



Surviving in Agriculture

The USDA's Risk Management Agency and the University of California Cooperative Extension in San Bernardino County invite you to join us for **Surviving in Agriculture** a risk management workshop that will help your farm thrive in today's challenging environment. Workshop presentations and activities are designed to help you and your family or business partners gain a better understanding of how to manage risk in your farm operation.



Tuesday, April 30th 2013
9:00 a.m. - 12:00 noon
Chino Fairgrounds
5410 Edison Ave, Chino, California

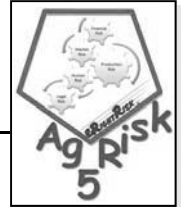
Program #1

Welcome: Nyles Peterson, County Director and Dairy Advisor



Overview of the Dairy Industry in Southern California

Nyles Peterson, County Director and Dairy Advisor University of California



Ag Risk-5: Learn more about tools for managing risk and thriving in today's agriculture

Dr. Jay Parsons, Agricultural Economist, Colorado State University



Strategic Risk Management: calculate your tolerance for risk

John Hewlett, Ranch/Farm Management Specialist, University of Wyoming



Statewide Dairy Outlook for California

Bees Buttler, Dairy Economist, University of California



Livestock Gross Margin Insurance: production risk management for dairy operators

Dr. Jay Parsons, Agricultural Economist, Colorado State University



Enterprise Risk Analyzer: Evaluate the breakeven for your enterprises

John Hewlett and Dr. Jay Parsons

Program #2

Tuesday, April 30th 2013 - 1:00 to 3:00 p.m.



Practice using tools to Evaluate Your Risk Strategies: Partial Budgets, the Enterprise Risk Analyzer, RDFinancial, and More . . .

Registration/Fee:
No registration fee is required
- lunch provided

Local Contact: For more information or to request special accommodations you may need, please contact Nyles Peterson by phone at 909.387.3318 or by email at ngpeterson@ucanr.edu.

RIGHT RISK



University of California
Agriculture and Natural Resources

How Much Risk Is Right For You?

Ag Risk 5



Sources of Risk and Tools for Managing It and *Thriving* in Today's Agriculture

Jay Parsons

John Hewlett

What is RISK?

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

Origin of Word RISK

- RISICARE

–*Italian word*
–“TO DARE”

Risk Tradeoffs

- Profits are the 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 and how much stress are you willing to endure to potentially achieve higher returns?



Sources of Risk

- Business Risks
 - *Business risks are those risks that occur independently of the way a firm (or farm) is financed. Even with 100% equity (no debt obligations) these risks still occur.*
- Sources of Business Risk
 - *Market risk*
 - *Production risk*
 - *Institutional risk*
 - *Social risk*
 - *Legal risk*
 - *Human risk*

Marketing and Price Risk

Prices of inputs or outputs 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 or inputs 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



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

Sources of Risk in Agriculture – Ag Risk 5

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



Financial Risk

Financial risk is the extra risk that is attached to being leveraged. It's the added variability that results from financial obligations associated with debt financing.

What are Your Sources?

- Possibility of losing a lease
- Production, prices, or casualty losses
- Instable 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

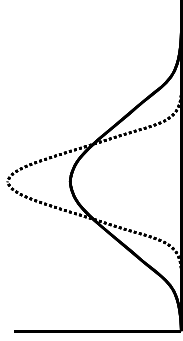


Strategies for Managing Risk

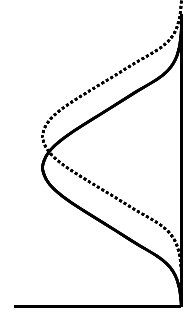
1. Avoid it
2. Reduce it
 - a) *Reduce the probability it will happen*
 - b) *Reduce the impact if it does happen*
3. Transfer it outside the business
 - a) *Insurance*
 - b) *Contracting*
4. Build your internal capacity to bear
 - a) *Increase reserves*
 - b) *Maintain flexibility*
5. Accept it

Strategy Impacts

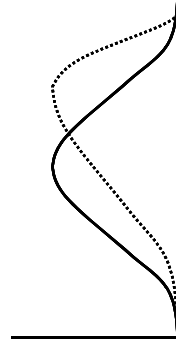
Panel 1: Same Mean, Less Dispersion



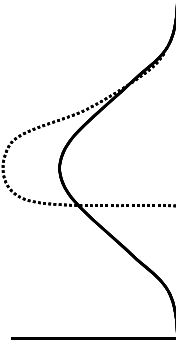
Panel 2: Same Dispersion, Higher Mean



Panel 3: Skewing the distribution



Panel 4: Truncating the Distribution



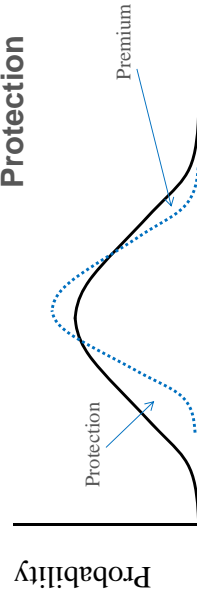
Personal Perspectives on Risk

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

These are dynamic and change over time.

