Dairy Risk Management

University of California Agriculture and Natural Resources

The USDA's Risk Management Agency and the University of California Cooperative Extension invites you to join us for Dairy Risk Management a risk management workshop that will help your farm *thrive* in today's challenging environment. The workshop is designed to help you gain a better understanding of how to manage risk on your farm operation.

Program #1

Welcome Ramiro Lobo, Farm Advisor, UC Cooperative Extension

California Dairy Risk and Implications for the Industry
Dr. Leslie (Bees) Butler, Dairy Extension Specialist, UC Cooperative Extension

Dairy Herd Nutrition under Drought Conditions
Dr. Peter Robinson, Dairy Nutrition and Management, UC Cooperative Extension

Dairy Herd Health under Drought Conditions
Dr. Gene Harlan, Cotati Large Animal Hospital, Cotati

Farm Bill Dairy Margin Program and LGM for Dairy
Dr. Jay Parsons, Risk Management Specialist, University of Nebraska-Lincoln

Ag Risk-5: Learn more about tools for managing risk and evaluating your risk management strategies
John Hewlett, Farm/Ranch Management Specialist, University of Wyoming

Program #2

Use risk manag

California.eRightRisk.com

alternative strategies for your farm, including: Partial Budgets, the Risk Scenario Planner, the Enterprise Risk Analyzer, RDFinancial, more . . .
Dr. Jay Parsons and John Hewlett

How Much Risk Is Right For You?

Funded by USDA-RMA Project #13-IE-53102-032,
Project Director John Mangus, Custom Ag Solutions

http://eRightRisk.com

Livestock Gross Margin Insurance

Risk Management for Dairy Producers

Jay Parsons
John Hewlett

What is Livestock Gross Margin-Dairy?

- LGM-Dairy is a form of insurance designed to provide protection to dairy farmers against:
  - *rising feed costs*
  - *falling milk prices*
  - *or both*
  - *bundled option insurance*

USDA United States Department of Agriculture
RMA
Program Aid Number 2021

A Risk Management Agency Fact Sheet

Livestock Gross Margin
Dairy Cattle
July 2011

Livestock Gross Margin (LGM)
LGM-Dairy Cattle (LGM Dairy) provides protection against loss of gross margin (market value of milk minus feed costs) on milk produced from dairy cows. LGM-Dairy uses the Chicago Mercantile Exchange Group futures prices for corn, soybean meal, and class III milk to determine the expected gross margin and the actual gross margin.

Producer **premium subsidy** is available for the LGM-Dairy plan of insurance and is determined by the deductible amount chosen by the producer. All administrative and operating subsidies are paid by the Federal Crop Insurance Corporation.

The indemnity at the end of the 11-month insurance period is the difference, if positive, between the gross margin guarantee and the actual gross margin. The price the producer receives at the local market is not used in these calculations.

Availability
LGM is available to any producer who owns dairy cattle in the 48 contiguous states.

Milk Coverage Availability
Only milk sold for commercial or private sale primarily intended for final human consumption from dairy cattle fed in any of the eligible states is eligible for LGM Dairy coverage. There is no minimum number of hundredweights a producer can insure. However, the maximum amount of milk that can be insured is 24 million pounds per crop year.

Coverage Levels/Deductibles
Producers can select deductible levels between $0 and $2.00 per hundredweight of milk in $0.10 increments.

Sales Closing
To enroll, producers must sign-up on the last business Friday of the month, submitting an application with a target marketing report for the milk and corn and soybean meal equivalents to be insured.

Prices
Prices for LGM Dairy are based on simple averages of futures contract daily settlement prices, and are **not** based on the prices the producer receives at the market.

Insurance Months
The insurance period contains the 11 months following sales closing. For example, the insurance period for the January 29 sales closing date contains the months of February through December. However, coverage begins in the second month of the insurance period, so the coverage period for this example is the months of March through December.

LGM Selling Period
LGM Dairy is sold on the **last business Friday** of each month. The sales period begins as soon as RMA reviews the data submitted by the owner and developer of LGM-Dairy after the close of markets on the last day of the price discovery period. The sales period ends at 8:00 p.m. CST the following evening. If expected milk and feed prices are not available on the RMA Web site, LGM Dairy will not be offered for sale for that insurance period.

Annual Premium
LGM premiums depend on producers' marketing plan, deductible level, futures and price volatility. Premium billing dates are determined by the target marketing report and will be the first business day of the month following the last month that a producer reports their insured marketings in the target marketings report.

Cause of Loss
LGM Dairy covers the difference between the gross margin guarantee and the actual gross margin. LGM Dairy does not insure against dairy cattle death loss, unexpected decreases in milk production, or unexpected increases in feed use. Indemnities to be paid will equal the difference between the gross margin guarantee and the actual total gross margin for the insurance period.

Risk Management Agency *Program Aid Number*

What is LGM-Dairy?

- LGM-Dairy insurance covers losses in gross margin from milk production
- Gross margin is calculated as the difference between the expected market value of class III milk and the associated feed costs (corn and soybean meal price).

What is LGM-Dairy?

- LGM-Dairy coverage is based on target marketings of milk and estimated feed use
- Target marketings (expected milk production) insured under LGM-Dairy is flexible, allowing a farm to purchase only the level of coverage desired

How Does LGM-Dairy Work?

- Prices for LGM-Dairy are based off of simple averages from the Chicago Mercantile Exchange (CME) Group futures contract daily settlement prices
  - *Class III milk*
  - *Corn*
  - *Soybean Meal*
- Local market price received by producer is not used.

How Does LGM-Dairy Work?

- To enroll, producers must sign up on the last business Friday of the month.
- LGM-Dairy insurance period is limited to the 11 months following the sales closing date.
- Coverage begins the second month of the insured period (10 months of coverage).

Expected Target Marketings

- Expected target marketings are an estimate of the hundredweight of milk to be produced each month.
- Upper limit of 240,000 cwt. per crop year.
- Customizable to your production and insurance needs

Jun '14	Jul '14	Aug '14	Sep '14	Oct '14	Nov '14	Dec '14	Jan '15	Feb '15	Mar '15	Apr '15	May '15
		1	2	3	4	5	6	7	8	9	10
Purchase at End of Month	No Cover-age	Insurance Contract Period									
Covered Months		10000 cwt.	10000 cwt.	10000 cwt.	15000 cwt.	15000 cwt.	10000 cwt.	10000 cwt.	15000 cwt.	10000 cwt.	10000 cwt.

Expected Feed Costs

- An estimate of the monthly feed costs needed to produce the expected target marketings.
- Expressed in corn and soybean meal equivalents.
- Producers have the option of either estimating their own or using the default values.
  - *Note: Producer estimates must fall within an acceptable range.*

	Jun '14	Jul '14	Aug '14	Sep '14	Oct '14	Nov '14	Dec '14	Jan '15	Feb '15	Mar '15	Apr '15	May '15
Covered Months			10000 cwt.	10000 cwt.	10000 cwt.	15000 cwt.	15000 cwt.	10000 cwt.	10000 cwt.	15000 cwt.	10000 cwt.	10000 cwt.
Corn			140 tons	140 tons	140 tons	210 tons	210 tons	140 tons	140 tons	210 tons	140 tons	140 tons
Soybean Meal			20 tons	20 tons	20 tons	30 tons	30 tons	20 tons	20 tons	30 tons	20 tons	20 tons

Expected Total Gross Margin

- The difference between the Expected Market Value of Milk and the Expected Feed Costs.
- Uses CME futures contracts prices.

Jun '14	Jul '14	Aug '14	Sep '14	Oct '14	Nov '14	Dec '14	Jan '15	Feb '15	Mar '15	Apr '15	May '15
		Expected Prices									
Milk ($/cwt.)		19.95	19.90	19.69	19.18	18.69	18.27	18.10	18.07	18.03	18.06
Corn ($/bu.)		4.77	4.76	4.76	4.76	4.76	4.79	4.82	4.85	4.88	4.91
Soybean Meal ($/ton)		460.56	426.12	397.42	395.54	393.65	393.01	393.40	393.78	393.62	393.45

Expected Total Gross Margin

- The difference between the Expected Market Value of Milk and the Expected Feed Costs.

Jun '14	Jul '14	Aug '14	Sep '14	Oct '14	Nov '14	Dec '14	Jan '15	Feb '15	Mar '15	Apr '15	May '15
Expected Values ($)											
Milk Revenue		199,497	198,996	196,895	287,693	280,342	182,694	180,993	271,040	180,293	180,592
Feed Cost		33,061	32,321	31,747	47,564	47,508	31,809	31,966	48,185	32,270	32,417
Gross Margins		166,436	166,674	165,148	240,128	232,834	150,885	149,027	222,854	148,022	148,175

- **Expected Total Gross Margin = $1,790,184.**

Deductible Level

- The deductible level is the amount of loss not covered by the insurance contract.
- Producers can select deductible levels between $0 and $2.00 per hundredweight of milk in $0.10 increments.
- Higher Deductible Level →
  - *Lower Premium*
  - *You are assuming more of the risk.*
  - *Less likely to receive an indemnity*
- Higher Deductible Level → Higher the premium subsidy
  - *Subsidies range from 18% to 50%*
  - *$0 deductible level → 18% premium subsidy*
  - *$2 deductible level→ 50% premium subsidy*

Gross Margin Guarantee

- The Gross Margin Guarantee is the Expected Total Gross Margin minus the product of the Deductible Level times the Total Expected Target Marketings.
- In our example,
  - *Expected Total Gross Margin = $1,790,184*
  - *Total Expected Target Marketings = 115,000 cwt.*
- Assume a $2.00 Deductible Level
  - *Gross Margin Guarantee = $1,790,184– (2 * 115,000) = $1,560,184*
  - *$1,560,184/115,000 cwt. = $13.57/cwt.*
- Assume a $0 Deductible Level
  - *Gross Margin Guarantee = $1,790,184*
  - *$1,790,184/115,000 cwt. = $15.57/cwt.*

How Does LGM-Dairy Work?

- Indemnity payments are made when the actual gross margin falls below the gross margin guarantee
- The actual gross margin is calculated based on expected target marketings each month of coverage and actual prices
- Actual prices are determined by Average Futures Settle Prices from 1st, 2nd, and 3rd days prior to last trading day for each contract

Annual Premium

- Premiums are due at the first business day of the month following the last month of reported insured marketings
- Premiums depend on each producer's insurance plan (expected marketings, coverage selected, deductible level, expected futures prices and price volatility, etc.)
- Premiums are calculated using 5,000 simulated payout profiles
- Total Premiums = Average of simulated payouts + 3%
- In our example, $0 Deductible Level
  - *Gross Margin Guarantee = $1,790,184*
  - *Average of expected payouts = $96,852*
  - *Total Premium = 96,852 * 1.03 = $99,758*
  - *Premium Subsidy = 99,758 * 0.18 = $17,956*
  - ***Producer Premium = 99,758 – 17,856 = $81,801*** **= $0.71/cwt.**

Implied Floor on Net Gross Margin = $1,708,383

= $14.86/cwt.

How Does LGM-Dairy Work?

- In our example, $2.00 Deductible Level
  - *Gross Margin Guarantee = $1,560,184*
  - *Average of expected payouts = $19,297*
  - *Total Premium = 19,297 * 1.03 = $19,876*
  - *Premium Subsidy = 19,876 * 0.50 = $9,938*
  - ***Producer Premium = 19,876 – 9,938 = $9,938*** **= $0.09/cwt.**

Implied Floor on Net Gross Margin = $1,550,246 **= $13.48/cwt.**

- Premiums are due at the first business day of the month following the last month of reported insured marketings.

LGM-Dairy Summary

- LGM-Dairy is flexible insurance program for dairy producers to protect against falling milk prices and/or rising feed prices.
  - *Customizable to your production and insurance needs*
  - *Need not insure all months or all production*
- LGM-Dairy can be thought of as Bundled Option Insurance.
  - *Similar to buying a combination of put and call options.*
  - *Put Option on Class III milk to protect against falling milk prices.*
  - *Call Options on corn and soybean meal to protect against rising feed prices.*

California: LGM-Dairy Policy Data - 2012

2012

County	Pol Sold	Pol Earn Prem	Pol Indem	Units Earn Prem	Units Indem	Number of Head	Liabilities	Total Premium	Subsidy	Indemnity	Loss Ratio	Producer Premium	Producer Loss Ratio
Fresno	5	4	1	4	1	811,000	14,085,330	360,061	177,778	10,342	0.03	182,283	0.06
Kern	2	2	0	2	0	420,000	7,308,000	159,764	79,883	0	0	79,881	0
Kings	3	2	0	2	0	314,980	5,484,851	130,194	62,493	0	0	67,701	0
Madera	1	1	0	1	0	120,000	2,083,200	83,004	39,842	0	0	43,162	0
Merced	8	8	4	8	4	897,280	15,600,833	354,070	173,200	144,993	0.41	180,870	0.80
Sacramento	1	0	0	0	0	0	0	0	0	0	0	0	0
San Joaquin	1	1	0	1	0	110,000	1,909,600	53,453	25,657	0	0	27,796	0
Sonoma	2	2	1	2	1	71,000	1,232,560	31,027	14,893	1,464	0.05	16,134	0.09
Stanislaus	11	10	4	10	4	1,321,278	22,944,001	632,866	298,940	57,838	0.09	333,926	0.17
Sutter	1	1	0	1	0	80,000	1,388,800	38,434	18,448	0	0	19,986	0
Tulare	18	17	2	17	2	2,267,736	39,461,922	1,118,362	475,394	12,659	0.01	642,968	0.02
Grand Total:	53	48	12	48	12	6,413,274	111,499,097	2,961,235	1,366,528	227,296	0.08	1,594,707	0.14

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California: LGM-Dairy Policy Data - 2013

