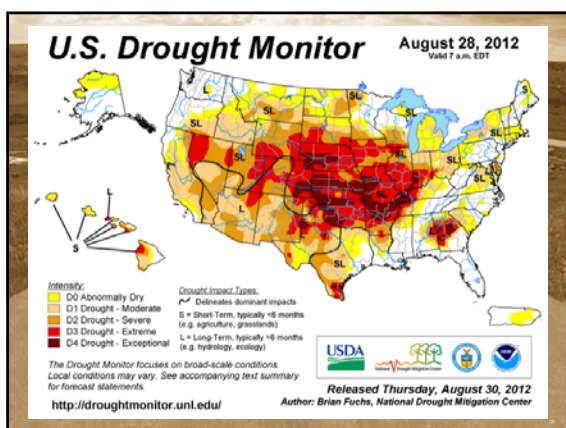


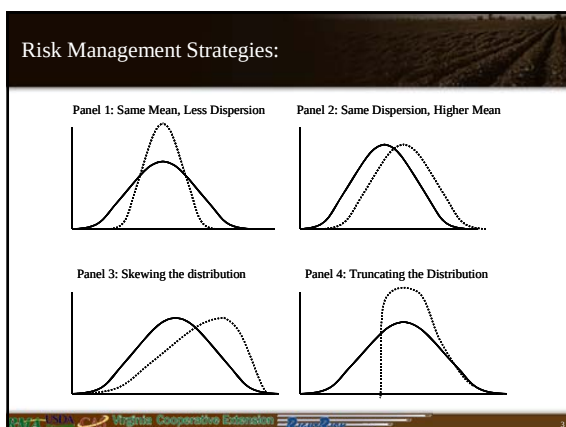
Managing Drought Risk

Using Rainfall Index – Pasture, Rangeland, Forage Insurance

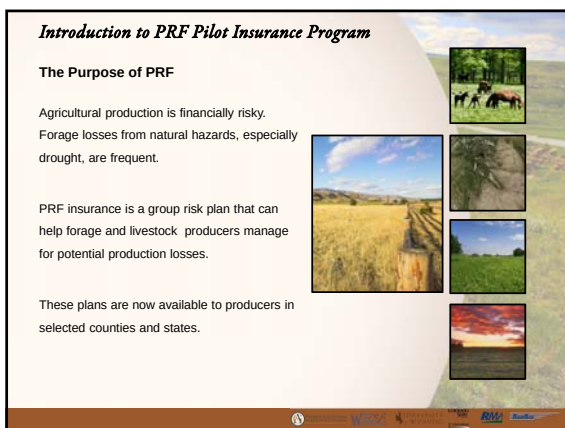
John P. Hewlett – University of Wyoming
Jay Parsons – Colorado State University
Tom Stanley – Virginia Tech

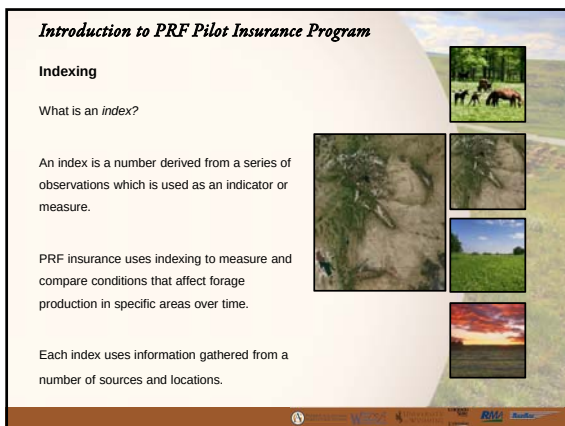
Virginia Cooperative Extension
VCSU
Virginia Tech
CAS Custom Ag Solutions
RMA USDA
RightRisk











Introduction to PRF Pilot Insurance Program

Rainfall Index or Vegetation Index

PRF insurance helps producers manage for production losses when the final grid index falls below the trigger grid index.

There are two separate indices: the rainfall index, and the vegetation index.



