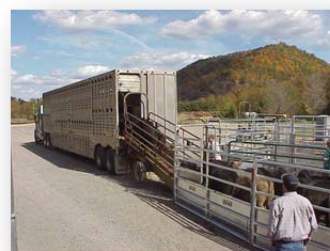


Reducing Market and Drought Risk

Jay Parsons, Colorado State University
John P. Hewlett, University of Wyoming
Tom Stanley, Virginia Cooperative Extension

Explore opportunities to secure market price insurance through the Livestock Risk Protection (LRP) Program. This is **market price insurance** is available from the crop insurance agent of your choice and does not involve futures or options contracts.



Learn about options to **manage drought risk** for 2013 by utilizing the Rainfall Index-Pasture, Rangeland, Forage (RI-PRF) insurance program. 'Rainfall insurance' can provide timely financial relief in times of drought.



Workshop Agenda

Introduction and Welcome – Virginia Cooperative Extension

Introduction to Risk, the Ag Risk 5, and options for Management

Presenter: John P. Hewlett

Livestock Risk Protection (LRP) for Virginia Feeder Cattle Producers

Presenter: Jay Parsons

Dinner

Managing Drought using Rainfall Index-Pasture, Rangeland, Forage insurance

Presenter: John P. Hewlett and Tom Stanley

Farm Simulation: Practice Making Risk Management Decisions

Presenters: Jay Parsons and John P. Hewlett

Contact information: Jay Parsons, RightRisk LLC ~Telephone: 970-215-8043~ Email: jparsons@erightrisk.com;
John P. Hewlett, RightRisk LLC~ Email: jhewlett@erightrisk.com; Tom Stanley, Virginia Cooperative Extension
Telephone: 540-463-4734~ Email: stanleyt@vt.edu

Funding for this workshop was provided by the USDA Risk Management Agency through Cooperative Agreement No. 11 IE 53102 069 with RightRisk, LLC in Fort Collins, CO.



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RISK, the AG Risk-5, and Risk Management



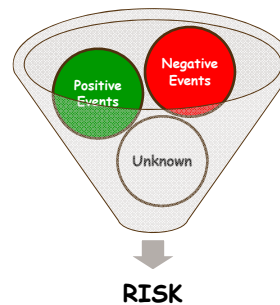
John P. Hewlett – University of Wyoming
Jay Parsons – Colorado State University
Tom Stanley – Virginia Tech

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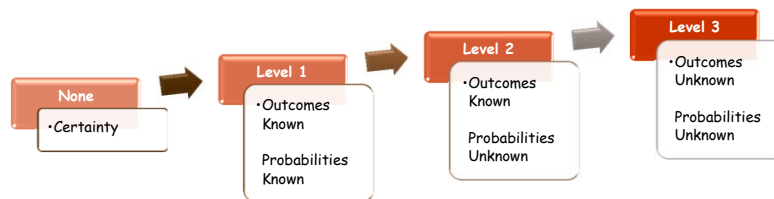
What is RISK?

- **Certainty**- lack of doubt
- **Uncertainty**- doubt about future events
- **RISK**- potential variation in the outcome of future events



What is RISK?

- **RISK**- potential variation in the outcome of future events



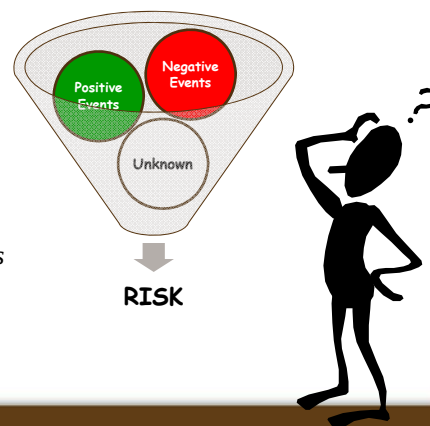
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What is RISK?

- **Cost of Loss**
 - Income
 - Resources
 - Productive capacity, etc.
- **Cost of Uncertainty**
 - Worry, doubt, fear, misallocation of resources, etc.
 - With potential for gain or loss comes moral or ethical implications



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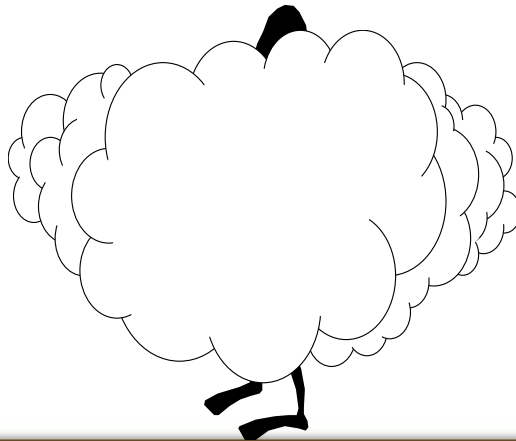
4

The HUMAN Dimension of Risk

- Emotionally we **avoid risk (uncertainty)**

to avoid the shame of:

- Failure,
- Being wrong,
- Being laughed at
- Being made fun of,
- Loosing the farm, etc.



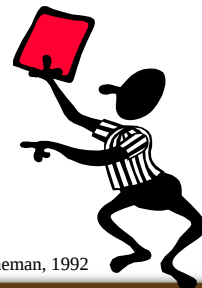
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The HUMAN Dimension of Risk

- Humans tend to be **loss averse** more than **risk adverse**
- Emotion can cloud** the ability to decide rationally
- The **way questions about risk are framed** will influence attitudes about risk
- Obtaining more information** about certain risks tends to promote a willingness to take those risks
- People tend to ignore that runs of luck tend to **regress to the mean** over time
- Humans do not possess **all information** necessary to decide in an economically rational manner
- Human choice is often based on **inadequate sampling**



Tversky and Kahneman, 1992

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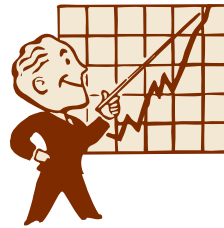
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Personal Perspectives on Risk

- Generational differences
- Gender differences
- Life stage/family differences
- Life experiences

*dynamic and
changing over time.*



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What is RISK?

- The probability of an event occurring that can negatively impact:
 - *Current profit level*
 - *Financial situation (equity position)*
 - *Satisfaction and well-being*

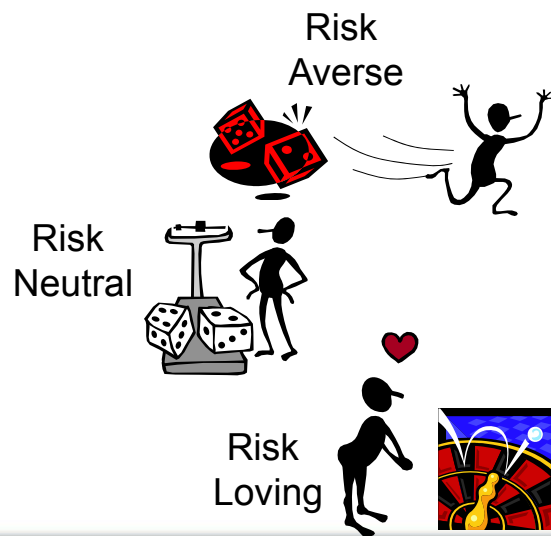


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Types of Risk Preference



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Sources of Risk in Agriculture – Ag Risk 5

1. Marketing/Price Risk
2. Production Risk
3. Institutional/Legal Risk
4. Human Risk
5. Financial Risk



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Sources of Risk

- Business Risks: *Business risks are those risks that occur independently of the way a firm (or farm) is financed. Even with 100% equity (no debt obligations) these risks still exist.*
 - Market/Price risk
 - Production risk
 - Institutional/Legal risk
 - Social risk
 - Legal risk
 - Human risk
- Non-Business Risk: *arise from the obligations created when external financing is used to leverage business operations.*
 - Financial Risk



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Risk Tradeoffs

***Profits are
returns for
taking risks***



- **Upside**: Greater risk taking usually leads to greater wealth over time
- **Downside**: Losses from risk taking can potentially be devastating
- Managing risks are a matter of **evaluating tradeoffs**
- How much **risk** (uncertainty) are you willing to accept for **possible higher returns**?

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Strategies for Managing Risk

1. Avoid it
2. Reduce it
 - a) *Reduce the probability it will happen*
 - b) *Reduce the impact if it does happen*
3. Transfer it outside the business
 - a) *Insurance*
 - b) *Contracting*
4. Increase capacity to bear
 - a) *Increase reserves*
 - b) *Maintain flexibility*
5. Accept it



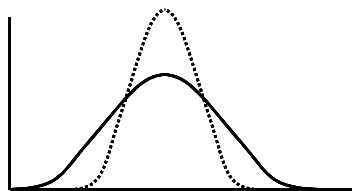
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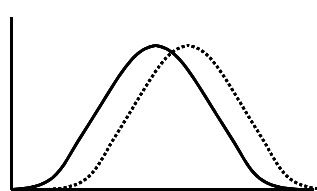
13

Strategy Impacts

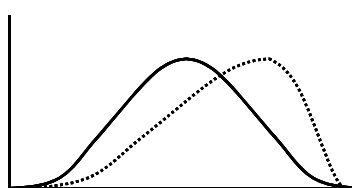
Panel 1: Same Mean, Less Dispersion



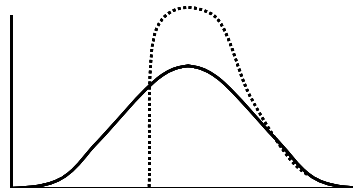
Panel 2: Same Dispersion, Higher Mean



Panel 3: Skewing the distribution



Panel 4: Truncating the Distribution



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Current Federal Insurance Options

2011 Virginia Crop Insurance Profile

Insurance Plans Available in Virginia					
Insurable Crops	Insured Acres	Total Acres	Percent Insured		
Apples	6,130	11,800	52%		
Barley - 2P	18,115	NA	20%		
Barley - 3P/4P	448	90,000	0.5%		
Barley - 1P	22,289	NA	25%		
Corn	15	900	2%		
Corn - 2P	272,323	NA	95%		
Corn - 3P/4P	8,715	490,000	2%		
Corn - 1P	59,545	NA	12%		
Cotton	84,413	NA	72%		
Cotton - 2P/3P	217	115,000	0.2%		
Cotton - 1P	23,847	NA	63%		
Fresh Market Beans	128	NA	NA		
Fresh Market Sweet Corn - 2P	5	3,300	0%		
Fresh Market Tomatoes	2,295	4,400	52%		
Grain Sorghum - 2P	725	NA	0%		
Grain Sorghum - 3P/4P	0	12,000	0%		
Grain Sorghum - 1P	211	NA	2%		
Orchards	376	11,000	3%		
Peanut	990	1,000	99%		
Peanut - 2P	12,860	14,000	92%		
Peanut - 1P	1,045	6,000	17%		
Processing Beans	3,050	NA	NA		
Processing Tomatoes	0	NA	NA		
Processing Potatoes	416,144	724	57%		
Processing - 2P	2,328	670,000	0.3%		
Processing - 3P/4P	40,862	NA	11%		
Processing - 1P	1,318	2,000	66%		
Processing - 2P/3P	0	NA	NA		
Processing - 4P/5P	333	330	61%		
Processing - 6P/7P	18,023	18,000	100%		
Processing - 8P/9P	140,862	NA	40%		
Wheat - 2P/3P	9,257	290,000	3%		
Wheat - 1P	27,426	NA	10%		
Dollar Liability Program		Total Dollar Liability			
Adjusted Gross Revenue		0			
Adjusted Gross Revenue - Life		13,317,376			
Cattle		11,887,852			
Livestock Gross Margin - Dairy		0			
Livestock Gross Margin - Swine		0			
Livestock Risk Protection - Fed Cattle		127,469			
Livestock Risk Protection - Fed Cattle		2,083,107			
Livestock Risk Protection - Lamb		0			
Livestock Risk Protection - Lamb		30,328,718			
Hemp		4,105,000			
Crop Pilot Programs					
Program		County			
Apples - 2P		All Counties			
Adjusted Gross Revenue (AGS)		25 counties and 14 independent cities in Eastern Virginia			
Cattle		All Counties, Northampton			
Processing - 2P/3P		All Counties			
Crop Pilot Programs					
Program					
All - Rural Index					
All - Regional Protection					
All - National Protection					
All - National Protection with Harvest Price Exclusion					
All - Yield Protection					
All - Not Available					

Raleigh Regional Office
 Contact: Larry Alkerson, Director
 Address: 4400 Blount Road
 Suite 105
 Raleigh, NC 27609
 Phone: (919) 875-5000
 Fax: (919) 875-4928
 E-Mail: larry.alkerson@nc.usda.gov

**Eastern Regional
 Compliance Office**
 Contact: Scott Lewis, Director
 Address: 4400 Blount Road
 Suite 105
 Raleigh, NC 27609
 Phone: (919) 875-5000
 Fax: (919) 875-4928
 E-Mail: scott.lewis@nc.usda.gov

Data current as of January 10, 2012

<http://www.rma.usda.gov/pubs/2012/stateprofiles/virginia11.pdf>

Virginia Fifteen Year Crop Insurance History

Year	Policies Earning Premium	Net Acres Insured	Liability	Gross Premium	Losses	Loss Ratio
1997	15,510	753,023	222,541,446	12,113,152	11,609,927	0.46
1998	9,380	794,961	238,045,453	14,174,112	26,812,433	1.89
1999	10,779	837,104	263,337,321	18,187,977	26,303,742	1.56
2000	10,597	942,600	261,701,377	18,440,580	12,268,024	0.67
2001	9,550	833,335	282,241,868	19,951,403	14,458,419	0.72
2002	9,222	960,961	303,983,195	20,835,274	44,877,786	2.14
2003	8,719	972,152	304,368,823	23,186,372	37,861,262	1.63
2004	8,672	994,727	342,608,425	28,218,521	15,160,121	0.54
2005	8,744	968,361	273,613,344	23,384,389	16,117,507	0.69
2006	8,203	942,991	289,785,191	26,423,574	16,962,717	0.64
2007	8,273	985,324	367,381,555	37,333,657	62,627,180	1.68
2008	6,463	1,069,256	470,064,841	56,107,834	24,486,433	0.56
2009	6,760	1,118,649	414,674,058	49,855,722	27,704,912	0.56
2010	6,640	1,154,043	423,275,395	47,003,573	118,740,063	2.53
2011	7,021	1,254,901	568,344,698	74,407,231	21,726,140	0.29

* 2011 figures are incomplete

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QUESTIONS?