2013

County	Pol Sold	Pol Earn Prem	Pol Indem	Units Earn Prem	Units Indem	Number of Head	Liabilities	Total Premium	Subsidy	Indemnity	Loss Ratio	Producer Premium	Producer Loss Ratio
Alameda	1	0	0	0	0	0	0	0	0	0	0	0	0
Fresno	1	1	1	1	1	57,000	1,159,380	25,333	12,160	4,892	0.19	13,173	0.37
Kings	4	4	4	4	4	900,000	18,306,000	317,624	158,813	399,094	1.26	158,811	2.51
Merced	5	4	1	4	1	445,600	8,568,008	172,955	72,062	1,490	0.01	100,893	0.01
Sacramento	1	1	1	5	1	162,000	3,017,540	92,449	43,557	304	0	48,892	0.01
San Joaquin	2	2	0	2	0	118,542	2,158,197	43,673	19,663	0	0	24,010	0
Sonoma	1	1	0	1	0	15,000	305,100	12,480	5,990	0	0	6,490	0
Stanislaus	12	11	3	30	5	1,577,744	30,998,712	968,666	383,554	43,360	0.04	585,112	0.07
Tulare	12	8	3	13	4	1,112,000	21,534,516	588,608	248,021	84,634	0.14	340,587	0.25
Grand Total:	39	32	13	60	16	4,387,886	86,047,453	2,221,788	943,820	533,774	0.24	1,277,968	0.42

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California: LGM-Dairy Policy Data – 2014

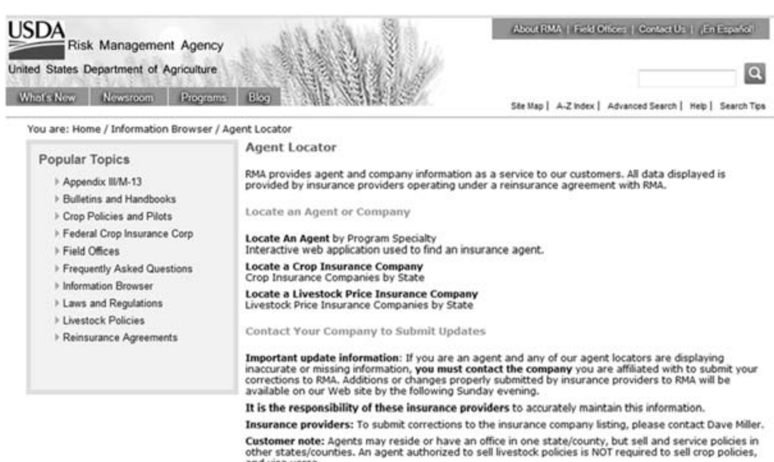
2014

County	Pol Sold	Pol Earn Prem	Pol Indem	Units Earn Prem	Units Indem	Number of Head	Liabilities	Total Premium	Subsidy	Indemnity	Loss Ratio	Producer Premium	Producer Loss Ratio
Fresno	1	1	0	1	0	60,000	1,037,400	12,992	6,236	0	0	6,756	0
Kings	6	6	0	7	0	826,300	14,348,733	291,959	79,718	0	0	212,241	0
Merced	5	4	0	4	0	639,360	12,904,486	372,752	119,369	0	0	253,383	0
San Joaquin	1	1	0	1	0	22,800	492,252	15,878	6,034	0	0	9,844	0
Stanislaus	8	8	0	13	0	599,011	12,448,123	285,711	123,103	0	0	162,608	0
Tulare	15	6	0	8	0	795,000	15,374,950	214,063	87,947	0	0	126,116	0
Grand Total:	36	26	0	34	0	2,942,471	56,605,944	1,193,355	422,407	0	0	770,948	0

How do I get it?

- Federally-subsidized crop insurance products managed by RMA such as LGM-Dairy are sold by private crop insurance agents.

- The RMA website has a link to an Agent Locator tool on their home page.

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RMA

Program Aid Number 2021

A Risk Management Agency Fact Sheet

Livestock Gross Margin

Dairy Cattle

July 2011

Livestock Gross Margin (LGM)

LGM-Dairy Cattle (LGM Dairy) provides protection against loss of gross margin (market value of milk minus feed costs) on milk produced from dairy cows. LGM-Dairy uses the Chicago Mercantile Exchange Group futures prices for corn, soybean meal, and class III milk to determine the expected gross margin and the actual gross margin.

Producer **premium subsidy** is available for the LGM-Dairy plan of insurance and is determined by the deductible amount chosen by the producer. All administrative and operating subsidies are paid by the Federal Crop Insurance Corporation.

The **indemnity** at the end of the 11-month insurance period is the difference, if positive, between the gross margin guarantee and the actual gross margin. The price the producer receives at the local market is not used in these calculations.

Availability

LGM is available to any producer who owns dairy cattle in the 48 contiguous states.

Milk Coverage Availability

Only milk sold for commercial or private sale primarily intended for final human consumption from dairy cattle fed in any of the eligible states is eligible for LGM Dairy coverage. There is no minimum number of hundredweights a producer can insure. However, the maximum amount of milk that can be insured is 24 million pounds per crop year.

Coverage Levels/Deductibles

Producers can select deductible levels between $0 and $2.00 per hundredweight of milk in $0.10 increments.

Sales Closing

To enroll, producers must sign-up on the last business Friday of the month, submitting an application with a target marketing report for the milk and corn and soybean meal equivalents to be insured.

Prices

Prices for LGM Dairy are based on simple averages of futures contract daily settlement prices, and are **not** based on the prices the producer receives at the market.

Insurance Months

The insurance period contains the 11 months following sales closing. For example, the insurance period for the January 29 sales closing date contains the months of February through December. However, coverage begins in the second month of the insurance period, so the coverage period for this example is the months of March through December.

LGM Selling Period

LGM Dairy is sold on the **last business Friday** of each month. The sales period begins as soon as RMA reviews the data submitted by the owner and developer of LGM-Dairy after the close of markets on the last day of the price discovery period. The sales period ends at 8:00 p.m. CST the following evening. If expected milk and feed prices are not available on the RMA Web site, LGM Dairy will not be offered for sale for that insurance period.

Annual Premium

LGM premiums depend on producers' marketing plan, deductible level, futures and price volatility. Premium billing dates are determined by the target marketing report and will be the first business day of the month following the last month that a producer reports their insured marketings in the target marketings report.

Cause of Loss

LGM Dairy covers the difference between the gross margin guarantee and the actual gross margin. LGM Dairy does **not** insure against dairy cattle death loss, unexpected decreases in milk production, or unexpected increases in feed use. Indemnities to be paid will equal the difference between the gross margin guarantee and the actual total gross margin for the insurance period.

LGM Dairy Advantages

Convenience: Producers can sign up for LGM Dairy 12 times per year and insure all their milk production they expect to market over a rolling 11-month insurance period.
Customization: Can be tailored to any size farm.
Bundled Option Insurance: LGM Dairy is similar to buying both a call option to limit higher feed costs and a put option to set a floor on milk prices.

What LGM Dairy Does Not Insure

- Risk of dairy cattle death
- Unexpected production (milk) losses
- Unexpected increase in feed use
- Anticipated or multiple-year declines in milk prices
- Anticipated or multiple year increases in feed costs

Definitions

Actual Marketings The total amount of milk sold by you in each month of the insurance period and for which you have proof of sale. Actual marketings are used to verify ownership of milk and determine approved target marketings.

Deductible The portion of the expected gross margin that you elect not to insure. Per cwt deductible amounts range from zero to $2.00 per cwt in 10 cent increments. The deductible equals the selected per cwt deductible times the sum of target marketings across all months of the insurance period.

Gross Margin Guarantee The gross margin guarantee for an insurance period is the expected total gross margin for an insurance period minus the deductible.

Marketing Report A report submitted by you on our form showing for each month your actual marketings for that month of milk insured under the policy. The marketing report must be accompanied by copies of sales receipts that provide records of the actual marketings shown on the marketing report.

Target Marketings Your determination as to the number of cwt of milk you elect to insure in each month during the insurance period.

Target Marketings Report A report submitted by you on our form showing for each month your target marketings for that month.

For More Information

LGM Coverage Prices, Rates and Actual Ending Values:
http://www3.rma.usda.gov/apps/livestock_reports/
Cost Estimator (Premium Calculator):
http://ewebapp.rma.usda.gov/apps/costestimator/

Where to Purchase

All multi-peril crop insurance policies are available from private insurance agents. A list of livestock insurance agents is on the RMA Web site at:
http://www3.rma.usda.gov/tools/agents/

Download Copies from the Web

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

Livestock Gross Margin - Dairy:

Margin Insurance for California Dairy Farmers Protecting Against Falling Milk Prices & Rising Feed Costs

By John P. Hewlett– University of Wyoming and Dr. Jay Parsons– Colorado State University

Information Sheet **April, 2013 #IS-04-01**

How Much Risk Is Right For You?

Livestock Gross Margin - Dairy (LGM-Dairy) is a form of insurance designed to provide protection to dairy farmers against rising feed costs and falling milk prices. Gross margin in this sense refers to the difference between the market value of milk and the cost of feed. LGM-Dairy uses futures markets to establish both milk and feed prices. Currently, LGM-Dairy is available to dairy producers in any county in California.

How Does It Work?

LGM-Dairy provides protection from the risk of falling milk prices, rising feed costs, or both. Milk produced for human consumption by dairy cattle in California and the other 47 contiguous states is eligible for coverage. LGM -Dairy insurance covers losses in gross margin from milk production. Futures markets for corn and soybean meal are used to establish feed costs. Futures prices for milk are used to estimate the market value of milk produced. Gross margin is calculated as the difference between the expected market value of milk and the associated feed costs. Local prices are not used in gross margin calculations. In this way, LGM-Diary may be used as a risk management tool to provide protection against declining margins from milk production.

LGM-Dairy insurance coverage is based upon target marketings of milk production (hundredweight of production per month) and estimated feed use (tons of soybean meal and corn). Estimates of feed use are normally established from prior farm production records (default values are also possible). In addition, the portion of target marketings (expected milk production) insured under LGM-Dairy is flexible, allowing a farm to purchase only the level of coverage desired.

LGM-Dairy does not provide protection against death loss of dairy cattle, unexpected declines in milk production or unanticipated increases in feed use.

LGM-Dairy insurance may be available for purchase the last business Friday of every month. The insurance period is limited to 11 months; coverage beginning the second month of the insured period. As a result, LGM-Dairy insurance is available only 12 times each calendar year.

Subsidies for LGM-Dairy coverage are available, covering a portion of the cost of an LGM-Dairy policy. These subsidies range from 18 to 50 percent of the total premium, depending on the level of deductible selected (subsidy levels increase with higher deductibles). Deductible levels are also adjustable, ranging from \$0 to \$2 per hundredweight of milk in \$0.10 increments. Premiums are due at the end of the coverage period and are estimated based on the level of LGM-Dairy insurance purchased.

Indemnity payments are made at the end of the 11-month insurance period when the actual gross margin falls below the gross margin guarantee. The level of indemnity payment is based on the level of insurance deductible selected.

Example Farm

Assume a California farm purchases LGM-Dairy insurance for a dairy located in San Bernardino County with milk production of 1,500 hundredweight per month. Using the default feed equivalents (21.0 corn equivalents and 3.0 soybean equivalents per hundredweight of milk) and the quoted prices for milk and feed for each of the 11 months of coverage, gives an expected gross margin of $180,951. The farm elects to purchase LGM-Dairy with the $0 deductible option with an associated subsidy of 18 percent, making the producer premium $9,535 including all subsidies and administrative fees over the 11 months. The corresponding gross margin guarantee amounts to $180,951 after factoring in the deductible level.

Table 1. California Farm Example

Item	Calculation	Amount
Expected Target Marketings	Total of: (1,500 hundredweight/month X monthly milk futures price) for each month of the 11-month insurance period	$219,780
Expected Feed Costs	Total of: (21 corn equivalents*/month X monthly corn futures price + 3 soybean meal equivalents*/month X monthly soybean futures price) for each month of the 11-month insurance period	$38,829
Expected Total Gross Margin	*Expected Target Marketings – Expected Feed Costs*	$180,951
Deductible Level		$0.00
Gross Margin Guarantee	*Expected Total Gross Margin – (Total Target Marketings X Deductible)*	$180,951
Producer Premium	$11,652 - $2,117	$9,535
Actual Gross Margin		$150,000
Estimated Indemnity Payment	$180,951 – $150,000	$30,951

* The producer has the option of estimating their own values for these feed equivalents.

Now assume that the dairy generated an actual gross margin of $150,000 over the insured period (due to declining milk price, increasing feed prices, or both). An indemnity payment would be due because the actual gross margin fell below the gross margin guarantee. The indemnity payment would be calculated as the difference of the gross margin guarantee and the actual gross margin or $30,951 in this case ($180,951 – $150,000). Note that where a positive deductible is selected, this will correspondingly reduce any indemnity payments as less than 100 percent of the gross margin is covered by LGM-Dairy insurance.

Deductible

Let's examine further the influence of the deductible decision for our example farm. Keep in mind that the expected total gross margin is estimated at $180,951. However, now let's assume that the farm purchased LGM-Dairy insurance at the $1.50 deductible level (values of $0 to $2 per hundredweight are permitted). This makes the gross margin guarantee $158,451 ($180,951-$22,500) and the associated producer premium $1,825, after including all subsidies and administrative fees over the 11 months.

Remember that the dairy generated an actual gross margin of $150,000 over the insured period (due to declining milk price, increasing feed prices, or both). An indemnity payment would be due because the actual gross margin fell below the gross margin guarantee. The indemnity payment would be calculated as the difference of the gross margin guarantee and the actual gross margin or $8,451 in this case ($158,451 – $150,000).

Clearly the level of deductible selected when purchasing LGM-Dairy makes a difference in the indemnity payments the farm could expect in a loss situation. Given the same level of actual gross margin, indemnity payments varied from $30,951 to $8,451 with deductibles set at $0 and $1.50, respectively. As with any form of insurance, the higher the level of protection purchased, the higher the cost. Premiums paid varied in this case from $9,535 to $1,825. These two examples demonstrate that the choice of deductible should be made with careful consideration of the expectations for the future.

