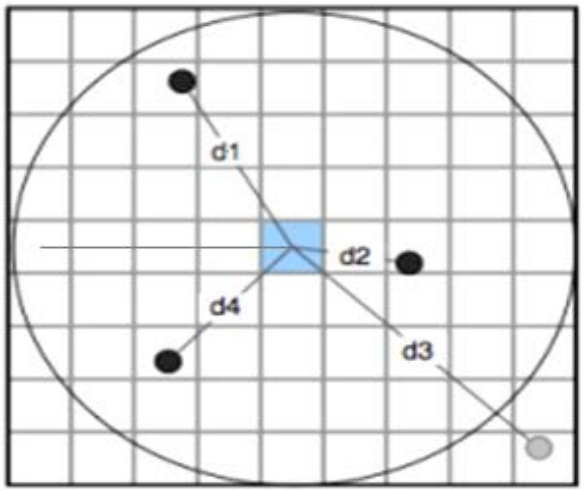
	Native	Brome	Fescue	Alf/Brome
March	0	5	5	0
April	5	15	15	10
May	30	50	35	25
June	33	10	15	25
July	18	0	0	15
August	10	0	0	10
Sept.	4	5	8	10
Oct.	0	10	17	5
Nov.	0	5	5	0

Technical Description of CPC Gridded Rainfall Data

- Gridded rainfall data is pre-processed by NOAA
  - **RMA does not further process or change data**
- Total 6,000 reporting stations daily – minimum
  - Normally over 15000 report daily
- Only stations reporting data by the cut off are used.
- Stations reporting weekly or monthly are not used
- Cressman interpolation translates point information into gridded information

NOAA CPC Uses Weighted Averaging Method





- Four Passes – with each successive pass, the scan radius is decreased, the weight of the closest station has higher effect on the target grid
- 4 passes insures that distant stations influence rainfall prediction in target grid, but weighting with distance decreases the influence

Will this work for me?

- All first order weather stations reporting to NOAA CPC by their DAILY cut off time are used IF they pass the NOAA CPC quality control steps.
  - NOAA CPC does not release which stations report
  - Reviewing NWS, NCDC, WFO, producer gauge results to calculate or estimate results is not appropriate and will not provide useful comparisons.
- ***Where the weather stations are located is not important***
- ***Producers should only use the Historical Tools to determine whether or not this product is appropriate***

Will this work for me?

- Precipitation is interpolated to the grid and not measured within a grid.
  - You must understand that even if there is a weather station that reports daily to NOAA CPC inside your grid, the results will NOT equal that weather station
- Similar to NASS data used for area crop policies
  - Producers reporting to NASS – unknown
  - Surveys NASS eliminates in their quality control - unknown

Program Overview – RI

Indemnity Overview

- The only insurable cause of loss is when the final grid index value is less than the coverage level (deductible) selected by the producer

- Indexes are based on normal/historical and deviation from normal/historical

SUBSIDY!!!

- Government subsidizes premium
- Coverage Level of 70% - Government Subsidy = 59%
- Coverage Level of 75% - Government Subsidy = 59%
- Coverage Level of 80% - Government Subsidy = 55%
- Coverage Level of 85% - Government Subsidy = 55%
- Coverage Level of 90% - Government Subsidy = 51%

Will this work for me?

- Focus MUST be on the Historical Indices web site
  - Have past results tracked with observed results?
  - How did it perform in a “spotty dry” year?
  - Do production trends follow historical indices results?
- Booklet provided at meeting has great information producers should use:
  - Plant year precipitation – (page 4)
  - Critical Rain Months
  - What are your resources such as carry over production
    - Index Interval selections
    - Coverage level and Productivity Factor

Summary: Rainfall & Vegetation

- Critical that the Historical and Decision Support Tools are understood and used
  - Must spend time reviewing the historical and comparing to past production
- The basis of decision to purchase MUST be based on an analysis between the historical results as compared to a producer's results.
- As with any area plan – results may not track 100% of the time
- Critical the appropriate Index Intervals are selected

Questions?