Rainfall Index



Vegetation Index



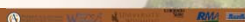

Introduction to PRF Pilot Insurance Program

Rainfall Index

In some states the rainfall index is available. Data from multiple sources, including weather, satellite, and radar data, are interpolated for the acreage within each 0.25 degree gridded area established by NOAA and identified by latitude and longitude. Losses are calculated based on deviation from the rainfall index for the grid during particular time intervals.



The insurance coverage is for a single peril, lack of precipitation. Coverage is based on historical experience of the grid, **not individual farms or ranches** or specific weather stations.

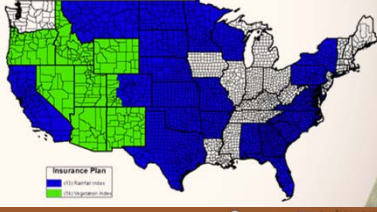
Introduction to PRF Pilot Insurance Program

PRF Program Availability for 2013

The PRF program is a pilot program, and is only available in selected states and counties.

Note: The most current coverage information is available on the [USDA-RMA website](#).

2013 and Succeeding Crop Years - Pasture, Rangeland, Forage Availability





Introduction to PRF Pilot Insurance Program

Index Intervals

Producers must select the appropriate time frames or [index intervals](#) to apply for PRF insurance coverage. It's important to select intervals when forage and pasture production is critical for your operation, and to follow guidelines for your index, county, and grid.

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	




Introduction to PRF Pilot Insurance Program

Grid ID Number

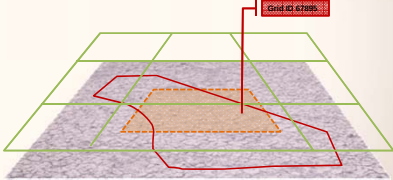
Producers must also select a reference point on the grid that best represents the location of the grazinglands or haylands they want to insure.




Introduction to PRF Pilot Insurance Program

Grid ID Number

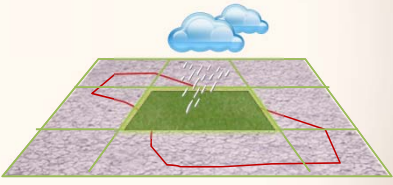
Each grid segment is identified by a [grid ID](#). Rainfall index and vegetation index programs use different grid sizes, so the grid ID will be different depending on which plan is available.




Introduction to PRF Pilot Insurance Program

Expected Index Values

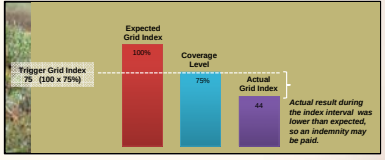
Historical data for each grid is used to determine the [expected index value](#) for either precipitation or vegetation greenness.




Introduction to PRF Pilot Insurance Program

Using Grid Indices

The expected grid index is compared to the [final grid index](#). Producers may receive an indemnity if the actual final index falls below the [trigger grid index](#), which is adjusted based on the [coverage level](#).



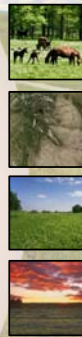
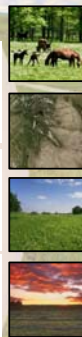

Introduction to PRF Pilot Insurance Program

Key Characteristics of PRF

Coverage is based on the experience of the **entire grid area—not individual losses**. PRF does not take into consideration the exact situation of the producer. It is possible that ...

- Grid conditions might have been normal, while a specific property was experiencing drought. A producer *might not* receive a payment, even if he or she incurred losses.
- Final grid indices may have been less than expected, while a producer may not have suffered losses. A payment *might* be awarded even though there was no loss of production.