Table 2. California Farm Example continued

Item	Calculation	Amount
Expected Total Gross Margin	*Expected Target Marketings – Expected Feed Costs*	$180,951
Deductible Level		$1.50
Gross Margin Guarantee	*$180,951 – (15,000 * $1.50)*	$158,451
Producer Premium	$2,230 – $405	$1,825
Actual Gross Margin		$150,000
Estimated Indemnity Payment	$158,451 – $150,000	$8,451

* The producer has the option of estimating their own values for these feed equivalents.

For more information

More information on the Livestock Gross Margin - Dairy plans of insurance may be found at the USDA Risk Management Agency website www.rma.usda.gov.

This web site also includes a Cost Estimator tool that allows the user to evaluate premium costs for various levels of LGM-Dairy protection. Click on the Information Browser link in the left side bar and choose the Cost Estimator link on the following page. From the next list select either Quick Estimate or Detailed Estimate to begin estimating premium costs. This tool will also provide premium estimates for other federally-subsidized insurance products.

There are several web sites that provide additional information on LGM -Dairy. One website maintained by the University of Wisconsin contains software tools for evaluating the program, fact sheets and bulletins explaining how the program works, and links to other information on the U.S. dairy industry, including historic price data. The website is located at: future.aae.wisc.edu.

How do I get it?

Federally-subsidized crop insurance products managed by RMA are sold by private crop insurance agents. The RMA website lists an Agent/company Locator link in the right side bar of their home page. This link provides a list of all agents approved to provide these products in California.

For more information on LGM-Dairy, how it may fit your operation, and other crop insurance products, consult a local crop insurance agent. For more interactive products and information on risk management, consult eRightRisk.com.

Ag Risk-5

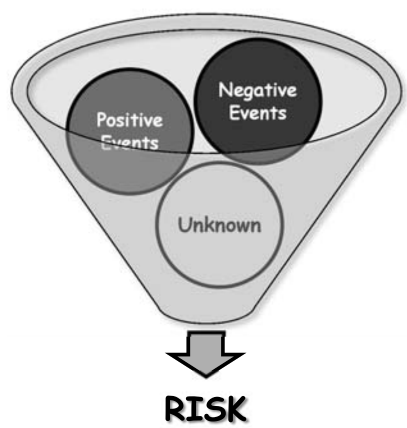
tools for managing risk and evaluating risk management strategies

John P. Hewlett
University of Wyoming

Jay Parsons
University of Nebraska-Lincoln

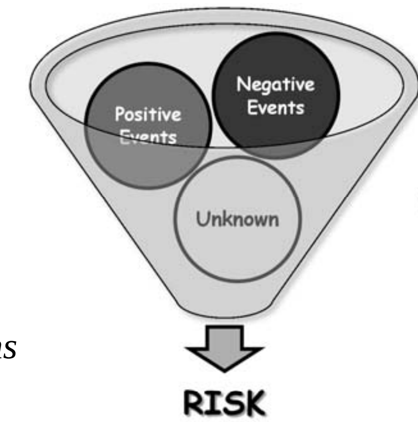
What is RISK?

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

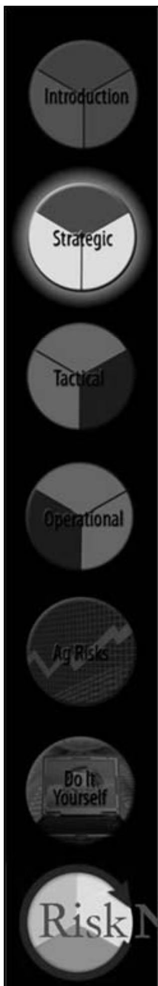


What is RISK?

- **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*

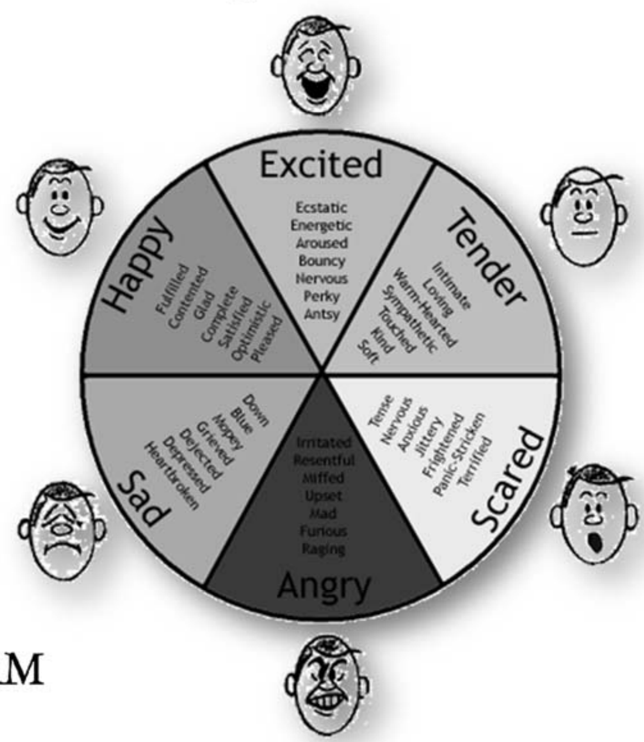


USDA RMA CAS University of California Agriculture and Natural Resources RightRisk



The Human Dimension of Risk Management

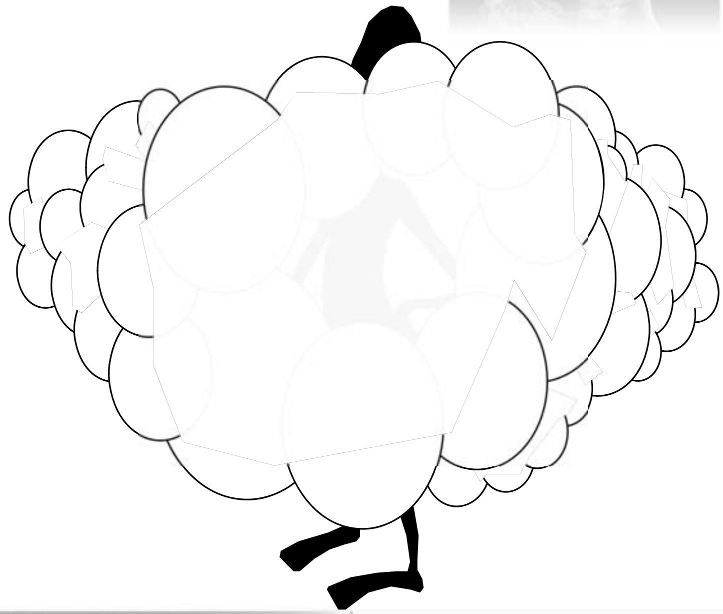
EMOTION



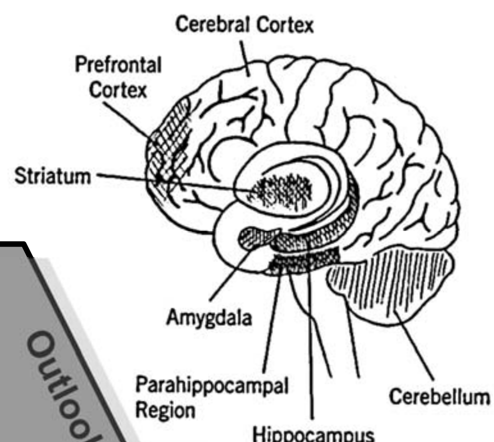
Risk Navigator SRM

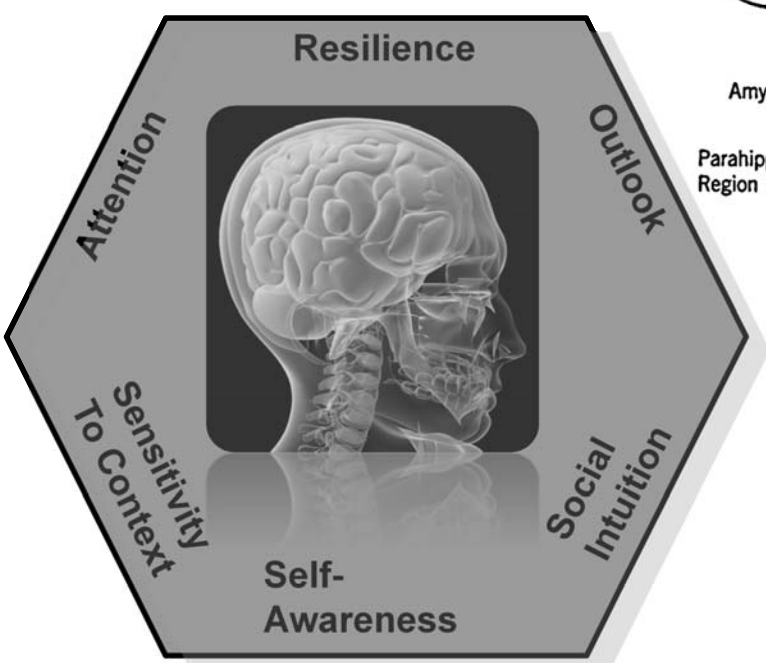
The HUMAN Dimension of Risk

- Emotionally we avoid risk (uncertainty) to avoid the shame of:
  - *Failure,*
  - *Being wrong,*
  - *Being laughed at*
  - *Being made fun of,*
  - *Loosing the farm, etc.*



Risk Tolerance: Emotional Style*

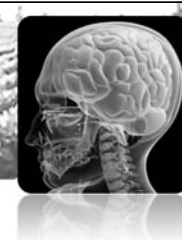




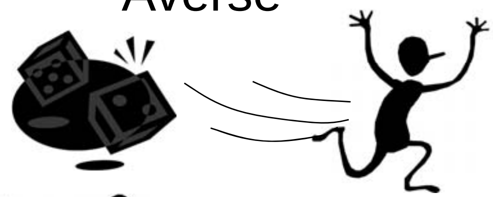
Risk Navigator SRM

* The Emotional Life of Your Brain, Davidson and Begley, 2012.

Types of Risk Preference

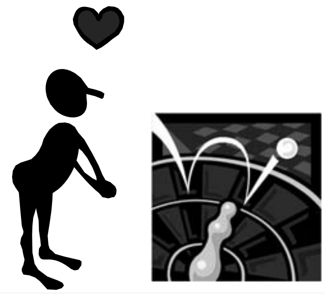


Risk Averse



Risk Neutral

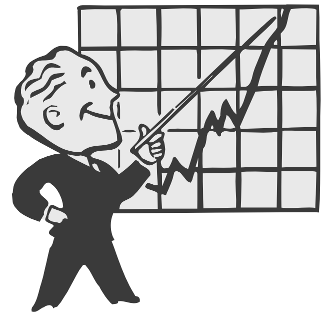
Risk Loving



Personal Perspectives on Risk

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

dynamic and changing over time.



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**?

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

Marketing and Price Risk

Prices of inputs or outputs that change after you commit to a plan of action.

What are Your Sources?

- Total national production
- Government programs
- Demand (including quality issues)
- Seasonal effects

Marketing and Price Risk

What are Your Management Controls?

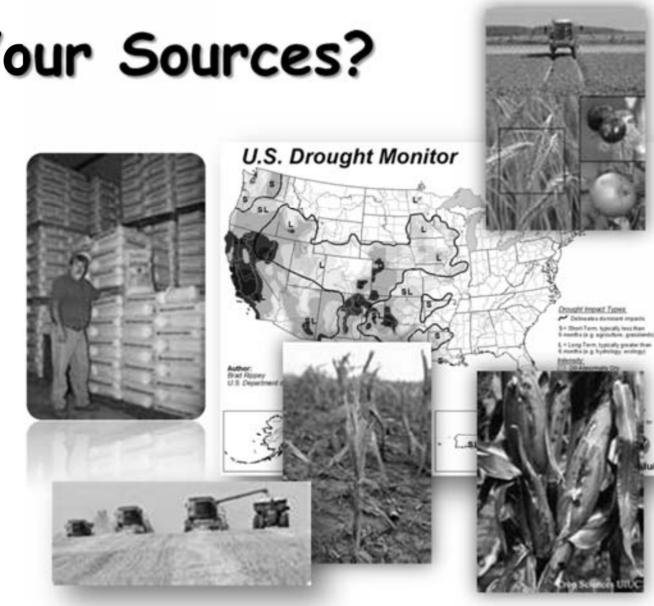
- Forward pricing or contracting
- Diversified market timing
- Diversified production
- Selecting low price risk enterprises
- Obtaining market outlook reports (information)
- Negotiated lease agreements
- Crop Insurance

Production Risk

Uncontrollable events such as weather, pests or disease make yields, quality, or outputs unpredictable.

What are Your Sources?

- Weather
- Pests
- Disease
- Genetic variations
- Timing of operations



Production Risk

What are Your Management Controls?

- Selecting low production risk enterprises
- Using low-risk production practices
- Diversification
- Maintaining flexibility and extra capacity
- Utilizing land over a wide spread area
- Crop insurance

Institutional Risk

Government or other institutional rules, regulations and policies effect profitability through costs or returns.

What are Your Sources?

- Changes in social attitudes
- Changing regulations about land use and environmental quality
- The possibility of lawsuits for accidents or misuse of chemicals

USDA RMA University of California Agriculture and Natural Resources RightRisk

Institutional Risk

What are Your Management Controls?

- Maintaining a liability insurance program
- Keeping informed of new regulations and interpretations of the law

USDA RMA University of California Agriculture and Natural Resources RightRisk

Human Risk

The character, health or behavior of the people involved in your operation introduces risk.

What are Your Sources?

- Health issues
- Divorce
- The possibility of losing a key employee
- Moral or the mental state of the work force

Human Risk

What are Your Management Controls?