Email: rma.kcviri@rma.usda.gov

RMA Tools

How to get to the Web Based Tools

www.rma.usda.gov

Popular Topics

- Appendix III/M-13
- Bulletins and Handbooks
- Crop Policies and Pilots
- Federal Crop Insurance Corp
- Field Offices: ROs | COs
- Frequently Asked Questions
- Information Browser
- Laws and Regulations
- Livestock Policies
- Reinsurance Agreements

Rainfall and Vegetation Indices

The Rainfall and Vegetation Index plans of insurance are designed as risk management tools to insure against declines in an index in a designated area called a grid. They are primarily intended for use by producers whose crop production tends to follow the average precipitation or vegetation patterns for the grid. It is possible for you to have low crop production on the acreage that you insure and still not receive a payment under these plans. Because the program is designed for producers whose crop production tends to follow average patterns and not individual crop production, you should review the historical indices, additional tools, and information provided to determine if these programs are suitable for your risk management needs.

Rainfall Index (RI)

Rainfall Index (RI) is based on weather data collected and maintained by NOAA's Climate Prediction Center. The index reflects how much precipitation is received relative to the long-term average for a specified area and timeframe.

- Crops covered:
  - Annual Forage
  - Apiculture
  - Pasture, Rangeland, Forage (PRF)

Vegetation Index (VI)

Vegetation Index (VI) is based on the U.S. Geological Survey's Earth Resources Observation and Science (EROS) normalized difference vegetation index (NDVI) data derived from satellites observing long-term changes in greenness of vegetation of the earth since 1989.

- Crops covered:
  - Apiculture
  - Pasture, Rangeland, Forage (PRF)

Click on PRF link for either RI or VI as appropriate for your state

Contact Information

- For more information regarding these programs, contact a qualified **crop insurance agent**.
- For more information regarding the contents of this page, contact **RMA.KCVIRI@rma.usda.gov**.

Popular Topics

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- Reinsurance Agreements

Pasture, Rangeland, Forage

Pasture, Rangeland, and forages cover approximately 55 percent of all U.S. land. Forage grows differently in different areas, so it's important for farmers and ranchers to know which types and techniques work best for their region. The following insurance programs for pasture, rangeland, and forage (PRF) utilize various indexing systems to determine conditions. Also see livestock policies or PRF NAP Table.

PRF Archive

Rainfall Index (RI) - is based on weather data collected and maintained by NOAA's Climate Prediction Center. The index reflects how much precipitation is received relative to the long-term average for a specified area and timeframe.

- County Availability (PDF): Map | Text
- Basic Provisions (PDF) *See mandatory Ineligibility Amendment, Farm Bill Amendment, and footnotes.
- *Ineligibility Amendment (15-Ineligibility)
- *Farm Bill Amendment (15-RIVI-Farm Bill)
- Policy Provisions (PDF)
- Insurance Standards Handbook (PDF) (Revised Apr 2013)
- Grid ID Locator, Decision Support Tool, Historical Indices

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- Grid ID Locator, Decision Support Tool, Historical Indices
- Downloadable Interactive PRF Spreadsheet - Total Loss Factor: XLS | PDF

*Ineligibility Amendment (15-Ineligibility) modifies the Rainfall and Vegetation Index Plan of Insurance Basic Provisions for the 2015 and succeeding crop years.

Click on tools link for either RI or VI as appropriate for your state

Grid Locator

Pasture, Rangeland, Forage

Find a Location: Search

Enter name, address, or latitude/longitude values. More Info

Vegetation | Rainfall

Grids: Counties: Marker Info:
Labels: Labels: Degrees Decimal

Google Ma

Current Location

Grid ID: **16320**
Latitude: 33° 30' 17.13" N
Longitude: 100° 11' 43.13" W
County: King
State: Texas
Address: Unnamed Road, Texas, USA

Grid Tools:

- Decision Support Tool
- Historical Rainfall Indices
- View Actuarial Info
- View Cost Estimator

Steps

1. Enter nearest town or address
2. Click Search
3. Navigate to property
4. Click a point on property
5. Print view for records
6. Note the Grid ID
7. Choose grid tool to view data

This website is a product of AgForce, GMS, and RMA.

Grid Locator

Pasture, Rangeland, Forage

Find a Location: Search

Enter name, address, or latitude/longitude values. More Info

Vegetation | Rainfall

Grids: Counties: Marker Info: Google Maps Print

Labels: Labels: Degrees Decimal

Current Location

Grid ID: 16320
Latitude: 33° 39' 50.64" N
Longitude: 100° 11' 49.3" W
County: King
State: Texas
Address: 1307-1401 County Road 257, Guthrie, TX 79236, USA

Grid Tools:

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- Historical Rainfall Indices
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- View Cost Estimator