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Livestock Risk Protection (LRP) for Virginia Feeder Cattle Producers



Jay Parsons
Colorado State University

John P. Hewlett
University of Wyoming



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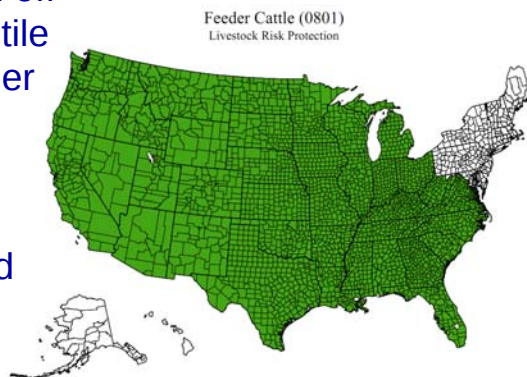
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LRP Feeder Cattle

- LRP for feeder cattle offers *price* protection for feeder cattle producers based off of the Chicago Mercantile Exchange Group Feeder Cattle Index.
- Now available in all counties of Virginia and across several other states



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LRP Feeder Cattle

- It does not cover sickness or death of the cattle or insure against possible rising feed costs.
- Producers remain subject to **basis price risk**



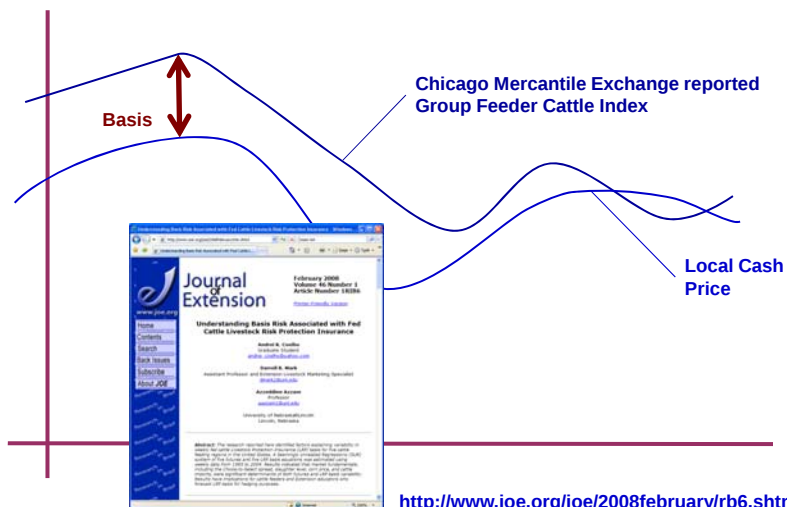
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Basis Risk



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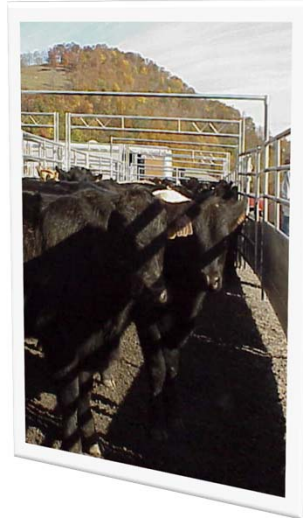
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Basics of LRP for Feeder Cattle

- **Product Offered:** Protection for producer against decline in cattle prices below the established coverage price
- **Insurance Period:** Offered for 13, 17, 21, 26, 30, 34, 39, 43, 47 or 52-week periods
 - The producer will choose a time closest to the time cattle will be marketed or time when cattle will reach the desired weight



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Basics of LRP for Feeder Cattle

- **Application:** An application is required to purchase insurance coverage
- **Specific Coverage Endorsement:** A producer must file a Specific Coverage Endorsement for each group of feeder cattle to be insured. Several endorsements may be filed under one application as long as beneficial interests are the same



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LRP for Feeder Cattle: Types and Weights Insurable

- Steer feeder cattle < 6.0 cwt for steers and bulls and steers only from 6.0 to 9.0 cwt
- Heifer feeder cattle < 6.0 cwt and heifer feeder cattle from 6.0 to 9.0 cwt
- Predominantly Brahman heifers, steers, and bulls < 6.0 cwt and predominantly Brahman heifers and steers from 6.0 cwt to 9.0 cwt
- Predominately dairy heifers, steers and bulls < 6.0 cwt and predominately dairy heifers and steers 6.0 to 9.0 cwt

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Basics of LRP for Feeder Cattle

- “Crop” year: [July 1 to June 30]
 - **Annual Policy Limits:** *The maximum number of head of feeder cattle that may be covered during a crop year is 2,000 head per producer*
- Endorsement Limits:
 - *A limit of 1,000 head of feeder cattle may be insured under any one Specific Coverage Endorsement*



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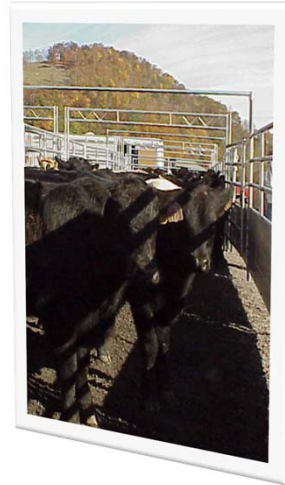
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LRP for Feeder Cattle: Coverage Prices and Levels

- Coverage Prices
 - the prices that may be insured by the producer
- Coverage Levels
 - based on the chosen coverage price and range from 70 to 100% of the expected end value
- Price Adjustment Factors
 - account for differences between steer prices and prices of other types and weight of cattle
 - adjustments are applied prior to posting on the RMA website



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LRP for Feeder Cattle: Actual and Expected End Value of Feeder Cattle

- Expected End Value
 - This is the expected prices at the end of an insurance period for each specific type and weight of feeder cattle announced daily on the RMA website
- Actual End Value
 - This is the value of the cash settled CME feeder cattle index on the end date of the insurance period, adjusted by RMA for feeder cattle type and weight
- Subsidy Level
 - RMA provides a 13% subsidy on LRP feeder cattle premiums

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Cost Estimator

USDA United States Department of Agriculture
Risk Management Agency

Cost Estimator
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Home

Home > Information Browser > Cost Estimator > Detailed Estimate

Detailed Estimate CE0301

Detailed Criteria

* Insurance Plan : Livestock Risk Protection 81

* Commodity Year : 2012

* State : Virginia 51

* County : Rockbridge 163

* - indicates required field.

[Continue](#) [Reset](#)

Data valid as of: 9/4/2012

The Cost Estimator only provides a general premium estimate. Refer to your crop insurance agent and policy for specific information regarding insurance coverage, actuarial information, conditions and exclusions.

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Cost Estimator

<http://www.rma.usda.gov>

USDA United States Department of Agriculture
Risk Management Agency

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Detailed Estimate

[Back](#) [Save](#)

Selected Initial Criteria

* Insurance Plan : Livestock Risk Protection 81

* Commodity Year : 2012

* State : Virginia

* County : 51

* Effective Date : August 015

[Feeder Cattle 0801](#) [Add Item](#) [Refresh](#)

Item 1	Commodity	Type	Practice	Effective Date	Endorsement Length	Number of Head	Target Weight	Insured Share Percent
Feeder Cattle 0801	Steers Weight 1 809	No Practice Specified 997	02/17/2012	26 Weeks	100	5.5	1.0	

[Get Estimates](#)

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Data valid as of: 2/16/2012

United States Department of Agriculture
Risk Management Agency

Cost Estimator
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Producer and Detail Worksheets for Estimate 106980

Back Save Print/Export

Selected Initial Criteria
* Insurance Plan : Livestock Risk Protection 81 * Commodity Year : 2012 * State : Virginia 51
* County : Augusta 019

Detailed Item Manager
Feeder Cattle 0801: Item 1 << Show Item Details >>

99 % 98 % 97 % 95 % 94 % 93 % 92 % 91 %

Detail Worksheet **Producer Worksheet**

Section 1: Insured Value (Liability)

1.01 Calculate the Insured Value . (Rounded to the nearest whole dollar)			
1	Number of Head *	Target Weight *	Coverage Price *
	100 *	2 *	\$179.17 *
		Share *	Insured Value *
		1.000 *	\$97,994.00 *

Section 2: Total Premium

2.01 Calculate the Total Premium . If total premium is less than \$1, set it to \$1. (Rounded to the nearest whole dollar)			
1	Insured Value *	Rate *	Total Premium *
	\$97,994.00 *	0.024482 *	\$2,379.00 *

Section 3: Producer Premium

3.01 Calculate the Subsidy . (Rounded to 3 decimal places)			
1	Total Premium *	Subsidy Factor *	Subsidy *
	\$2,379.00 *	0.130 *	\$439.00 *
3.02 Calculate the Producer Premium . (Rounded to nearest whole dollar)			
1	Total Premium *	Subsidy *	Producer Premium *
	\$2,379.00 *	\$439.00 *	\$2,940.00 *

Miscellaneous Calculations

Calculate the A&O Expense Subsidy Amount .			
	Total Premium Amount *	A&O Expense Subsidy Percent *	A&O Expense Subsidy Amount *
	\$2,379.00 *	0.222 *	\$750.14 *

THIS WORKSHEET IS INTENDED TO ASSIST IN ESTIMATING PRODUCER PREMIUM ONLY.

The Cost Estimator only provides a general premium estimate. Refer to your crop insurance agent and policy for specific information regarding insurance coverage, actuarial information, conditions and exclusions.

Data valid as of: 2/16/2012

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United States Department of Agriculture
Risk Management Agency

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- Database Query

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Detailed Estimate

CE0301

Detailed Criteria

* Insurance Plan	: Livestock Risk Protection 81
* Commodity Year	: 2012
* State	: Virginia 51
* County	: Rockbridge 163

* - indicates required field.

Continue Reset

Data valid as of: 9/4/2012

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14

Livestock Reports

Main Menu | Print 9/6/2012 12:29:15 AM

LRP Coverage Prices, Rates, and Actual Ending Values Criteria

Select a Type. Type selection is not required.