- A backup management plan
- A plan to deal with the possible loss of a key employee
- Maintaining a health and life insurance program
- Establishing and maintaining an estate plan
- A good employee benefit package

Financial Risk

Financial risk is the extra risk that is attached to being leveraged. Added variability resulting from debt financing.

What are Your Sources?

- Possibility of losing a lease
- Production, prices, or casualty losses
- Unstable financial partners
- Anything that would negatively affect cash flow and the ability to meet debt obligations

Financial Risk

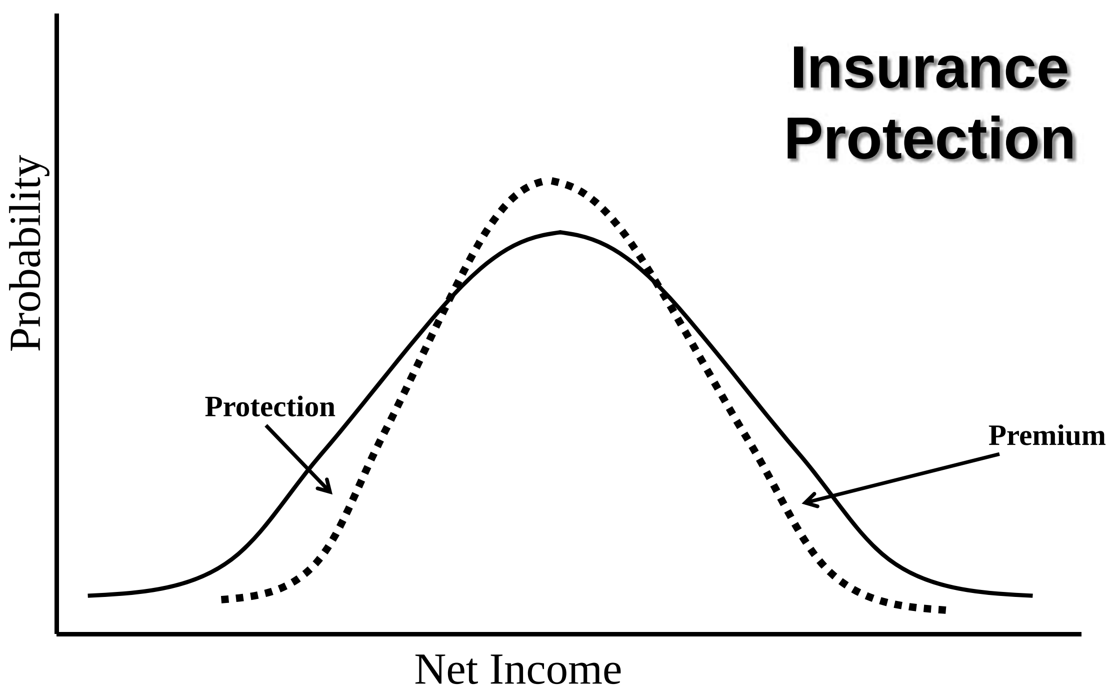
What are Your Management Controls?

- Maintaining a financial cushion
- Practicing solid land leasing strategies
- Incorporating all or part of your operation
- Maintaining up-to-date financial information

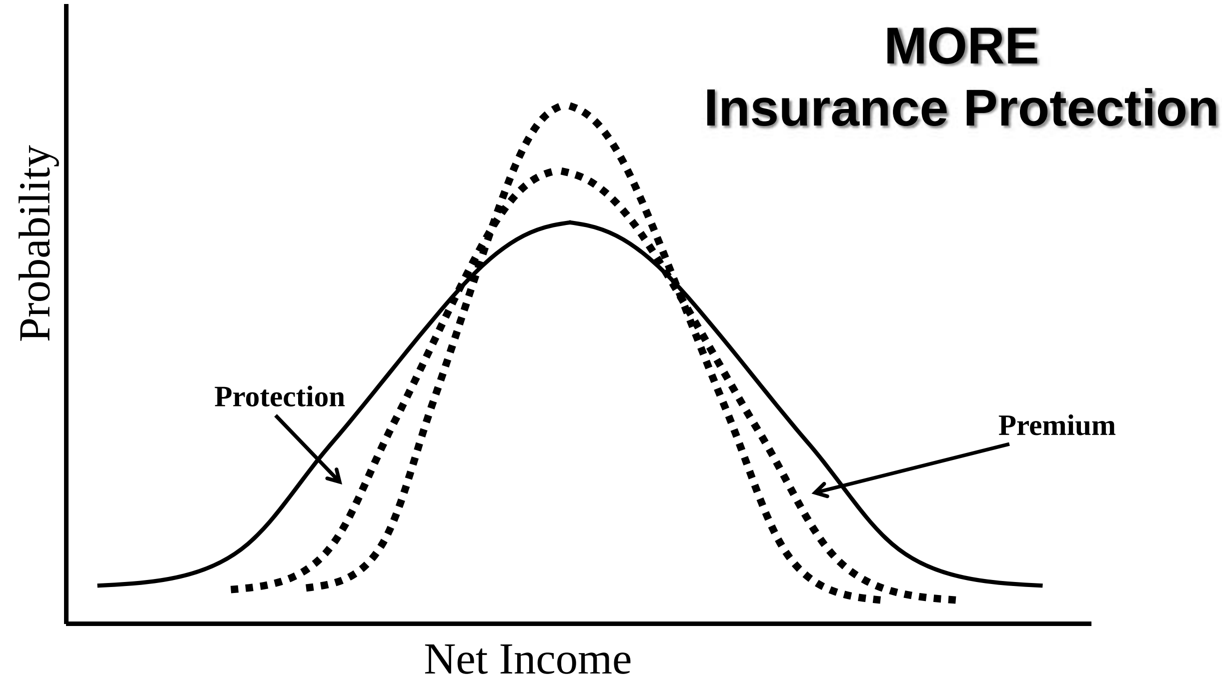
Strategies for Managing Risk

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 bare**
   a) Increase reserves
   b) Maintain flexibility
5. **Accept it**

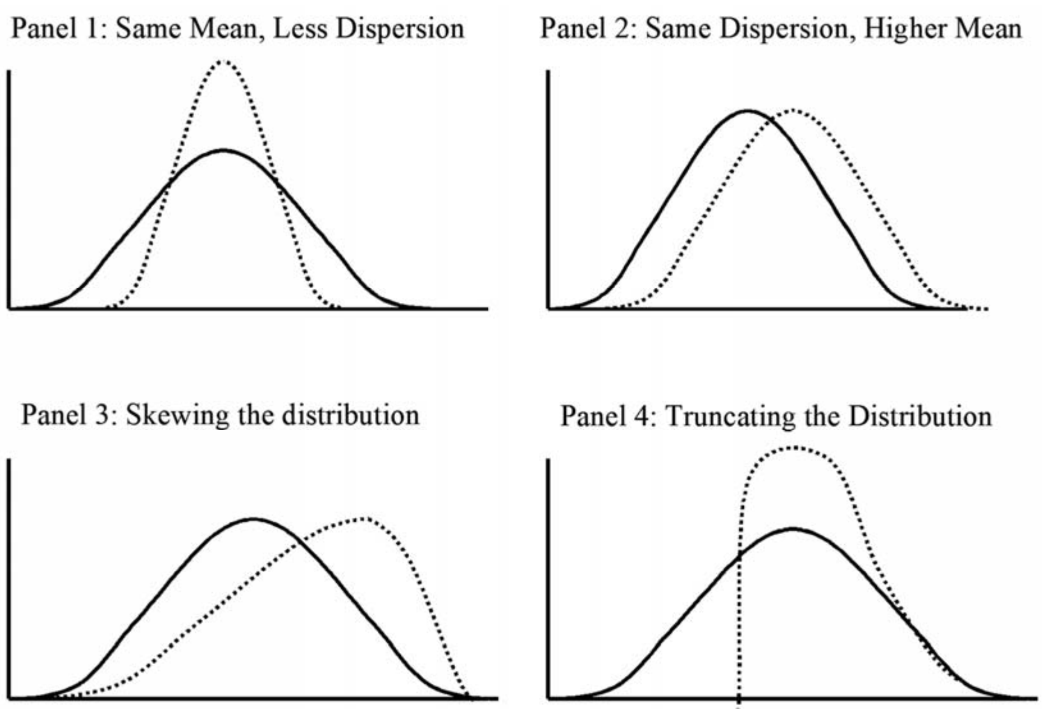
How much risk is right for you?



How much risk is right for you?



Strategy Impacts



Current Federal Insurance Options

2013 California Crop Insurance Profile

Insurance Plans Available in CALIFORNIA			
Insurable Crops	**Insured Acres**	**Total Acres**	**Percent Insured**
Alfalfa Seed	10,416	29,023	36%
Almonds	692,001	876,196	79%
Apples	5,684	13,026	32%
Avocados	36,147	53,559	68%
Barley	48,962	100,000	49%
Blueberries	2,216	3,900	57%
Cherries	28,852	39,173	74%
Citrus – 8 types of fruit	227,963	257,382	84%
Corn	232,551	560,000	42%
Cotton & ELS Cotton	263,497	280,000	94%
Beans (Dry)	17,911	49,000	37%
Figs	4,216	8,046	52%
Forage Production	136,188	921,910	15%
Grapes (Table)	84,951	92,197	92%
Grapes (Wine)	484,439	587,600	83%
Grain Sorghum	693	6,249	10%
Mint	1,849	3,200	58%
Oats	3,290	6,829	48%
Olives	25,131	44,000	57%
Onions	4,239	55,146	8%
Pears	8,699	14,000	62%
Pecans	300	3,600	9%
Pistachios	87,887	178,000	49%
Potatoes	18,404	33,000	56%
Prunes	48,682	61,988	79%
Rice	463,402	553,110	84%
Rice (Cultivated Wild)	13,329	15,000	89%
Safflower	34,558	57,000	61%
Stonefruit (Includes Plums)	56,543	126,698	49%
Strawberries	136	38,000	1%
Sugar Beets	3,694	24,500	15%
Tomatoes (Fresh)	13,139	30,000	47%
Tomatoes (Processing)	252,574	259,000	98%
Walnuts	140,363	289,809	48%
Wheat	344,519	568,156	61%

Dollar Liability Program	Total Dollar Liability
Adjusted Gross Revenue	$39,927,037
Apiculture (Rainfall Index)	$10,414,535
Forage Seeding	$2,265,422
Livestock Gross Margin (LGM) Dairy	$86,047,453
Livestock Risk Protection (LRP) Lamb	$8,971,882
Nursery	$190,545,014
Pasture, Rangeland, Forage (Rainfall Index)	$19,506,133
Raisins	$214,106,513

Crop Pilot Programs

Program	County Availability
Adjusted Gross Revenue	Fresno, Kern, Riverside, San Diego, San Joaquin, San Luis Obispo, Tulare and Ventura Counties
Apiculture (Rainfall Index)	All Counties
Avocados	Orange, Riverside, San Diego, San Luis Obispo, Santa Barbara and Ventura Counties
Cherries	Butte, Contra Costa, Fresno, Kern, Kings, Madera, Merced, Placer, Sacramento, San Benito, Santa Clara, San Joaquin, Stanislaus, Sutter, Tulare and Yuba Counties
Citrus Dollar (Navels)	Fresno, Kern, Madera and Tulare Counties
Forage (Alfalfa) Seed	Kings and Fresno Counties
Olives	Butte, Colusa, Fresno, Glenn, Tehama, Kern, Madera, San Joaquin, Shasta, Stanislaus, Sutter, Tulare and Yolo Counties
Strawberries	Fresno, Merced, Monterey, Santa Barbara, Santa Cruz and Ventura Counties
PRF (Rainfall index)	All Counties
Pistachios	Alameda, Butte, Colusa, Contra Costa, Fresno, Glenn, Kern, Kings, Madera, Merced, Riverside, San Benito, San Bernardino, San Joaquin, San Luis Obispo, Santa Barbara, Stanislaus, Sutter, Tehama, Tulare, Yolo and Yuba Counties

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Data as of January 2014

http://www.rma.usda.gov/pubs/2014/stateprofiles/california13.pdf

California
Fifteen Year Crop Insurance History

Year	Policies Earning Premium	Net Acres Insured	Liability	Gross Premium	Losses	Loss Ratio
1999	28,590	4,023,277	2,494,656,258	130,826,215	133,134,448	1.02
2000	29,191	4,278,811	2,796,253,781	143,343,081	92,359,660	0.64
2001	27,958	4,010,128	2,690,254,801	142,519,840	117,359,756	0.82
2002	27,200	3,920,007	2,833,618,262	146,356,279	79,069,948	0.54
2003	26,471	3,990,438	2,951,841,797	150,191,677	79,366,135	0.53
2004	25,629	3,908,123	3,153,568,412	157,913,694	83,152,323	0.53
2005	24,859	3,818,813	3,317,832,621	168,995,411	92,497,107	0.55
2006	24,490	3,732,668	3,658,867,941	186,617,268	88,506,353	0.47
2007	24,207	3,780,829	3,708,288,115	187,455,253	154,139,100	0.82
2008	24,074	3,810,375	3,911,645,612	197,920,945	89,455,031	0.45
2009	24,723	3,932,306	4,648,316,411	243,273,227	177,694,925	0.73
2010	24,649	3,752,230	4,493,432,544	219,282,609	111,142,020	0.51
2011	24,726	4,062,207	4,792,588,280	248,898,972	110,209,054	0.44
2012	25,462	4,600,044	5,394,444,735	260,903,031	112,207,209	0.43
2013*	25,470	5,233,794	6,097,497,679	286,604,558	82,422,389	0.29

