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.
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

<table>
<thead>
<tr>
<th>Month</th>
<th>Native</th>
<th>Brome</th>
<th>Fescue</th>
<th>Alf/Brome</th>
</tr>
</thead>
<tbody>
<tr>
<td>March</td>
<td>0</td>
<td>5</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>April</td>
<td>5</td>
<td>15</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>May</td>
<td>30</td>
<td>50</td>
<td>35</td>
<td>25</td>
</tr>
<tr>
<td>June</td>
<td>33</td>
<td>10</td>
<td>15</td>
<td>25</td>
</tr>
<tr>
<td>July</td>
<td>18</td>
<td>0</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>August</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Sept.</td>
<td>4</td>
<td>5</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Oct.</td>
<td>0</td>
<td>10</td>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td>Nov.</td>
<td>0</td>
<td>5</td>
<td>5</td>
<td>0</td>
</tr>
</tbody>
</table>
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
How to get to the Web Based Tools

www.rma.usda.gov
Click on PRF link for either RI or VI as appropriate for your state

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
  - Apiiculture
  - 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:
  - Apiiculture
  - Pasture, Rangeland, Forage (PRF)

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

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

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.

- 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
- 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.
Grid Locator tool is used to find your Grid ID.
Use the Zoom to Grids feature to find your location.
Once you found your Grid ID click on the Historical Rainfall Indices link
Click on graph view to view historical results

Refine the results

Type:
- Index Values
- Estimated Indemnities

Range:
- Start: 1948
- End: 2015

Intervals:
- Jan-Feb
- Feb-Mar
- Mar-Apr
- Apr-May
- May-Jun
- Jun-Jul
- Jul-Aug
- Aug-Sep
- Sep-Oct
- Oct-Nov
- Nov-Dec
Click on graph view
Click on table to get back to DST tools

Enter all required information

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

Once you entered all required information click the Calculate button
**Results from 2013**

### Protection Information

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

### Table

<table>
<thead>
<tr>
<th>Index Interval</th>
<th>Percent of Value (%)</th>
<th>Policy Protection per Unit</th>
<th>Premium Rate per $100</th>
<th>Total Premium</th>
<th>Premium Subsidy</th>
<th>Producer Premium</th>
<th>Actual Index Value</th>
<th>Indemnity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan-Feb</td>
<td></td>
<td>$0</td>
<td>30.82</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>174.7</td>
<td>$0</td>
</tr>
<tr>
<td>Feb-Mar</td>
<td></td>
<td>$0</td>
<td>26.01</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>96.6</td>
<td>$0</td>
</tr>
<tr>
<td>Mar-Apr</td>
<td>N/A</td>
<td>$0</td>
<td>23.74</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>42.3</td>
<td>$0</td>
</tr>
<tr>
<td>Apr-May</td>
<td>50</td>
<td>$81,207</td>
<td>19.88</td>
<td>$16,144</td>
<td>$8,233</td>
<td>$7,911</td>
<td>46.5</td>
<td>$39,250</td>
</tr>
<tr>
<td>May-Jun</td>
<td>N/A</td>
<td>$0</td>
<td>17.22</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>77.8</td>
<td>$0</td>
</tr>
<tr>
<td>Jun-Jul</td>
<td>N/A</td>
<td>$0</td>
<td>19.69</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>121.8</td>
<td>$0</td>
</tr>
<tr>
<td>Jul-Aug</td>
<td>50</td>
<td>$81,207</td>
<td>23.47</td>
<td>$19,059</td>
<td>$9,720</td>
<td>$9,339</td>
<td>95.2</td>
<td>$0</td>
</tr>
<tr>
<td>Aug-Sep</td>
<td>N/A</td>
<td>$0</td>
<td>25.49</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>85.8</td>
<td>$0</td>
</tr>
<tr>
<td>Sep-Oct</td>
<td></td>
<td>$0</td>
<td>23.68</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>68.4</td>
<td>$0</td>
</tr>
<tr>
<td>Oct-Nov</td>
<td></td>
<td>$0</td>
<td>28.93</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>25.9</td>
<td>$0</td>
</tr>
<tr>
<td>Nov-Dec</td>
<td></td>
<td>$0</td>
<td>32.43</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>100.3</td>
<td>$0</td>
</tr>
</tbody>
</table>

**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

### Graph

- **Type:**
  - Index Values
  - Estimated Indemnities

- **Range:**
  - Start: 1991
  - End: 2015

- **Intervals:**
  - Jan-Feb
  - Feb-Mar
  - Mar-Apr
  - Apr-May
  - May-Jun
  - Jun-Jul
  - Jul-Aug
  - Aug-Sep
  - Sep-Oct
  - Oct-Nov
  - Nov-Dec

- **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%
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.