Steps

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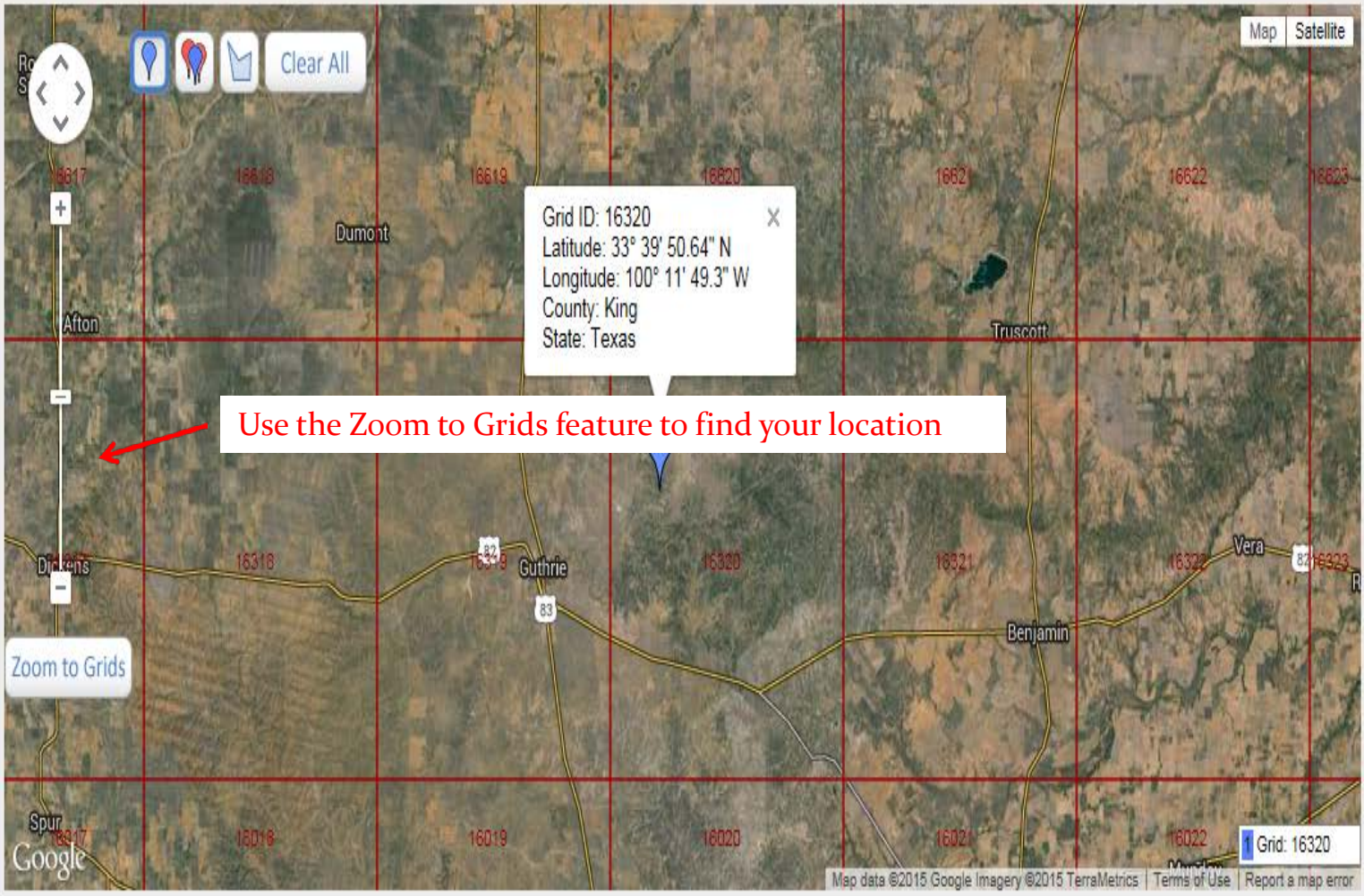