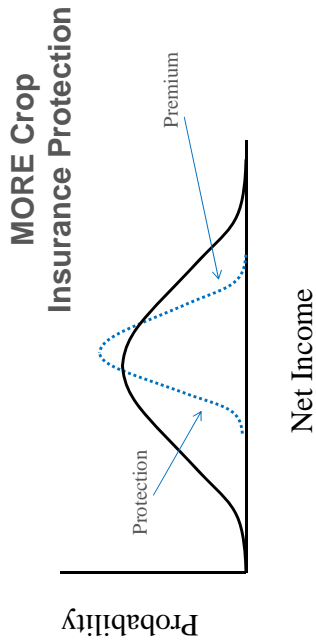
How much risk is right for you?

Crop Insurance Protection



Net Income

How much risk is right for you?



QUESTIONS?

Thank You!

Contact info:

Jay Parsons

jparsons@eRightRisk.com

970-215-8043

University of California
Agriculture and Natural Resources

2012 California Crop Insurance Profile

Insurance Plans Available in California

Insurable Crops	Insured Acres	Total Acres	Percent Insured
Alfalfa Seed	8,663	39,710	22%
Almonds	661,184	780,000	84%
Apples	6,074	17,500	35%
Avocados	36,082	51,794	69%
Barley	86,423	120,000	54%
Blueberries	1,914	3,900	49%
Cherries	24,591	29,000	85%
Citrus – 8 types of fruit	224,782	269,400	83%
Corn	238,151	610,000	39%
Cotton & ELS Cotton	324,463	367,000	88%
Beans (Dry)	22,704	58,500	39%
Figs	4,593	8,045	57%
Forage Production	133,074	950,000	14%
Grapes (Table)	79,908	85,000	94%
Grapes (Wine)	480,299	506,000	94%
Grain Sorghum	1,034	17,000	6%
Mint	2,214	3,700	60%
Oats	12,598	25,000	50%
Olives	21,630	44,000	49%
Onions	3,404	43,300	8%
Pears	8,295	14,000	59%
Pecans	307	3,600	9%
Pistachios	83,239	153,000	54%
Potatoes	20,458	29,000	71%
Prunes	50,799	58,000	88%
Rice*	458,425	575,000	84%
Rice (Cultivated Wild)	13,879	15,000	93%
Safflower*	35,205	53,000	66%
Stonefruit (Includes Plums)	88,718	115,000	77%
Strawberrie	421	38,000	1%
Sugar Beets	3,852	24,500	27%
Tomatoes (Fresh)	14,416	30,000	48%
Tomatoes (Processing)	240,958	260,000	93%
Walnuts	136,397	227,000	60%
Wheat*	382,264	750,000	51%
Dollar Liability Program		Total Dollar Liability	
Adjusted Gross Revenue			\$50,675,841
Apiculture (Rainfall Index)			\$2,840,436
Forage Seeding			\$3,317,586
Livestock Gross Margin (LGM) Dairy			\$111,499,097
Livestock Risk Protection (LRP) Lamb			\$13,964,099
Nursery			\$226,227,112
Pasture, Rangeland, Forage (Rainfall Index)			\$9,159,898
Raisins			\$173,169,530

Davis Regional Office

Contact: Jeff Yasui, Director
Address: 430 G Street, # 4168
Davis, CA 95616
Phone: (530) 792-5870
Fax: (530) 792-5893
E-mail: jeff.yasui@rma.usda.gov

Western Regional Compliance Office

Contact: Susan Choy, Director
Address: 430 G Street, # 4167
Davis, CA 95616
Phone: (530) 792-5850
Fax: (530) 792-5865
E-Mail: susan.choy@rma.usda.gov