Effective Date: 09/05/2012
 State: 51 Virginia
 Commodity: 0801 Feeder Cattle
 Type: 810 Steers Weight 2

Report Type: ☒ Web Output ☐ Formatted for Printing

<< Back Create Report

Holidays where LRP Sales Data will be Unavailable

- 10/08/2012 Columbus Day *
- 11/12/2012 Veteran's Day *
- 11/22/2012 Thanksgiving Day
- 12/25/2012 Christmas Day
- 01/01/2013 New Year's Day
- 01/21/2013 Birthday of Martin Luther King, Jr. *

Livestock Reports

Select Criteria | Main Menu | Print 9/6/2012 12:41:35 AM

LRP Coverage Prices, Rates, and Actual Ending Values - Report for 09/05/2012

* See notes at bottom of page

State	County	Endorsement Length	Commodity	Type	Practice	Crop Year	Exp. End Value	Coverage Price	Coverage Level	Rate	Cost Per CWT	End Date	Actual End Value
51 Virginia	998 All Counties	13	0801 Feeder Cattle	810 Steers Weight 2	997 No Practice Specified	2013	148.894	\$148.440	0.997000	0.028692	4.259	12/05/2012	
51 Virginia	998 All Counties	13	0801 Feeder Cattle	810 Steers Weight 2	997 No Practice Specified	2013	148.894	\$146.440	0.983500	0.021948	3.214	12/05/2012	
51 Virginia	998 All Counties	13	0801 Feeder Cattle	810 Steers Weight 2	997 No Practice Specified	2013	148.894	\$144.440	0.970100	0.016443	2.375	12/05/2012	
51 Virginia	998 All Counties	13	0801 Feeder Cattle	810 Steers Weight 2	997 No Practice Specified	2013	148.894	\$142.440	0.956700	0.012096	1.723	12/05/2012	
51 Virginia	998 All Counties	13	0801 Feeder Cattle	810 Steers Weight 2	997 No Practice Specified	2013	148.894	\$140.440	0.943200	0.008530	1.198	12/05/2012	
51 Virginia	998 All Counties	17	0801 Feeder Cattle	810 Steers Weight 2	997 No Practice Specified	2013	150.047	\$149.600	0.997000	0.031671	4.738	01/02/2013	
51 Virginia	998 All Counties	17	0801 Feeder Cattle	810 Steers Weight 2	997 No Practice Specified	2013	150.047	\$147.600	0.983700	0.025251	3.727	01/02/2013	

Livestock Reports

Main Menu | Print 9/6/2012 12:53:22 AM

LRP Coverage Prices, Rates, and Actual Ending Values Criteria

Select a Type. Type selection is not required.

Effective Date: 03/01/2012
 State: 51 Virginia
 Commodity: 0801 Feeder Cattle
 Type: 809 Steers Weight 1

Report Type: ☒ Web Output ☐ Formatted for Printing

<< Back Create Report

Holidays where LRP Sales Data will be Unavailable

- 10/08/2012 Columbus Day *
- 11/12/2012 Veteran's Day *
- 11/22/2012 Thanksgiving Day
- 12/25/2012 Christmas Day
- 01/01/2013 New Year's Day
- 01/21/2013 Birthday of Martin Luther King, Jr. *
- 02/18/2013 Washington's Birthday *
- 03/29/2013 Good Friday (market holiday)

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Select Criteria | Main Menu | Print 9/6/2012 12:56:17 AM

LRP Coverage Prices, Rates, and Actual Ending Values - Report for 03/01/2012

* See notes at bottom of page

State	County	Endorsement Length	Commodity	Type	Practice	Crop Year	Exp. End Value	Coverage Price	Coverage Level	Rate	Cost Per CWT	End Date	Actual End Value
51 Virginia	998 All Counties	13	0801 Feeder Cattle	809 Steers Weight 1	997 No Practice Specified	2012	179.663	\$177.130	0.985900	0.024300	4.304	05/31/2012	167.530
.....													
51 Virginia	998 All Counties	21	0801 Feeder Cattle	809 Steers Weight 1	997 No Practice Specified	2012	180.572	\$160.440	0.888500	0.006129	0.983	07/26/2012	147.600
51 Virginia	998 All Counties	26	0801 Feeder Cattle	809 Steers Weight 1	997 No Practice Specified	2012	180.730	\$178.200	0.986000	0.032617	5.812	08/30/2012	153.960
51 Virginia	998 All Counties	26	0801 Feeder Cattle	809 Steers Weight 1	997 No Practice Specified	2012	180.730	\$176.000	0.973800	0.027331	4.810	08/30/2012	153.960
51 Virginia	998 All Counties	26	0801 Feeder Cattle	809 Steers Weight 1	997 No Practice Specified	2012	180.730	\$173.800	0.961700	0.022854	3.972	08/30/2012	153.960
51 Virginia	998 All Counties	26	0801 Feeder Cattle	809 Steers Weight 1	997 No Practice Specified	2012	180.730	\$171.600	0.949500	0.018949	3.252	08/30/2012	153.960
51 Virginia	998 All Counties	26	0801 Feeder Cattle	809 Steers Weight 1	997 No Practice Specified	2012	180.730	\$165.000	0.913000	0.011373	1.877	08/30/2012	153.960
51 Virginia	998 All Counties	26	0801 Feeder Cattle	809 Steers Weight 1	997 No Practice Specified	2012	180.730	\$160.600	0.888600	0.007973	1.280	08/30/2012	153.960
51 Virginia	998 All Counties	26	0801 Feeder Cattle	809 Steers Weight 1	997 No Practice Specified	2012	180.730	\$160.600	0.888600	0.007973	1.280	08/30/2012	153.960

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Livestock Insurance: LRP for Feeder Cattle Example

Contract Data	Value
Number of Steers	100
Expected Weight	700
Current Date	Sep. 5
Marketing Date	Jan. 2
Insurance Period	17 Weeks
Expected Ending Value	150.047
Coverage Level	0.997
Coverage Price	149.60



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Livestock Insurance: LRP for Feeder Cattle Example

Contract Data	Value	Source
Insured Value	\$105,033	100 hd x 7 cwt/hd x 150.047/cwt
Premium Rate	0.031671	RMA
Total Premium	\$3,327	105,033 x 0.031671
Subsidy Rate	13%	RMA
Subsidy Amount	\$433	3,327 x 0.13
Producer Premium	\$2,894	3,327 - 433

$$\text{Producer Premium} = 2,894 / (700 \text{ cwt}) = \$4.13/\text{cwt}$$



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Livestock Insurance: LRP for Feeder Cattle Example

- Suppose the CME-reported actual ending value is \$142.00/cwt.
- Indemnity calculation

Indemnity = 100 hd x 7 cwt/hd x (150.047-142.00) = **\$5,633**

- This is independent of your actual marketing decision and outcome.

Livestock Insurance: LRP for Feeder Cattle Example

- Suppose you actually market your steers for \$127.00/cwt. at the local auction.
- Net Revenue Calculations

Sales Revenue = 100 hd x 7 cwt/hd x 127 = \$88,900

Net Revenue = Sales + Indemnity – Producer Premium

Net Revenue = 88,900 + 5,633 – 2,894 = \$91,639

Net Revenue per Cwt. = 91,639/(100 x 7) = **\$130.91/cwt.**

LRP Feeder Cattle - History

Federal Crop Insurance Corporation
Reinsurance Year Statistics for 2012
As of: 9/5/2012
Nationwide Summary - By State/Commodity

Commodity	Ins Plan	Pol Sold	Pol Earn Prem	Pol Indem	Units Earn Prem	Units Indem	Number of Head *	Liabilities	Total Premium	Subsidy	Indemnity	Loss Ratio
VIRGINIA												
FEEDER CATTLE	LRP	56	23	12	42	19	1,843	1,984,994	40,916	5,319	45,932	1.12
Grand Total		56	23	12	42	19	1,843	1,984,994	40,916	5,319	45,932	1.12




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Price Risk Analysis: Futures, Options, LRP Comparison

Conditions at Time of Purchase	Futures	Put Option	LRP	Cash
Futures Price: Options Strike Price: LRP Coverage	\$115.55	\$114.00	\$121.50	
Expected Basis Entered by User	\$6.00	\$6.00		
Brokerage and Other Misc Costs	\$0.30	\$0.30	\$0.18	
Margin Call Transaction Costs: \$/Cwt	\$0.00			
Net Predicted Cash/Floor Price	\$121.25	\$115.15	\$117.39	
Percent Hedged or With Price Protection	87.0%	87.0%	100.0%	
Conditions at Time of Sale/Exercise/Offset For Futures/Options/Insurance				
Futures Price at Sale/Exercise/Offset	\$115.00	\$115.00		
Cash Settlement Index Value Termination/Sale/Offset			\$115.00	
Profit/Loss on Futures/Options OR LRP Indemnity, if any	\$0.55	-4.55	\$2.39	
Cash Conditions at Time of Sale				
Cash Price at Sale Time	\$121.00	\$121.00	\$121.00	\$121.00
Net Price Received @ Sale (Cash - Brokerage-Trading) +/- Hedge P/L Adj % Coverage	\$121.22	\$116.78	\$123.21	\$121.00
Cost of Production Per Cwt (Cow/Calf/Feeder)	\$105.00	\$105.00	\$105.00	\$105.00
Net Income Received Per Cwt of Production	\$16.22	\$11.78	\$18.21	\$16.00
Buy Purchase	Check Current LRP Coverage Levels at the RMA Web Site.			
Current Futures Price-Initial Position	\$115.55			
Put Option Strike Price at Purchase	\$114.00			
Put Option Premium @ Strike Price	\$4.55			
Expected Basis at Sale Time	\$6.00			
LRP Coverage Price Level Selected	\$121.50			
Coverage Rate for LRP Coverage Price	0.038859			
RMA Premium for Coverage Level	\$4.7212			
Sale				
Futures Price @ Sale/Offset Time	\$115.00			
Local Cash Price at Sale Time	\$121.00			
Actual Basis at Sale Time	\$6.00			
CHS Cash Settlement Index @Sale/Offset	\$115.00			
Total Cost of Production Cow/Calf	\$105.00			

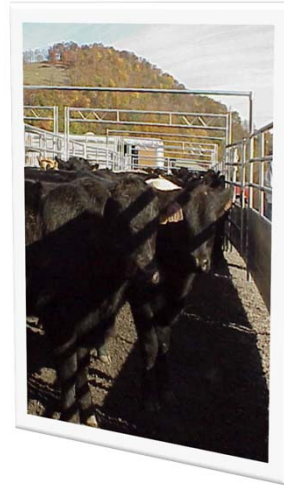
These three values MUST be changed together for correct results.

Number of animals considered	100
Expected Average Cwt at time of Sale	5.75
LRP Ownership Share of these cattle	100%
Number of Feeder Contracts Needed	1.15
Number of Feeder Contracts Purchased	1
Percent Hedged	86.96%

- Farm Management Wiki tool "Futures, Options, LRP Comparison"
- <http://FarmManagement.org/Wiki>
- Click on Contents > Tools > "Futures Options LRP Comparison"

LRP for Feeder Cattle: Summary

- Livestock Risk Protection for feeder cattle
- The insurable types and weights of feeder cattle under livestock insurance
- Insurance against price changes
- The difference between LRP insurance coverage and an options coverage



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RMA LRP Fact Sheet

LRP

Livestock Risk Protection

Feeder Cattle

Revised May 2010

The length of insurance coverage available for each specific coverage endorsement is 11, 17, 21, 26, 30, 34, 38, 42, 47, or 51 weeks.

Coverage is available for the calves, steers, heifers, predominantly Brahman, and predominantly dairy cattle categories. Feeder cattle producers may also choose from two weight ranges: under 900 pounds and 900-999 pounds.

LRP-Feeder Cattle insurance is available to producers with feeder cattle in the following 17 states: Alabama, Arizona, Arkansas, California, Colorado, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

Coverage Levels, Prices, and Rates
Cattle producers may select coverage prices ranging from 75 to 100 percent of the expected ending value. At the end of the insurance period, if the actual ending value is below the coverage price, the producer will be paid the difference between the coverage price and actual ending value.

The LRP-Feeder Cattle program's coverage price, rates, actual ending values, and per head/headweight cost of insurance may be viewed on the Risk Management Agency's Web site. Actual ending values are based on weighted average prices as reported in the Chicago Mercantile Exchange Group Feeder Cattle Index. Actual ending values will be posted on the Risk Management Agency's Web site at the end of the insurance period.

About the Application Process

Insurance must be purchased through an approved agent. An agent will set up your insurance and provide you with a contract. The contract will specify the insurance type, the coverage price, the coverage level, the coverage period, the coverage price, and the coverage level. The contract will also specify the insurance type, the coverage price, the coverage level, the coverage period, the coverage price, and the coverage level.

Download Copies from the Web
Visit our online information center page at <http://www.rma.usda.gov>

To be a complete agent, you must be a member of the National Livestock Producers Association (NLPA) and the National Animal Health Inspection Service (NAHIS). For more information, visit <http://www.rma.usda.gov>.

RMA Web Site

Only LRP Coverage Price, Rate, and Actual Ending Value: <http://www.rma.usda.gov>

Insurance Contract: <http://www.rma.usda.gov>

Approved Livestock Agents and Insurance Companies: <http://www.rma.usda.gov>

Related ADH online livestock reports: <http://www.rma.usda.gov>

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Questions

?

Jay Parsons
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United States
Department of
Agriculture



Program
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1667-09

A Risk Management Agency Fact Sheet

Livestock Risk Protection Feeder Cattle

Revised May 2009

General Background

Livestock Risk Protection (LRP)-Feeder Cattle is designed to insure against declining market prices. Cattle producers may select from a variety of coverage levels and insurance periods that match the time their feeder cattle would normally be marketed (ownership may be retained).

