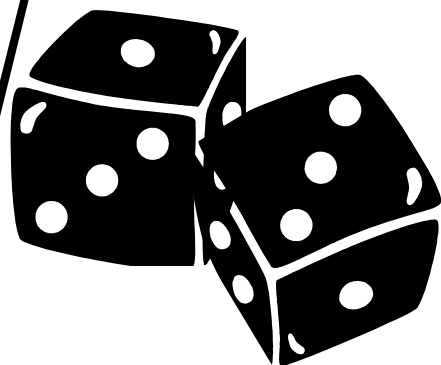


Ranching with a Sharp Pencil



Risk Management Tools for Nebraska Ranches

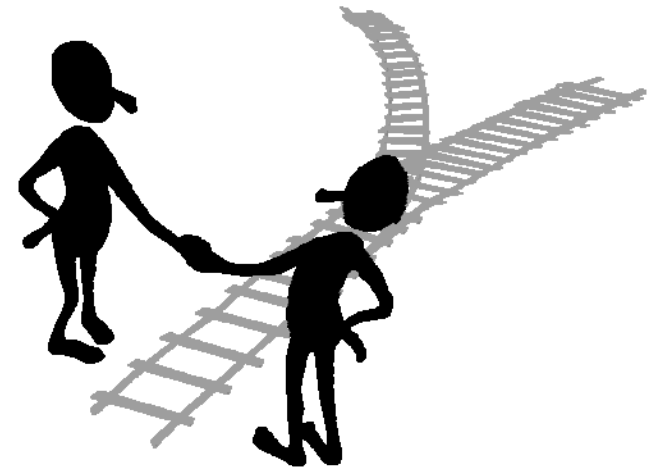
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John P. Hewlett

Ranch/Farm Management Specialist,
University of Wyoming

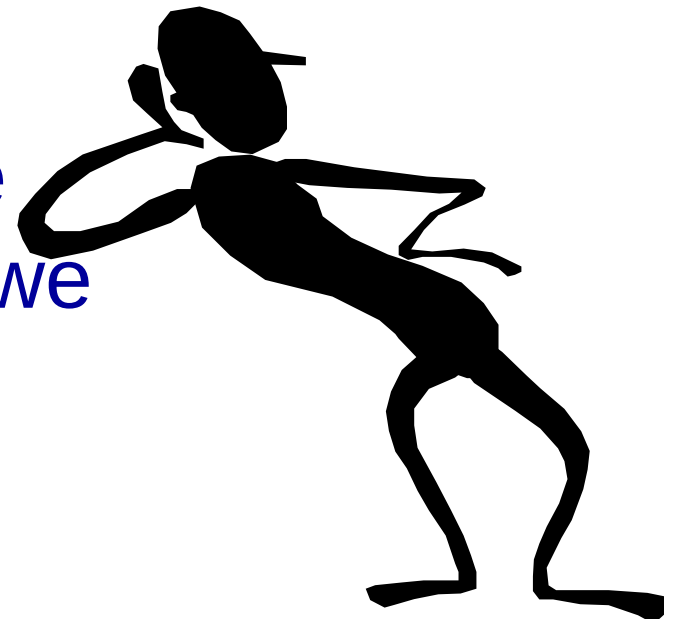
Where Do We Want to Go?

- Reduced Risk?
 - Reduced volatility = greater certainty
 - Lower risk = lower returns



Where Do We Want to Go?

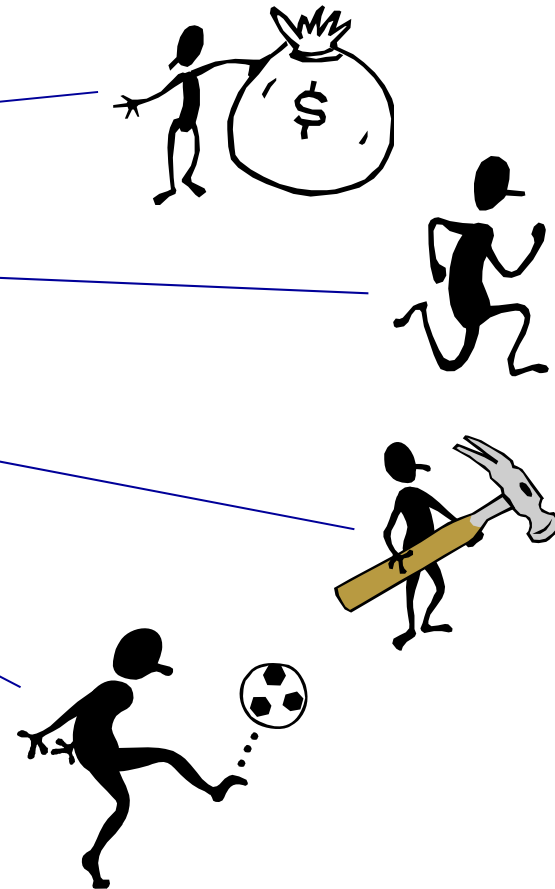
- Reduced Risk?
 - Lower volatility = greater certainty
 - Lower risk = lower returns
- Manage the risk(s) we are willing to accept at levels we are comfortable with



Where Do We Want to Go?

Risk Management Strategies

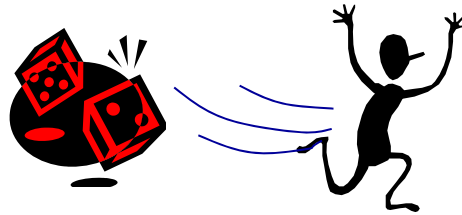
- Assume the risk
- Avoid the risk
- Reduce the risk
- Transfer the risk



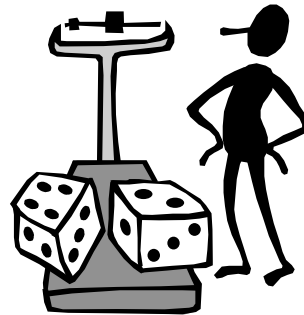
Where Do We Want to Go?

Types of Risk Preference

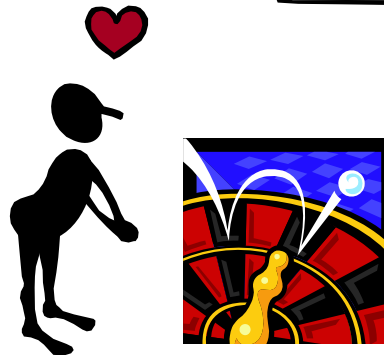
- Risk Averse



- Risk Neutral



- Risk Loving



How Do We Get There?

- Better risk management
 - Evaluate risk(s)
 - Develop strategy
 - Use available tools



How Do We Get There?

Tools Available

- **Insurance**
- Disaster Assistance Programs
- Risk Analysis



Current Federal Insurance Options

Insurance Plans Available in Nebraska			
Insurable Crops	Insured Acres	Total Acres	Percent Insured
Barley	1,452	NA	NA
Corn (Total Ins. Plans)	8,213,202	9,200,000	89%
Corn APH	1,113,976		
Corn CRC	5,965,774		
Corn GRIP	10,419		
Corn GRP	732		
Corn RA	1,122,301		
Dry Beans	154,404	175,000	88%
Forage Production	10,168	NA	NA
Forage Seeding	883	NA	NA
Grain Sorghum (Total Ins. Plans)	60,872	210,000	29%
Grain Sorghum APH	14,123		
Grain Sorghum CRC	46,749		
Hybrid Corn Seed	94,890	NA	NA
Millet	66,704	95,000	70%
Oats	12,065	100,000	12%
Pasture, Rangeland, Forage	405,215	NA	NA
Popcorn	55,732	NA	NA
Potatoes	14,116	19,000	74%
Rye	789	NA	NA
Soybeans (Total Ins. Plans)	4,629,200	4,900,000	94%
Soybeans APH	630,447		

2010
Nebraska

Crop Pilot Programs	
Apiculture – Vegetative Index	All Counties in Nebraska.
Corn Biotechnology Endorsement (BE)	
Pasture, Rangeland, and Forage (PRF) – Vegetative Index	

Loss History	Loss Ratio	Losses									
		Premium	Losses	Loss Ratio	Premium	Losses	Loss Ratio	Premium	Losses	Loss Ratio	Premium
		155,278	53,356,825	0.48	155,278	53,356,825	0.48	155,278	53,356,825	0.48	155,278
		888,183	41,606,984	0.40	888,183	41,606,984	0.40	888,183	41,606,984	0.40	888,183
		160,493	37,588,955	0.34	160,493	37,588,955	0.34	160,493	37,588,955	0.34	160,493
		609,902	50,987,951	0.43	609,902	50,987,951	0.43	609,902	50,987,951	0.43	609,902
		327,711	190,762,670	1.32	327,711	190,762,670	1.32	327,711	190,762,670	1.32	327,711
		816,442	75,194,649	0.40	816,442	75,194,649	0.40	816,442	75,194,649	0.40	816,442
		208,282	372,934,615	2.01	208,282	372,934,615	2.01	208,282	372,934,615	2.01	208,282
		240,598	181,380,302	0.79	240,598	181,380,302	0.79	240,598	181,380,302	0.79	240,598
		132,537	143,343,821	0.51	132,537	143,343,821	0.51	132,537	143,343,821	0.51	132,537
		108,007	81,034,510	0.32	108,007	81,034,510	0.32	108,007	81,034,510	0.32	108,007
		367,926	127,108,392	0.44	367,926	127,108,392	0.44	367,926	127,108,392	0.44	367,926
		793,900	85,806,605	0.19	793,900	85,806,605	0.19	793,900	85,806,605	0.19	793,900
		589,527	413,872,738	0.61	589,527	413,872,738	0.61	589,527	413,872,738	0.61	589,527
		686,035	164,836,742	0.28	686,035	164,836,742	0.28	686,035	164,836,742	0.28	686,035
		574,872	137,491,891	0.30	574,872	137,491,891	0.30	574,872	137,491,891	0.30	574,872