* 2013 numbers are incomplete

Current Federal Insurance Options - *Crops*

Federal Crop Insurance Corporation
Crop Year Statistics for 2013
As of: 5/19/2014
Nationwide Summary - By State/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 Dscnt	Indemnity	Loss Ratio
CALIFORNIA															
ADJUSTED GROSS REVENUE	AGR	58	47	0	47	0	0	34,840,057	1,416,522	761,304	0	0	0	0	.00
ALFALFA SEED	APH	62	32	1	84	1	10,581	14,105,093	573,098	339,328	0	0	0	3,856	.01
ALMONDS	APH	3,894	3744	177	5,901	196	695,616	1,517,069,955	55,343,395	36,083,880	0	0	0	4,292,712	.08
APICULTURE	RAINF	190	189	186	736	687	0	10,414,535	2,969,479	1,563,974	0	0	0	5,545,093	1.87
APPLES	APH	123	110	27	230	35	5,658	21,910,284	3,215,918	2,052,786	0	0	0	1,151,774	.36
AVOCADOS	APH	1,081	1037	78	1,138	78	35,805	72,259,384	8,665,290	7,415,855	0	0	0	732,933	.08
BARLEY	RP	77	18	14	41	21	8,504	1,662,243	436,823	252,605	0	0	0	677,428	1.55
	RPHPE	6	2	1	3	2	514	38,544	17,908	12,722	0	0	0	7,093	.40
	YP	567	86	38	134	61	38,756	4,936,645	1,098,082	741,056	0	0	0	2,227,841	2.03
BARLEY Total		650	106	53	178	84	47,774	6,637,432	1,552,813	1,006,383	0	0	0	2,912,362	1.88

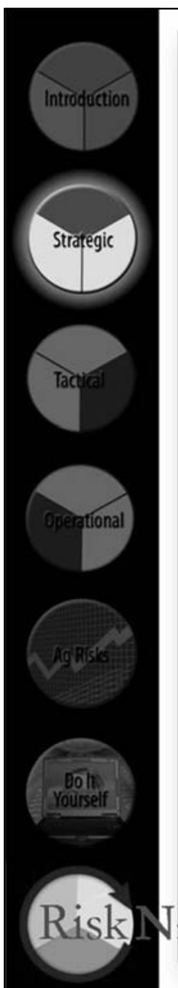
Federal Crop Insurance Corporation
Crop Year Statistics for 2013
As of: 5/19/2014
Nationwide Summary - By State/Crop

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 Dscnt	Indemnity	Loss Ratio
CALIFORNIA															
PLUMS	APH	354	311	44	797	82	14,151	26,493,269	3,059,102	2,068,851	0	0	0	757,691	.25
POTATOES	APH	104	56	4	182	13	18,926	36,912,644	2,387,820	1,640,507	0	0	0	981,960	.41
PROCESSING APRICOTS	APH	49	41	3	64	5	2,907	3,599,285	527,951	308,356	0	0	0	183,485	.35
PROCESSING CLING PEACHES	APH	358	345	30	960	47	16,134	42,845,401	1,764,388	1,049,095	0	0	0	410,949	.23
PROCESSING FREESTONE	APH	78	63	1	98	2	2,860	5,987,822	216,357	129,674	0	0	0	95,319	.44
PRUNES	APH	641	615	340	862	446	48,496	55,203,797	10,870,139	6,570,306	0	0	0	12,657,198	1.16
Pistachios	APH	437	396	98	516	117	87,919	200,652,566	7,476,615	5,817,145	0	0	0	4,580,889	.61
RAISINS	DOL	1,646	1373	14	2,396	15	0	249,926,786	13,725,643	8,512,133	0	0	0	123,043	.01
RICE	RP	79	24	1	53	1	6,675	5,147,936	214,573	131,364	0	0	0	3,234	.02
	RPHPE	116	104	2	278	3	44,806	43,681,679	1,534,102	1,106,258	0	0	0	83,970	.05
	YP	1,612	1262	71	2,304	106	411,577	248,300,787	6,693,088	4,314,052	0	0	0	3,236,674	.48
RICE Total		1,807	1,390	74	2,635	110	463,058	297,130,402	8,441,763	5,551,674	0	0	0	3,323,878	.39
SAFFLOWER	APH	511	68	5	101	5	34,588	5,321,832	719,597	679,231	0	0	0	65,582	.09
SUGAR BEETS	APH	7	6	0	7	0	3,694	2,722,653	37,314	35,724	0	0	0	0	.00
SWEET ORANGES	APH	75	65	3	67	3	436	842,230	65,669	38,120	0	0	0	10,517	.16
Strawberries	ARH	7	2	0	3	0	136	2,519,606	74,728	47,872	0	0	0	0	.00
TABLE GRAPES	APH	431	356	35	1,153	52	84,874	251,103,013	9,670,149	7,885,504	0	0	0	2,068,816	.21
TOMATOES	APH	1,019	525	87	2,537	144	253,174	450,704,562	7,952,985	4,686,427	0	0	0	7,759,496	.98
VALENCIA ORANGES	APH	978	930	68	1,225	75	31,259	48,405,038	4,412,327	2,822,814	0	0	0	1,850,801	.42
WALNUTS	APH	1,323	1263	63	1,709	75	140,004	257,626,508	7,722,341	5,807,744	0	0	0	1,104,107	.14
WHEAT	RP	299	121	62	334	139	91,056	24,089,621	5,777,140	3,751,401	0	0	0	7,380,630	1.28
	RPHPE	50	23	7	56	15	10,246	4,095,888	616,408	428,834	0	0	0	308,820	.50
	YP	1,655	689	51	1,118	85	243,446	52,558,873	5,470,135	4,922,381	0	0	0	1,741,652	.32
WHEAT Total		2,004	833	120	1,508	239	344,748	80,744,382	11,863,683	9,102,616	0	0	0	9,431,102	.79
CALIFORNIA Total		33,325	25,408	2,678	48,175	4,290	5,240,534	6,139,821,032	288,737,222	192,491,937	0	0	0	124,979,245	.43
Grand Total		33,325	25,408	2,678	48,175	4,290	5,240,534	6,139,821,032	288,737,222	192,491,937	0	0	0	124,979,245	.43

Current Federal Insurance Options - *Livestock*

Federal Crop Insurance Corporation
Reinsurance Year Statistics for 2013
As of: 5/21/2014
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
CALIFORNIA												
DAIRY CATTLE	LGM	39	32	13	60	16	4,387,886	86,047,453	2,221,788	943,820	533,774	.24
FED CATTLE	LRP	2	0	0	0	0	0	0	0	0	0	.00
FEEDER CATTLE	LRP	5	3	2	6	3	1,760	2,108,858	37,607	4,887	41,436	1.10
LAMB	LRP	28	14	12	38	36	46,850	8,971,882	279,209	83,137	1,561,946	5.59
CALIFORNIA Total		74	49	27	104	55	4,436,496	97,128,193	2,538,604	1,031,844	2,137,156	.84
Grand Total		74	49	27	104	55	4,436,496	97,128,193	2,538,604	1,031,844	2,137,156	.84



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Risk Controls

Market Risk - Production Risk - Institutional/Legal Risk - Human Risk - Financial Risk

Market Risk

- *risk associated with the uncertainty around markets and prices for inputs and outputs*

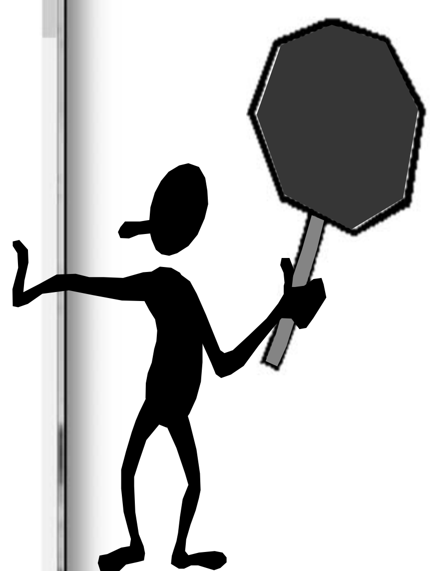
1. Livestock Prices
- USDA Agricultural Marketing Service: **Colorado** Weekly Summary
- USDA Agricultural Marketing Service: **Montana** Weekly Summary
- USDA Agricultural Marketing Service: **New Mexico** Combined Wtd Avg - Cattle (weekly)
- USDA Agricultural Marketing Service: **Washington** Weekly Livestock Auction Summary
- USDA Agricultural Marketing Service: **Wyoming** Weekly Summary
- USDA Agricultural Marketing Service:**Livestock and Seed**
- USDA Agricultural Marketing Service:**ALL**
- Beef Basis- provides cattle producers with information and analytics to improve marketing decisions influenced by cattle basis risk.

2. Grain Prices
- USDA Agricultural Marketing Service: **California** Weekly Grain Report
- USDA Agricultural Marketing Service: **Montana** Cash Grain Prices
- USDA Agricultural Marketing Service: **Utah** Daily Grain Report
- USDA Agricultural Marketing Service: **Eastern New Mexico** Grain Report
- USDA Agricultural Marketing Service: **Wyoming/Western Nebraska** Elevator Grain Bids

3. Hay Prices
- USDA Agricultural Marketing Service: **California** Weekly Hay Report
- USDA Agricultural Marketing Service: **Colorado** Weekly Hay Report
- USDA Agricultural Marketing Service: **Idaho** Weekly Hay Report
- USDA Agricultural Marketing Service: **Montana** Weekly Hay Report
- USDA Agricultural Marketing Service: **New Mexico** Weekly Hay Report
- USDA Agricultural Marketing Service: **Oregon** Weekly Hay Report
- USDA Agricultural Marketing Service: **Utah** Weekly Hay Market Report
- USDA AMS: **Washington-Oregon** (Columbia Basin) Weekly Hay
- USDA AMS: **Wyoming, West Nebraska, and SW South Dakota** Hay Report (weekly)
- USDA Agricultural Marketing Service: **Wyoming** Weekly Summary

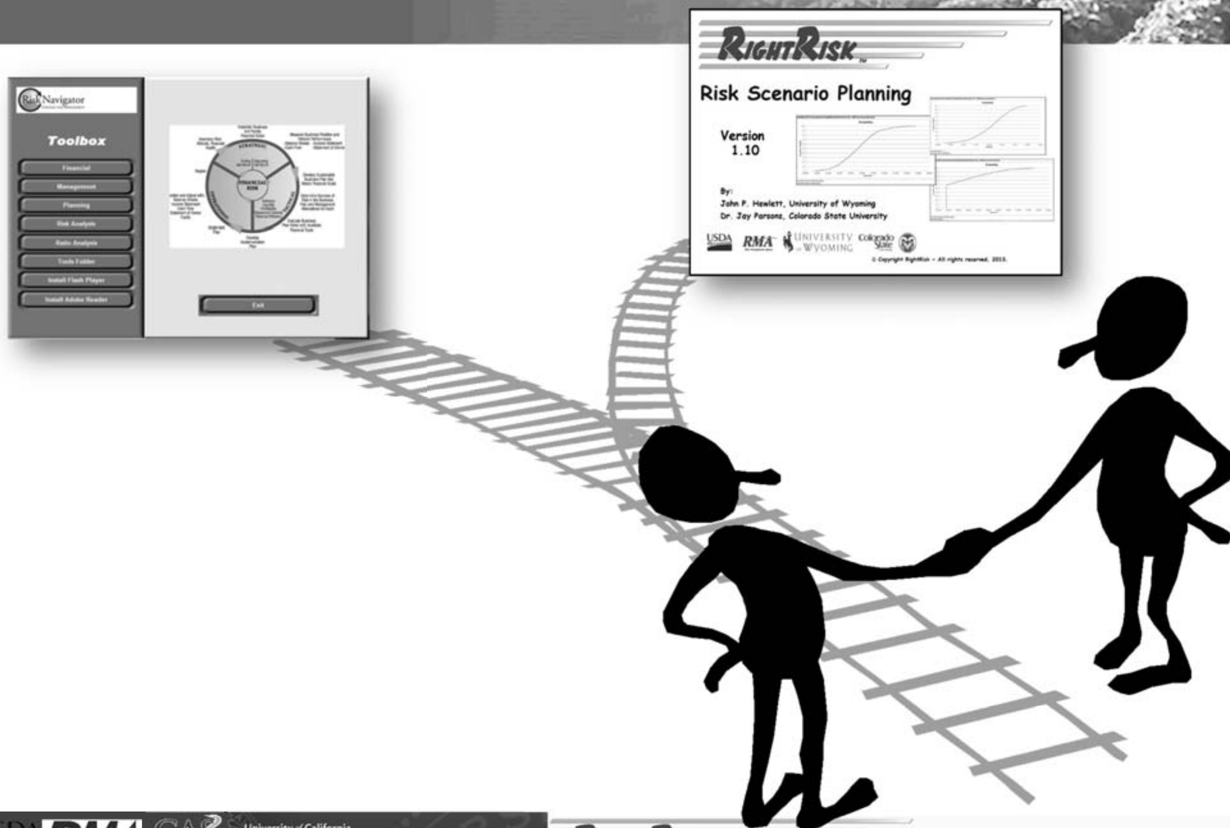
4. Lease Rates/Grazing Fees
- USDA AMS: **Wyoming, West Nebraska and SW Dakota** Grazing Fee Report
- USDA National Agricultural Statistics Service: **Cash Rents by County**