LRP-Feeder Cattle insurance may be purchased throughout the year from approved livestock insurance agents. Premium rates, coverage prices, and actual ending values are posted online daily.

Coverage Availability

Cattle producers submit a one-time application for LRP-Feeder Cattle coverage. After the application is accepted, specific coverage endorsements may be purchased for up to 1,000 head of feeder cattle that are expected to weigh up to 900 pounds at the end of the insurance period. The annual limit for LRP-Feeder Cattle is 2,000 head per producer for each crop year (July 1 to June 30). All insured calves and cattle must be located in a State approved for LRP-Feeder Cattle at the time insurance is purchased.

The length of insurance coverage available for each specific coverage endorsement is 13, 17, 21, 26, 30, 34, 39, 43, 47, or 52 weeks.

Coverage is available for the calves, steers, heifers, predominantly Brahman, and predominantly dairy cattle categories. Feeder cattle producers may also choose from two weight ranges: under 600 pounds and 600-900 pounds.

LRP-Feeder Cattle insurance is available to producers with feeder cattle in the following 37 States: Alabama, Arizona, Arkansas, California, Colorado, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

Coverage Levels, Prices, and Rates

Cattle producers may select coverage prices ranging from 70 to 100 percent of the expected ending value. At the end of the insurance period, if the actual ending value is below the coverage price, the producer will be paid an indemnity for the difference between the coverage price and actual ending value.

The LRP-Feeder Cattle program's coverage prices, rates, actual ending values, and per hundredweight cost of insurance may be viewed on the Risk Management Agency's Web site. Actual ending values are based on weighted average prices as reported in the Chicago Mercantile Exchange Group Feeder Cattle Index. Actual ending values will be posted on Risk Management Agency's Web site at the end of the insurance period.

RMA Web Site

Daily LRP Coverage Prices, Rates, and Actual Ending Values: <http://www.rma.usda.gov/tools/livestock.html>

Premium Calculator:
<http://www.rma.usda.gov/tools/premcalc.html>

Approved livestock agents and insurance companies:
<http://www.rma.usda.gov/tools/agent.html>

Related AMS online livestock reports:
http://marketnews.usda.gov/portal/lg?paf_dm

About the Application Process

LRP-Feeder Cattle insurance must be purchased through a livestock insurance agent. An application can be filled out at any time; however, insurance does not attach until a specific coverage endorsement is purchased. Coverage will not attach unless the premium is paid on the day coverage is purchased. Multiple specific coverage endorsements may be purchased with one application. Insurance coverage starts the day a specific coverage endorsement is purchased and the purchase is approved by Risk Management Agency. There are funding limitations for all livestock programs; therefore, Risk Management Agency tracks total policy sales against available underwriting capacity using a real-time, Web-based program. Sales will cease when underwriting capacity is reached.

Contact Us

USDA/RMA

1400 Independence Ave., SW, Stop 0801

Washington, D.C. 20250-0801

RMA Web site: <http://www.rma.usda.gov>

E-mail: rmaweb.content@rma.usda.gov

Download Copies from the Web

Visit our online publications/fact sheets page at: <http://www.rma.usda.gov/pubs/rme/>

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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

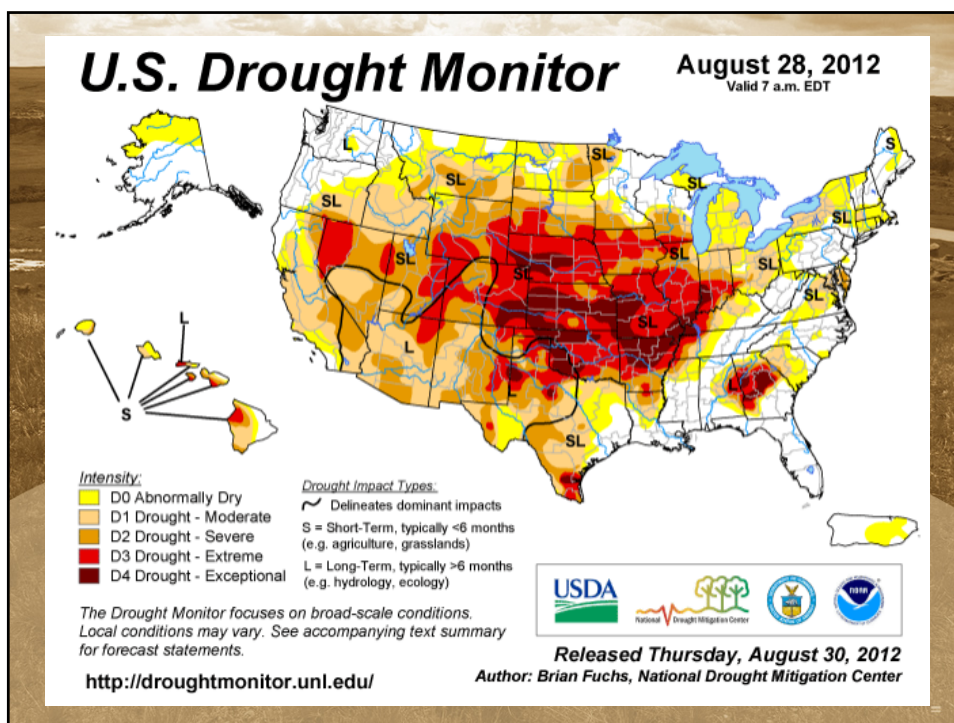
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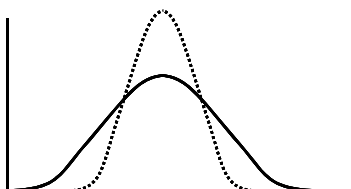




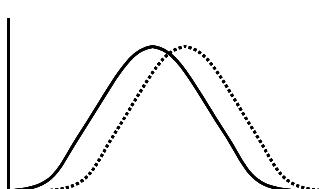


Risk Management Strategies:

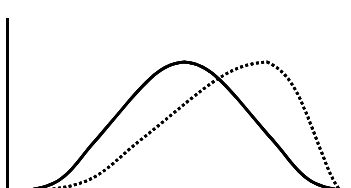
Panel 1: Same Mean, Less Dispersion



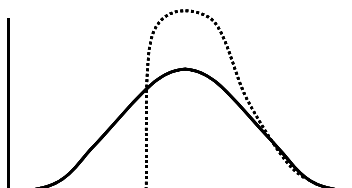
Panel 2: Same Dispersion, Higher Mean



Panel 3: Skewing the distribution



Panel 4: Truncating the Distribution



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Introduction
to
PRF



Using
the
Grid Locator



Rainfall
Index



Vegetation
Index



Calculating
Premiums

Pasture, Rangeland, Forage (PRF)

Rainfall and Vegetation Index
Insurance Programs



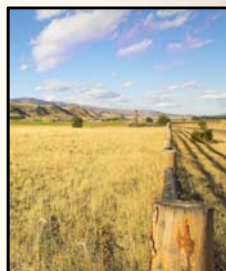
Introduction to PRF Pilot Insurance Program

The Purpose of PRF

Agricultural production is financially risky.
Forage losses from natural hazards, especially drought, are frequent.

PRF insurance is a group risk plan that can help forage and livestock producers manage for potential production losses.

These plans are now available to producers in selected counties and states.



Introduction to PRF Pilot Insurance Program

Indexing

What is an *index*?

An index is a number derived from a series of observations which is used as an indicator or measure.

PRF insurance uses indexing to measure and compare conditions that affect forage production in specific areas over time.

Each index uses information gathered from a number of sources and locations.



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.



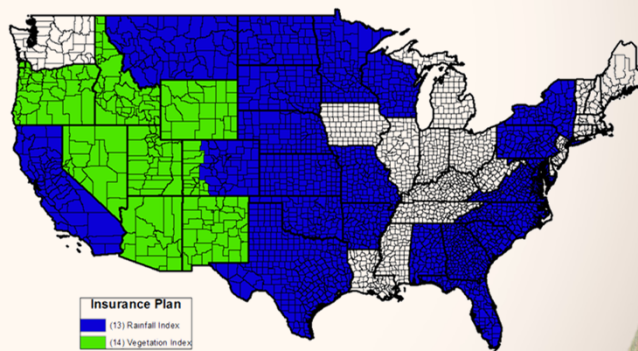
Introduction to PRF Pilot Insurance Program

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.

April-2010	May-2010	June-2010
S M T W T F S	S M T W T F S	S M T W T F S
1 2 3	1	1 2 3 4 5
4 5 6 7 8 9 10	2 3 4 5 6 7 8	6 7 8 9 10 11 12
11 12 13 14 15 16 17	9 10 11 12 13 14 15	13 14 15 16 17 18 19
18 19 20 21 22 23 24	16 17 18 19 20 21 22	20 21 22 23 24 25 26
25 26 27 28 29 30	23 24 25 26 27 28 29	27 28 29 30
	30 31	



Introduction to PRF Pilot Insurance Program

Grid ID Number

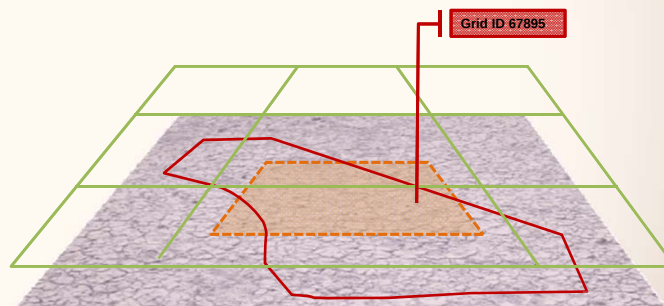
Producers must also select a reference point on the grid that best represents the location of the grazinglands or haylands they want to insure.



Introduction to PRF Pilot Insurance Program

Grid ID Number

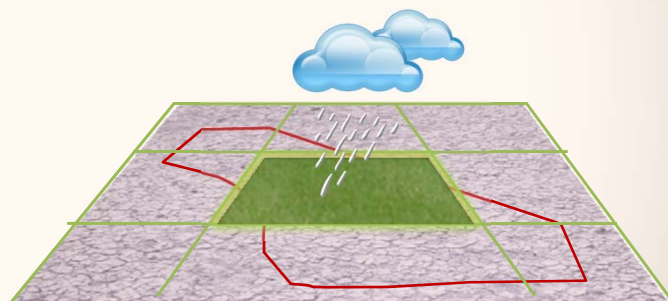
Each grid segment is identified by a [grid ID](#). Rainfall index and vegetation index programs use different grid sizes, so the grid ID will be different depending on which plan is available.



Introduction to PRF Pilot Insurance Program

Expected Index Values

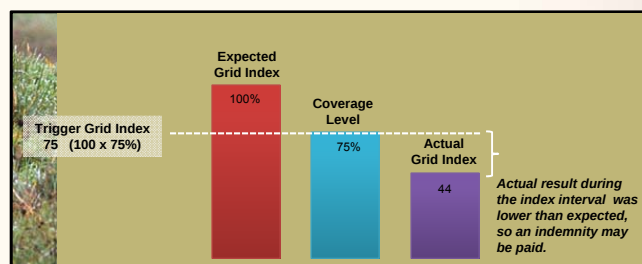
Historical data for each grid is used to determine the [expected index value](#) for either precipitation or vegetation greenness.



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.*



Introduction to PRF Pilot Insurance Program

Property that Extends Beyond the Grid Area

- A producer can base his or her insurance coverage on a single grid ID or on multiple grid IDs.
- Non-contiguous acres must be insured using the same coverage parameters if they are in the same grid.
- If the non-contiguous acres are in different grids, the coverage parameters can be different.



The rules are complex. Producers should contact an insurance agent familiar with PRF if they have questions.



Introduction to PRF Pilot Insurance Program

Important Dates

January	February	March	April
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	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
May	June	July	August
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	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 31
September	October	November	December
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	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



Introduction to PRF Pilot Insurance Program

Flexible Risk Management Strategies

The PRF insurance program is one more option for farmers and ranchers to manage potential losses.

Agricultural operations can choose PRF insurance:

- As a standalone product.
- In combination with other risk management strategies or insurance products.

Producers considering PRF should work closely with an insurance agent to understand their options.