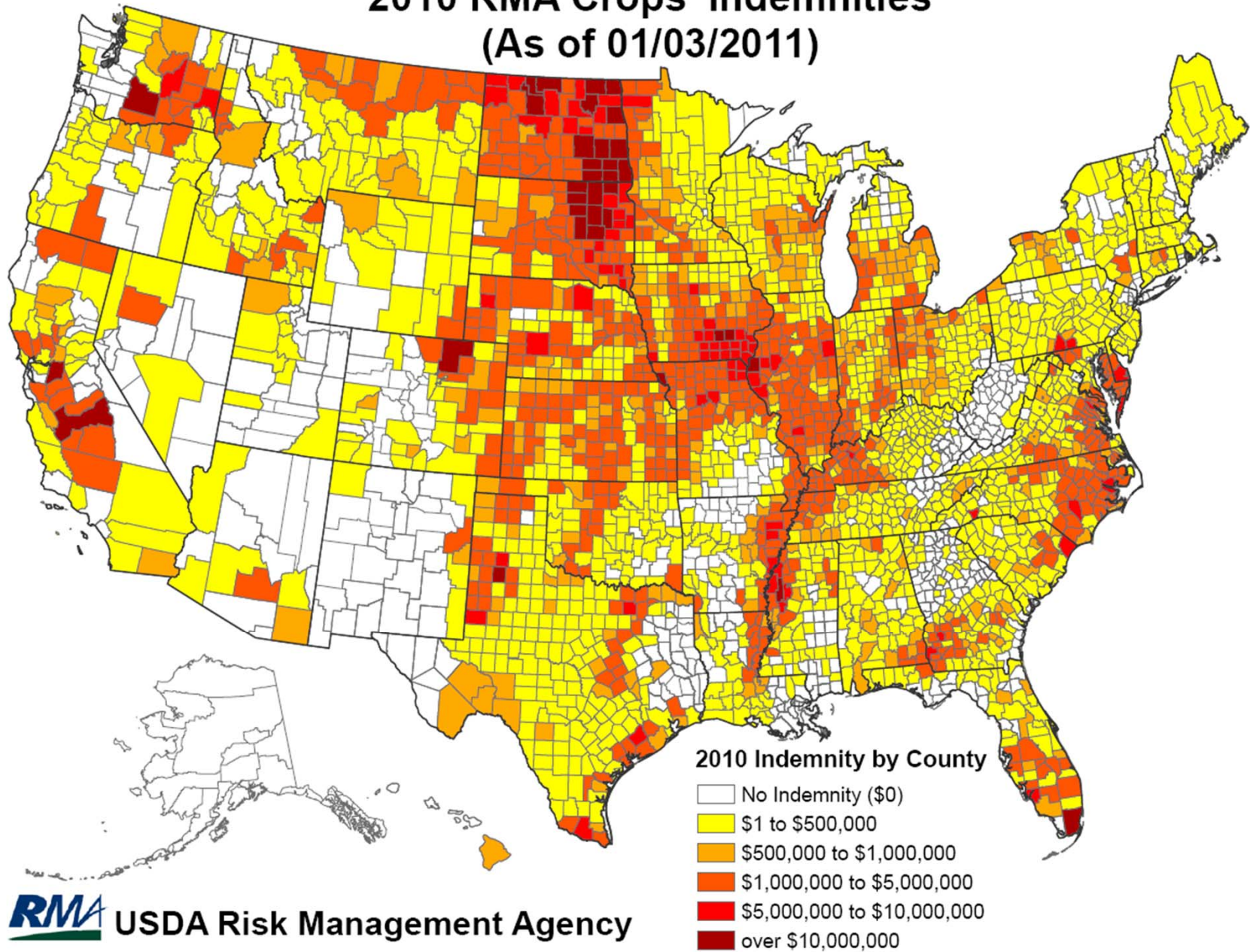
Farm Service Agency:
Noninsured Crop Disaster Assistance Program

Wheat APH	151,112	
Wheat CRC	1,132,569	
Wheat GRIP	0	
Wheat GRP	787	
Wheat RA	157,331	
NA = Not Available		
Dollar Liability Program		Total Dollar Liability
LGM Cattle		0
LGM Dairy Cattle		0
LRP Fed Cattle		1,634,670
LRP Feeder Cattle		10,898,386
LRP Lamb		92,515
LGM Swine		0
LRP Swine		64,528
Nursery		4,286,978
Pasture, Rangeland, and Forage (Vegetative Index)		9,868,971

Fifteen Year	Year	Policies Earning Premium	Net Acres Insured	Losses									
				Premium	Losses	Loss Ratio	Premium	Losses	Loss Ratio	Premium	Losses	Loss Ratio	Premium
	1996	123,262	13,090,751				123,262	13,090,751		123,262	13,090,751		123,262
	1997	105,518	12,020,301				105,518	12,020,301		105,518	12,020,301		105,518
	1998	98,753	11,811,251				98,753	11,811,251		98,753	11,811,251		98,753
	1999	98,078	12,253,931				98,078	12,253,931		98,078	12,253,931		98,078
	2000	101,578	12,962,941				101,578	12,962,941		101,578	12,962,941		101,578
	2001	101,558	13,236,171				101,558	13,236,171		101,558	13,236,171		101,558
	2002	97,932	13,337,261				97,932	13,337,261		97,932	13,337,261		97,932
	2003	99,662	13,654,001				99,662	13,654,001		99,662	13,654,001		99,662
	2004	99,244	14,008,211				99,244	14,008,211		99,244	14,008,211		99,244
	2005	95,213	14,129,481				95,213	14,129,481		95,213	14,129,481		95,213
	2006	90,918	13,906,291				90,918	13,906,291		90,918	13,906,291		90,918
	2007	87,492	14,167,851				87,492	14,167,851		87,492	14,167,851		87,492
	2008	88,323	14,417,191				88,323	14,417,191		88,323	14,417,191		88,323
	2009	88,790	15,350,881				88,790	15,350,881		88,790	15,350,881		88,790
	2010	86,982	15,262,981				86,982	15,262,981		86,982	15,262,981		86,982

* 2010 numbers are incomplete

2010 RMA Crops' Indemnities (As of 01/03/2011)



RMA USDA Risk Management Agency

RIGHT RISK
TM

RMA

Summary of Policies Sold, by commodity: Nebraska

Federal Crop Insurance Corporation
Crop Year Statistics for 2010
As of: 6/13/2011
Nationwide Summary - By State

State	Ins Plan	Pol Sold	Pol Earn Prem	Pol Indem	Units Earn Prem	Units Indem	Net Acres	Liabilities	Total Premium	Subsidy	Cost Share	State Sbsdy	Prem Dscnt	Indemnity	Loss Ratio
NEBRASKA	APH	46,845	16952	2,234	42,341	3,497	2,307,101	780,245,309	48,020,182	28,501,205	0	0	0	25,243,944	.53
	CRC	81,182	51704	6,395	138,703	10,082	9,979,452	3,759,529,364	321,398,617	193,203,653	0	0	0	99,036,871	.31
	DOL	178	43	8	54	14	1,385	4,765,675	97,010	68,082	0	0	0	203,455	2.10
	GRIP	80	58	0	90	0	18,396	14,828,177	1,235,263	547,162	0	0	0	0	.00
	GRP	25	20	0	34	0	2,363	1,147,442	42,926	24,160	0	0	0	0	.00
	RA	26,617	16373	2,108	44,197	3,134	2,460,144	827,737,047	91,569,132	52,523,797	0	0	0	28,581,330	.31
	VEGAT	974	947	2	2,088	4	404,412	9,854,140	451,914	253,411	0	0	0	3,821	.01
	YDO	1,915	885	128	1,626	164	94,986	70,517,425	3,052,107	1,783,181	0	0	0	3,533,576	1.16
NEBRASKA Total		157,816	86,982	10,875	229,133	16,895	15,268,239	5,468,624,579	465,867,151	276,904,651	0	0	0	156,602,997	.34
Grand Total		157,816	86,982	10,875	229,133	16,895	15,268,239	5,468,624,579	465,867,151	276,904,651	0	0	0	156,602,997	.34



Summary of Policies Sold, by county

Federal Crop Insurance Corporation Crop Year Statistics for 2010 As of: 6/13/2011

Federal Crop Insurance Corporation Crop Year Statistics for 2010 As of: 6/13/2011 Nationwide Summary - By State/County/Crop

Crop	Ins Plan	Pol Sold	Pol Earn Prem	Pol Indem	Units Earn Prem	Units Indem	Net Acres	Liabilities	Total Premium	Subsidy	Cost Share	State Sbsdy	Prem Dscent	Indemnity	Loss Ratio
NEBRASKA															
NEBRASKA - Cherry (031)															
CORN	APH	17	11	5	20	6	2,476	815,502	71,249	44,022	0	0	0	106,294	1.49
	CRC	20	12	2	26	7	5,480	2,520,231	303,265	197,931	0	0	0	201,521	.66
	RA	34	20	10	77	27	11,001	5,176,387	677,864	395,376	0	0	0	1,206,701	1.78
CORN Total		71	43	17	123	40	18,937	8,512,100	1,052,378	637,329	0	0	0	1,514,516	1.44
DRY BEANS	APH	38	9	5	28	14	3,231	1,521,808	165,088	97,002	0	0	0	616,799	3.74
GRAIN SORGHUM	APH	16	0	0	0	0	0	0	0	0	0	0	0	0	.00
	CRC	14	0	0	0	0	0	0	0	0	0	0	0	0	.00
GRAIN SORGHUM Total		30	0	0	0	0	0	0	0	0	0	0	0	0	.00
OATS															
PASTURE,RANGELAND,FO															
POPCORN															
SOYBEANS															
SOYBEANS Total															
SUNFLOWERS															
WHEAT															
WHEAT Total															
NEBRASKA - Cherry Total															
NEBRASKA Total															
Grand Total															

Federal Crop Insurance Corporation Reinsurance Year Statistics for 2010 As of: 6/15/2011

Nationwide Summary - By State/County/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
NEBRASKA												
SWINE	LRP	1	0	0	0	0	0	0	0	0	0	.00
Cedar Total		19	1	0	1	0	200	222,560	2,816	366	0	.00
NEBRASKA - Chase (029)												
FED CATTLE	LRP	1	0	0	0	0	0	0	0	0	0	.00
FEEDER CATTLE	LRP	7	0	0	0	0	0	0	0	0	0	.00
Chase Total		8	0	0	0	0	0	0	0	0	0	.00
NEBRASKA - Cherry (031)												
FED CATTLE	LRP	1	0	0	0	0	0	0	0	0	0	.00
FEEDER CATTLE	LRP	2	0	0	0	0	0	0	0	0	0	.00
Cherry Total		3	0	0	0	0	0	0	0	0	0	.00



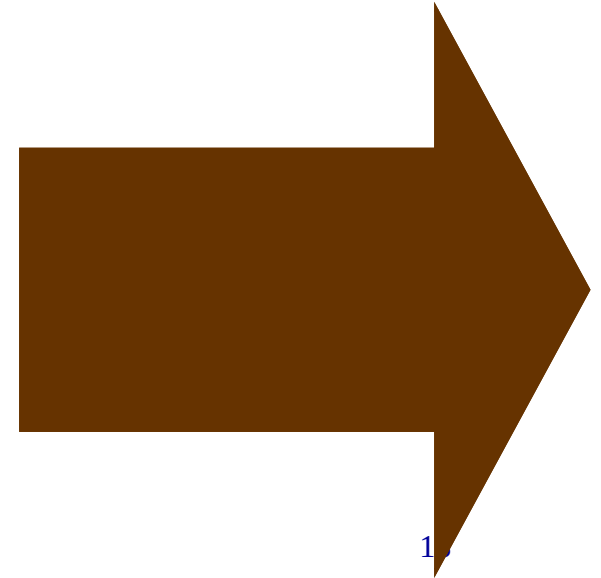
Categories of Insurance

There are three broad categories of RMA approved insurance products:

1. **Yield Insurance** pays indemnities when per acre yields are low
2. **Price insurance** pays indemnities when per unit output prices are low (currently this type of insurance is available only for certain classes of livestock).
3. **Revenue insurance** pays indemnities when per acre revenue (price x quantity) is low or when whole farm revenue is low due to losses in production and declines in product quality and price.