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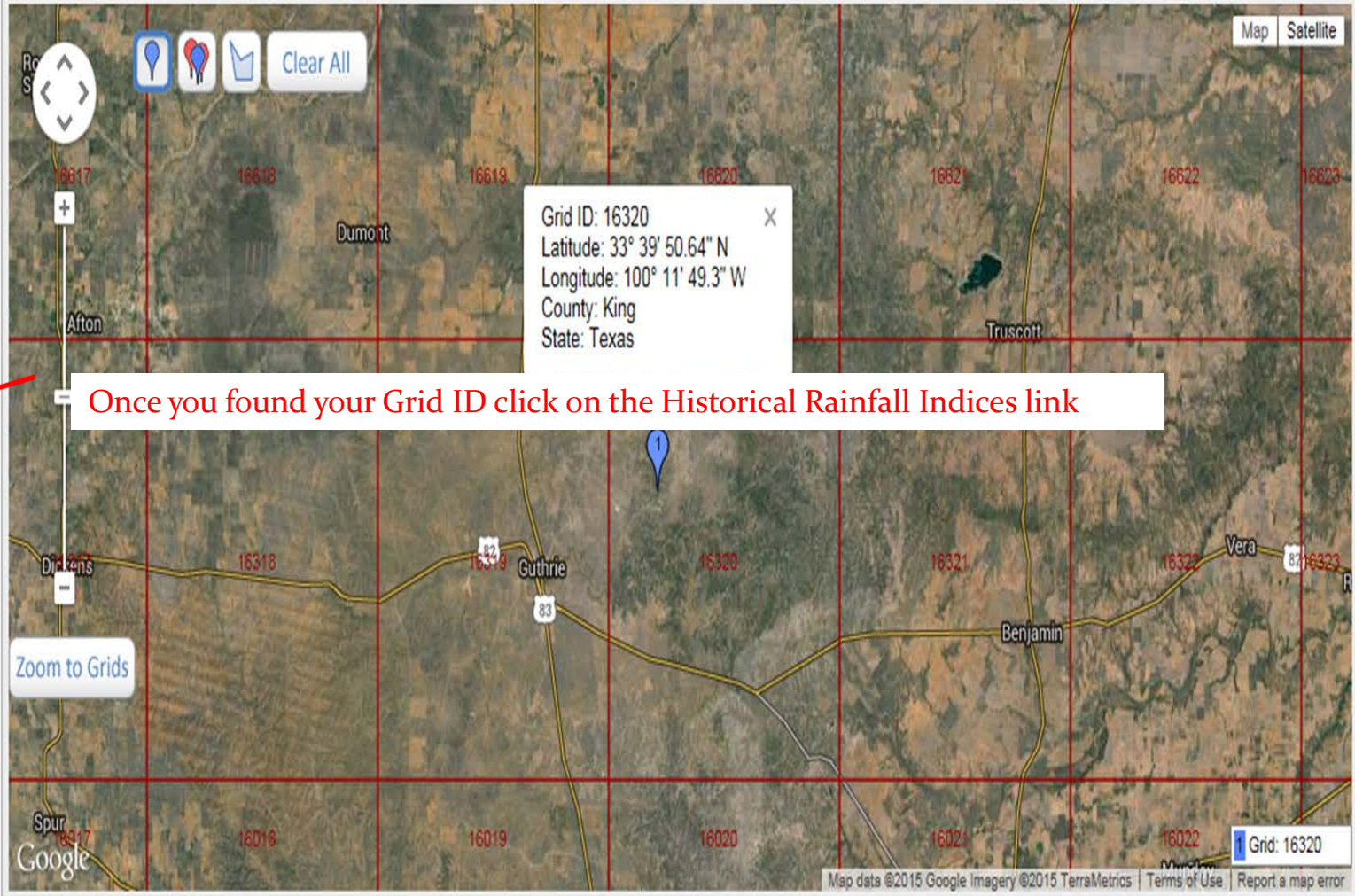

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Decision Support Tool
Pasture, Rangeland, Forage

This tool is for illustration purposes only. Your actual information may differ.
For additional information, please click here.

Rainfall | Vegetation

Please Select a Location: State: Texas | County: King | Grid: 16320 | Grid Locator | Print

Protection Information

Intended Use: Grazing
Coverage Level (%): Please Select
Productivity Factor (%): 100
Insurable Interest (%): 100
Insured Acres:
Sample Year: 2015