Data as of January 2013

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	Contra Costa, Fresno, Kern, Sacramento, San Benito, Santa Clara, San Joaquin, Stanislaus and Tulare Counties
Forage (Alfalfa) Seed	Kings and Fresno Counties
Strawberries	Fresno, Merced, Monterey, Santa Barbara, Santa Cruz
Citrus Dollar (Navels)	Fresno, Kern, Madera and Tulare Counties
PRF (Rainfall Index)	All Counties
Olives	Butte, Colusa, Fresno, Glenn, Tehama, Kern, Madera, San Joaquin, Sutter, Tulare, Yolo
Pistachios	Alameda, Butte, Colusa, Contra Costa, Fresno, Glenn, Kern, Kings, Madera, Merced, Riverside, San Benito, San Joaquin, San Luis Obispo, Santa Barbara, Stanislaus, Sutter, Tehama, Tulare, Yolo, Yuba



California Fifteen Year Crop Insurance History

Year	Policies Earning Premium	Net Acres Insured	Liability	Gross Premium	Losses	Loss Ratio
1998	24,069	3,526,388	2,124,396,498	109,881,653	118,272,047	1.08
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	25,441	4,583,226	5,358,332,573	259,126,046	91,451,022	0.35

* 2012 numbers are incomplete

NOTE: To see detailed information on the above 15 Year Crop Insurance History by County, go to RMA's Summary of Business Application at: <http://www3.rma.usda.gov/apps/sob/> and then click on the "Run Current Reports" button. Select the State/County tab and then select the appropriate Year and State to get a listing by County. Select the desired output type – Formatted Print or Download Data to Excel.



What Does This Graph Represent?



1900

Time

Today

Risk Navigator SRM



NEW THINKING NEEDED

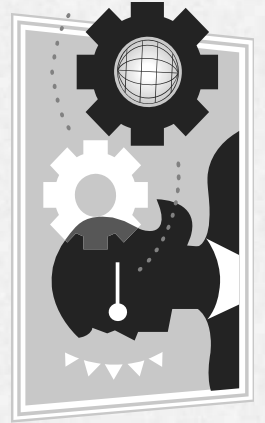


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Strategic Thinking Involves

Studying the environment through an intuitive, visual and creative process, which results in an understanding of the emerging themes, issues, patterns and opportunities.



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“The best way to predict the future is to create it.”