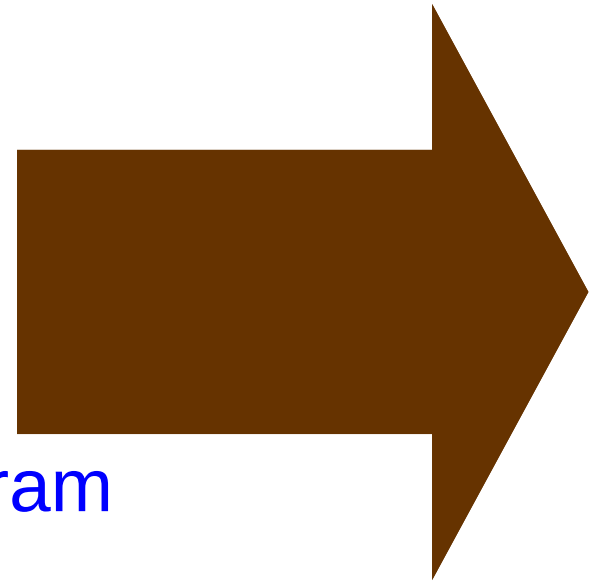
Older Insurance Options

- **NAP** Noninsured Crop Disaster Assistance Program - Farm Service Agency
- **Forage Seeding**
- **Forage Production**
- **LRP** feeder/fed cattle and swine



Recently Added Insurance Options

- **PRF**-vegetation index
- **LRP** Lamb
- **LGM** cattle/swine
- **LGM** dairy
- **PRF**-apiculture pilot index program



How Do We Get There?

Tools Available

- Insurance
- **Disaster Assistance Programs**
 - Supplemental Revenue Assistance (SURE)
 - Livestock Forage Disaster Program (LFP)
 - Livestock Indemnity Program (LIP)
 - Emergency Livestock Assistance Program (ELAP)
- Risk Analysis



How Do We Get There?

Non-insured Disaster Assistance Program (NAP)

- Available if there is no RMA actuarial offering for the commodity in the county
- Offered by the Farm Service Agency (FSA)
- Covers crops that are non-insurable, including crops grown for food, fiber, and livestock feed
- Covers low yields, loss of inventory, or prevented planting losses

SURE Program

- Provides disaster assistance to farms/ranches:
 - In a county where a disaster is declared by the Secretary of Agriculture, or
 - In a county adjacent to a declared county, or
 - Have experienced a farm wide crop loss in excess of 50 percent of expected production
- To be eligible, producers must buy crop insurance or Non-insured Disaster Assistance Program (NAP) for all acres of economically significant crops
- An eligible farm/ranch disaster payment is linked to the dollar amount of crop insurance coverage the farm obtains



Livestock Forage Disaster Program (LFP)

- Provides compensation to eligible livestock producers who have suffered grazing losses due to qualifying drought or fire
- To be eligible, producers must purchase rangeland insurance or Non-insured Disaster Assistance Program (NAP) for all forage acres

Livestock Indemnity Program (LIP)

- Provides payments to eligible livestock owners and contract growers for livestock death losses in excess of normal mortality due to adverse weather
- Does **NOT** have a risk management purchase requirement for program benefit eligibility
- Payments are based on eligible losses due to adverse weather conditions

ELAP Program

- ELAP covers losses **NOT** covered under other disaster assistance programs: SURE, LFP, or LIP
- Payments are limited to \$100,000 per year per person or legal entity, a combined limit with SURE, LFP, and LIP

ELAP Program cont.

- Covered losses include:
 - **Grazing losses** due to adverse weather or eligible loss conditions
 - **Loss of forage or feedstuffs raised** by livestock producers
 - **Cost of transporting additional feed** to eligible livestock
 - **Costs of purchasing additional feed** above normal quantities
 - **Payments for death loss** above normal mortality rates
 - Loss of feed intended for honeybees or farm-raised fish.
 - Honeybee colony or hive losses due to **colony collapse disorder**
 - Losses due to fish deaths from weather or eligible loss conditions
 - Livestock, honeybee or farm-raised fish losses that are not related to adverse weather or eligible loss conditions

ELAP Program cont.

- ELAP has a **risk management purchase requirement**:
 - To be eligible for ELAP payments, producers on a farm or ranch must purchase insurance for each insurable crop excluding grazing land.
 - For non-insurable crops, producers must purchase NAP coverage when available, except grazing lands.
 - Persons without insurance or NAP coverage may be exempt from the risk management purchase requirement if they are socially disadvantaged, limited resource, or a beginning farmer or rancher

Farm Bill Disaster Aid Programs

The 2008 Farm Bill created a permanent disaster aid program for U.S. farms and ranches. Specifically, five different permanent disaster programs were authorized that are intended to replace ad hoc disaster relief programs. The five standing disaster programs are the Livestock Indemnity Payments program (LIP), Livestock Forage Disaster program (LFP), Emergency Assistance for Livestock, Honey Bees and Farm Raised Fish program (ELAP), the Orchard and Nursery Tree Assistance Program (TAP), and the Supplemental Revenue Assistance Payments Program (SURE).

To be eligible to receive benefits under several of the new disaster aid programs, producers must have purchased insurance for each insurable commodity. Insurable commodities are those for which a plan of insurance can be obtained from the USDA's Risk Management Agency. Coverage for noninsurable commodities is generally available through the Noninsured Crop Disaster Assistance Program (NAP) run by the USDA's Farm Service Agency.

For livestock producers the insurable commodity of greatest concern is forage. Generally, a producer must either: (1) obtain a Risk Management Agency (RMA) policy or plan of insurance for the forage, or (2) file the required paperwork and pay the administrative fee by the application closing date for Noninsured Disaster Assistance Program (NAP) coverage.

Vegetative Index – Pasture, Rangeland and Forage (VI-PRF)

The Pasture, Rangeland, Forage Pilot Insurance Program is a risk management tool for grazinglands and hayland in all counties of Nebraska. This program is based on a vegetation greenness index, and is designed to give forage and livestock producers the ability to buy insurance protection for losses of forage produced for grazing or harvested for hay.

For more information see: <http://www.rma.usda.gov>.

Sales closing date: **September 30th**
Policy year: **January 1-December 31**



Noninsured Crop Disaster Assistance Program (NAP)

USDA's Farm Service Agency's (FSA) Noninsured Crop Disaster Assistance Program (NAP) provides financial assistance to producers of noninsurable crops when low yields, loss of inventory or prevented planting occurs due to natural disasters.

To be eligible for NAP assistance, crops must be noninsurable crops and agricultural commodities for which the catastrophic risk protection level of crop insurance is not available, and must be one of the commercially produced crops found in the published list, including crops planted and grown for livestock consumption (not limited to grain and forage crops and including native forage).

For more information see: <http://www.fsa.usda.gov/FSA/stateoffap?mystate=ne>

Deadline for purchase of NAP for **ALL** crops: **March 15th**

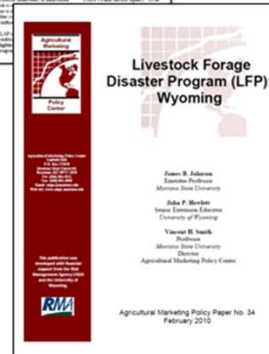
WESTERN RISK MANAGEMENT LIBRARY

Copies available at:
Western Risk Management Library
<http://agecon.uwyo.edu/RiskMgt>



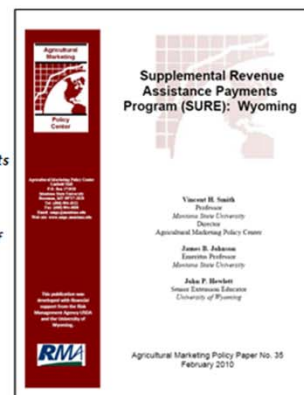
4 pages:

The Emergency Assistance for Livestock, Honeybees, and Farm-Raised Fish Program (ELAP) provides emergency assistance to eligible producers of livestock, honeybees, and farm-raised fish who have losses due to disease, adverse weather, or other conditions, including losses due to blizzards, or wildfire, as determined by the Secretary of Agriculture.



13 pages:

The Livestock Forage Disaster Program (LFP) provides compensation to eligible livestock producers who have suffered grazing losses because of qualifying drought or fire. The eligible grazing losses must occur within the same calendar year the benefits are being requested. Compensation provided under LFP can be used for any purpose by the program participant.



14 pages:

The new Supplemental Revenue Assistance Payments Program (SURE), created by 2008 Farm Bill, is a permanent disaster aid program for farms producing crops. The program is one of five different permanent disaster programs authorized by the act. The purpose of the SURE program is to provide agricultural producers with automatic disaster payments when the region in which they farm experiences catastrophic natural weather events or when an individual farm experiences severe crop losses due to highly localized adverse weather conditions.

