Using Crop Insurance to Manage Your Livestock Risks

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Idaho Farm Bureau Commodity Groups Conference

Boise, ID

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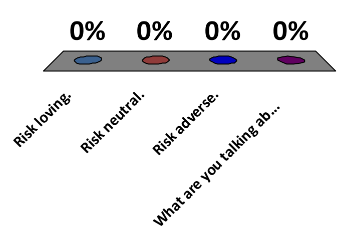
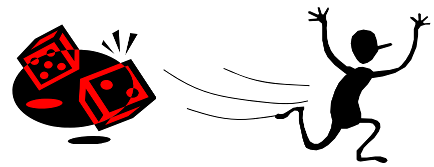
I believe I am…

1. Risk loving.
2. Risk neutral.
3. Risk adverse.
4. What are you talking about?



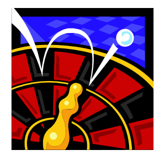
Types of Risk Preference

Risk Averse



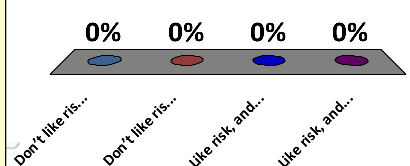
Risk Neutral

Risk Loving



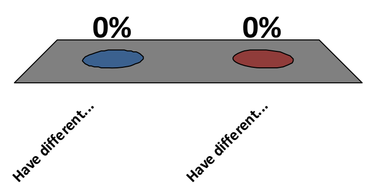
I…

1. Don't like risk, but I accept it.
2. Don't like risk, so I take steps to protect my business.
3. Like risk, and take steps to protect my business.
4. Like risk, and take no steps to protect my business.



I and my partner(s)…

1. Have different feelings about risk, so we do nothing.
2. Have different feelings about risk, but we agree to take steps to protect our business.



What is Risk?

The probability of an event occurring that can impact your

- ✓ Current profit level
- ✓ Financial situation (equity position)
- ✓ Satisfaction and well-being

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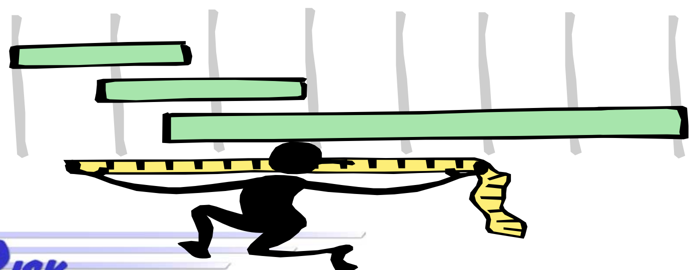
Relationship of risk and profit

High risk = High potential profit

Low risk = Low potential profit



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Sources of Risk

Production …yield/quality variability

Marketing …changes in price/external conditions

Financial …variability in debt/equity capital and ability to meet cash demands

Legal/ Institutional …responsibilities for contracts, statutory compliance, tort liability, and business structure

Human …managing people and estate transfers

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Production Risk


Sources

Weather, pests, disease, technology, genetics, inputs (availability, quality, price), equipment, labor …

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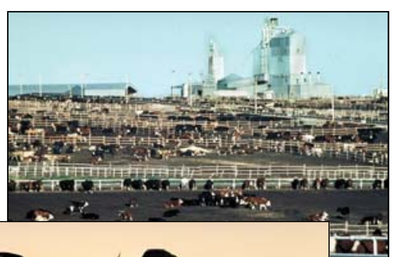
Marketing Risk