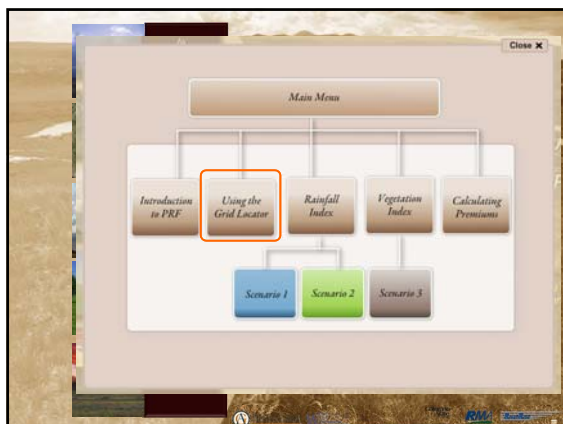



[illegible]

[illegible]

19

- 9/5/2011



Using the Grid Locator

Enter a Location to Find

Using the Grid Locator

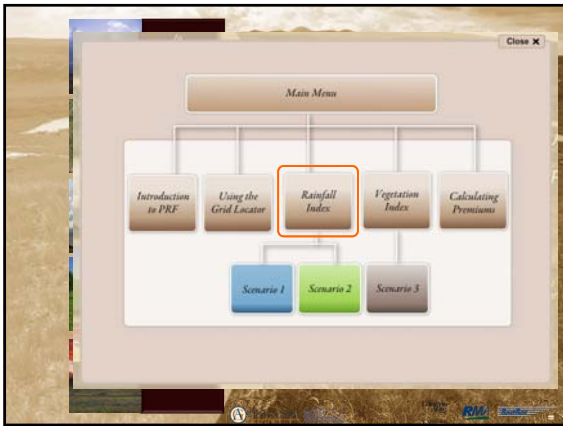
Find the Property

Navigate to the Property
 1. Place the cursor close to the location of the property and click on the map to insert a location pointer

Rainfall Index

Display the Grid Outlines and ID Numbers

Display Checkboxes
 To see the borders of counties and grid areas, select
 ✓ Counties (blue outlines)
 ✓ Grids (red outlines)
 ✓ Labels (red numbers)



Introduction to PRF Pilot Insurance Program

How the Rainfall Index is Established

The PRF Rainfall Index:

- Uses historical precipitation data.
- Forage production is influenced by precipitation.
- Measures data in specific areas called grids



Remember, this index does NOT measure the actual precipitation received on any specific property within a grid.

Introduction to PRF Pilot Insurance Program

How the Rainfall Index is Established

For each grid, data from nearby weather, radar, and satellite estimates are combined and interpolated.

The resulting index is a composite value for the entire grid that cannot be traced to a single point or data set.

The database contains data from 1948 to the present.



Introduction to PRF Pilot Insurance Program

How the Rainfall Index is Established

Precipitation data is used to establish rainfall indices for each grid. One index is calculated for each two-month interval in a twelve-month period.

The index is the ratio of interpolated precipitation to expected average (normal) precipitation. The index is expressed as a percentage.

Graph

Type: ☒ Index Values ☐ Estimated Indemnities

Range: Start: 1943 End: 2000

Intervals:

☒ Jan-Feb	☒ Feb-Mar	☒ Mar-Apr
☒ Apr-May	☒ May-Jun	☒ Jun-Jul
☒ Jul-Aug	☒ Aug-Sep	☒ Sep-Oct
☒ Oct-Nov	☒ Nov-Dec	

Introduction to PRF Pilot Insurance Program

Using the Rainfall Index Decision Support Tool

Step 1: Select a Location

- ✓ State
- ✓ County
- ✓ Grid ID (longitude and latitude that best represents the location of the acreage the producer wants to insure. A specific code is associated with each grid)

See the Grid Locator module to learn more about how to locate the specific grid ID numbers for your operation.