5. Price Protection (Insurance)
- USDA Risk Management Agency: **Livestock Insurance**, background information



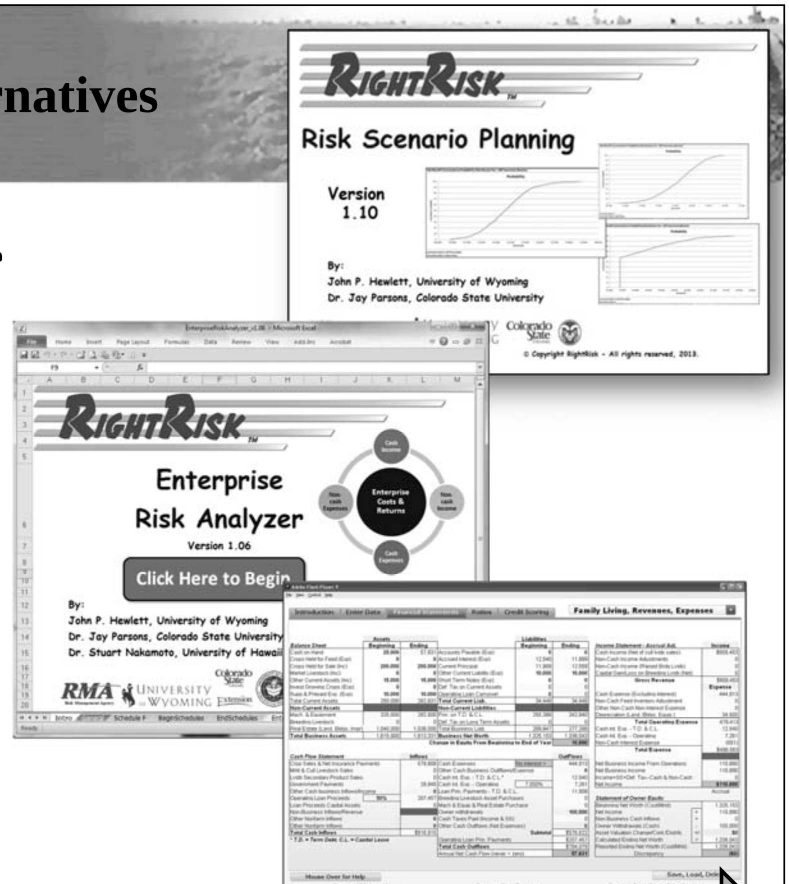
http://RightRisk.org/controls

Evaluating Alternatives

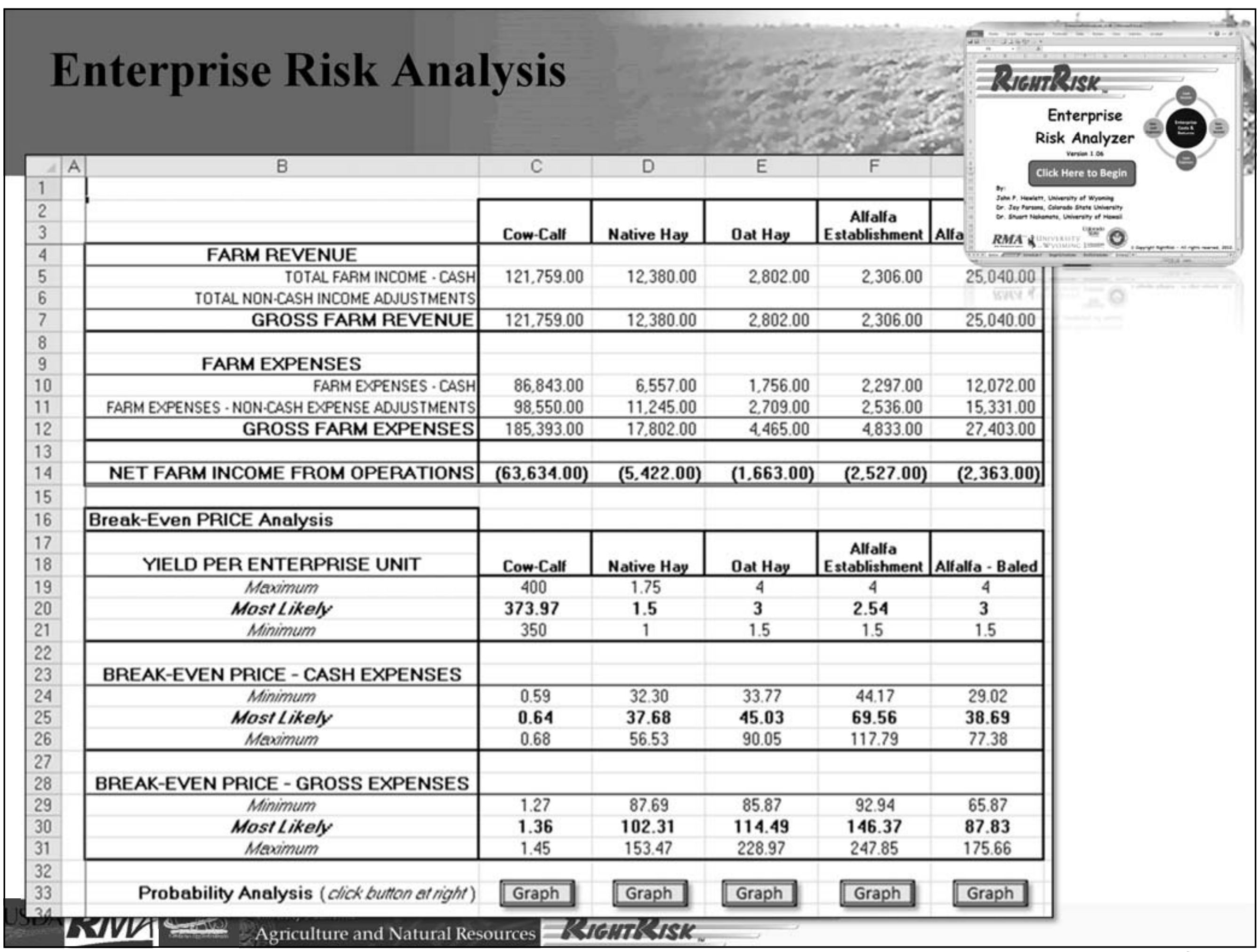


Tools to Evaluate Alternatives

- Risk Scenario Planner
  relatively minor changes
- Enterprise Budget
  larger changes
- Whole Farm Budget
  substantial changes



http://RightRisk.org/tools



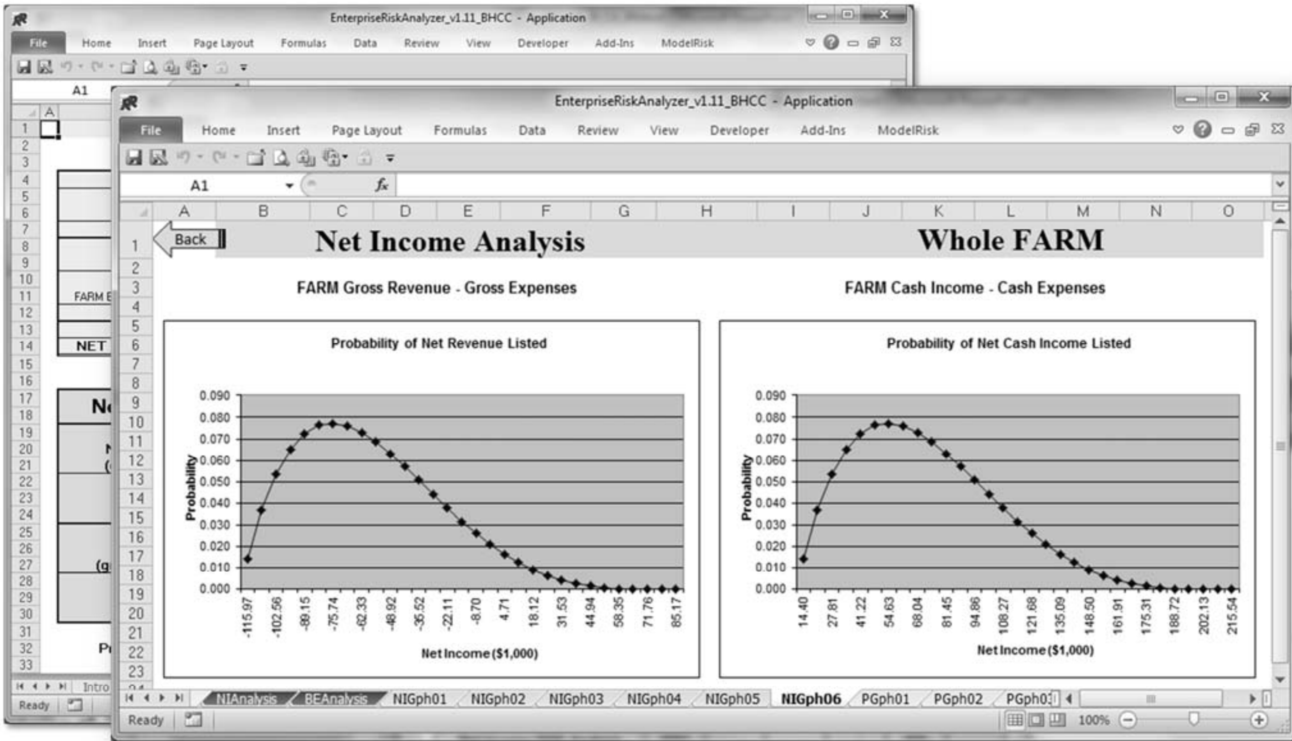
	Cow-Calf	Native Hay	Oat Hay	Alfalfa Establishment	Alfa[lfa - Baled]
FARM REVENUE					
TOTAL FARM INCOME - CASH	121,759.00	12,380.00	2,802.00	2,306.00	25,040.00
TOTAL NON-CASH INCOME ADJUSTMENTS					
GROSS FARM REVENUE	121,759.00	12,380.00	2,802.00	2,306.00	25,040.00
FARM EXPENSES					
FARM EXPENSES - CASH	86,843.00	6,557.00	1,756.00	2,297.00	12,072.00
FARM EXPENSES - NON-CASH EXPENSE ADJUSTMENTS	98,550.00	11,245.00	2,709.00	2,536.00	15,331.00
GROSS FARM EXPENSES	185,393.00	17,802.00	4,465.00	4,833.00	27,403.00
NET FARM INCOME FROM OPERATIONS	(63,634.00)	(5,422.00)	(1,663.00)	(2,527.00)	(2,363.00)

Break-Even PRICE Analysis

YIELD PER ENTERPRISE UNIT	Cow-Calf	Native Hay	Oat Hay	Alfalfa Establishment	Alfalfa - Baled
Maximum	400	1.75	4	4	4
Most Likely	**373.97**	**1.5**	**3**	**2.54**	**3**
Minimum	350	1	1.5	1.5	1.5
BREAK-EVEN PRICE - CASH EXPENSES					
Minimum	0.59	32.30	33.77	44.17	29.02
Most Likely	**0.64**	**37.68**	**45.03**	**69.56**	**38.69**
Maximum	0.68	56.53	90.05	117.79	77.38
BREAK-EVEN PRICE - GROSS EXPENSES					
Minimum	1.27	87.69	85.87	92.94	65.87
Most Likely	**1.36**	**102.31**	**114.49**	**146.37**	**87.83**
Maximum	1.45	153.47	228.97	247.85	175.66
Probability Analysis (*click button at right*)	Graph	Graph	Graph	Graph	Graph