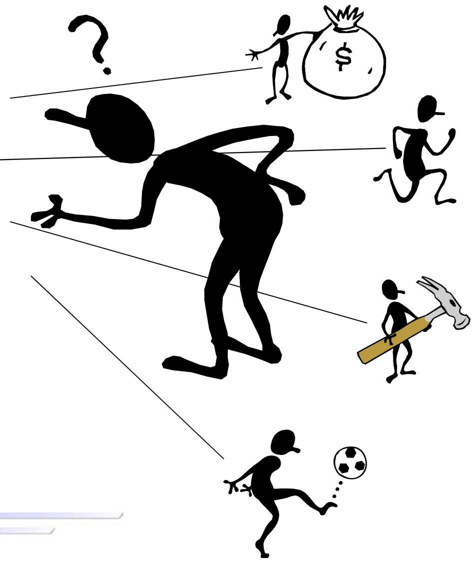

Sources

Product quality (genetics, disease, handling, input/feed…)

Product price (quality, timing, global market, weather, government policy …)

Identify Management Alternatives

- **Assume the risk**
- **Avoid the risk**
- **Reduce the risk**
- **Transfer the risk**



Federal Risk Management
Crop Insurance Programs

- A risk management tool for
  - Production
  - Price
  - Revenue

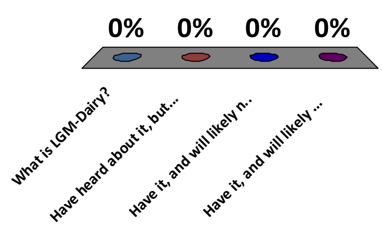
	U.S.	Idaho
Total Crop Value Covered by Insurance	$8,000,000,000	$800,000,000
Number of Policies	1.1 million	6,122
Acres Covered	256 million	2+ million
Commodities Covered	100	30

Crop Insurance
Three Products Discussed Today

- Livestock Gross Margin for Dairy (LGM-Dairy)
- Adjusted Gross Revenue Lite (AGR-Lite)
- Pasture, Rangeland, Forage (PRF)

What is your experience with LGM-Dairy insurance?

1. What is LGM-Dairy?
2. Have heard about it, but did not purchase it.
3. Have it, and will likely not purchase it again.
4. Have it, and will likely purchase it again.



Livestock Gross Margin for Dairy LGM – Dairy (cattle)

- First available in Idaho in 2011
- Participation in Idaho
  - 27 policies
  - 1,404,675 hundredweight of milk insured
  - $22,132,484 of liability coverage
- Strong demand exhausted allocated underwriting capacity ($13.184 million)
  - Sales for 2012 have been suspended
  - Sales may resume in October 2012 (for 2013 crop year)

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LGM – Dairy

- Provides protection when feed costs increase or milk prices drop
  - Gross margin = Market Value of Milk – Feed Costs
- Prices based on simple average of CME futures contract daily settlement prices

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LGM - Dairy
Eligible Milk

- Milk sold for commercial or private sale intended for final human consumption
- From dairy cattle fed in any eligible state – Idaho is included
- >0 hundredweights to 24 million pounds per crop year

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LGM - Dairy

- Sign-up:
  - 12 times per year
- Sales Closing
  - Must sign up on the last business Friday of the month
  - Application includes
    - Target marketings
    - Corn and soybean meal equivalents
    - (may choose) Default values for corn and soybean meal equivalents

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LGM - Dairy

- Insurance months
  - Insurance period equals 10 months following the sales closing date
    - Sales closing date of January 29th means Mar-Dec insurance period

- Premium due at end of coverage period

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LGM – Dairy
Cause of Loss

- Difference between gross margin guarantee and actual gross margin
- NOT
  - Death loss
  - Unexpected decreases in production
  - Unexpected increases in feed use
  - Anticipated or multiple-year declines in milk prices
  - Anticipated or multiple-year increases in feed costs

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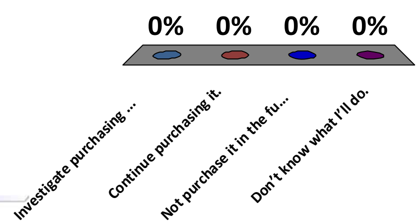
LGM – Dairy
Important Web Sites

- Risk Management Agency
  - www.rma.usda.gov
- LGM Coverage Prices, Rates, and Actual Ending Values
  - www3.rma.usda.gov/apps/livestock_reports/
- Premium Calculator
  - www.rma.usda.gov/tools/premcalc.html
- List of insurance agents
  - www3.rma.usda.gov/tools/agents/

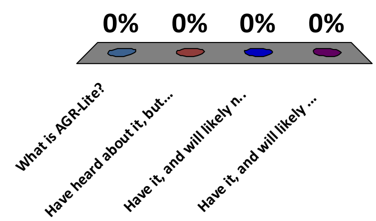
Following this quick overview, you are likely to?