Introduction to PRF Pilot Insurance Program

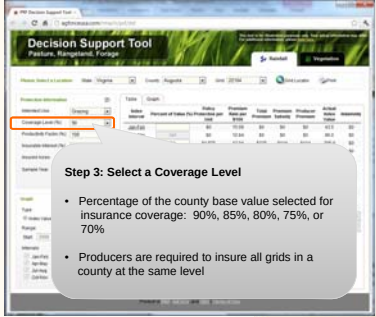
Using the Rainfall Index Decision Support Tool

Step 2: Select an Intended Use (two choices)

1. Grazingland (area of forage established on land suitable and intended for grazing livestock)
2. Hayland (established area of hay on land suitable and intended for haying)

Introduction to PRF Pilot Insurance Program

Using the Rainfall Index Decision Support Tool

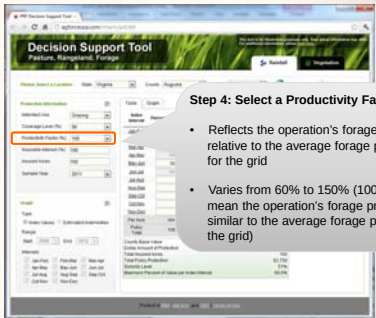


Step 3: Select a Coverage Level

- Percentage of the county base value selected for insurance coverage: 90%, 85%, 80%, 75%, or 70%
- Producers are required to insure all grids in a county at the same level

Introduction to PRF Pilot Insurance Program

Using the Rainfall Index Decision Support Tool

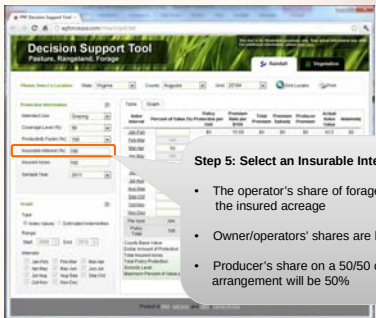


Step 4: Select a Productivity Factor

- Reflects the operation's forage productivity relative to the average forage productivity for the grid
- Varies from 60% to 150% (100% would mean the operation's forage productivity is similar to the average forage productivity for the grid)

Introduction to PRF Pilot Insurance Program

Using the Rainfall Index Decision Support Tool



Step 5: Select an Insurable Interest (%)

- The operator's share of forage production on the insured acreage
- Owner/operators' shares are likely to be 100%
- Producer's share on a 50/50 crop share arrangement will be 50%

Introduction to PRF Pilot Insurance Program

Using the Rainfall Index Decision Support Tool

The screenshot shows the 'Decision Support Tool' interface for 'Pasture, Rangeland, Forage'. The 'Insurable Acres' field is highlighted with a red box. The 'Sample Year' is set to 2015. The 'Percent of Value to be Insured' is set to 100%.

Step 6: Enter the Number of Insured Acres That Quality for Coverage

- Insurable acres are determined by policy provisions
- All insurable acres do not have to be insured
- Producer chooses the number of acres to be insured
- Uninsurable acres possess characteristics precluding grazing or hay production

Introduction to PRF Pilot Insurance Program

Using the Rainfall Index Decision Support Tool

The screenshot shows the 'Decision Support Tool' interface for 'Pasture, Rangeland, Forage'. The 'Sample Year' field is highlighted with a red box. The 'Insurable Acres' is set to 100. The 'Percent of Value to be Insured' is set to 100%.

Step 7: Select the Sample Year for Insurance Coverage

- A wide range of sample years are available
- Used for historical analysis

Introduction to PRF Pilot Insurance Program

Using the Rainfall Index Decision Support Tool

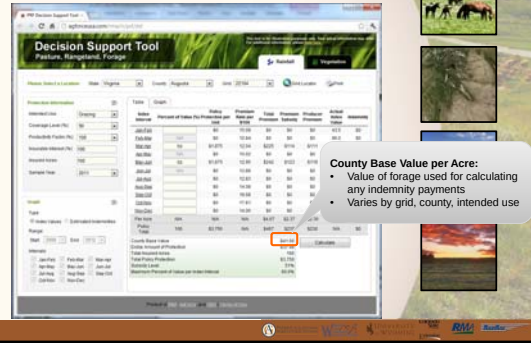
The screenshot shows the 'Decision Support Tool' interface for 'Pasture, Rangeland, Forage'. The 'Percent of Value to be Insured' field is highlighted with a red box. The 'Insurable Acres' is set to 100. The 'Sample Year' is set to 2015.