Enterprise Risk Analyzer

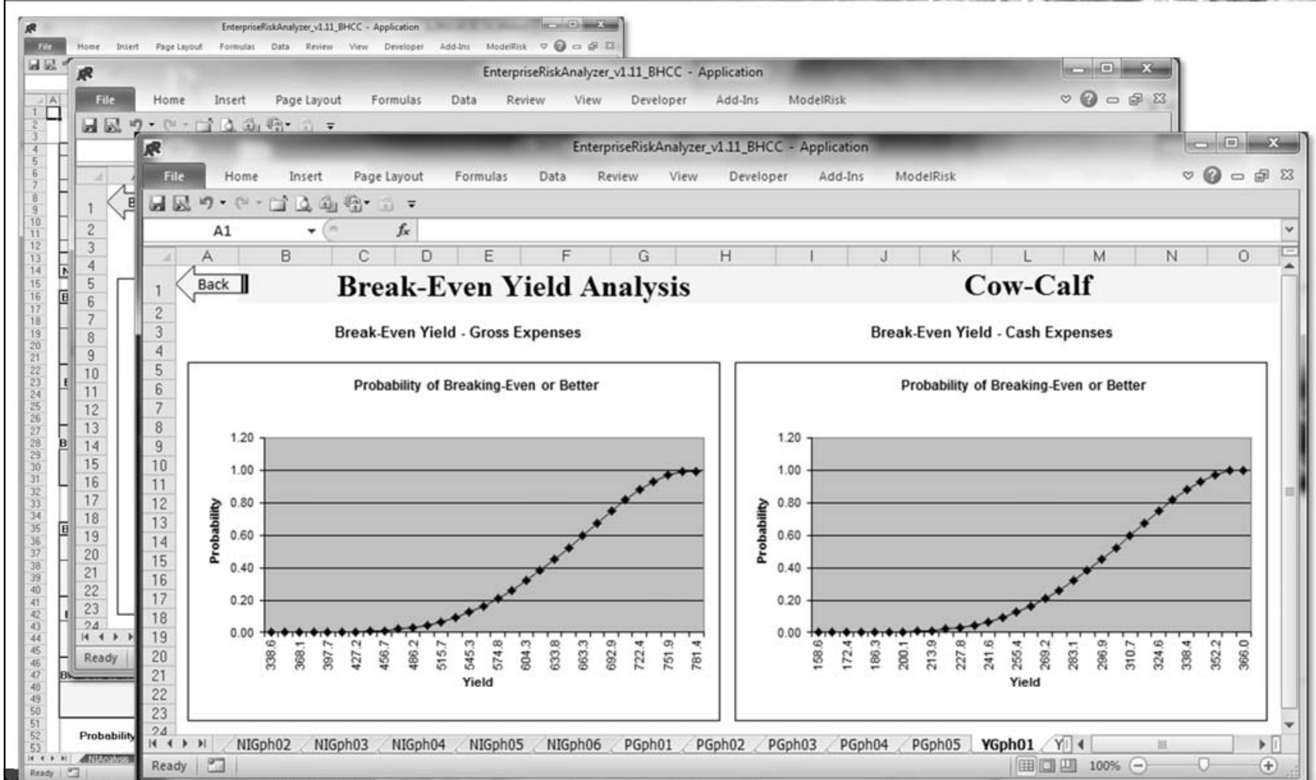
Net Return Analysis



Agriculture and Natural Resources

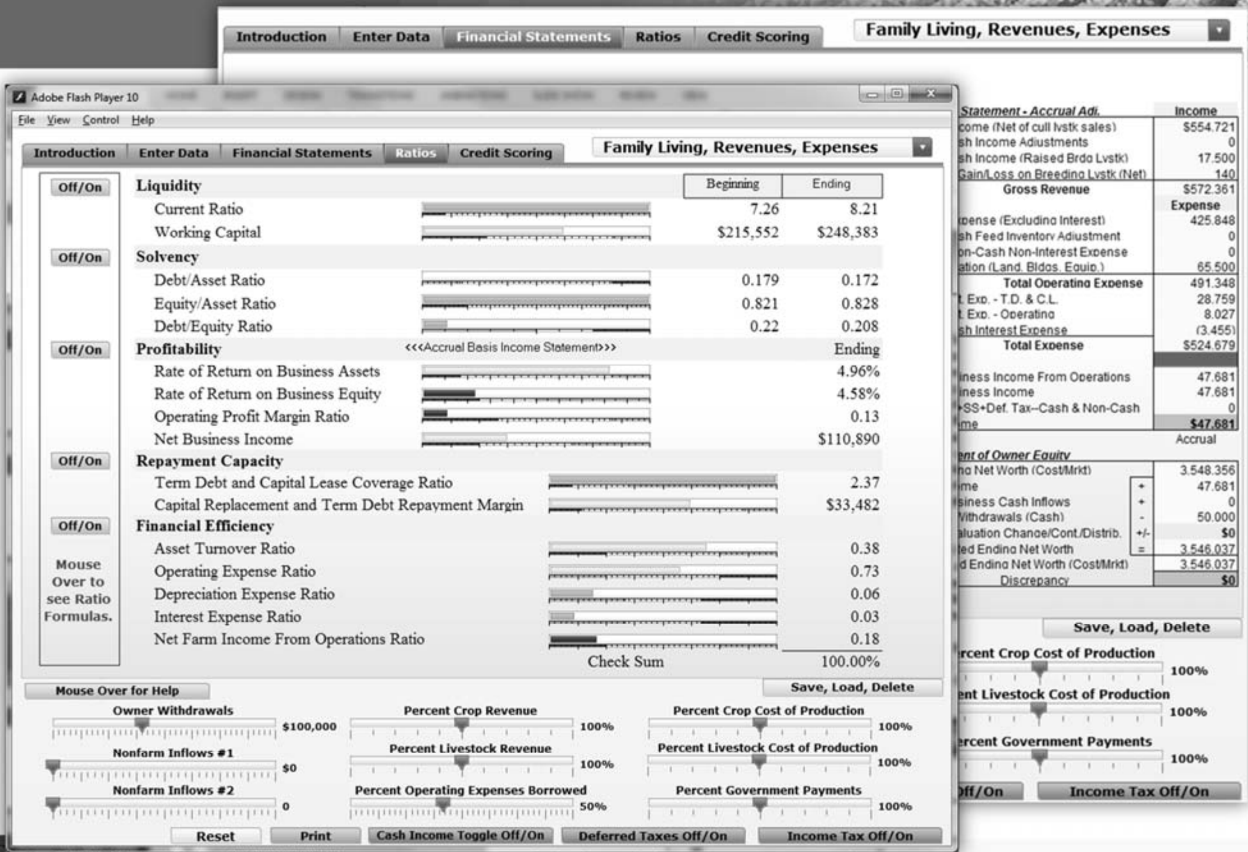
Enterprise Risk Analyzer

Breakeven Analysis



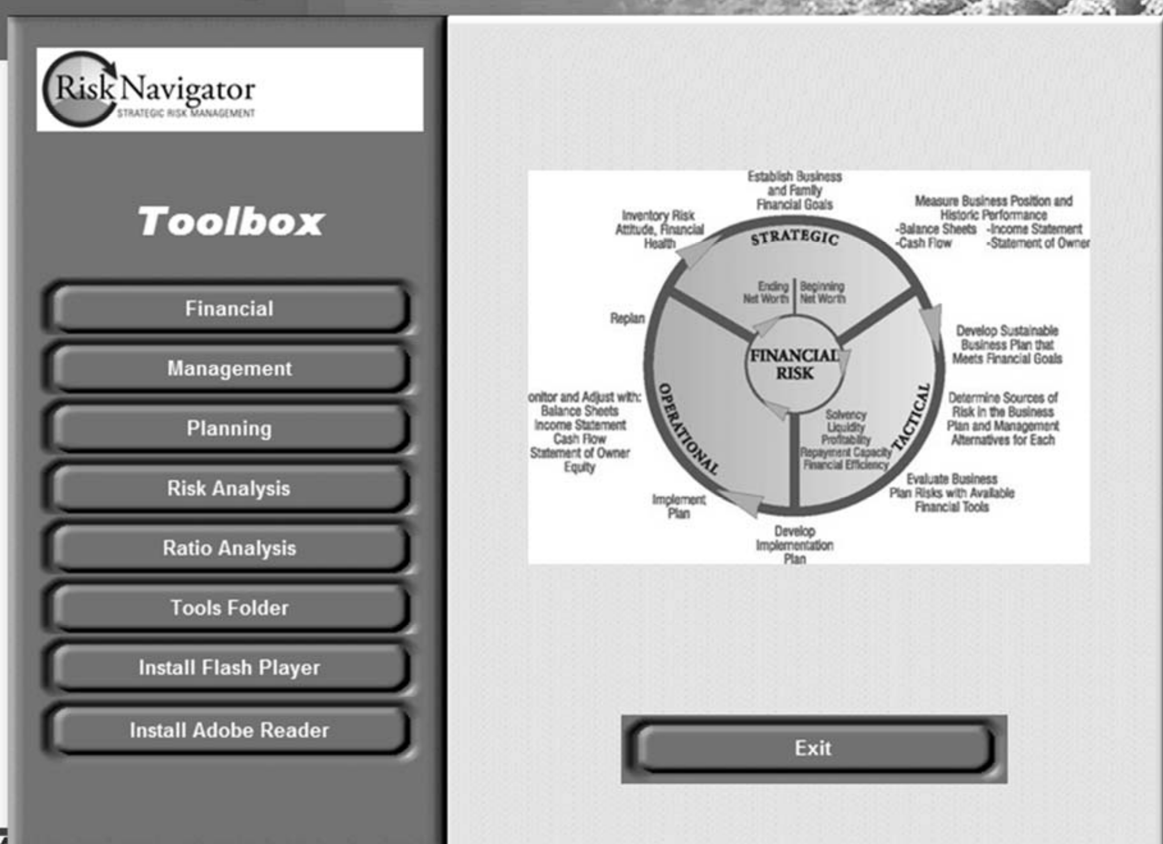
Agriculture and Natural Resources

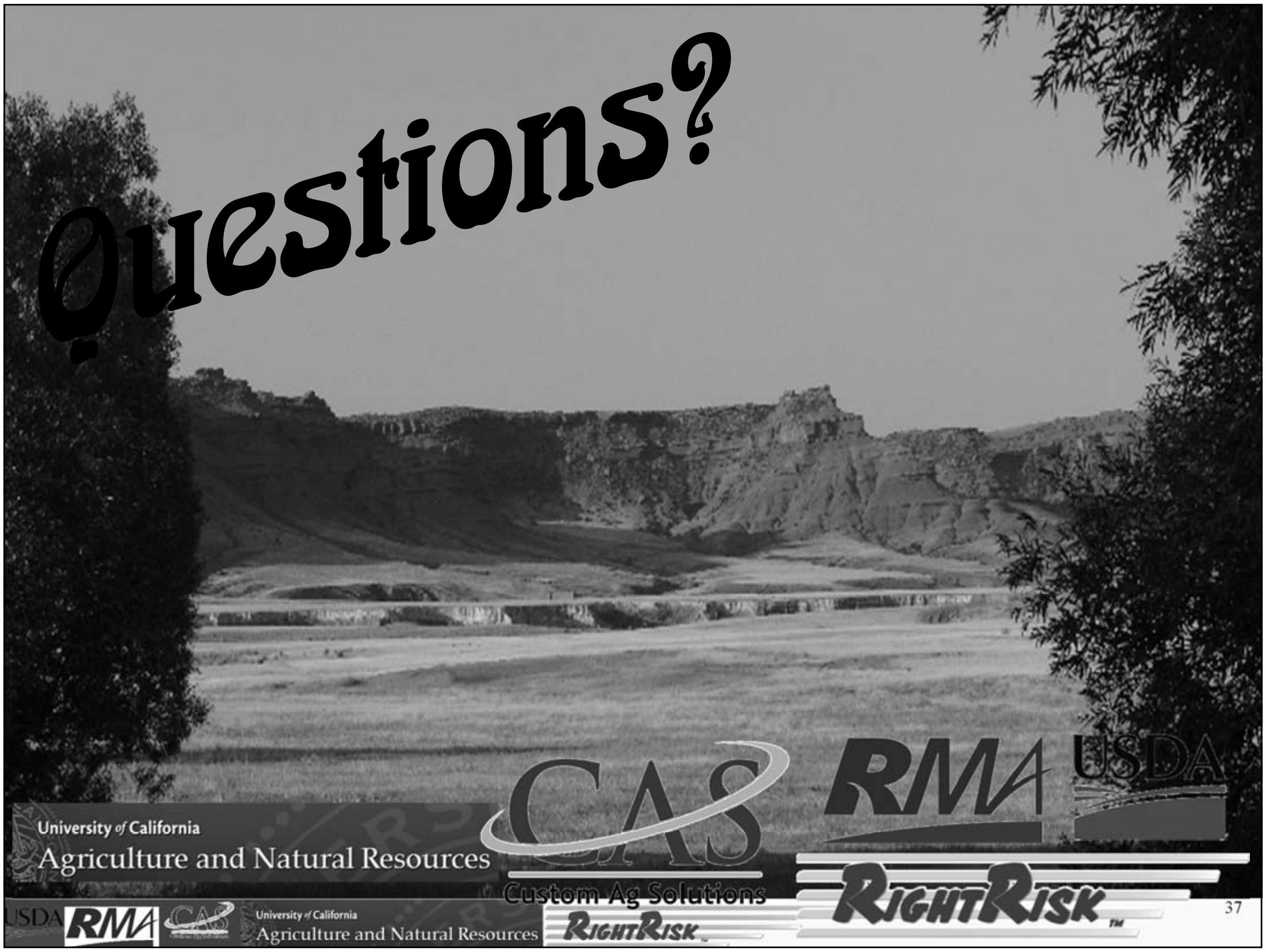
Whole Farm Budget



Agriculture and Natural Resources

Risk Navigator Tool Box




Questions?
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Statewide Cost Comparison Summary