1. Investigate purchasing LGM-Dairy.
2. Continue purchasing it.
3. Not purchase it in the future.
4. Don't know what I'll do.



What is your experience with AGR-Lite Insurance?

1. What is AGR-Lite?
2. Have heard about it, but did not purchase it.
3. Have it, and will likely not purchase it again.
4. Have it, and will likely purchase it again.



Adjusted Gross Revenue - Lite AGR-Lite

Objective

- Manage production and price risk
- Risk Management tool for insuring farm commodities not currently insurable under stand-alone crop insurance policies

Insurable causes of loss

- Revenue losses from natural causes
- Revenue losses from market fluctuation

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Adjusted Gross Revenue - Lite
AGR-Lite

- Whole-farm revenue protection against
  - Unavoidable natural occurrences
  - Market fluctuations
- Stand alone or in conjunction with other crop insurance plans
  - Except AGR
- Available in all counties in Idaho
  - AGR, another crop insurance product, is available in Canyon, Payette, and Washington Counties

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AGR-Lite
Commodities Eligible for Protection

- Most Farm-Raised Crops
  - Grain/non-grain crops
  - Fruits and vegetables
  - Nuts
  - Nursery plants
  - Floriculture
  - Christmas trees
  - Etc.
- Animals and Animal Products
  - Livestock
  - Aquaculture
  - Milk
  - Eggs
  - Etc.

Excludes: Timber, forest, forest products, processed products, and animals for sport, show, and pets.

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AGR-Lite
No Coverage For

- Negligence, mismanagement, or wrongdoing
- Failure to follow good management and irrigation practices
- Water contained by any government, public, private dam, or reservoir
- Failure or breakdown of irrigation equipment or facilities
- Theft and vandalism
- Inability to market the commodities due to quarantine, boycott, or refusal of anyone to accept the commodities
- Lack of labor
- Failure of buyer to pay for commodities

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Adjusted Gross Revenue - Lite
AGR-Lite

- Based on five-year revenue history
  - Federal Income Tax Schedule F
- Premium Subsidy: 48% to 59%
  - 65% level Government pays 59%
  - 80% level Government pays 48%

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AGR-Lite:
Eligibility Requirements

- U.S. citizen/resident
- File a federal farm tax return (Schedule F)
- Eligible county
- Liability not exceeding $1 million
- Same tax entity for 7 years
- Revenue less than 50% from commodities purchased for resale
- No more than 83.35% of revenues from potatoes

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AGR-Lite
Important Dates for Application

- Timeline
  - Sales Closing Date - March 15
    - New applications
    - Revised reports for farms insured previous year

  http://www3.rma.usda.gov/apps/agents
  - Cancellation/Termination Date – January 31
    - Farms with previous year AGR-Lite policy
  - August 31 - Contract change date

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AGR-Lite
Coverage Levels

Coverage Payment		Minimum # of Commodities	Maximum Annual Income
Level	Rate		
65	75	1	$2,051,282
65	90	1	$1,709,401
75	75	1	$1,777,777
75	90	1	$1,481,481
80	75	3	$1,666,666
80	90	3	$1,388,888

AGR-Lite
Guarantee Example

- 5 year Average Revenue: $300,000
- Expected 2011 Revenue: $310,000
  - AGR is Lesser of the Two ($300,000)

Approved AGR	$300,000
Coverage Level (20% deductible)	x 80%
Trigger Point (loss payment begins)	$240,000
Payment Rate (10% deductible)	x 90%
Income Guarantee	$216,000