Pasture, Rangeland, Forage Vegetation Index

Grid Locator
Pasture, Rangeland, Forage

Find a Location: Search

Enter name, address, or latitude/longitude values: [More Info](#)

Vegetation Rainfall Grids: ☒ Counties: ☒ Marker Info: ☒ Google Maps

Labels: ☒ Labels: ☐

Map Satellite Hybrid Terrain

Current Location

Grid ID: -
Latitude: -
Longitude: -
County: -
State: -
Address: -

Grid Tools:

- [Decision Support Tool](#)
- [Historical Vegetation Indices](#)
- [View Actuarial Info](#)
- [View Cost Estimator](#)

Steps

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

76593 76594 76595 76596 76597 76598 76599 76600 76601 76602

77162 77163 77164 77165 77166 77167 77168 77169 77170 77171 77172

77361 77362 77363 77364 77365 77366 77367 77368 77369 77370 77371

77372 77373 77374 77375 77376 77377 77378 77379 77380 77381 77382

78310 78311 78312 78313 78314 78315 78316 78317 78318 78319 78320

78884 78885 78886 78887 78888 78889 78890 78891 78892 78893 78894

79458 79459 79460 79461 79462 79463 79464 79465 79466 79467 79468

80032 80033 80034 80035 80036 80037 80038 80039 80040 80041 80042

80605 80606 80607 80608 80609 80610 80611 80612 80613 80614 80615 80616

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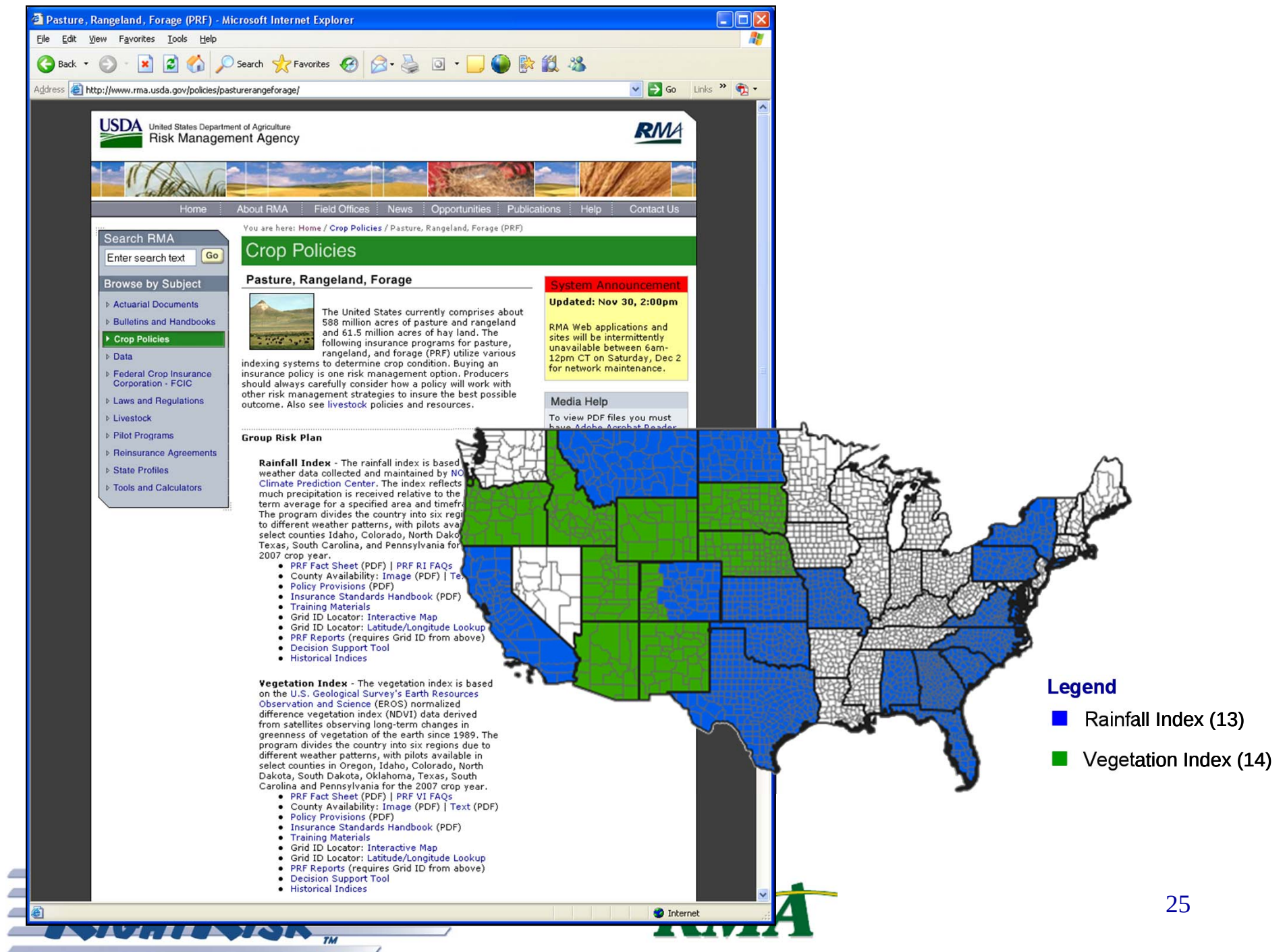
81754 81755 81756 81757 81758 81759 81760 81761 81762 81763 81764

82328 82329 82330 82331 82332 82333 82334 82335 82336 82337 82338

82903 82904 82905 82906 82907 82908 82909 82910 82911 82912

This website is a product of [AgForce](#), [GMS](#), and [RMA](#).





Rangeland Insurance - PRF Vegetation Index Insurance Program

- **Pasture, Rangeland, Forage Vegetation, Index Pilot Program**
- **This program can be used by a farm or ranch operator to cover grazingland production or hayland production or both**



Rangeland Insurance - PRF Vegetation Index Insurance Program

- A vegetation index is used as a substitute (proxy) for range and hay production
- The vegetation index employed is the NDVI Index:
 - *A index calculated from data from the U.S. Geological Survey Earth Resource Observation and Science data center (satellite data) produced by the National Oceanic and Atmospheric Administration*



Rangeland Insurance - PRF Vegetation Index Insurance Program

- This pilot program is a Group Risk Program
- This pilot program insures against certain declines in the vegetative index values in a grid area



Rangeland Insurance - PRF Vegetation Index Insurance Program

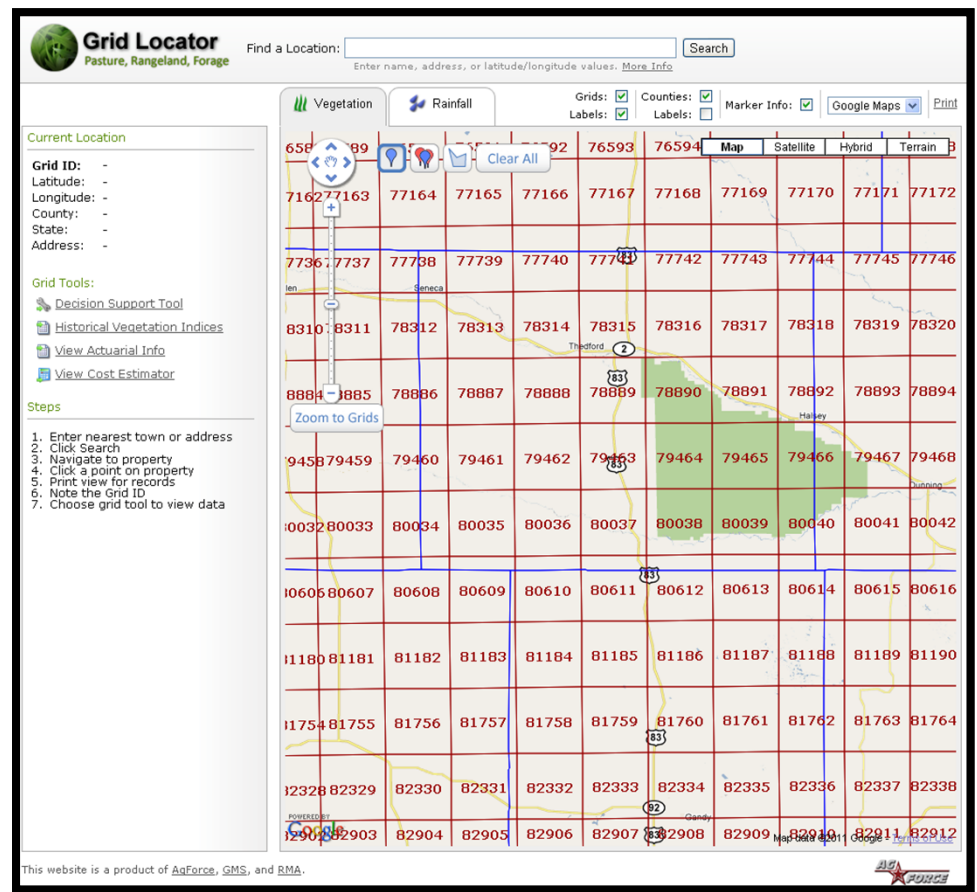
- Although most GRP insurance programs are based on county level information, this program is based on a grid
- Several terms are defined:
 - *Grid-Acreage within each 4.8 mile by 4.8 mile gridded area established using NDVI data and identified by longitude and latitude*



Rangeland Insurance - PRF Vegetation Index Insurance Program

Grid Identification (GRID ID):

- A specific code associated with each grid contained in the actuarial documents for this insurance program
- The grid ID is determined on a “point of reference” selected by the forage producer



Rangeland Insurance - PRF Vegetation Index Insurance Program

- The crop for which this insurance program is applicable is defined as pasture, rangeland, or forage
- The crop types are grazingland and hayland
- Grazingland is established acreage of forage on land suitable and intended for grazing by livestock
- Hayland is established acreage of forage on land suitable and intended for haying



Rangeland Insurance - PRF Vegetation Index Insurance Program

- For this insurance product the crop year begins on January 1 and ends December 31
- The crop year is divided into 3-month “index intervals”
- Which intervals are available for a particular grid vary by county
- Acres may not be insured in overlapping intervals
- For insurable acreage in a particular grid, a producer must select the interval(s) for insuring forage production

Decision Support Tool
Pasture, Rangeland, Forage

This tool is for illustration purposes only. Your actual information may differ. For additional information, please [click here](#).