Statewide Cost Comparison Summary, 2013

All costs: per cow per month, unless noted	2012 Average	North Coast	North Valley	South Valley	Southern California	2013 Average	Percent Change
Number of Herds	**126**	**12**	**60**	**38**	**4**	**114**	
Feed Costs							
a. Dry Roughage	$48.39	$61.48	$43.13	$50.07	$53.20	$48.16	-0.5%
b. Wet Feed & Wet Roughage	$44.02	$20.64	$50.65	$44.28	$39.16	$46.06	4.6%
c. Concentrates	$111.99	$95.72	$108.40	$120.02	$124.27	$115.16	2.8%
d. Minerals & Supplements	$9.10	$1.67	$9.62	$7.68	$3.73	$8.05	-11.5%
e. Pasture	$1.45	$41.07	$1.91	$0.00	$0.00	$1.55	7.3%
Total Feed Costs	**$214.95**	**$220.58**	**$213.70**	**$222.05**	**$220.37**	**$218.99**	**1.9%**
Total Feed Costs ($/cwt.)	**$11.48**	**$16.03**	**$11.16**	**$11.61**	**$11.53**	**$11.46**	**-0.1%**
Total Feed Costs (% of total cost)	**65.3%**	**68.0%**	**64.0%**	**67.2%**	**68.2%**	**66.0%**	
Total Hired Labor	**$28.47**	**$36.18**	**$32.38**	**$26.36**	**$27.24**	**$28.96**	**1.7%**
Total Hired Labor Costs ($/cwt.)	**$1.52**	**$2.63**	**$1.69**	**$1.38**	**$1.43**	**$1.52**	**-0.3%**
Total Labor Costs (% of total cost)	**8.7%**	**11.1%**	**9.7%**	**8.0%**	**8.4%**	**8.7%**	
Total Herd Replacement	**$23.14**	**$13.49**	**$20.47**	**$21.46**	**$15.56**	**$20.73**	**-10.4%**
Total Replacement Costs ($/cwt.)	**$1.24**	**$0.98**	**$1.07**	**$1.12**	**$0.81**	**$1.08**	**-12.2%**
Total Replacement Costs (% of total cost)	**7.0%**	**4.2%**	**6.1%**	**6.5%**	**4.8%**	**6.2%**	
Operating Costs							
a. Utilities	$5.42	$9.12	$5.88	$5.04	$6.81	$5.49	1.3%
b. Supplies	$10.02	$10.61	$10.83	$9.52	$7.47	$9.93	-0.9%
c. Veterinary & Medicine	$7.02	$3.34	$7.55	$7.57	$6.10	$7.37	4.9%
d. Outside Services	$3.69	$1.74	$4.34	$3.02	$2.71	$3.50	-5.1%
e. Repairs & Maintenance	$6.36	$6.45	$7.69	$5.09	$8.23	$6.33	-0.5%
f. Miscellaneous	$1.28	$1.52	$1.52	$1.36	$1.53	$1.41	10.3%
g. Bedding & Manure Haul	$1.10	$1.86	$1.14	$0.72	$3.27	$0.98	-10.6%
h. Fuel & Oil	$4.05	$5.31	$4.10	$3.78	$1.97	$3.86	-4.7%
i. Interest Expense	$1.24	$0.37	$0.81	$1.68	$1.25	$1.33	7.2%
j. R E Lease Expense	$4.81	$1.15	$5.19	$5.48	$5.57	$5.43	13.0%
k. Depreciation	$5.34	$5.15	$5.75	$4.49	$1.00	$4.97	-7.1%
l. Taxes & Insurance	$2.15	$1.65	$2.30	$2.30	$1.91	$2.27	5.5%
Total Operating Costs	**$52.48**	**$48.26**	**$57.09**	**$50.06**	**$47.82**	**$52.87**	**0.7%**
Total Operating Costs ($/cwt.)	**$2.80**	**$3.51**	**$2.98**	**$2.62**	**$2.50**	**$2.77**	**-1.2%**
Total Operating Costs (% of total cost)	**15.9%**	**14.9%**	**17.1%**	**15.2%**	**14.8%**	**15.9%**	
Milk Marketing Costs							
a. Hauling	$6.66	$3.02	$6.59	$6.91	$8.34	$6.88	3.3%
b. State Assessments	$2.43	$2.36	$2.59	$2.54	$2.66	$2.57	5.6%
c. Federal Assessments & Misc. Ded.	$0.95	$0.62	$0.97	$0.98	$0.96	$0.97	2.6%
Total Milk Marketing Costs	**$10.04**	**$6.00**	**$10.15**	**$10.43**	**$11.96**	**$10.42**	**3.8%**
Total Milk Marketing Costs ($/cwt.)	**$0.54**	**$0.44**	**$0.53**	**$0.55**	**$0.63**	**$0.55**	**1.7%**
Total Milk Marketing Costs (% of total cost)	**3.1%**	**1.8%**	**3.0%**	**3.2%**	**3.7%**	**3.1%**	
Total Cost ($/Cow/Month)	**$329.07**	**$324.51**	**$333.79**	**$330.36**	**$322.95**	**$331.95**	**0.9%**
Total Cost ($/cwt.)	**$17.57**	**$23.58**	**$17.44**	**$17.27**	**$16.90**	**$17.37**	**-1.1%**
Return on Investment and Management							
a. Allowance: Return on Investment ($/cwt.)	$0.80	$0.99	$0.76	$0.81	$0.70	$0.79	-1.3%
b. Allowance: Return on Management ($/cwt.)	$0.66	$0.78	$0.74	$0.74	$0.75	$0.74	12.1%
Total Costs and Allowances ($/cwt.)	**$19.03**	**$25.35**	**$18.94**	**$18.82**	**$18.35**	**$18.90**	**-0.7%**
Milk Production Data							
a. Milk Sold/Total Cow/Month/ (cwt.)	18.73	13.76	19.14	19.13	19.10	19.11	2.0%
b. Lbs Milk Sold/milk cow/day	71.03	52.89	72.63	72.24	72.11	72.18	1.6%
f. Income Over Feed Cost ($/cwt.)	$5.45	$9.86	$8.16	$6.68	$7.31	$7.38	35.6%
g. Fat Test %	3.82%	3.87%	3.93%	3.80%	3.69%	3.83%	
h. SNF Test %	8.91%	8.84%	8.97%	8.94%	8.91%	8.95%	
Related Data							
i. Milk Cow Feed Costs ($/cow/day)	$7.67	$7.82	$7.64	$7.93	$7.85	$7.81	1.9%
j. Milk Cow Feed Costs ($/cwt.)	$10.82	$14.79	$10.52	$10.97	$10.88	$10.85	0.3%
l. Total Cows	1,355	279	1,204	1,930	1,161	1,360	0.4%
Milk Volume Percentages [1]	**100.00%**	**2.15%**	**37.73%**	**54.20%**	**5.92%**	**100.00%**	

[1] Weighted average computed based on 2013 milk volume percentages.

http://www.cdfa.ca.gov/dairy/

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Risk Controls

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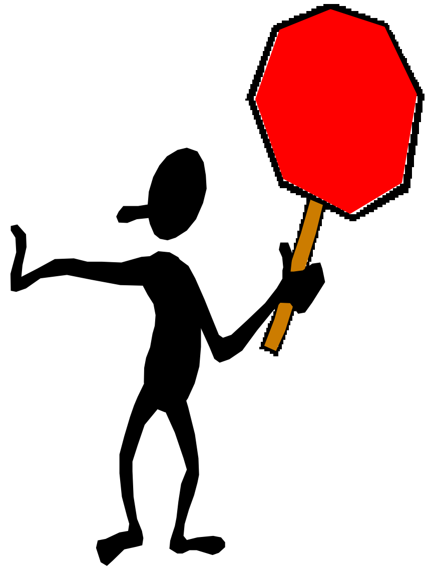

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Risk Management Tools

1. Partial Budget Analyzer
- Use this tool to evaluate smaller changes in the operation.
- Click here for a guide on using a partial budget.

2. Risk Scenario Planning
- Use this tool to evaluate the risk or uncertainty in your partial budget projections.
- Click here for a guide on using the Risk Scenario Planning tool and examples of its application.
- Click here for a version of the Risk Scenario Planning tool depicting the Cow/Calf "Raise Bred Heifers to Sell" example outlined in the guide linked above.
- Click here for a version of the Risk Scenario Planning tool depicting the crop farm "Replace Corn with more Dry Beans acres" example outlined in the guide linked above.
- Click here for a version of the Risk Scenario Planning tool depicting the Cow/Calf "LRP Insurance Decision" example outlined in the guide linked above.

3. Enterprise Risk Analyzer
- Use this tool to evaluate larger changes or changes in enterprise mix for the operation.
- Click here for a guide to use the Enterprise Risk Analyizer tool.
- Click here for a version of the ERA populated with Wyoming Big Horn Basin Cow/Calf Ranch data.
- Click here for a version of the ERA populated with Wyoming Big Horn Basin Farm data.

4. Whole Farm Budget
- Use this tool to evaluate more substantial changes, adding ranches/farms, whole enterprises, etc. to the operation.
- Click here for a guide to use the RDFinancial tool.

5. Risk Navigator Toolbox
- Access the extensive risk management library (20+ tools) designed to implement a strategic risk management strategy

6. Price Risk Analysis: Futures, Options, LRP Comparison
- Use this tool to evaluate market risk management alternatives for livestock enterprises. [From the Farm Management Wiki]

7. Financial Analysis Tool (FAT)
- Use this tool to project start-up costs, annual operating expenses, and annual revenues for any type of enterprise. [From Agriculture & Business Management (ABM)]

8. Should I Buy Hay or Sell Cows?
- Use this tool to the evaluate cow retention decision.
[From the Farm Management Wiki]

9. Livestock Marketing and Risk Management
- Use this bulletin and linked tools to better manage marketing risk for livestock enterprises.

10. Machinery and Operations Cost
- Use these tools to estimate the cost of individual machinery services or the cost of an entire field operation.

http://RightRisk.org/tools

Risk Management Profiles

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RightRisk Newsletter


November 2013

Volume 1, Issue 11

RightRisk

RightRisk News

Dates to Remember

- November 15, 2013: Pasture, Rangeland, Forage insurance (PRF)
- November 15, 2013: Apiculture
- November 15, 2013: Noninsured Crop Disaster Assistance Program (NAP) acreage reporting deadline for forage crops including grazing
- December 1, 2013: NAP application deadline for fall seeded crops and forage

Risk Management Strategies for Livestock Producers

How Much Risk is Right for You?

Risk Management Profile

VI-PRF pilot insurance minimizes feed risk for Z-F

Early fall 2010 on the Z-F Ranch found owners Bob and Betsy Zomer assessing risk management strategies for their cow-calf and yearling operation. The Zomers are situated on 12,000 acres of pasture and 200 acres of native hay in Fremont County, Wyoming. Both husband and wife were concerned about the coming production year. This year's late summer and early fall had been dry, and they were worried it would carry over into next year.

To read more see:
RightRisk.org > Resources > Risk Mgt Profiles

Highlighted Course

The Pasture, Rangeland, Forage (PRF) Pilot Insurance Program course available at RightRisk.org offers a step-by-step approach to learn more about PRF insurance and how PRF can be applied. The course includes audio and interactive features, while example farm profiles demonstrate application to real-world examples.

Course materials provide maps to assist in first deciding the type of PRF insurance available in the area. Links to appropriate Web pages help determine the grid identification numbers for individual grids. The next two sections in the course go into greater depth on Vegetative and Rainfall Index policies.

A section of the PRF course explains how to go online to the RMA website and make the most of the cost estimator. Finally, users are encouraged to compare their own yield/historical experience for their grids with that presented in the online decision tool/cost estimator Web pages.

RightRisk helps decision-makers discover innovative and effective risk management solutions.

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- Coaching
- Research

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How much risk

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Dairy Risk Management

The USDA's Risk Management Agency and the University of California Cooperative Extension county invites you to join us for Dairy Risk Management a risk management workshop that will help your farm *thrive* in today's challenging environment. The workshop is designed to help you gain a better understanding of how to manage risk on your farm operation.

Program #1

- Welcome Ramiro Lobo, Farm Advisor, UC Cooperative Extension
- California Dairy Risk and Implications for the Industry
  Dr. Leslie (Bees) Butler, Dairy Extension Specialist, UC Cooperative Extension
- Dairy Herd Nutrition under Drought Conditions
  Dr. Alejandro Castillo, Farm Advisor, Dairy Science, UC Cooperative Extension
- Dairy Herd Health under Drought Conditions
  Nyles Peterson, Dairy Advisor, UC Cooperative Extension
- Farm Bill Dairy Margin Program and LGM for Dairy
  Dr. Jay Parsons, Risk Management Specialist, Colorado State University
- Ag Risk-5: Learn more about tools for managing risk and evaluating your risk management strategies
  John Hewlett, Farm/Ranch Management Specialist, University of Wyoming

Program #2

- Use risk management tools to manage your risks. Practice comparing alternative strategies for your farm, including: Partial Budgets, the Risk Scenario Planner, the Enterprise Risk Analyzer, RDFinancial, more . . .
  Dr. Jay Parsons and John Hewlett

How Much Risk Is Right For You?

Funded by USDA-RMA Project #13-IE-53102-032, Project Director John Mangus, Custom Ag Solutions

California.eRightRisk.com

VOLUME 2, ISSUE 5 MAY 2014

RIGHTRISK™

RIGHTRISK NEWS

DATES TO REMEMBER

- **July 15, 2014**: Spring crop acreage reporting deadline.
- **August 15, 2014**: Spring premium billing deadline date.
- **November 15, 2014**: Pasture, Rangeland, Forage (PRF) sales closing date.

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

How Much Risk is Right for You?

2014 Farm Bill

The 2014 Farm Bill, formally titled The Agricultural Act of 2014, was signed into law on February 7, 2014. This bill, authorized and funded through 2018, will bring about many changes to U.S. agricultural programs. This article provides a broad overview of the Bill with an emphasis on the risk management decision aspects that some of the new programs and modifications to existing programs create.

Direct Payment and Counter-Cyclical Programs End

The Direct Payment program, the Counter-Cyclical Program, and the Average Crop Revenue Election (ACRE) program are all repealed with the 2014 Farm Bill. These programs are replaced with two new programs: the Price Loss Coverage (PLC) program and the Agricultural Risk Coverage (ARC) program.

These Farm Service Agency (FSA) programs are designed to help mitigate risk for producers of commodity program crops in times of low yields and/or prices. The big change from a risk management standpoint is that the known payment that came with the Direct Payment program has gone away.

In theory, this creates more risk for producers moving forward in that FSA payments become more variable. The PLC program is a price guarantee program while the ARC program is a revenue guarantee program. Both programs use national prices, while the ARC program uses a 5-year Olympic average yield to determine average revenue.

Probably the biggest consideration at this point in time is that producers must make an election between ARC and PLC in 2014 for each farm and this election remains in effect for the 2014–2018 crop years. The 2014 Farm Bill also provides owners and operators a one-time opportunity to update their base acres across commodity program crops.

Supplemental Coverage Option

Starting in 2015, producers who enroll in PLC and participate in the federal crop insurance program have an additional option available to them. On an annual basis, these producers can decide whether to purchase the Supplemental Coverage Option (SCO) for individually insured commodity program crops.

continued on pg. 2

Risk Management Profile

Rich and Sally Samedi have been farming for close to 20 years. During that time they have encountered a variety of different risks. Sometimes things have worked out well; sometimes not so well.

Rich and Sally are at a point in their life that they feel a need to take a deeper look at their farming operation and the risk/reward potential that it holds for their family as a whole.

To read more see: http://RightRisk.org > Resources > Risk Mgt Profiles

2014 Farm Bill continued from pg. 1

This coverage provides the producer with the option of protecting a portion their insurance deductible up to a total of 86 percent coverage for yields and/or revenue, based on county averages. Crops for which the producer has elected to participate in ARC are not eligible for the SCO.

NAP and Disaster Programs

The Noninsured Crop Disaster Assistance Program (NAP) has been expanded to include buy-up coverage in 5-percent increments from 50 percent up to 65 percent yield coverage at 100 percent of market price.

The four disaster assistance programs authorized in the 2008 Farm Bill are reauthorized retroactively to October 1, 2011 and are extended indefinitely. The programs include the Livestock Forage Disaster Program (LFP), the Livestock Indemnity Program (LIP), the Emergency Assistance for Livestock, Honey Bees, and Farm-Raised Fish Program (ELAP), and the Tree Assistance Program (TAP). Beginning April 15, 2014, producers can begin enrolling in these programs for qualified 2012-2014 losses.

Dairy Programs

The 2014 Farm Bill created the Dairy Margin Protection Program to replace the Milk Income Loss Contract Program (MILC). The Dairy Margin Protection Program provides catastrophic margin coverage for producers at no cost other than a $100 administrative fee. The catastrophic margin is defined to be a $4 per hundredweight margin between the all-milk price and average feed costs. Buy-up coverage is available for margins between $4 and $8 per hundredweight.

In coming months, we will have more details on these programs and other considerations for upcoming risk management decisions and strategies.

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How much risk is right for you and your operation?