AGR-Lite
Loss Payment Example

- Actual Revenue - $70,000
- Approved AGR - $100,000
- Coverage – Level 80%, Rate 75%
- Liability - $100,000 x 0.80 x 0.75 = $60,000
- Loss Inception Point - $100,000 x 0.80 = $80,000
- Loss Scenario - $80,000-$70,000 = $10,000
- Indemnity Payment - $10,000 x 0.75 = $7,500

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AGR-Lite
What Operations May Find AGR-Lite Useful

- Small to mid-sized farms (<$2,000,000 in gross sales)
- Diversified cropping firms (those that have 3 or more crops can select better coverage)
- Farms that are susceptible to market and/or production losses (exception: when >50% of sales are from commodities purchased for resale)
- Organic (alternative enterprise) producers

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Following this quick overview, you are likely to?

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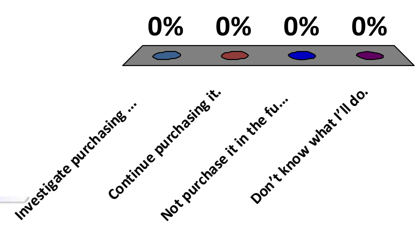

What is your experience with PRF insurance?

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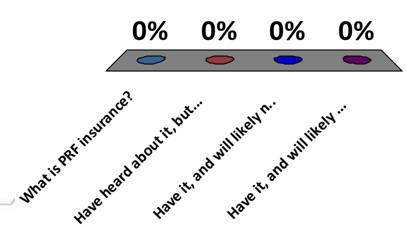
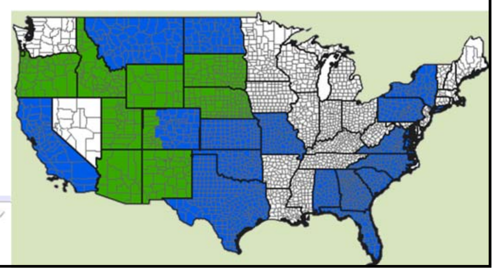


PRF Insurance

Pasture, Rangeland, Forage Pilot Insurance Program

- Group risk plan for potential production losses
- Uses indexing
  - Measure and compare conditions that affect forage production in specific areas over time
  - **Rainfall Index**
  - **Vegetation Index**



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PRF Insurance

Designed to give forage and livestock producers the ability to buy insurance protection for losses of forage produced for grazing or harvested for hay.

Covers:

- *Grazinglands* – perennial forage established on land suitable and intended for grazing livestock.
- *Haylands* – perennial forage on land suitable and intended for haying.

RIGHTRISK™

PRF Insurance

Rainfall Index

- Indemnity payments are possible when the final index of rainfall for a grid (final grid index) falls below average precipitation patterns (trigger grid index).

Vegetation Index

- Indemnity payments are possible when the final index of vegetation greenness for a grid (final grid index) falls below the insured's trigger grid index.

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PRF Insurance
Vegetation Index

- Uses data from the U.S. Geological Survey Earth Resources Observation and Science data center.
- Estimates plant condition in approximately 4.8 x 4.8 mile grids.
- A measure of the average vegetation index patterns for the grid.
  - Not a direct measure of your production.
  - The healthier the plants in a given grid, the higher the greenness index will be.

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PRF Insurance
How Vegetation Data is Measured

The data is called the Normalized Difference Vegetation Index (NDVI).

- NDVI is a measurement of the density of photosynthetic biomass on the ground.
- Results are obtained from the processing of satellite imagery.

Loss payments are based on the difference between the normal NDVI data (expected grid index) and the actual grid index experienced during the months insured.

PRF Insurance
Vegetation Index Intervals

NDVI data is collected during an index interval.