Refine the results

Graph

Type:
(•) Index Values ( ) Estimated Indemnities

Range:
Start 1948 End 2015

Intervals:
☑ Jan-Feb ☑ Feb-Mar ☑ Mar-Apr
☑ Apr-May ☑ May-Jun ☑ Jun-Jul

Table | Graph

Click on graph view to view historical results

( ) Graph View (•) Chart View

Year	Jan-Feb	Feb-Mar	Mar-Apr	Apr-May	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec
2015	119.6	82.0	130.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2014	26.6	29.4	19.8	69.4	106.9	127.8	126.8	134.8	95.6	73.9	98.6
2013	174.7	96.6	42.3	46.5	77.8	121.8	95.2	85.8	68.4	25.9	100.3
2012	44.3	79.9	80.4	42.4	64.4	89.2	99.9	129.3	72.7	7.5	21.6
2011	31.4	25.3	4.6	31.4	30.0	6.5	0.3	8.6	61.9	120.9	165.2
2010	194.0	137.4	248.0	166.6	71.2	168.8	207.6	126.3	106.4	58.6	34.7
2009	25.9	46.8	169.6	138.5	95.9	131.2	111.0	109.3	140.7	92.2	57.5
2008	17.9	51.2	90.0	97.6	116.0	121.9	107.5	111.3	120.8	96.9	4.6
2007	77.6	149.2	149.8	95.4	154.0	149.4	133.7	126.1	43.4	12.3	65.3
2006	24.7	95.4	129.2	125.9	83.4	41.0	77.9	94.3	161.4	167.7	93.0
2005	152.7	106.7	46.2	42.4	64.2	107.6	196.9	153.2	97.8	76.1	4.9
2004	265.7	222.6	158.8	51.9	120.6	219.0	150.9	61.5	77.5	329.7	425.5
2003	10.1	21.7	49.8	52.5	92.2	86.8	25.0	55.2	36.5	28.2	44.6
2002	99.1	144.8	203.4	81.4	58.4	167.3	153.9	44.2	133.6	185.8	158.8
2001	144.1	186.3	103.1	49.7	61.6	35.1	47.2	79.1	42.5	102.2	195.3
2000	51.5	227.3	198.9	46.8	79.3	83.7	6.4	1.0	46.6	151.4	187.7
1999	126.6	115.0	133.9	152.6	169.4	109.2	37.9	39.0	39.7	23.4	21.1
1998	165.2	192.4	96.6	43.2	33.6	22.4	62.5	46.7	49.3	103.5	79.5
1997	205.8	160.9	196.8	166.3	98.4	127.1	125.8	97.5	103.4	104.1	163.6

Decision Support Tool
Pasture, Rangeland, Forage

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For additional information, please click here.

Rainfall | Vegetation

Please Select a Location: State: Texas | County: King | Grid: 16320 | Grid Locator | Print

Protection Information

Intended Use:	Grazing
Coverage Level (%):	Please Select
Productivity Factor (%):	100
Insurable Interest (%):	100
Insured Acres:	
Sample Year:	2015

Graph

Type:
(•) Index Values ( ) Estimated Indemnities

Range:
Start 1991 End 2015

Intervals:
☑ Jan-Feb ☑ Feb-Mar ☑ Mar-Apr
☑ Apr-May ☑ May-Jun ☑ Jun-Jul

Table | Graph

Click on graph view

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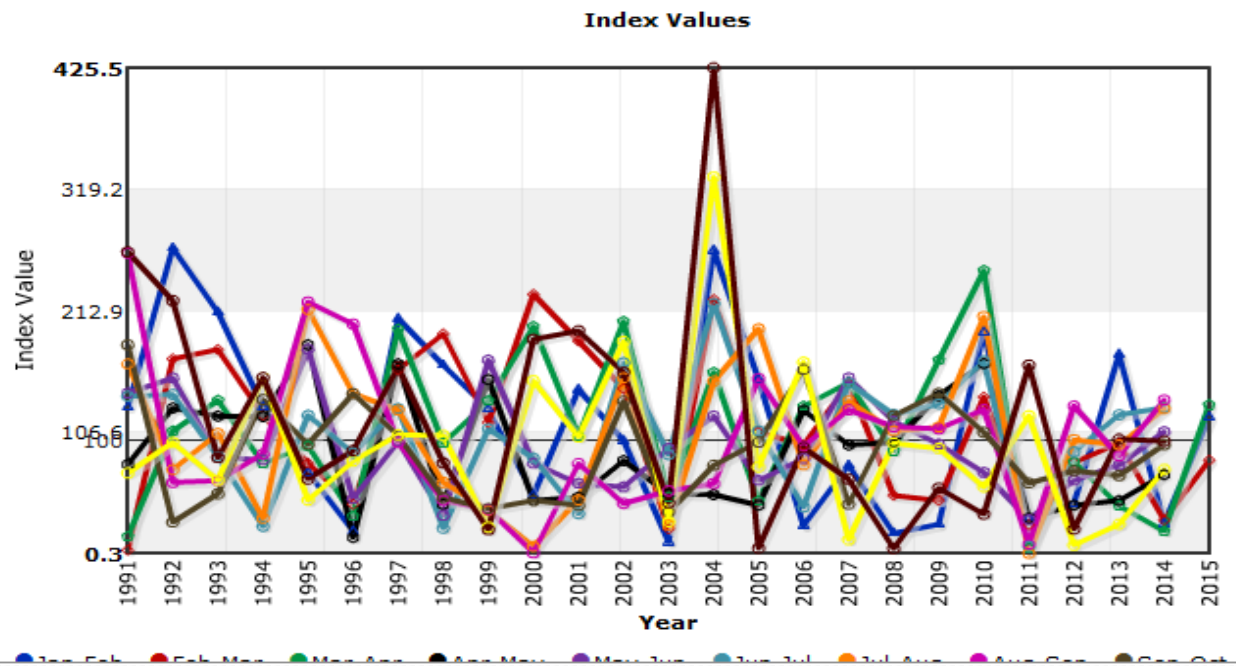