Step 8: Enter Percent of Value to be Insured Per Index Interval

- Select appropriate intervals to protect against production losses
- Each interval consists of two consecutive months
- At least two index intervals must be insured
- Selected intervals cannot overlap
- There may be a minimum and maximum percentage insurable for a single interval
- The total insurable value can be insured across different intervals
- The sum of the percent of value insured for all intervals must equal 100

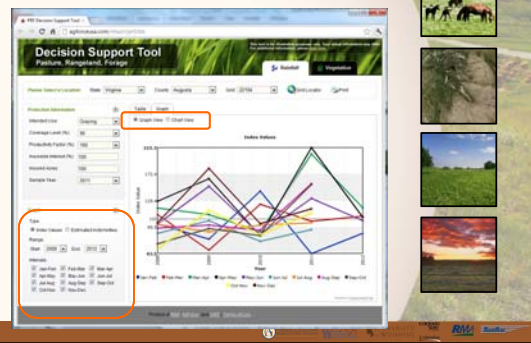
Introduction to PRF Pilot Insurance Program

Using the Rainfall Index Decision Support Tool



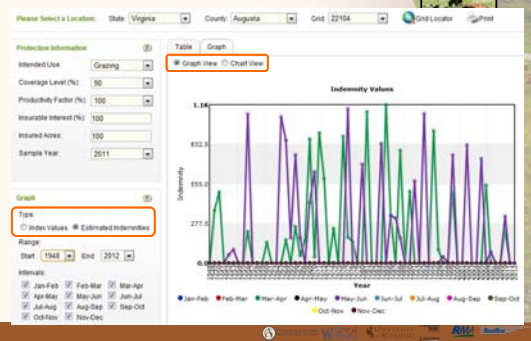
Introduction to PRF Pilot Insurance Program

Using the Rainfall Index Decision Support Tool



Introduction to PRF Pilot Insurance Program

Using the Rainfall Index Decision Support Tool



Using the Rainfall Index Decision Support Tool

Using the Rainfall Index Decision Support Tool

Using the Rainfall Index Decision Support Tool



Introduction to PRF Pilot Insurance Program

Finding Information about the Rainfall Index Program

USDA United States Department of Agriculture Risk Management Agency

Find the Rainfall Index Program and Rainfall Index Program Insurance

Search for:

View search results

Viewed by Subject:

- Available Documents
- Business and Marketing
- Crop Policies and Programs
- Tools
- Pasture Crop Insurance
- Commodity Programs
- Losses and Payments
- Weathering Agreements
- Tools and Calculators

Crop Policies and Programs

The United States currently comprises about 100 million acres of pasture and rangeland and 1.2 billion acres of cropland. The following information programs for pasture, rangeland, and forage (PRF) utilize various indexing systems to determine crop condition, risk and business policies and resources.

Program components: CRIS, Equine Pasture, Rangeland, Forage Insurance

A link to the Decision Support Tool is available on the USDA RMA website, or you can go directly to the Decision Support Tool at:

<http://agforceusa.com/rma/rpr/dst/>

• **Find the Rainfall Index Program**

• **Find the Rainfall Index Program Insurance**

Vegetation Index (VI) is based on the U.S. Geological Survey's Earth Resources Observation and Research (EROS) normalized difference vegetation index (NDVI) data derived from satellite, measuring long-term changes in greenness of vegetation of the earth since 1982.

Close X

Main Menu

Introduction to PRF

Using the Grid Locator

Rainfall Index

Vegetation Index

Calculating Premiums

Scenario 1

Scenario 2

Scenario 3

Introduction to PRF Pilot Insurance Program

Risk Management Profile:
Hagland Farms

RISK MANAGEMENT PROFILES

RightRisk

Rainfall Index-PRF helps manage drought risk for Hagland Farms

Every year, 2001, the United States experienced a record-breaking drought. The risk of drought is a constant threat to the nation's food supply. The Rainfall Index-PRF program is a new tool that helps farmers manage their drought risk. The Rainfall Index-PRF program is a new tool that helps farmers manage their drought risk. The Rainfall Index-PRF program is a new tool that helps farmers manage their drought risk.