- An insured producer may select any 3-month index interval
  - March through October in Idaho
- Index intervals cannot overlap

Correct Index Interval Selection

Index Interval 1		
Month 1	Month 2	Month 3
April	May	June

Incorrect Index Interval Selections

Selection 1

Index Interval 1		
Month 1	Month 2	Month 3
April	May	June

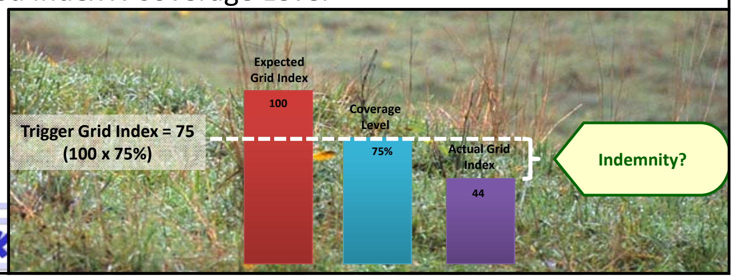
Selection 2

Index Interval 1		
Month 1	Month 2	Month 3
June	July	August

You cannot select two intervals that contain the same month.

Indexes

- **Expected Index Value**
  - Historical data for each grid for precipitation.
- **Final Grid Index**
  - Measurement of actual precipitation during the 2-month interval
- **Trigger Grid Index**
  - Expected Index X Coverage Level



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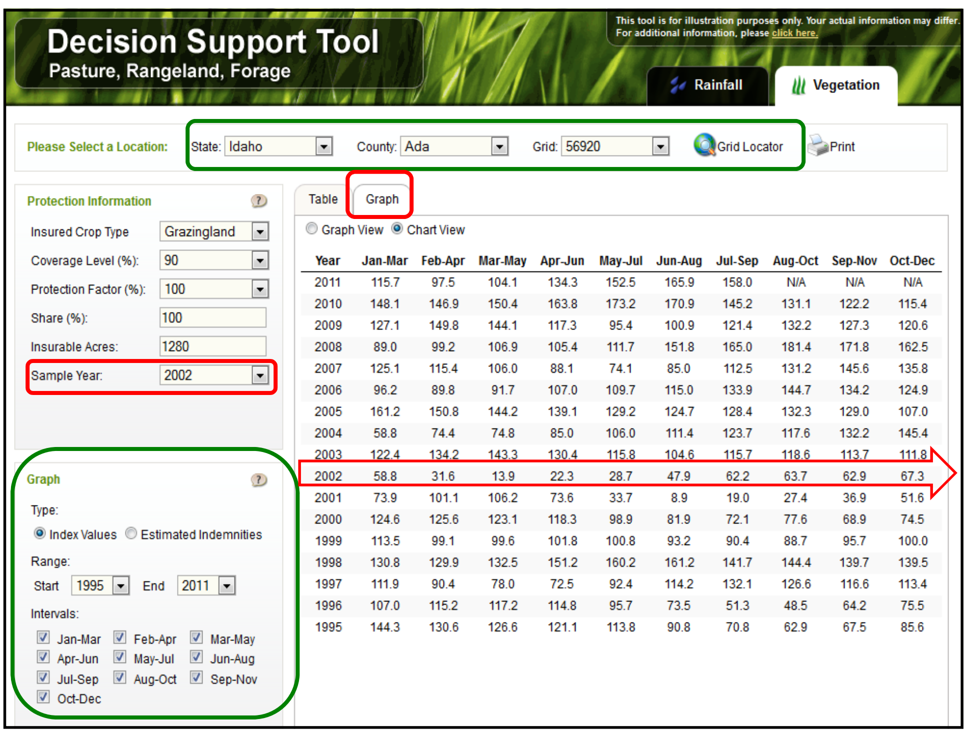
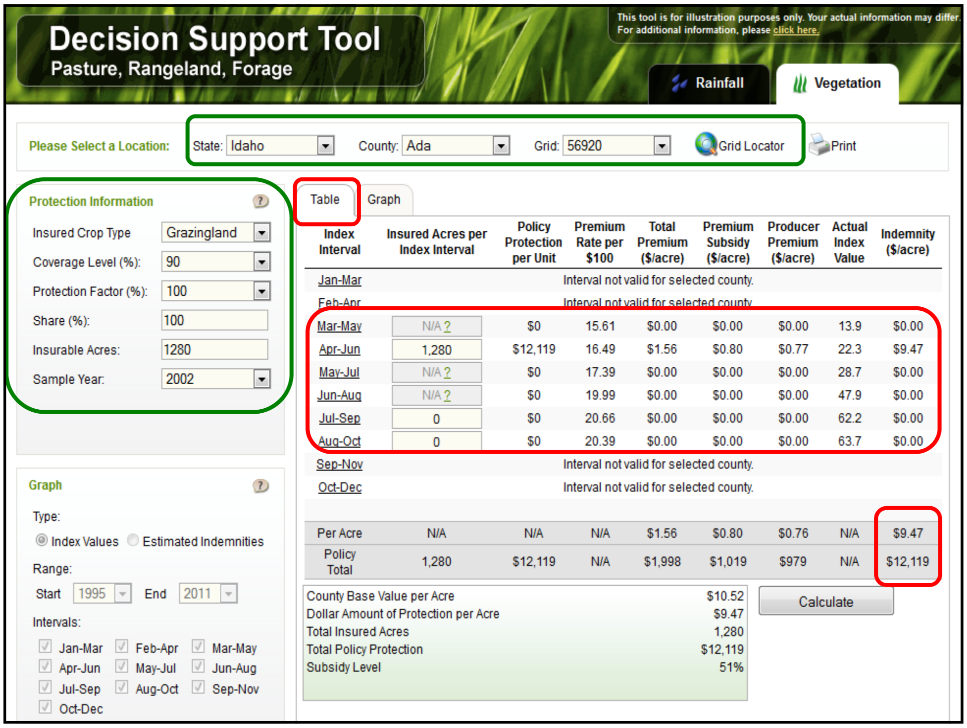