Please Select a Location: State: County: Grid: [Grid Locator](#) [Print](#)

Protection Information

Insured Crop Type:
 Coverage Level (%):
 Protection Factor (%):
 Share (%):
 Insurable Acres:
 Sample Year:

Graph

Type: ☐ Index Values ☒ Estimated Indemnities
 Range: Start End
 Intervals:
☒ Jan-Mar ☒ Feb-Apr ☒ Mar-May
☒ Apr-Jun ☒ May-Jul ☒ Jun-Aug
☒ Jul-Sep ☒ Aug-Oct ☒ Sep-Nov
☒ Oct-Dec

Table

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								
Feb-Apr								
Mar-May								
Apr-Jun	320	\$3,372	14.86	\$1.57	\$0.80	\$0.77	129.4	\$0.00
May-Jul	N/A 2	\$0	15.45	\$0.00	\$0.00	\$0.00	128.7	\$0.00
Jun-Aug	N/A 2	\$0	18.67	\$0.00	\$0.00	\$0.00	138.4	\$0.00
Jul-Sep	320	\$3,372	20.14	\$2.12	\$1.08	\$1.04	144.6	\$0.00
Aug-Oct	N/A 2	\$0	20.49	\$0.00	\$0.00	\$0.00	142.3	\$0.00
Sep-Nov								
Oct-Dec								
Per Acre	N/A	N/A	N/A	\$1.84	\$0.94	\$0.90	N/A	\$0.00
Policy Total	640	\$6,744	N/A	\$1,180	\$602	\$578	N/A	\$0
County Base Value per Acre					\$11.71			
Dollar Amount of Protection per Acre					\$10.54			
Total Insured Acres					640			
Total Policy Protection					\$6,745			
Subsidy Level					51%			

Calculate

Product of RMA, AgForce, and GMS | [Terms of Use](#)

Rangeland Insurance - PRF Vegetation Index Insurance Program

- Several variables enter into how much insurance may be purchased for a particular acreage of a crop type in a specified grid
- These are considered:
 - *County Base Value is the Federal Crop Insurance Corporation's determined production value of grazingland and hayland forage production in a county*
 - *Coverage Level is the percentage of the county base value a producer selects for insurance coverage on forage production. The producer choices are 70, 75, 80, 85 or 90 percent levels of coverage. Producers are required to insure each grid in a county at the same coverage level*

Rangeland Insurance - PRF Vegetation Index Insurance Program

- **Protection Factor** is a percentage factor between 60 and 150 percent selected by the insured producer to reflect their individual operation's forage productivity
- **Producer Share** is the operator's share of the forage production



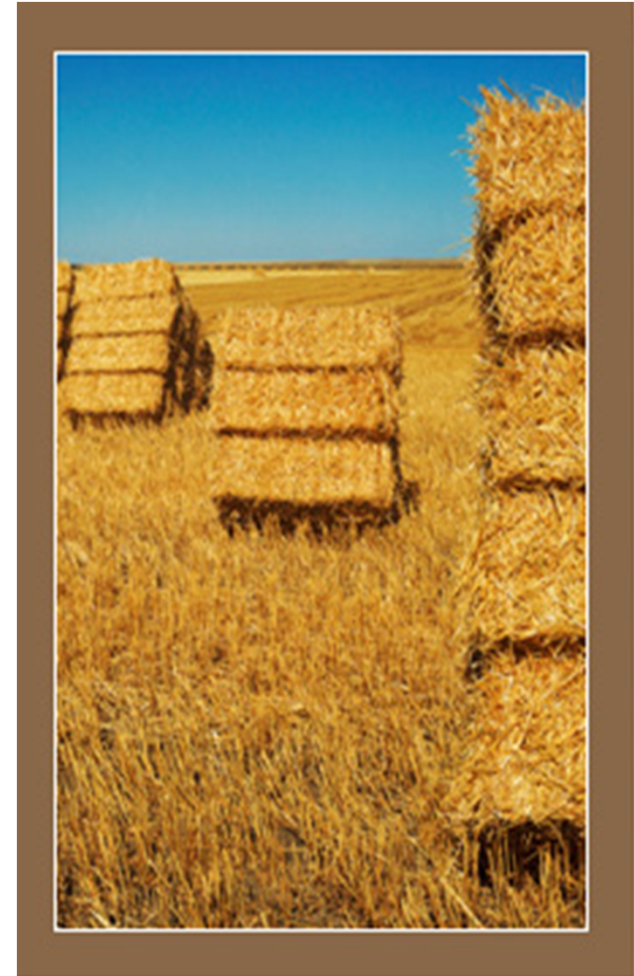
Rangeland Insurance - PRF Vegetation Index Insurance Program

- The policy protection for a crop type is the sum of the policy protection per unit values
- Except for the county base value specified for the crop, most of the variables that influence the policy protection are selected by the producer:
 - *Coverage level*
 - *Productivity factor*
 - *Insured areas*



Rangeland Insurance - PRF Vegetation Index Insurance Program

- **Total Premium per Unit is:**
Dollar Protection Per Acre
x Insured Acres/Unit
x Premium Rate per \$100 insurance
x Adjustment factor 0.01
x Producer Share
- **Premium Subsidy per Unit is:**
Premium per Unit
x Subsidy rate
- **Producer Premium per Unit is:**
Total Premium per unit
x Premium subsidy per unit



Rangeland Insurance - PRF Vegetation Index Insurance Program

- The Expected Grid Index is known to a producer desiring insurance prior to the September 30 sales closing date for this insurance product



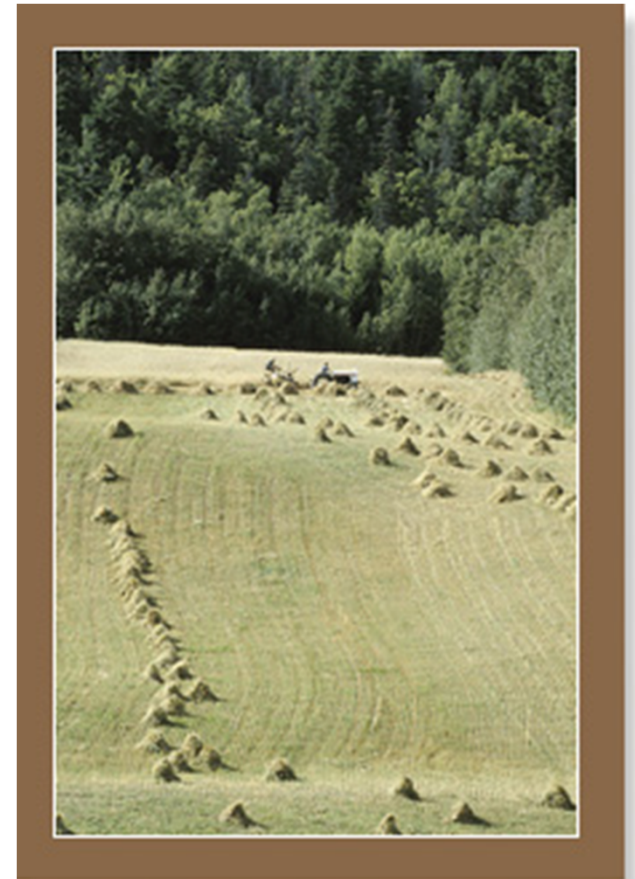
Rangeland Insurance - PRF Vegetation Index Insurance Program

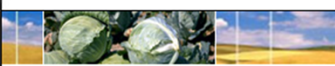
- The Final Grid Index is known after the close of the index interval.



Rangeland Insurance - PRF Vegetation Index Insurance Program

- **Trigger Grid Index** is the result of multiplying the expected grid index by the coverage level
- An insurance payment (indemnity) is due if the Final Grid Index is less than the Trigger Grid Index
- The insurance payment (indemnity) is calculated as the Policy Protection per Unit times the Payment Calculation Factor. The Payment Calculation Factor is the difference (Trigger Grid Index – Final Grid Index) divided by the Trigger Grid Index





Rainfall Index

maintained by the National Oceanic and Atmospheric Administration (NOAA) reflects how much rainfall a given area receives relative to the long-term average for that area. The index is divided into six categories, with patterns, with patterns, with patterns.

- PRF Fact Sheet
- Frequently Asked Questions
- County Averages
- Basic Program
- Policy Provisions
- Insurance
- Training
- Grid ID
- Grid ID
- RI and V
- Decision
- Historical

Vegetation Index

Survey's Earth Resources Observation and Science (EOS) satellite data from satellites of vegetation of the country into six categories, with patterns, with patterns, with patterns.

- PRF Fact Sheet
- Frequently Asked Questions
- County Averages
- Basic Program
- Policy Provisions
- Insurance
- Training
- Grid ID
- Grid ID
- DBF Rep
- Decision
- Historical

Grid Locator

Pasture, Rangeland, Forage

Find a Location: Search

Enter name, address, or latitude/longitude values. [More Info](#)

Current Location

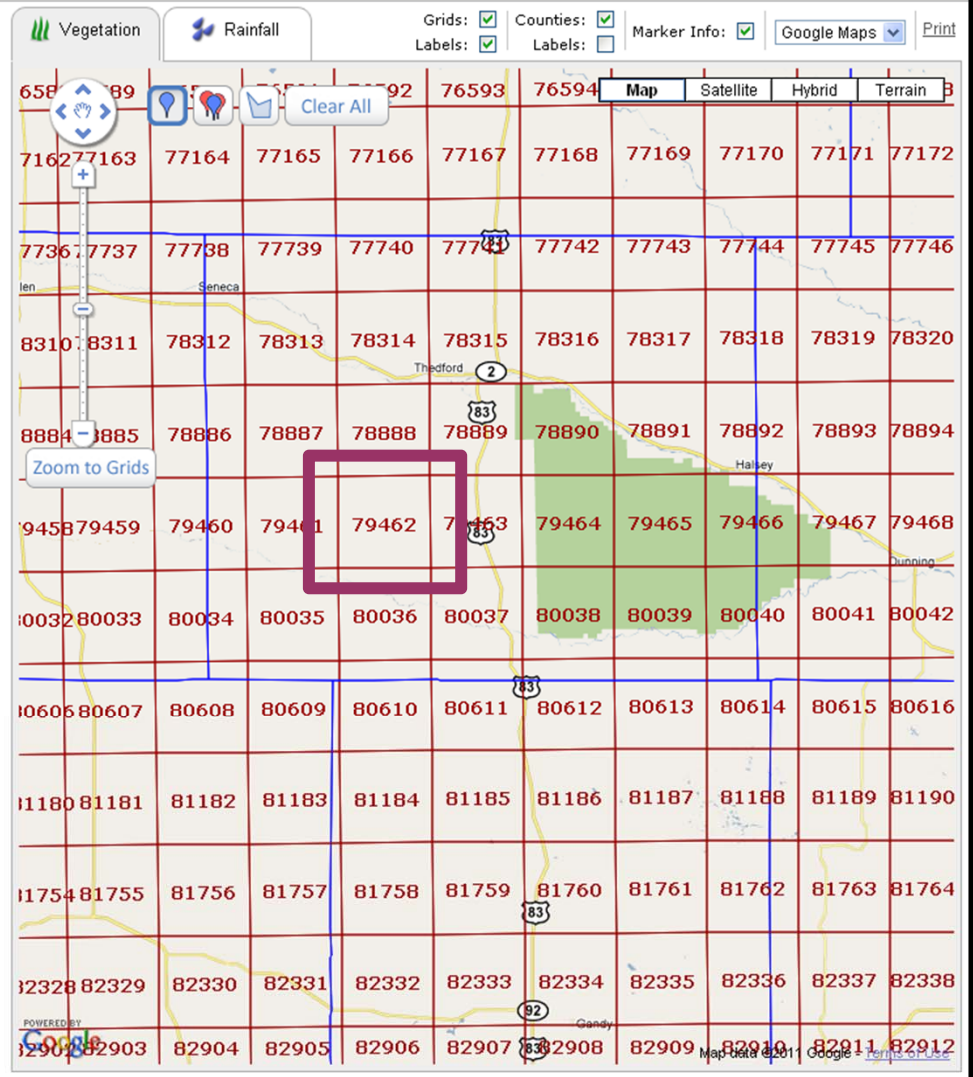
Grid ID: -
 Latitude: -
 Longitude: -
 County: -
 State: -
 Address: -

Grid Tools:

- [Decision Support Tool](#)
- [Historical Vegetation Indices](#)
- [View Actuarial Info](#)
- [View Cost Estimator](#)

Steps

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



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



Decision Support Tool

Pasture, Rangeland, Forage

This tool is for illustration purposes only. Your actual information may differ. For additional information, please [click here](#).