MPCI

Multi Peril Crop Insurance

LGM

Livestock Gross Margin

AGR-Lite

LRP

Livestock Risk Protection

NAP

Non-Insured CROP DISASTER Assistance Program



Disaster Assistance Programs

~~Supplemental Revenue Assistance (SURE)~~

- Livestock Forage Disaster Program (LFP)
- Livestock Indemnity Program (LIP)
- Emergency Livestock Assistance Program (ELAP)



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Rainfall Index

Virginia Rangeland Insurance History – counties with highest insured acres

2010 Crop Year	County Name(Code)	Crop	Pol Sold	Pol Earn Prem	Pol Indem	Units Earn Prem	Units Indem	Net Acres	Liabilities	Total Premium	Subsidy	Indemnity	Loss Ratio
VIRGINIA	VIRGINIA - Pittsylvania (143)	PASTURE,RANGELAND,FORAGE	33	33	2	80	2	6,462	741,748	93,442	48,182	1,380	.01
VIRGINIA	VIRGINIA - Halifax (083)	PASTURE,RANGELAND,FORAGE	14	14	2	38	2	4,202	323,498	39,374	20,527	407	.01
VIRGINIA	VIRGINIA - Franklin (067)	PASTURE,RANGELAND,FORAGE	12	12	7	24	7	2,440	222,294	22,637	12,245	4,546	.20
Grand Total			100	100	42	242	53	18,853	1,686,633	192,963	100,628	51,624	.27

2011 Crop Year	County Name(Code)	Crop	Pol Sold	Pol Earn Prem	Pol Indem	Units Earn Prem	Units Indem	Net Acres	Liabilities	Total Premium	Subsidy	Indemnity	Loss Ratio
VIRGINIA	Pittsylvania (143)	PASTURE,RANGELAND,FORAGE	44	42	42	193	102	9,096	818,322	99,907	51,362	64,933	.65
VIRGINIA	Franklin (067)	PASTURE,RANGELAND,FORAGE	39	38	31	216	103	8,508	802,204	92,905	48,015	52,160	.56
VIRGINIA	Campbell (031)	PASTURE,RANGELAND,FORAGE	13	13	6	39	12	4,147	277,792	20,836	11,204	3,553	.17
Grand Total			263	251	167	922	373	50,895	4,006,695	419,497	218,786	231,267	.55

2012 Crop Year	County Name(Code)	Crop	Pol Sold	Pol Earn Prem	Pol Indem	Units Earn Prem	Units Indem	Net Acres	Liabilities	Total Premium	Subsidy	Indemnity	Loss Ratio
VIRGINIA	VIRGINIA - Pittsylvania (143)	PASTURE,RANGELAND,FORAGE	44	41	40	271	109	9,178	795,620	96,672	49,727	53,307	.55
VIRGINIA	VIRGINIA - Franklin (067)	PASTURE,RANGELAND,FORAGE	38	36	29	248	87	7,977	772,968	91,146	47,055	40,167	.44
VIRGINIA	VIRGINIA - Campbell (031)	PASTURE,RANGELAND,FORAGE	12	12	9	26	12	3,214	176,607	9,255	5,246	8,538	.92
VIRGINIA	VIRGINIA - Bedford (019)	PASTURE,RANGELAND,FORAGE	12	11	6	30	7	3,072	247,836	19,995	10,575	6,539	.33
VIRGINIA	VIRGINIA - Rockbridge (163)	PASTURE,RANGELAND,FORAGE	9	9	4	26	6	2,894	127,966	8,500	4,766	2,654	.31
Grand Total			297	273	171	1,136	355	54,622	4,098,423	413,259	216,188	196,998	.48

- 9/5/2012



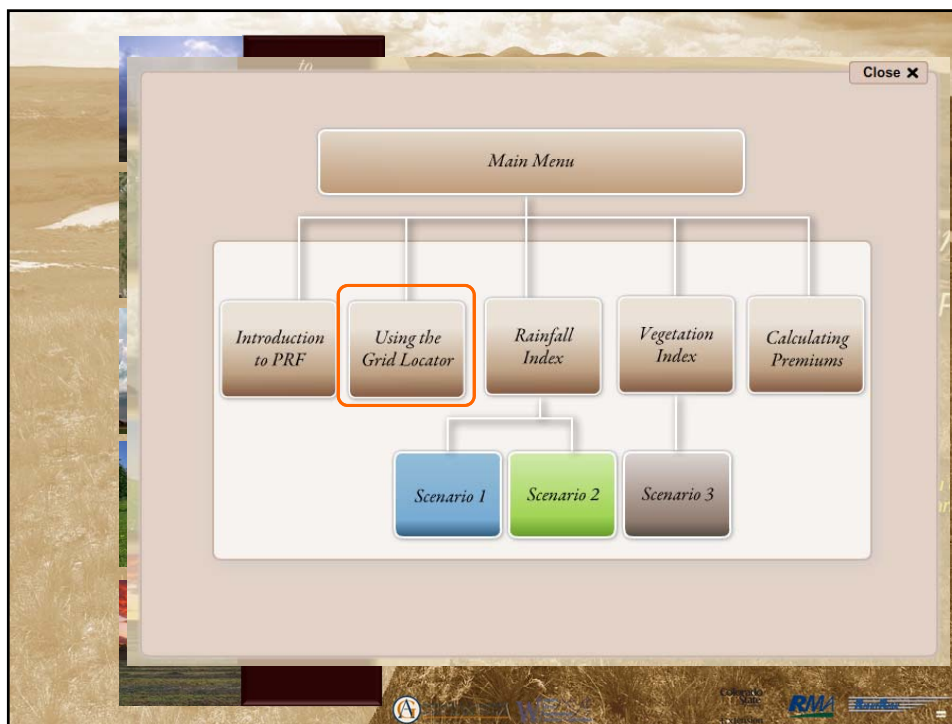
WCSA

UNIVERSITY
OF WYOMING

COOPERATIVE
EXTENSION SERVICE

RMA

Rockwell

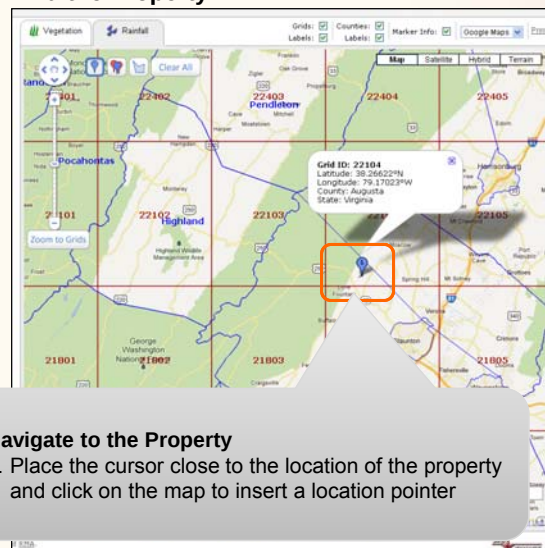


Using the Grid Locator

Enter a Location to Find

Using the Grid Locator

Find the Property



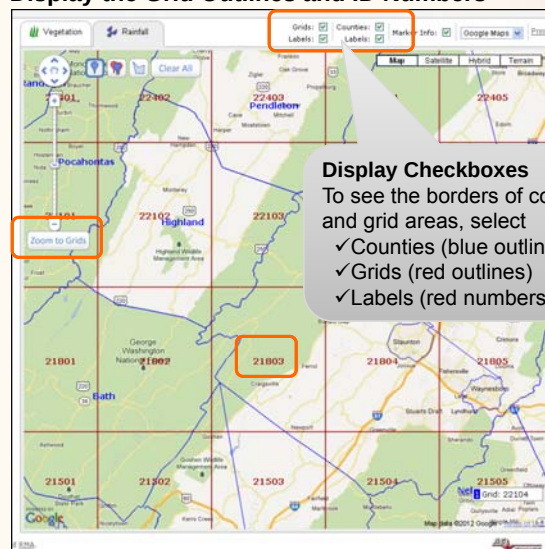
Navigate to the Property

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



Rainfall Index

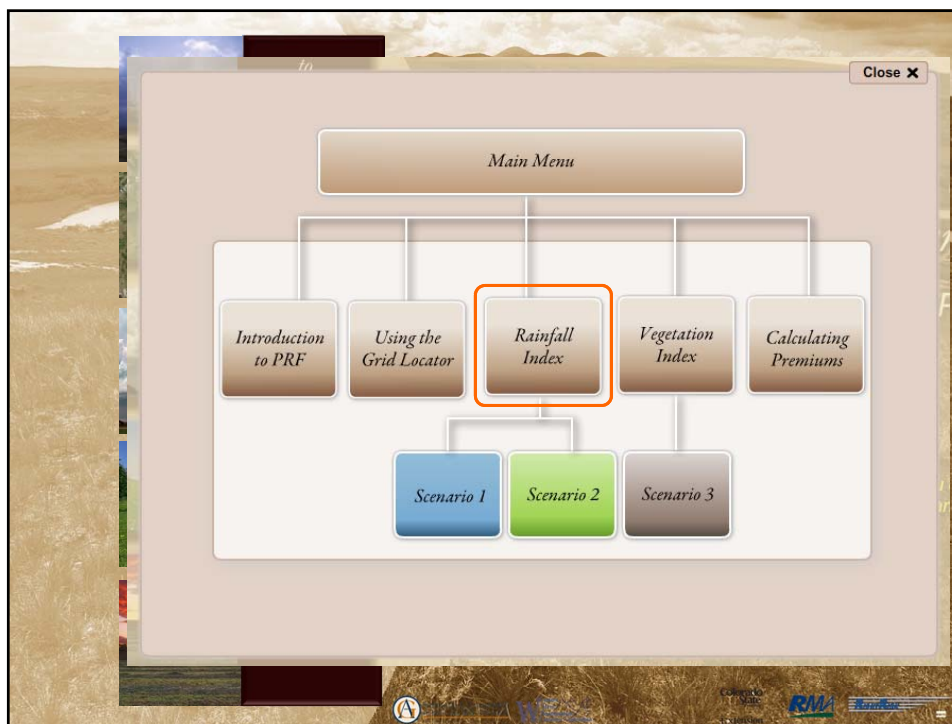
Display the Grid Outlines and ID Numbers



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: End:

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

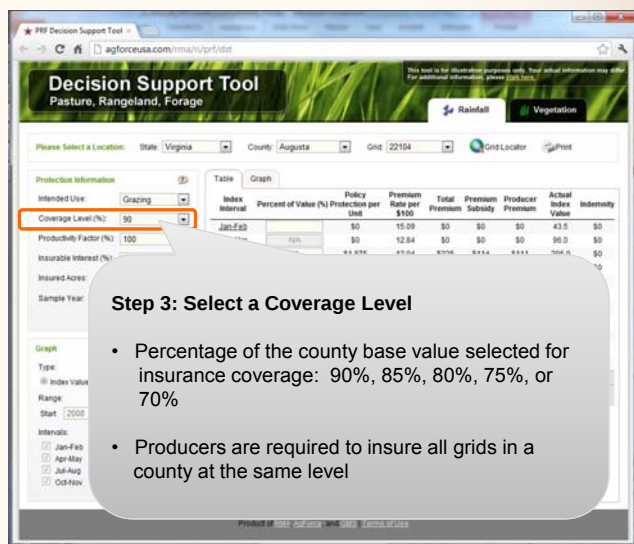
Using the Rainfall Index Decision Support Tool

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



Decision Support Tool
Pasture, Rangeland, Forage

Please Select a Location: State: Virginia County: Augusta Grid: 22104

Protection Information

Intended Use: Grazing

Coverage Level (%): 90

Productivity Factor (%): 100

Insurable Interest (%): 100

Insured Acres: 100

Sample Year: 2011

Table

Index Interval	Percent of Value (%) Protection per \$100	Premium Rate per \$100	Total Premium	Premium Subsidy	Producer Premium	Actual Index Value	Indemnity
Jan-Feb	15.09	\$0	\$0	\$0	\$0	43.5	\$0
Mar-Apr	12.84	\$0	\$0	\$0	\$0	96.0	\$0
May-Jun	12.84	\$0	\$0	\$0	\$0	96.0	\$0
Jul-Aug	12.84	\$0	\$0	\$0	\$0	96.0	\$0
Sep-Oct	12.84	\$0	\$0	\$0	\$0	96.0	\$0
Nov-Dec	12.84	\$0	\$0	\$0	\$0	96.0	\$0

Graph

Type: Index Values

Range: Start: 2008 End: 2012

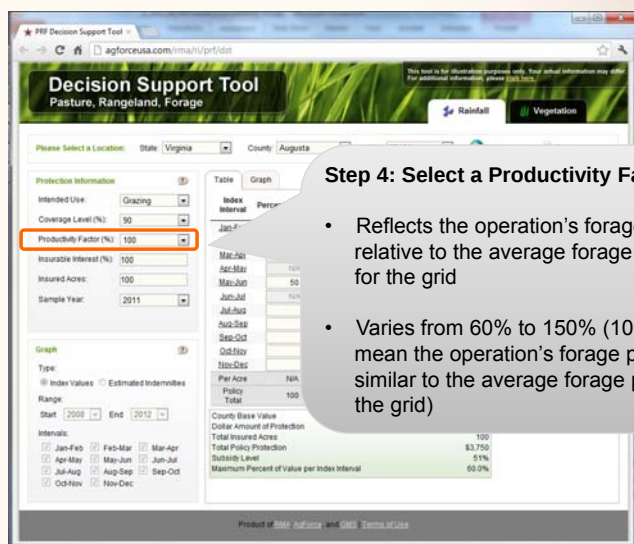
Intervals: Jan-Feb, Mar-Apr, May-Jun, Jul-Aug, Sep-Oct, Nov-Dec