Year	Jan-Mar	Feb-Apr	Mar-May	Apr-Jun	May-Jul	Jun-Aug	Jul-Sep	Aug-Oct	Sep-Nov	Oct-Dec
2011	115.7	97.5	104.1	134.3	152.5	165.9	158.0	N/A	N/A	N/A
2010	148.1	146.9	150.4	163.8	173.2	170.9	145.2	131.1	122.2	115.4
2009	127.1	149.8	144.1	117.3	95.4	100.9	121.4	132.2	127.3	120.6
2008	89.0	99.2	106.9	105.4	111.7	151.8	165.0	181.4	171.8	162.5
2007	125.1	115.4	106.0	88.1	74.1	85.0	112.5	131.2	145.6	135.8
2006	96.2	89.8	91.7	107.0	109.7	115.0	133.9	144.7	134.2	124.9
2005	161.2	150.8	144.2	139.1	129.2	124.7	128.4	132.3	129.0	107.0
2004	58.8	74.4	74.8	85.0	106.0	111.4	123.7	117.6	132.2	145.4
2003	122.4	134.2	143.3	130.4	115.8	104.6	115.7	118.6	113.7	111.8
2002	58.8	31.6	13.9	22.3	28.7	47.9	62.2	63.7	62.9	67.3
2001	73.9	101.1	106.2	73.6	33.7	8.9	19.0	27.4	36.9	51.6
2000	124.6	125.6	123.1	118.3	98.9	81.9	72.1	77.6	68.9	74.5
1999	113.5	99.1	99.6	101.8	100.8	93.2	90.4	88.7	95.7	100.0
1998	130.8	129.9	132.5	151.2	160.2	161.2	141.7	144.4	139.7	139.5
1997	111.9	90.4	78.0	72.5	92.4	114.2	132.1	126.6	116.6	113.4
1996	107.0	115.2	117.2	114.8	95.7	73.5	51.3	48.5	64.2	75.5
1995	144.3	130.6	126.6	121.1	113.8	90.8	70.8	62.9	67.5	85.6