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Rainfall

Vegetation

Please Select a Location:

State:

County:

Grid:

Grid Locator

Print

Protection Information

Insured Crop Type:

Coverage Level (%):

Protection Factor (%):

Share (%):

Insurable Acres:

Sample Year:

Graph

Type:

☐ Index Values ☒ Estimated Indemnities

Range:

Start:

End:

Intervals:

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

Table

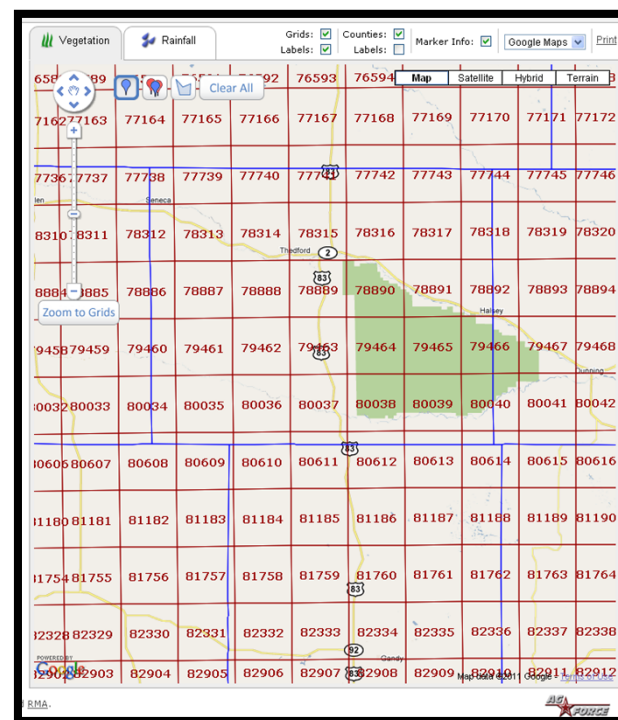
Graph

☐ Graph View ☒ Chart View

Year	Jan-Mar	Feb-Apr	Mar-May	Apr-Jun	May-Jul	Jun-Aug	Jul-Sep	Aug-Oct	Sep-Nov	Oct-Dec
2010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2009	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2008	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2007	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2006	0.0	0.0	0.0	0.0	0.0	0.0	9.255	0.0	0.0	0.0
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	3.583	0.0	0.0	0.0	0.0	0.0	0.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	5.743	0.0	0.0	0.0
2002	0.0	0.0	0.0	8.5	0.0	0.0	10.538	0.0	0.0	0.0
2001	0.0	0.0	0.0	9.15	0.0	0.0	3.354	0.0	0.0	0.0
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.334	0.0	0.0	0.0
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996	0.0	0.0	0.0	0.65	0.0	0.0	0.0	0.0	0.0	0.0
1995	0.0	0.0	0.0	3.513	0.0	0.0	1.177	0.0	0.0	0.0
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A	N/A	N/A
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	4.654	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.509	0.0	0.0	8.395	0.0	0.0	0.0
1990	0.0	0.0	0.0	5.673	0.0	0.0	5.48	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Rangeland Insurance - PRF Vegetation Index Insurance Program: Summary cont.

- Not required to insure all acres in a grid
...however:
 - The SURE, LFP, and ELAP programs administered by FSA require coverage by either NAP or PRF
 - Coverage must be purchased for all land where disaster assistance eligibility is desired
 - Producers may select both PRF and NAP coverage on the same acres for the same intended use
 - Producers are eligible to earn a PRF and NAP benefit on the same acres for the same intended use
 - Contact a local FSA office for specific program requirements

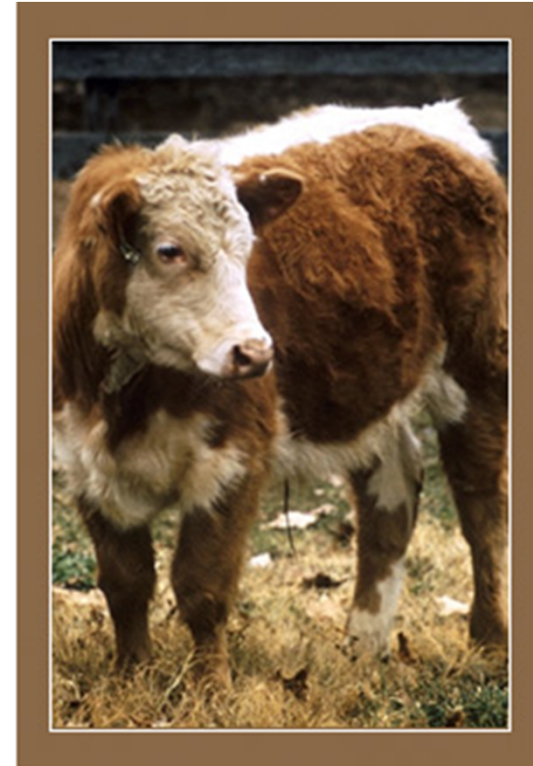


LRP Feeder Cattle

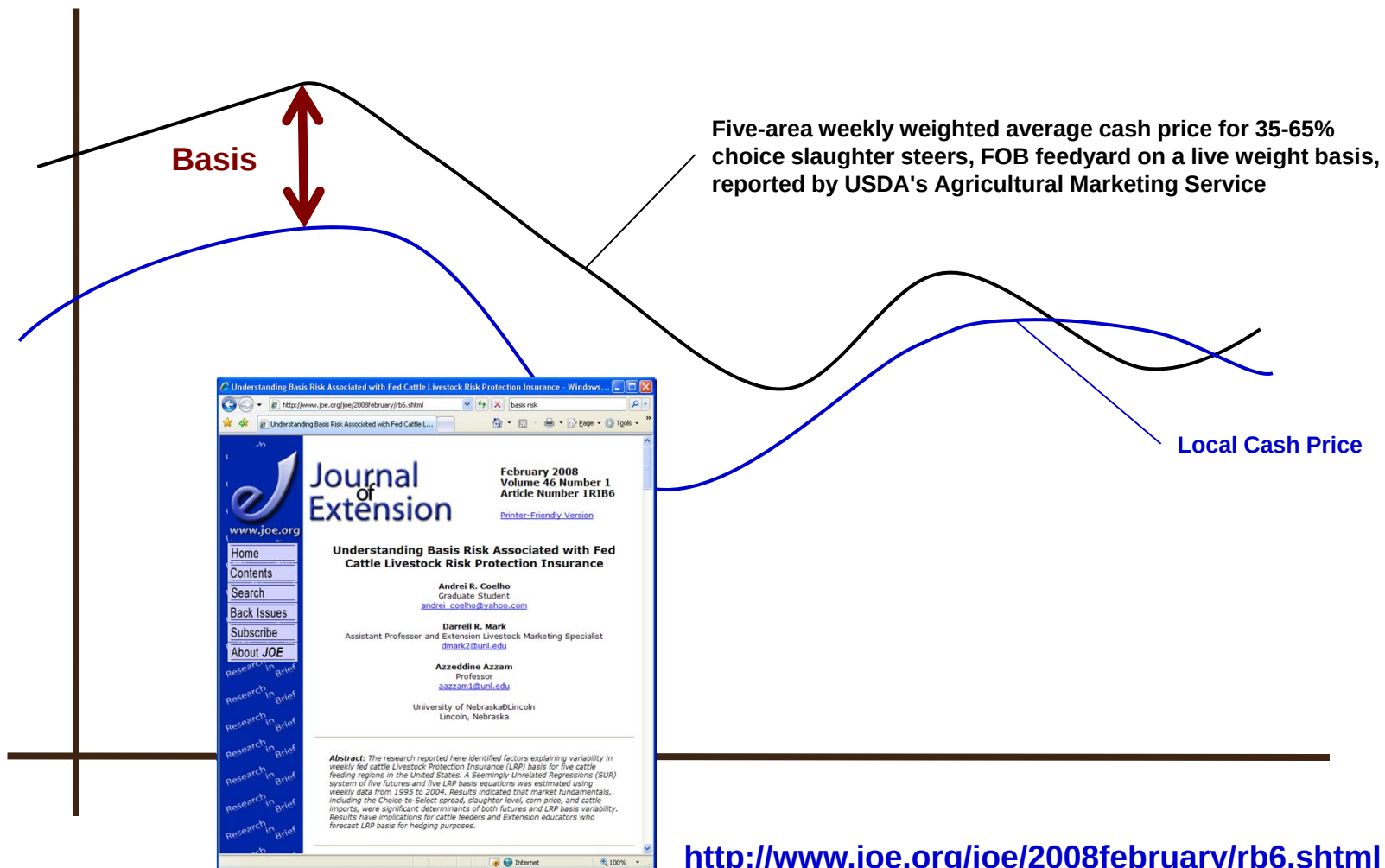


Livestock Insurance: LRP for Feeder Cattle Coverage

- LRP for feeder cattle offers *price* protection for feeder cattle producers. It does not cover sickness or death of the cattle or insure against possible rising feed costs.
- Now available in all counties of Oregon and in all counties of 36 other states
- Producers remain subject to ***basis price risk***



Livestock Insurance: LRP for Feeder Cattle Coverage



Livestock Insurance: LRP for Feeder Cattle

Basics of LRP

- **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*



Livestock Insurance: LRP for Feeder Cattle

Basics of LRP (cont.)