Decision Support Tool
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Rainfall | Vegetation

Please Select a Location: State: Texas | County: King | Grid: 16320 | Grid Locator | Print

Protection Information

Intended Use: Grazing
Coverage Level (%): Please Select
Productivity Factor (%): 100
Insurable Interest (%): 100
Insured Acres:
Sample Year: 2015

Graph

Type:
Index Values | Estimated Indemnities

Range:
Start 1991 End 2015

Intervals:
Jan-Feb | Feb-Mar | Mar-Apr
Apr-May | May-Jun | Jun-Jul

Table | Graph

Click on table to get back to DST tools

Index Interval	Percent of Value (%)	Policy Protection per Unit	Premium Rate per $100	Total Premium	Premium Subsidy	Producer Premium	Actual Index Value	Indemnity
Jan-Feb								
Feb-Mar								
Mar-Apr								
Apr-May								
May-Jun								
Jun-Jul								
Jul-Aug								
Aug-Sep								
Sep-Oct								
Oct-Nov								
Nov-Dec								
Per Acre	N/A	N/A	N/A				N/A	
Policy Total			N/A				N/A	

Enter all required information

Select Percent of Value % for each interval you want to insure

County Base Value
Dollar Amount of Protection
Total Insured Acres

Calculate

Once you entered all required information click the Calculate button

Maximum Percent of Value per Index Interval

Please Select a Location: State: Texas County: King Grid: 16320 Grid Locator Print

Protection Information

Intended Use: Haying
Coverage Level (%): 90
Productivity Factor (%): 100
Insurable Interest (%): 100
Insured Acres: 1000
Sample Year: 2013

Graph

Type:
Index Values Estimated Indemnities

Range:
Start 1991 End 2015

Intervals:
Jan-Feb Feb-Mar Mar-Apr
Apr-May May-Jun Jun-Jul

Table Graph

Index Interval	Percent of Value (%)	Policy Protection per Unit	Premium Rate per $100	Total Premium	Premium Subsidy	Producer Premium	Actual Index Value	Indemnity
Jan-Feb		$0	30.82	$0	$0	$0	174.7	$0
Feb-Mar		$0	26.01	$0	$0	$0	96.6	$0
Mar-Apr	N/A	$0	23.74	$0	$0	$0	42.3	$0
Apr-May	50	$81,207	19.88	$16,144	$8,233	$7,911	46.5	$39,250
May-Jun	N/A	$0	17.22	$0	$0	$0	77.8	$0
Jun-Jul	N/A	$0	19.69	$0	$0	$0	121.8	$0
Jul-Aug	50	$81,207	23.47	$19,059	$9,720	$9,339	95.2	$0
Aug-Sep	N/A	$0	25.49	$0	$0	$0	85.8	$0
Sep-Oct		$0	23.68	$0	$0	$0	68.4	$0
Oct-Nov		$0	28.93	$0	$0	$0	25.9	$0
Nov-Dec		$0	32.43	$0	$0	$0	100.3	$0
Per Acre	N/A	N/A	N/A	$35.20	$17.95	$17.25	N/A	$39.25
Policy Total	1,000	$162,414	N/A	$35,203	$17,953	$17,250	N/A	$39,250

County Base Value	$180.46
Dollar Amount of Protection	$162.41
Total Insured Acres	1,000
Total Policy Protection	$162,414
Subsidy Level	51.0%

Results from 2013

Calculate

Historical Indices and Decision Support Tool

- Actuarial information will not change.
  - Actual Final Grid Index for past years.
- Tools are designed to be fluid and will change:
  - Updated annually; and
  - Final Grid Index values will reflect the change in average.