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



Decision Support Tool
Pasture, Rangeland, Forage

Please Select a Location: State: Virginia County: Augusta Grid: 22104

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Jul-Aug	12.84	\$0	\$0	\$0	\$0	96.0	\$0
Sep-Oct	12.84	\$0	\$0	\$0	\$0	96.0	\$0
Nov-Dec	12.84	\$0	\$0	\$0	\$0	96.0	\$0

Graph

Type: Index Values

Range: Start: 2008 End: 2012

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

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

Decision Support Tool
Pasture, Rangeland, Forage

Please Select a Location: State: Virginia County: Augusta Grid: 22104

Protection Information

Intended Use: Grazing
Coverage Level (%): 90
Productivity Factor (%): 100
Insurable Interest (%): 100
Insured Acres: 100
Sample Year: 2011

Table

Index Interval	Percent of Value (%)	Policy Premium Rate per \$100	Total Premium	Producer Premium	Actual Index Value
Jan-Feb	50	\$15.00	\$0	\$0	43.5
Feb-Mar	50	\$15.00	\$0	\$0	43.5
Mar-Apr	50	\$15.00	\$0	\$0	43.5
Apr-May	50	\$15.00	\$0	\$0	43.5
May-Jun	50	\$15.00	\$0	\$0	43.5
Jun-Jul	50	\$15.00	\$0	\$0	43.5
Jul-Aug	50	\$15.00	\$0	\$0	43.5
Aug-Sep	50	\$15.00	\$0	\$0	43.5
Sep-Oct	50	\$15.00	\$0	\$0	43.5
Oct-Nov	50	\$15.00	\$0	\$0	43.5
Nov-Dec	50	\$15.00	\$0	\$0	43.5

Graph

Type: Index Values Estimated Index Values
Range: Start 2008 End 2012

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

Decision Support Tool
Pasture, Rangeland, Forage

Please Select a Location: State: Virginia County: Augusta Grid: 22104

Protection Information

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Coverage Level (%): 90
Productivity Factor (%): 100
Insurable Interest (%): 100
Insured Acres: 100
Sample Year: 2011

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Jun-Jul	50	\$15.00	\$0	\$0	43.5
Jul-Aug	50	\$15.00	\$0	\$0	43.5
Aug-Sep	50	\$15.00	\$0	\$0	43.5
Sep-Oct	50	\$15.00	\$0	\$0	43.5
Oct-Nov	50	\$15.00	\$0	\$0	43.5
Nov-Dec	50	\$15.00	\$0	\$0	43.5

Graph

Type: Index Values Estimated Index Values
Range: Start 2008 End 2012

Step 6: Enter the Number of Insured Acres That Qualify 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

Decision Support Tool
Pasture, Rangeland, Forage

Please Select a Location: State: Virginia County: Augusta Grid: 22104

Protection Information

Intended Use: Grazing
Coverage Level (%): 90
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Insurable Interest (%): 100
Insured Acres: 100
Sample Year: 2011

Graph

Type: ☒ Index Values ☐ Estimated Indemnities
Range: Start: 2008 End: 2012

Intervals:

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

Index Interval	Percent of Value (%) Protection per Unit	Policy Premium Rate per \$100	Total Premium	Producer Premium	Actual Index Value	Indemnity
Jan-Feb	50	\$1.875	\$0	\$0		
Feb-Mar	50	\$0	\$0	\$0		
Mar-Apr	50	\$0	\$0	\$0		
Apr-May	50	\$0	\$0	\$0		
May-Jun	50	\$0	\$0	\$0		
Jun-Jul	50	\$0	\$0	\$0		
Jul-Aug	50	\$0	\$0	\$0		
Aug-Sep	50	\$0	\$0	\$0		
Sep-Oct	50	\$0	\$0	\$0		
Oct-Nov	50	\$0	\$0	\$0		
Nov-Dec	50	\$0	\$0	\$0		
Total	100	\$3.750				

County Base Value
Dollar Amount of Protection
Total Insured Acres
Total Policy Protection
Subsidy Level
Maximum Percent of Value per Index Interval

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

Decision Support Tool
Pasture, Rangeland, Forage

Please Select a Location: State: Virginia County: Augusta Grid: 22104

Protection Information

Intended Use: Grazing
Coverage Level (%): 90
Productivity Factor (%): 100
Insurable Interest (%): 100
Insured Acres: 100
Sample Year: 2011

Graph

Type: ☒ Index Values ☐ Estimated Indemnities
Range: Start: 2008 End: 2012

Intervals:

☒ Jan-Feb ☒ Feb-Mar ☒ Mar-Apr
☒ Apr-May ☒ May-Jun ☒ Jun-Jul
☒ Jul-Aug ☒ Aug-Sep ☒ Sep-Oct
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Index Interval	Percent of Value (%)	Policy Premium Rate per \$100	Total Premium	Producer Premium	Actual Index Value	Indemnity
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Feb-Mar	50	\$0	\$0	\$0		
Mar-Apr	50	\$0	\$0	\$0		
Apr-May	50	\$0	\$0	\$0		
May-Jun	50	\$0	\$0	\$0		
Jun-Jul	50	\$0	\$0	\$0		
Jul-Aug	50	\$0	\$0	\$0		
Aug-Sep	50	\$0	\$0	\$0		
Sep-Oct	50	\$0	\$0	\$0		
Oct-Nov	50	\$0	\$0	\$0		
Nov-Dec	50	\$0	\$0	\$0		
Total	100	\$3.750				

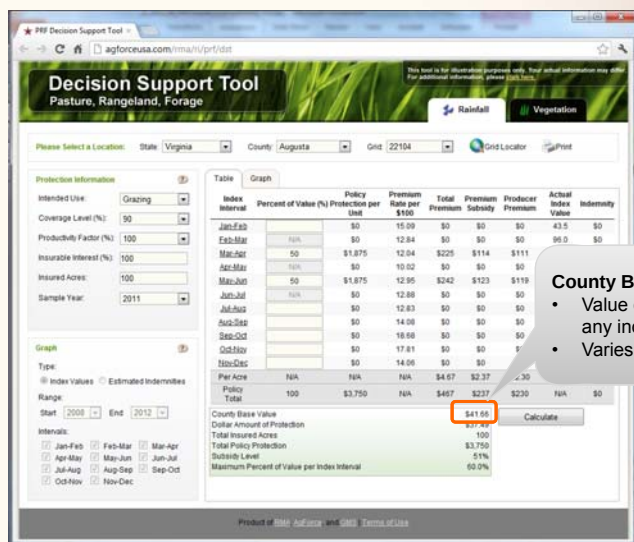
County Base Value
Dollar Amount of Protection
Total Insured Acres
Total Policy Protection
Subsidy Level
Maximum Percent of Value per Index Interval

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

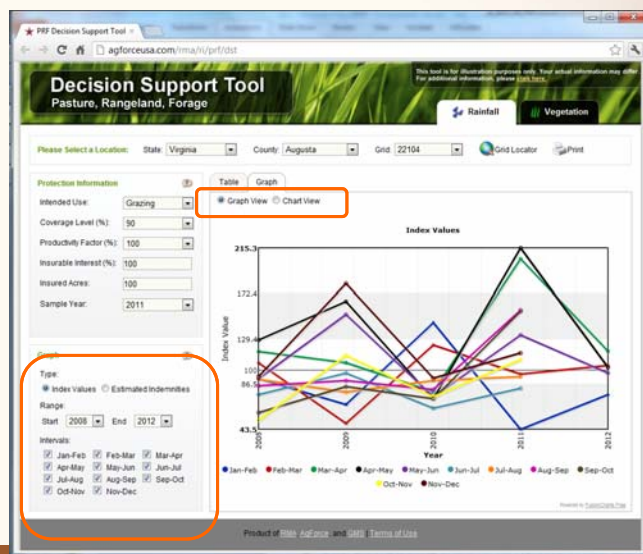


County Base Value per Acre:

- Value of forage used for calculating any indemnity payments
- Varies by grid, county, intended use

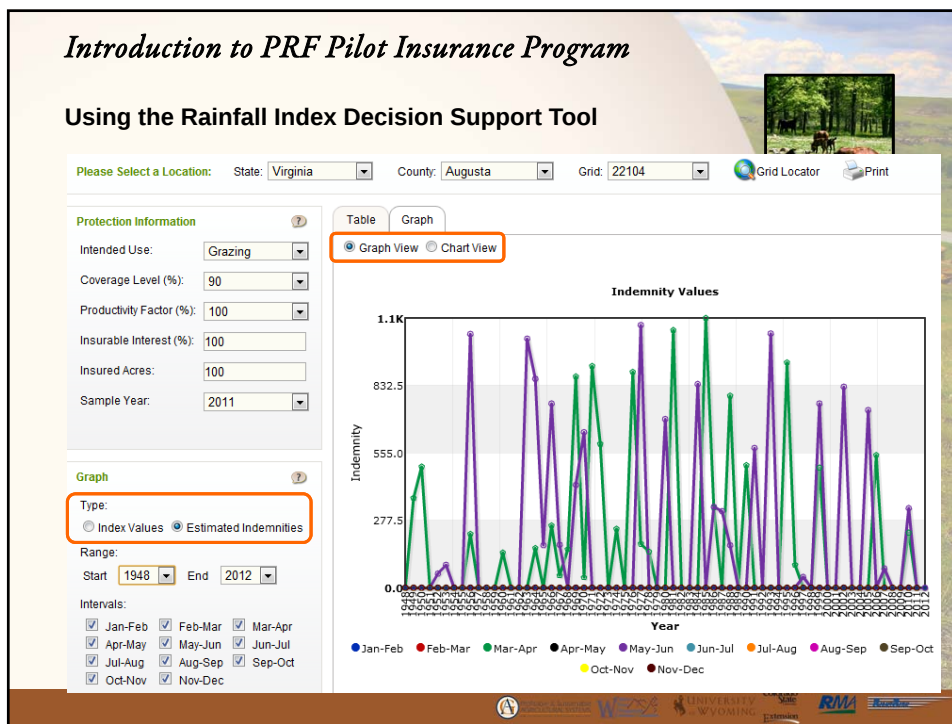
Introduction to PRF Pilot Insurance Program

Using the Rainfall Index Decision Support Tool



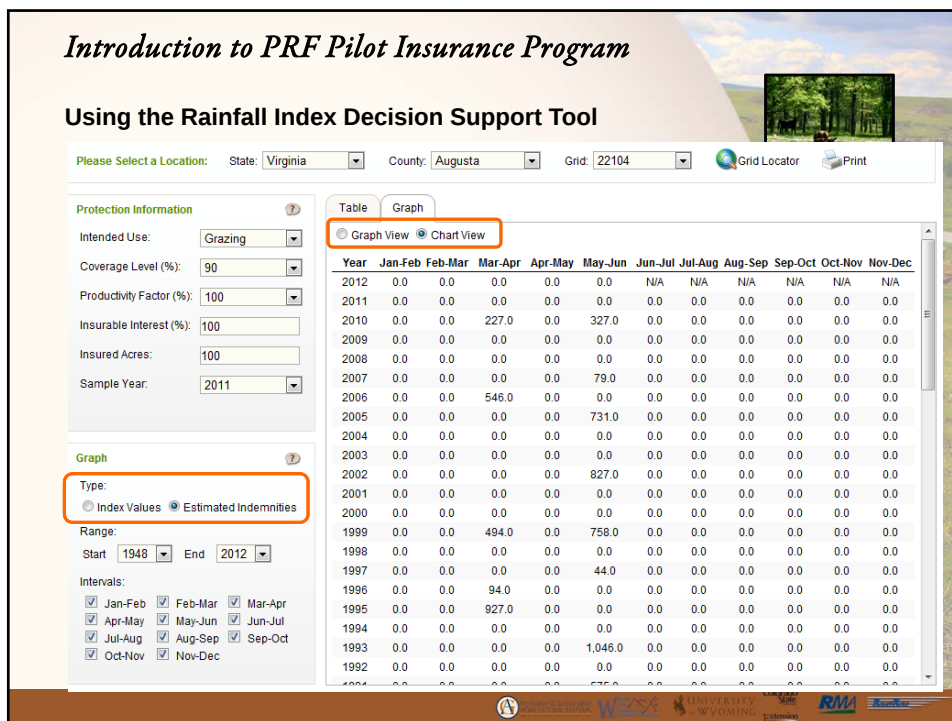
Introduction to PRF Pilot Insurance Program