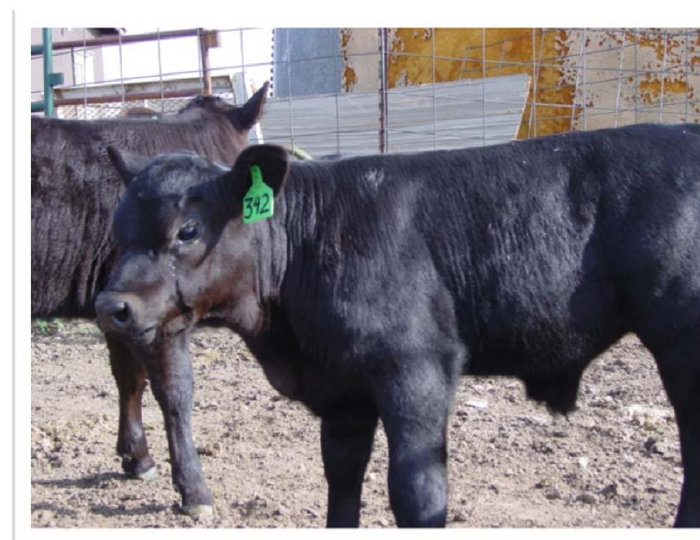
- **Application:** An application is required to purchase insurance coverage
- **Specific Coverage Endorsement:** A producer must file a Specific Coverage Endorsement for each group of feeder cattle to be insured. Several endorsements may be filed under one application as long as beneficial interests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



Livestock Insurance: LRP for Feeder Cattle

Types and Weights of Feeder Cattle Insurable

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



Livestock Insurance: LRP for Feeder Cattle

Types and Weights of Feeder Cattle Insurable (cont.)

- “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*
- Endorsement Limits:
 - *A limit of 1,000 head of feeder cattle may be insured under any one Specific Coverage Endorsement*

Livestock Insurance: 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*



Livestock Insurance: 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*

Livestock Insurance: LRP for Feeder Cattle Example

Contract Data	Value	Calculation
Number of Steers	1000	Producer
Expected Weight	800 Ib	Producer
Current Date	Oct. 26	Producer
Marketing Date	April 26	Producer
Insurance Period	26 Weeks	Producer*
Expected Ending Value	\$103.94 cwt	RMA
Coverage Level	86.58%	RMA**
Coverage Price	\$90.00 cwt	Producer/RMA**

* Producer's choices are limited

** The producer chooses an RMA-determined coverage price which concurrently reflects the coverage level

Livestock Insurance: LRP for Feeder Cattle

Example

Contract Data	Value	Source
Insured Value	\$720,000	1,000 hd x 8 cwt/hd x \$90.00/cwt
Premium Rate	0.020133	RMA
Total Premium	\$14,496	$\$720,000 \times 0.020133$
Subsidy Rate	13%	RMA
Subsidy Amount	\$1,884	$\$14,496 \times 0.13$
Producer Premium	\$12,612	$\$14,496 - 1,884$

Livestock Insurance: LRP for Feeder Cattle

Indemnity Calculation: Example 1

- Suppose the producer actually sells 1,000 800-pound steers on April 26th for \$85.00/cwt
- The CME-reported actual ending value is \$85.00/cwt
- Would the producer receive an indemnity?
- Let's look at the calculations



Livestock Insurance: LRP for Feeder Cattle

Indemnity Calculation: Example 1

- **Indemnity calculation:**

- $1,000 \text{ head} \times 8 \text{ cwt/head} \times (\$90.00 - \$85.00) = \$40,000$

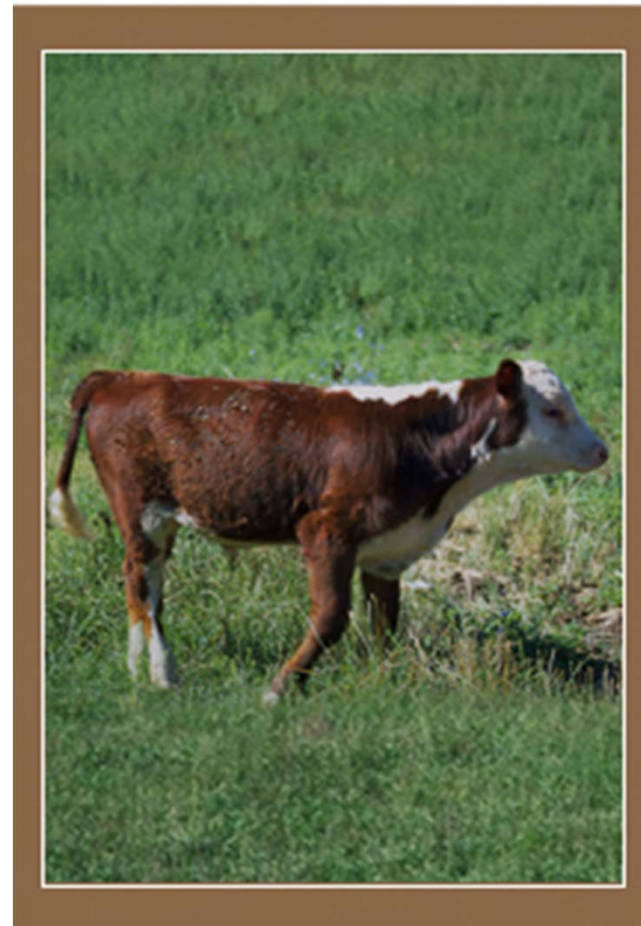
- **Revenue from calves:**

- $1,000 \times 8 \text{ cwt/head} \times \$85.00 = \$680,000$
 - Plus indemnity of: $+ 40,000$
 - Less premium of: $- 12,612$
 - Net revenue: $= \$707,388$

Livestock Insurance: LRP for Feeder Cattle

Indemnity Calculation: Example 2

- Suppose a second producer actually sells 1,000 800-pound steers on April 26 for \$82.00/cwt
- The CME-reported actual ending value is \$85.00/cwt
- Will the producer receive an indemnity?
- Let's look at the calculations



Livestock Insurance: LRP for Feeder Cattle

Indemnity Calculation: Example 2

- **Indemnity calculation:**

- $1,000 \text{ head} \times 8 \text{ cwt/head} \times (\$90.00 - \$85.00) = \$40,000$

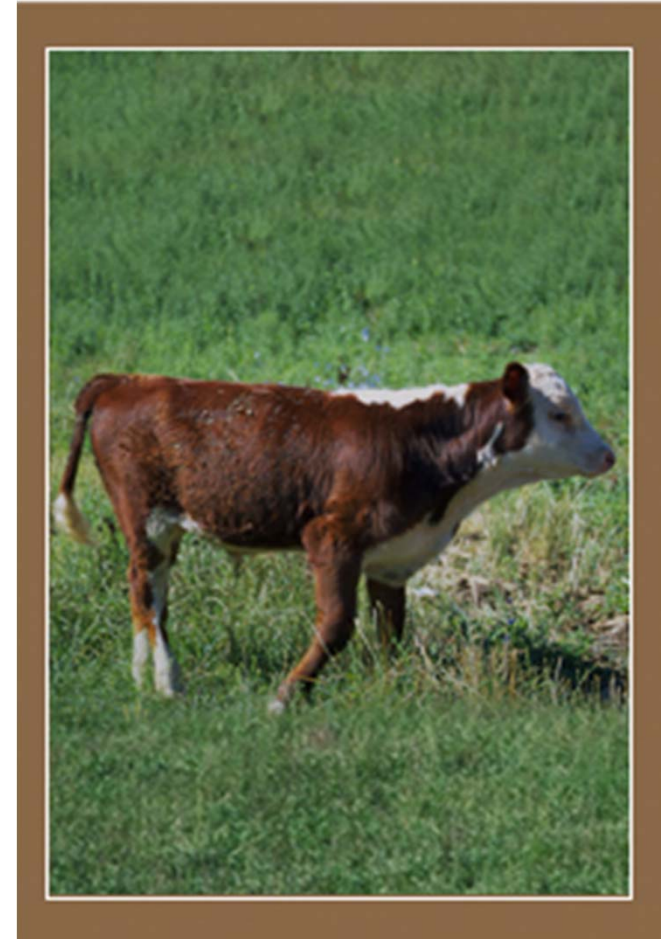
- **Revenue from calves:**

- $1,000 \times 8 \text{ cwt/head} \times \$82.00 = \$656,000$
 - Plus indemnity of: $+ 40,000$
 - Less premium of: $- \underline{12,612}$
 - Net revenue: $= \$683,388$

Livestock Insurance: LRP for Feeder Cattle

Indemnity Calculation: Example 3

- Suppose a third producer actually sells 980 750-pound steer calves on April 26
 - 2% death loss
 - Reported within 72 hours
 - Lower sales weight
 - The producer sells the calves for \$85.00/cwt
- The CME-report actual ending value is \$85.00/cwt
- Will the producer receive an indemnity?
- Let's look at the calculations



Livestock Insurance: LRP for Feeder Cattle

Indemnity Calculation: Example 3

- **Indemnity calculation:**
 - $1,000 \text{ head} \times 8 \text{ cwt/head} \times (\$90.00 - 85.00) = \$40,000.$
- **Revenue from calves:**
 - $980 \times 7.50 \text{ cwt/head} \times \$85.00/\text{cwt} = \$624,750$
 - Plus indemnity of: $+ 40,000$
 - Less premium of: $- \underline{12,612}$
 - Net revenue: $= \$652,138$

Livestock Insurance: LRP for Feeder Cattle

Livestock Risk Protection	Options
Protects against downside price risk The selected "coverage price" is the producer's price floor Requires the payment of a premium - an insurance premium is paid to an insurance agent May result in a payout - payout is an insurance indemnity Payouts are received when prices decline below an insured level - producer receives an indemnity Protects the producer from a decline in the CME feeder cattle price index Does not protect the producer from a decline in the producer's sale price	The selected "strike price" is the producer's price floor Requires the payment of a premium - an option premium is paid to a broker May result in a payout - premium increases in value Payouts are received when prices decline below an insured level - premium increases in value and is reflected in the producer's brokerage account Option premium declines to zero and there is no increase in the producer's brokerage account Protects the producer from a decline in the CME feeder cattle price index Does not protect the producer from a decline in the producer's sale price Need a brokerage account Subsidies are not available for option premiums Requires brokerage fees No price adjustments for varying weights. A producer may buy higher price coverage levels than LRP More timing flexibility because the producer may sell an option prior to expiration Can re-purchase an option at any time

Price Risk Analysis: Futures, Options, LRP Comparison

Adobe Flash Player 9

File View Control Help

Introduction Futures Options LRP Summary Results Cost Of Production Save, Load, Delete a Scenario

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	Put Option	LRP	Cash
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	Futures	Put Option	LRP	Cash
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 (CowCalf/Feeder)	\$105.00	\$105.00	\$105.00	\$105.00
Net Income Received Per Cwt of Production	\$16.22	\$11.78	\$18.21	\$16.00

@ Purchase	
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

Check Current LRP Coverage Levels at the RMA Web Site

Check Current Futures/Options Prices on the Web

Click to toggle graphic/table display

These three values MUST be changed together for correct results.