Decision Support Tool
Pasture, Rangeland, Forage

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

Rainfall | Vegetation

Please Select a Location: State: Idaho County: Ada Grid: 56920 Grid Locator Print

Protection Information

Insured Crop Type: Grazingland
Coverage Level (%): 90
Protection Factor (%): 100
Share (%): 100
Insurable Acres: 1280
Sample Year: 2002

Graph

Type: Index Values / Estimated Indemnities
Range: Start 1995 End 2011
Intervals: Jan-Mar, Feb-Apr, Mar-May, Apr-Jun, May-Jul, Jun-Aug, Jul-Sep, Aug-Oct, Sep-Nov, Oct-Dec

Table | Graph

Index Interval	Insured Acres per Index Interval	Policy Protection per Unit	Premium Rate per $100	Total Premium ($/acre)	Premium Subsidy ($/acre)	Producer Premium ($/acre)	Actual Index Value	Indemnity ($/acre)
Jan-Mar	Interval not valid for selected county.							
Feb-Apr	Interval not valid for selected county.							
Mar-May	N/A ?	$0	15.61	$0.00	$0.00	$0.00	13.9	$0.00
Apr-Jun	1,280	$12,119	16.49	$1.56	$0.80	$0.77	22.3	$9.47
May-Jul	N/A ?	$0	17.39	$0.00	$0.00	$0.00	28.7	$0.00
Jun-Aug	N/A ?	$0	19.99	$0.00	$0.00	$0.00	47.9	$0.00
Jul-Sep	0	$0	20.66	$0.00	$0.00	$0.00	62.2	$0.00
Aug-Oct	0	$0	20.39	$0.00	$0.00	$0.00	63.7	$0.00
Sep-Nov	Interval not valid for selected county.							
Oct-Dec	Interval not valid for selected county.							
Per Acre	N/A	N/A	N/A	$1.56	$0.80	$0.76	N/A	$9.47
Policy Total	1,280	$12,119	N/A	$1,998	$1,019	$979	N/A	$12,119

County Base Value per Acre	$10.52
Dollar Amount of Protection per Acre	$9.47
Total Insured Acres	1,280
Total Policy Protection	$12,119
Subsidy Level	51%

Calculate

www.rma.usda.gov/policies/pasturerangeforage/

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 Availability for 2011 Crop Year (Jun 30, 2010)

PRF Archive

2012

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

- PRF Fact Sheet
- Frequently Asked Questions
- County Availability (PDF): Map | Text
- Basic Provisions (PDF)
- 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.

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- Basic Provisions (PDF)
- Policy Provisions (PDF)
- Insurance Standards Handbook (PDF)
- Grid ID Locator, Decision Support Tool, Historical Indices
- Downloadable Interactive PRF Spreadsheet - Total Loss Factor: XLS | PDF

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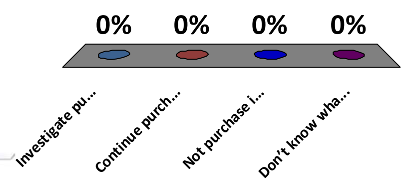
1. Investigate purchasing PRF.
2. Continue purchasing it.
3. Not purchase it in the future.
4. Don't know what I'll do.



RMA Crop Insurance
On-Line Self Study Courses (RightRisk.org)

2008 Insurance and Risk Management

Getting on Track:
Better Management Through Basic Ag Records

Feasibility of Alternative Enterprises

Taxes for Agricultural Enterprises

Enterprising Rural Families

AGR-Lite

A Lasting Legacy

Thank You!

Sponsors

- ✓ USDA Risk Management Agency
- ✓ Idaho Farm Bureau
- ✓ RightRisk, LLC

Speakers

- ✓ Jeffrey E. Tranel, jtranel@erightrisk.com
- ✓ Rod Sharp, rsharp@erightrisk.com

Web Sites

- ✓ erightrisk.com
- ✓ coopext.colostate.edu/ABM/
- ✓ Idaho.erightrisk.com