Using the Rainfall Index Decision Support Tool



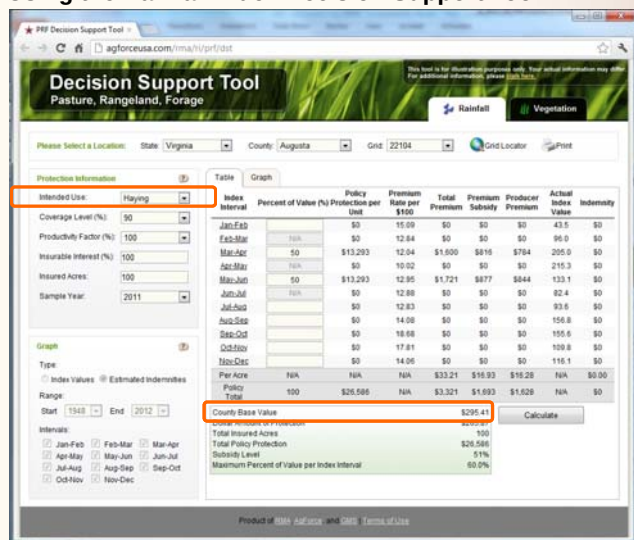
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Using the Rainfall Index Decision Support Tool



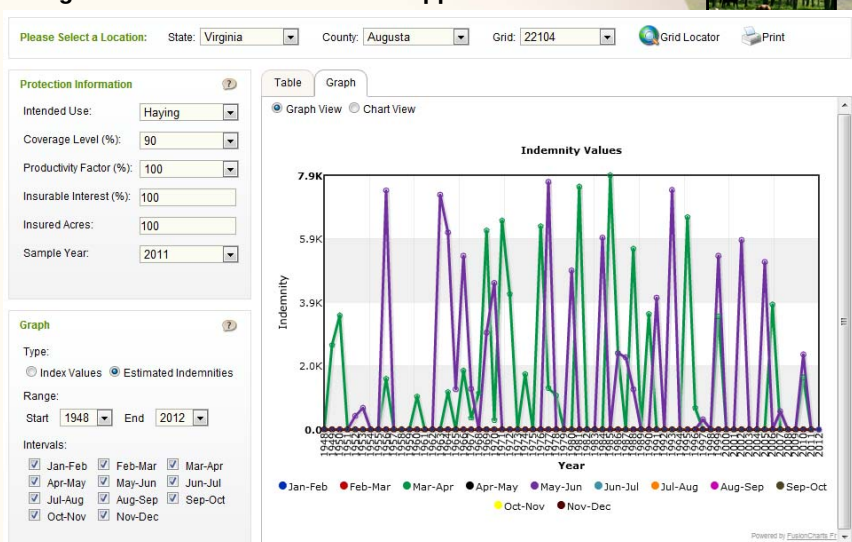
Introduction to PRF Pilot Insurance Program

Using the Rainfall Index Decision Support Tool



Introduction to PRF Pilot Insurance Program

Using the Rainfall Index Decision Support Tool



Introduction to PRF Pilot Insurance Program

Finding Information about the Rainfall Index Program

USDA United States Department of Agriculture
Risk Management Agency

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You are here: Home / Crop Policies and Pilots / Pasture, Rangeland, Forage

Crop Policies and Pilots

Pasture, Rangeland, Forage

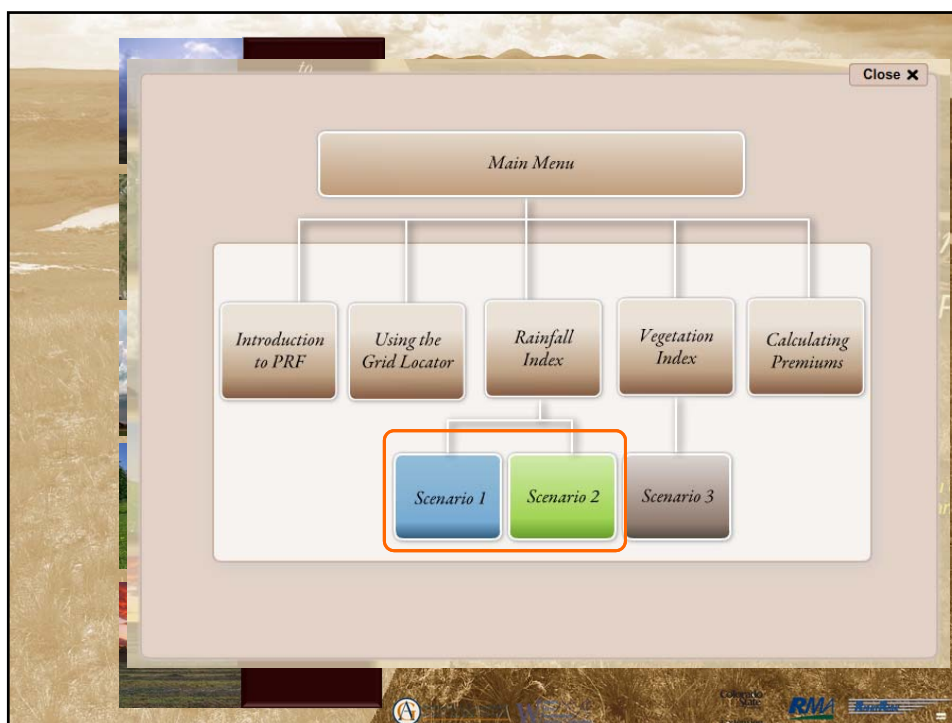
The United States currently comprises about 588 million acres of pasture and rangeland and 61.5 million acres of hay land. The following insurance programs for pasture, rangeland, and forage (PRF) utilize various indexing systems to determine crop condition. Also see livestock policies and resources.

Program announcement: RMA Expands 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/ri/prf/dst>.

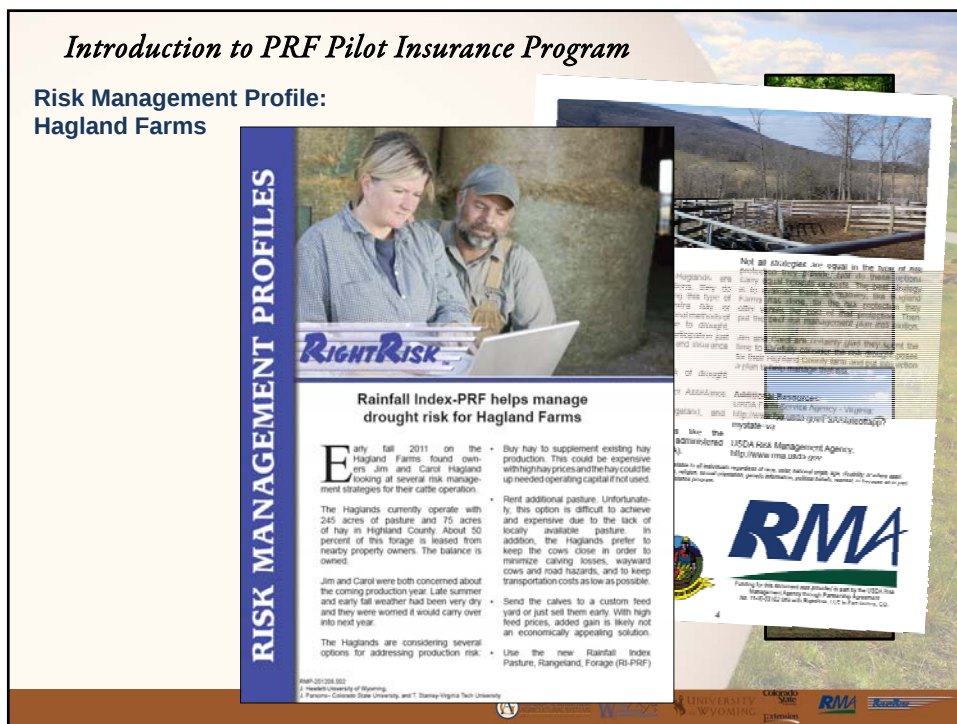
- Policy Provisions (PDF)
- Insurance Standards Handbook (PDF)
- Grid ID Locator, Decision Support Tool, Historical Indices

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.



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

Early fall 2011, on the Hagland Farms found owners Jim and Carol Hagland looking at several risk management strategies for their cattle operation.

The Haglands currently operate with 245 acres of pasture and 75 acres of hay in Highland County. About 50 percent of this forage is leased from nearby property owners. The balance is owned.

Jim and Carol were both concerned about the coming production year. Late summer and early fall weather had been very dry and they were worried it would carry over into next year.

The Haglands are considering several options for addressing production risk:

- Buy hay to supplement existing hay production. This could be expensive with high hay prices and the hay could be up needed operating capital (not used).
- Rent additional pasture. Unfortunately, this option is difficult to achieve and expensive due to the lack of locally available pasture. In addition, the Haglands prefer to keep the cows close in order to minimize calving losses, roadway cows and road hazards, and to keep transportation costs as low as possible.
- Send the calves to a custom feed yard or just sell them early. With high feed prices, added gain is likely not an economically appealing solution.
- Use the new Rainfall Index Pasture, Rangeland, Forage (R-PRF)

WAP-201208-002
A. Weathers University of Wyoming,
J. Peterson Colorado State University, and T. Steiner Virginia Tech University

RMA
Funding for this document was provided in part by the USDA Risk Management Agency (RMA) through the Wyoming Agricultural Experiment Station (WAES) and the Wyoming Agricultural Experiment Station (WAES) and the Wyoming Agricultural Experiment Station (WAES).

<http://RightRisk.org>



RightRisk

Insuring Success for Wyoming Agriculture 2006
Feasibility of Alternative Rural Enterprises Course

A LASTING LEGACY

Insuring Success for Wyoming Agriculture 2008
Insurance and Risk Management Course

AG SURVIVOR

Applied Risk Management in Agriculture
Dana L. Hoag, editor
James C. Gossage Jr., PhD
Shirley F. Gossage, PhD
James C. Gossage, PhD
James C. Gossage, PhD

Risk Navigator
STRATEGIC RISK MANAGEMENT

Getting on Track: Better Management Through Basic Ag Records

Pasture, Rangeland, Forage (PRF) Pilot Insurance Program

Getting on Track: Understanding Financial Performance

Getting on Track: Better Management Through Basic Financial Statements

<http://RightRisk.org>



A Risk Management Agency Fact Sheet Pasture, Rangeland, Forage Pilot Insurance Program

November 2010

The Risk Management Agency has modified the Pasture, Rangeland, Forage Pilot Insurance Program, which uses two separate Basic Provisions; the Rainfall Index Basic Provisions and the Vegetation Index Basic Provisions. Basic provisions are the terms and conditions included in all policies under these plans. These innovative pilot programs are based on vegetation greenness and rainfall indices, and are designed to give forage and livestock producers the ability to buy insurance protection for losses of forage produced for grazing or harvested for hay.

The original Pasture, Rangeland, Forage Program was designed as a risk management tool for the 588 million acres of pastureland and the 61.5 million acres of hayland in the United States. In 2007, Pasture, Rangeland, Forage insurance was available for testing in selected States. The program has been expanded and revised for the 2009 crop year. The Risk Management Agency has replaced its Group Risk Plan Basic Provisions with the Rainfall Index and Vegetation Index Basic Provisions. The new basic provisions will be applied to all Pasture, Rangeland, Forage crop policies.

The Pasture, Rangeland, Forage Pilot Insurance Programs are only available in selected States and counties. To test each index in various climates, soils, and weather conditions, these pilot programs are available in six regions across the country: the warm and humid Southeast, the cool and humid Northeast, the Northern Great Plains, the Southern Great Plains, the semi-arid Southwest, and the intermountain region of the Northwest. You can see the States and counties where the Rainfall Index and the Vegetation Index pilot programs are available at: <http://www.rma.usda.gov/policies/pasturerangeforage/2011availabilitymap.pdf>

The [Rainfall Index](#) uses National Oceanic and Atmospheric Administration Climate Prediction Center (NOAA CPC) data and each grid is 0.25

degrees in latitude by 0.25 degrees in longitude. You must select at least two, 2-month time periods where rain is important to your operation in your area. These time periods are called index intervals. Your insurance payments will be calculated using NOAA CPC data for the grid(s) and index interval(s) you have chosen to insure. When the final grid index falls below your “trigger grid index” (coverage level multiplied by the expected grid index), you may receive a loss payment. This insurance coverage is for a single peril—lack of rain. **Coverage is based on the experience of the entire grid. It is NOT based on individual farms or ranches or specific weather stations in the general area.** (You can find more detailed information at the NOAA Web site: http://www.cpc.ncep.noaa.gov/products/outreach/research_papers/ncep_cpc_atlas/7/toc.html)

The [Vegetation Index](#) uses data from the U.S. Geological Survey Earth Resources Observation and Science data center called the *Normalized Difference Vegetation Index (NDVI)*. The NDVI is a measure of vegetation greenness and is used to estimate plant condition in approximately 4.8 x 4.8 mile grids. This index is not a direct measure of your production. It is a measure of all vegetation in a grid. In general, the healthier the plants in a given grid, the higher the NDVI value will be. With this insurance plan, you may select one or more 3-month time periods that represent your pasture, rangeland, or forage practices. These time periods are called index intervals. **Coverage is based on losses within the 4.8 x 4.8 mile grid rather than on an individual producer’s losses.** Losses for the Vegetation Index are paid based on the difference between the normal NDVI data (expected grid index) and the actual grid index experience during the index interval(s) you have chosen to insure. When the final grid index falls below your “trigger grid index” (coverage level times the expected grid index), you may receive a loss payment.