@ Sale	
Futures Price @ Sale/Offset Time	\$115.00
Local Cash Price at Sale Time	\$121.00
Actual Basis at Sale Time	\$6.00
CME Cash Settlement Index @Sale/Offset	\$115.00
Total Cost of Production Cow Calf	\$105.00

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%

MouseOver for Help Off/On

Print Reset

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

Price Risk Analysis: Cull Cow Marketing and Feeding Alternatives

Cull Cow Feeding Calculator and Price Forecaster

This calculator is designed to predict cull cow prices 1-6 months into the future. The price prediction is based on historical seasonal price relationships and historical relationships between cull cow grades. The price prediction is also based on the body condition score and expected market class for the cows. Enter data in the clear cells and the calculator will calculate the grey cells. Average daily gain can be negative on some rations. After entering feeding costs on the next screen, the calculator will determine your expected net return from feeding and calculate an expected break-even selling price.

Present Date (mm/dd)	12/8
Present BCS of Cull Cows	3.0
Estimated Cow Weight (lbs.)	
Present Market Price for a Cutter/Lean 85%-90% Lean(\$/cwt)	
Estimated Value Today (\$/head)	0.00
Number of Days on Feed	
Expected Avg Daily Gain (lbs.)	
Expected Final Weight (lbs.)	0
Expected Sale Date (mm/dd)	12/8
Expected BCS of Cull Cows	☐ No Commercial Market 3.0
Expected Market Price for a Cutter/Lean 85%-90% Lean(\$/cwt)	0.00
Estimated Value at end of feeding (\$/head)	0.00

Reset

Next

- Farm Management Wiki tool "Cull Cow Marketing"
- <http://FarmManagement.org/Wiki>
- Click on Contents > Tools > "Cull Cow Marketing"

Livestock Insurance: 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
- Indemnities for transactions
- The difference between LRP insurance coverage and an options coverage



How Do We Get There?

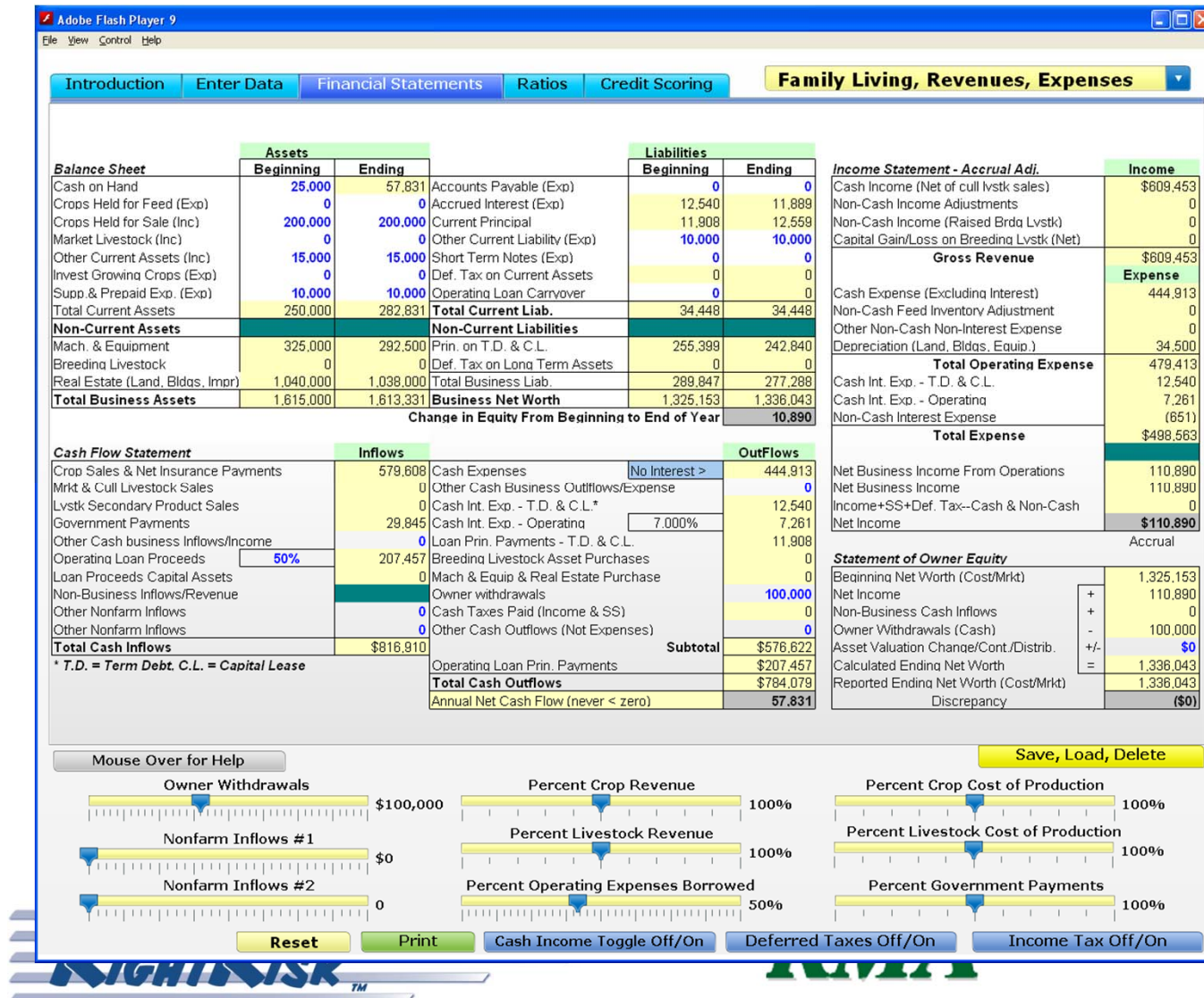
Tools Available

- Insurance
- Disaster Assistance Programs
- **Risk Analysis**
 - Financial Analysis
 - Price Risk Analysis
 - Price and Production Risk Analysis



How Do We Get There?

Financial Analysis: RDFinancial



- Ag In Uncertain Times - "Determining Financial Health (RDFinancial)" webinar offered on November 18, 2009

• <http://FarmManagement.org/AgInUncertainTimes>

- Click on Recordings in the right sidebar

How Do We Get There?

Price and Production Risk Analysis: Risk Navigator tools



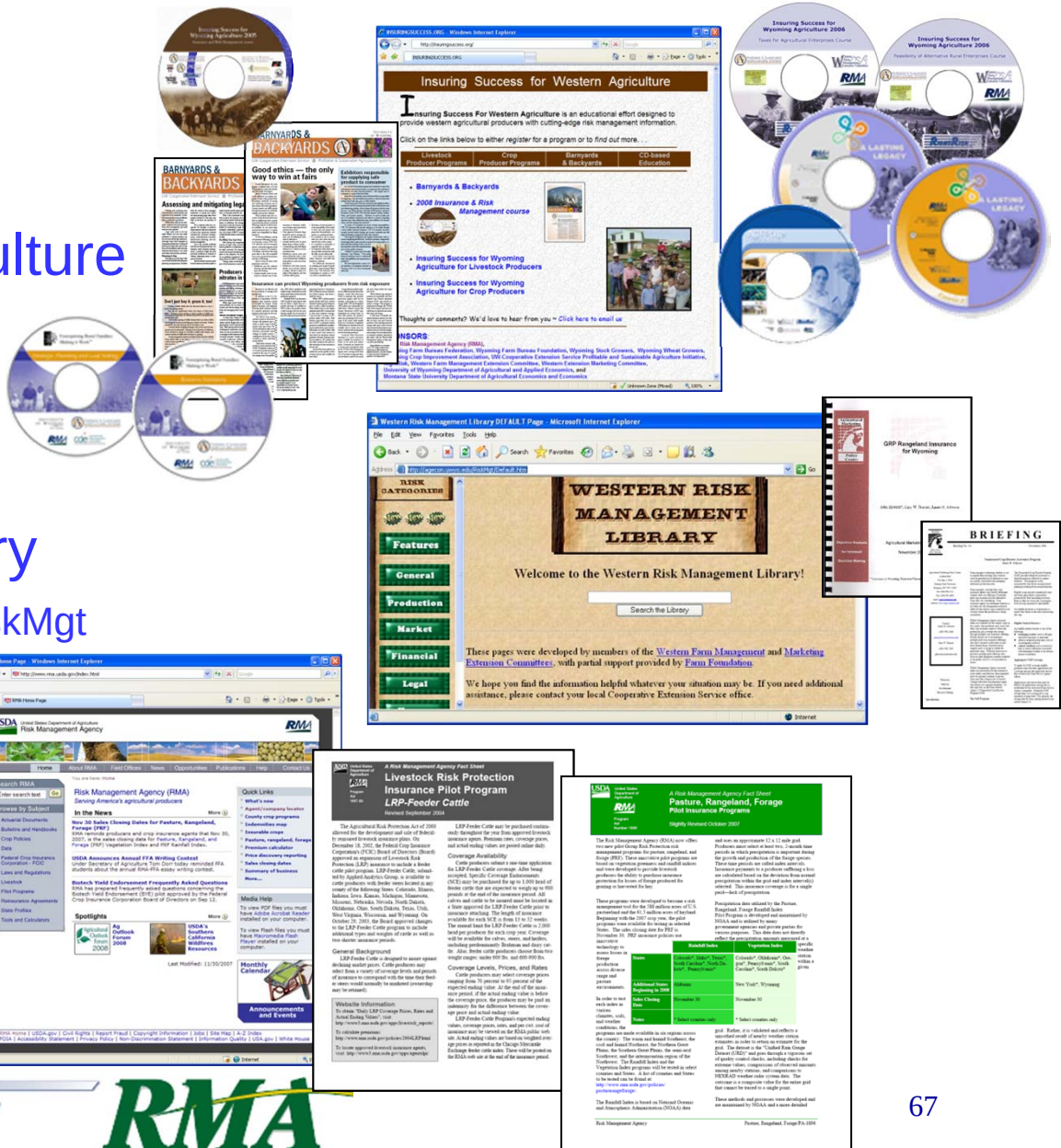
- Farm Management Wiki tool “Risk Navigator”
- <http://FarmManagement.org/Wiki>
- Click on Contents > Tools > “Risk Navigator”

Important Web Sites

- **Insuring Success For Western Agriculture**
<http://InsuringSuccess.org>

- **Western Risk Management Library**
<http://agecon.uwyo.edu/RiskMgt>

- **Risk Management Agency**
<http://www.rma.usda.gov>



Questions??