The process of developing these products included determining the value of forage for

grazing and haying for each county in the program. RMA and its partner used USDA Farm Service Agency Grassland Reserve Program prices for grazing land, USDA National Agricultural Statistics Service State hayland rates, U.S. Geological Survey land-cover estimates, and regional forage and hayland values determined by experts to establish a county base value for each location.

While developing these new insurance products, the Risk Management Agency considered public land versus private land, warm- and cool-season plants, different grazing patterns, and various forage species representing a wide range of relative feed values.

Pasture, Rangeland, Forage insurance was designed for maximum flexibility. You are not required to insure all your acres, but you cannot exceed the total number of grazing or haying acres you operate. This allows you to insure only those acres that are important to your grazing program or hay operation. By selecting a Protection Factor, you can establish a value between 60 and 150 percent of the County Base Value and match the amount of your protection to the value of forage that best represents your specific grazing or hay operation, as well as the productivity of your land.

You will be asked to make several choices when insuring your grazing or hay production, including coverage level, index intervals, protection factor, and number of acres. You should work with your crop insurance agent to view the Grid ID Locator map and index grids for your area, and assign acreage to one or more grids based on the location and use of the acreage to be insured. **The Vegetation and Rainfall indices do not measure your direct production or loss.** You are insuring a rainfall or vegetation index that is expected to estimate your production. **Please review the historical indices for your area to make sure that this product will be helpful to you.**

The Pasture, Rangeland, Forage Rainfall Index and Vegetation Index pilot programs are being tested in select counties and States. You can view a map and a list of the counties and States where each index is available at: <http://www.rma.usda.gov/policies/pasturerangeforage>.

Please visit your crop insurance agent for more information. If you do not have an agent, you can find one online using the RMA agent locator at: <http://www.rma.usda.gov/tools/agent.html> or at any USDA Service Center.

Contact Us

USDA/RMA

Mail Stop 0801

1400 Independence Ave., SW

Washington, DC 20250-0801

Web site: <http://www.rma.usda.gov>

E-mail: rma.cco@rma.usda.gov

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Augustaland Farms

Jay Parsons, John Hewlett and Tom Stanley

Augustaland Farms is representative of a cow/calf operation in the central Shenandoah Valley of Virginia. Production practices, costs of production, market prices, weather patterns, and other information are based on data from the region in order to provide a realistic setting. The probabilities of risk events were also calculated using actual data; however, slight modifications were sometimes made to maintain the workability and realism of the scenario.

The farm is owned by John and Betty Lets. They run 100 mother beef cows with annual non feed variable production costs of \$193 per cow. This figure does not include hay and grazing expenses. Calving typically occurs in October and early November. Weaned calves are sold in late July of the following summer typically weighing 600-700 pounds. The farm has historically had an 86 percent weaning percentage and replaces 14 percent of their mother cows each year. Since they raise their own replacements, this means they usually market 43 steer calves and 29 heifer calves each year. The initial market price for weaned 600-700 pound steer calves is \$127 per hundredweight and for heifers it is \$117. Cull cows weighing 1,150 pounds are sold at the end of each year for \$55.00/cwt.

Beef Cattle Production

Quantity	100 head
Production costs per unit	\$193 per cow
Weaning Percentage	86%
Average Steer Sale Weight	675 pounds per weaned calf
Initial Steer Market Price	\$127 per hundredweight
Average Heifer Sale Weight	625 pounds per weaned calf
Initial Heifer Market Price	\$117 per hundredweight
Replacement percentage	14%
Sale weight per cull unit	1,150 pounds per cow
Net Sale Price	\$55.00 per hundredweight

Augustaland Farms utilizes a mixture of small and large pasture and hay properties in the local area. Their home farm has 180 acres of pasture and 25 acres of grass hay meadow. They also cash rent a 75 acre pasture from their neighbor. Just down the road a piece they rent another 40 acre farm that has 20 acres of pasture and a 20 acre grass hay meadow on it. They pay cash rent for another 15 acre grass hay meadow four miles west of their home farm. And, finally, they are able to utilize a 10 acre grass hay meadow belonging to Betty's parents and a 5 acre grass hay meadow belonging to a local clergyman essentially "rent free." Augustaland Farms utilizes their grass hay meadows as stockpiled pasture typically harvesting one cutting of hay in the early summer with an average yield of 1.5 tons per acre. Their annual hay crop expenses, including fertilizer and rent, are an average of \$203 per acre. When you begin the simulation, there is 113 tons of hay in inventory with a market value of \$100 per ton. This hay will typically all be fed to their cow herd over the winter months.

Hay Production

Crop Acres	75 acres
Normal Annual Hay Yield	1.5 tons per acre
Production Costs	\$203 per acre
Initial Inventory	113 tons
Initial Market Price	\$100 per ton

Total cattle sales will generate \$66,923 in revenues each year. The Lets project \$41,010 in annual expenses including pasture rent and fixed costs (depreciation, overhead, property taxes, etc.). They expect their farm to generate \$25,913 in net returns each year to equity, management, and family labor.

Expected Annual Net Farm Income			
<u>Expected Revenues</u>		<u>Expected Expenses</u>	
Weaned Steer Calves	43 head = \$36,861.75	Cows	100 cows = \$19,300
Weaned Heifer Calves	29 head = \$21,206.25	Hay	75 acres = \$15,225
Cull Cows	14 head = \$8,855.00	Pasture rent	95 acres = \$2,185
		Fixed costs	\$4,300
Annual Gross Revenue:	\$66,923	Annual Expenses:	\$41,010
Returns to Equity, Management and Family Labor = \$25,913 per year			

As farm manager, you will be making decisions for the Augustaland Farms that include whether or not to purchase various insurance products (Rainfall Index-PRF and LRP-Feeder Cattle), buy or sell hay, and when to market your calves. Various market and production risks will influence the ultimate impact of these decisions as you progress throughout the simulation.

AUGUSTALAND FARMS SIMULATION

RISK & DECISIONS

YEAR 1		
Period 1	Risk and Probability of Occurrence	Impact
Oct. 1 to Dec. 31	<u>Fall Precipitation</u> Above Normal (33%) Normal (34%) Dry (23%) Extremely Dry (9%) <u>U.S. Corn Production</u> Extremely high (5%) Above average (35%) Average (55%) Below average (5%)	- Wet weather will increase forage production and calf prices but decrease hay prices. - Dry weather will decrease forage production and calf prices but increase hay prices. - Hay prices decrease and calf prices increase when production of competitive feed alternatives grows. Extremely high corn production results in these impacts. - There are only seasonal impacts on hay and calf prices when corn production is as expected. - Hay prices increase and calf prices decrease when corn production falls below expected levels.

Period 1	Risk Management Decisions	
Oct. 1 to Dec. 31 (cont.)	Rainfall Index Pasture, Rangeland and Forage Insurance (RI-PRF) RI-PRF is a rainfall index insurance product offered for grid areas that are approximately 12 miles by 12 miles in size. Indemnities are based on NOAA rainfall index determinations for each grid over a 2-month interval. Producer protection is established by choosing a coverage level, productivity factor, and by insuring between 10-60% of covered value in two or more 2-month intervals for the production year (January–December). Each month can only be insured once (no overlapping intervals). An indemnity is paid if the Final Grid Rainfall Index is less than the Coverage Level. This coverage decision is for the next production year and must be purchased by November 15th. Premiums are due July 1 and will be deducted from your bank balance in late June. Decision 1: RI-PRF on Grazingland Decide if you want to protect against the peril of low rainfall in the area by purchasing RI-PRF insurance for your 275 acres of pasture. The county base value for grazingland is \$41.66 per acre. Decision 2: RI-PRF on Hayland Decide if you want to protect against the peril of low rainfall in the area by purchasing RI-PRF insurance for your 75 acres of grass hay meadows. The county base value for hayland is \$276.85 per acre.	
Period 2	Risk and Probability of Occurrence	Impact
Jan. 1 to Mar. 31	<u>Winter Precipitation</u> Above Normal (25%) Normal (44%) Dry (28%) Extremely Dry (3%) <u>Corn Planting Intentions</u> Extremely high (5%) Above average (20%) Average (50%) Below average (25%)	• Above normal winter precipitation is excellent for annual forage production and livestock yields but, in the short-run, will mean you will feed more hay. Expect hay prices to increase due to shifts in demand. • Low winter precipitation will decrease forage and livestock yields but you will feed less hay in the short-run. • Very dry conditions will negatively affect cattle prices. • Higher than expected corn acres results in expectations for lower feed prices and higher cattle prices. • Lower than expected corn acres results in expectations for higher feed prices and lower cattle prices.
	Risk Management Decisions Livestock Risk Protection (LRP) Insurance for feeder cattle The number of animals to be insured and the coverage level is to be determined here. The current expected price for “Weight 2” calves (over 600 pounds) to be delivered at the end of July will be used to determine coverage price levels for a 26-week policy contract. Decision 1: LRP – Feeder Cattle insurance for steers Determine how many of your 43 steers you wish to buy a 26-week price insurance policy for assuming an ending weight of 675 pounds in late July. Decision 2: LRP – Feeder Cattle insurance for heifers Determine how many of your 43 heifers you wish to buy a 26-week price insurance policy for assuming an ending weight of 625 pounds in late July. Decision 3: Buy or sell hay Hay may be purchased to increase inventory for winter feeding or sold to generate cash flow. Remember, you cannot carry a negative inventory at the end of any period. If you run short of hay during the winter feeding period, it will be purchased for you at the prevailing market price.	

Period 3	Risk and Probability of Occurrence	Impact
Apr. 1 to Jun. 30	<u>Spring Precipitation</u> Above Normal (31%) Normal (42%) Dry (20%) Extremely Dry (6%) <u>Corn Crop Condition Report</u> Excellent (20%) Normal (65%) Poor (15%)	• Good spring precipitation will increase forage and livestock yields while decreasing hay prices due shifts in supply and demand. Lower feed prices increase cattle prices. • Poor spring precipitation will decrease forage and livestock yields while having a positive impact on hay prices and a negative impact on cattle prices. • Hay prices will fall and calf prices will rise when corn crop conditions are excellent because of expectations for an abundance of inexpensive feed. • Hay prices and calf prices normally decrease this time of year due to seasonal affects. • Poor corn crop conditions will have a positive effect on hay prices and a negative effect on calf prices.
	Risk Management Decisions Livestock Risk Protection (LRP) Insurance for feeder cattle The number of animals to be insured and the coverage level is to be determined here. The current expected price for “Weight 2” calves (over 600 pounds) to be delivered at the end of July will be used to determine coverage price levels for a 13-week policy contract. Decision 1: LRP – Feeder Cattle insurance for steers Determine how many of your 43 steers you wish to buy a 13-week price insurance policy for assuming an ending weight of 675 pounds in late July. Decision 2: LRP – Feeder Cattle insurance for heifers Determine how many of your 43 heifers you wish to buy a 13-week price insurance policy for assuming an ending weight of 625 pounds in late July.	
Period 4	Risk and Probability of Occurrence	Impact
Jul. 1 to Sep. 30	<u>Summer Precipitation</u> Above Normal (30%) Normal (38%) Dry (33%) <u>Corn Crop Condition Report</u> Above Expectations (20%) As Expected (65%) Below Expectations (15%)	• Good summer precipitation will increase forage and livestock yields while decreasing hay prices due shifts in supply and demand. Lower feed prices increase cattle prices. • Poor summer precipitation will decrease forage and livestock yields while having a positive impact on hay prices and a negative impact on cattle prices. • Hay prices will fall and calf prices will rise when corn crop conditions are above expectations because of expectations for an abundance of inexpensive feed. • Hay prices and calf prices normally decrease this time of year due to seasonal affects. • Poor corn crop conditions will have a positive effect on hay prices and a negative effect on calf prices.
	Risk Management Decisions Decision 1: Contract Weaned Steer Calves You have the opportunity to contract your steer calves to a private buyer. Non contracted steers will be sold at auction at the end of July. Decision 2: Buy or sell hay Hay may be sold or purchased to adjust inventory levels. You must end the scenario with 113 tons of hay in inventory for winter feeding.	



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