Peter Drucker

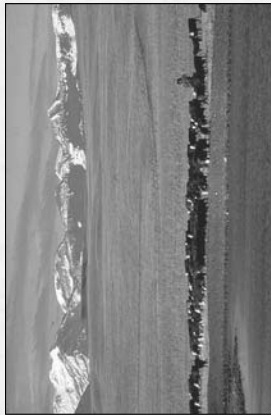


Risk Navigator SRM

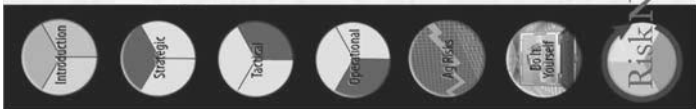
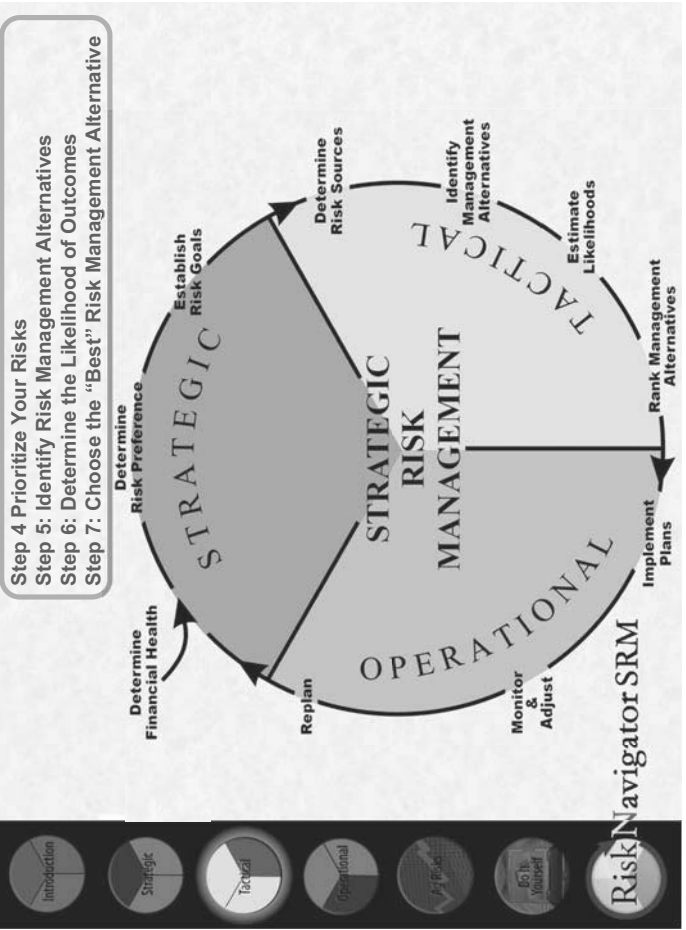
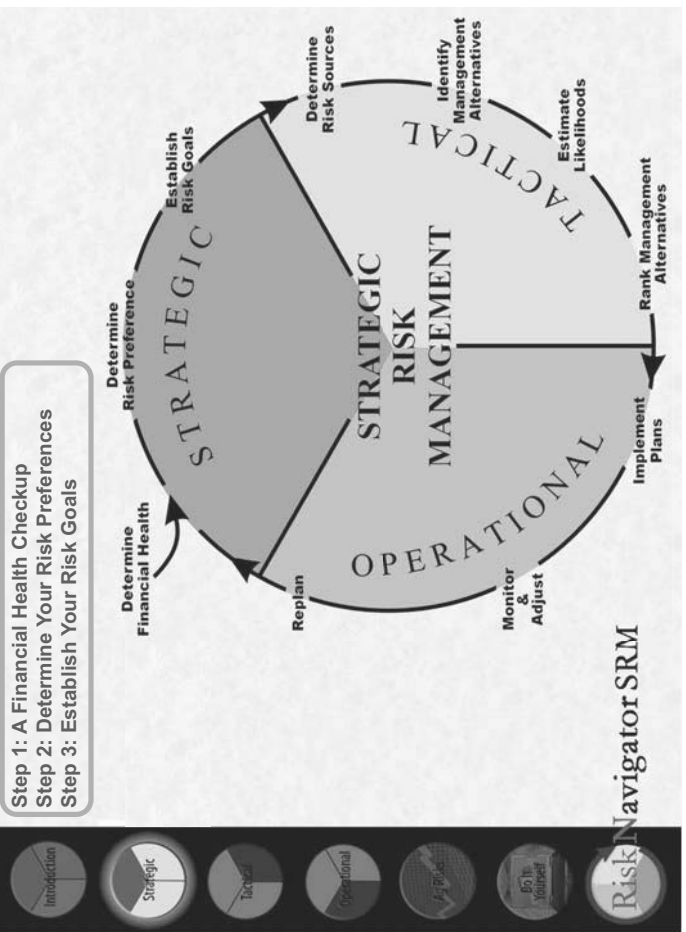


Sources of Risk

- **Production**- yield/quality variability
- **Marketing**- changes in price/external conditions
- **Financial**- variability in debt/equity capital and ability to meet cash demands
- **Legal**- responsibilities for contracts, statutory compliance, tort liability, and business structure
- **Human**- managing people and estate transfers



Risk Navigator SRM

Summary

WHERE DO YOU WANT TO GO?
STRATEGIC GOALS

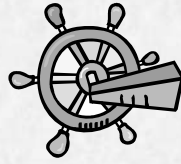


WHERE ARE YOU NOW?

Determine FINANCIAL HEALTH,
RISK PREFERENCES and RISK SOURCES

HOW ARE YOU GOING TO GET THERE?

TACTICAL and OPERATIONAL PLANS



RiskNavigator SRM



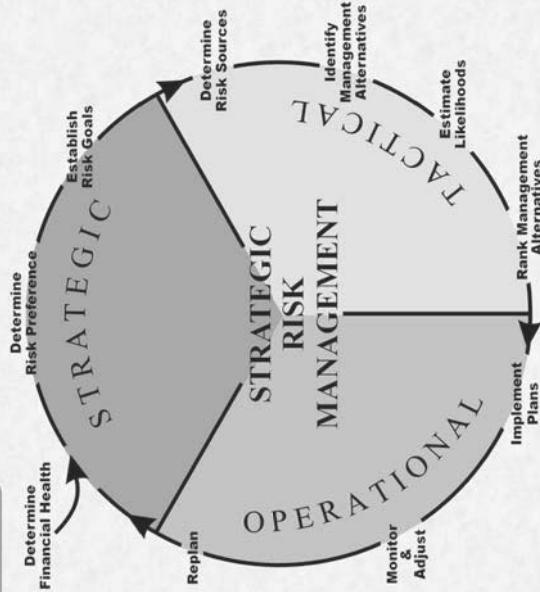
The Human Dimension of Risk Management



RiskNavigator SRM



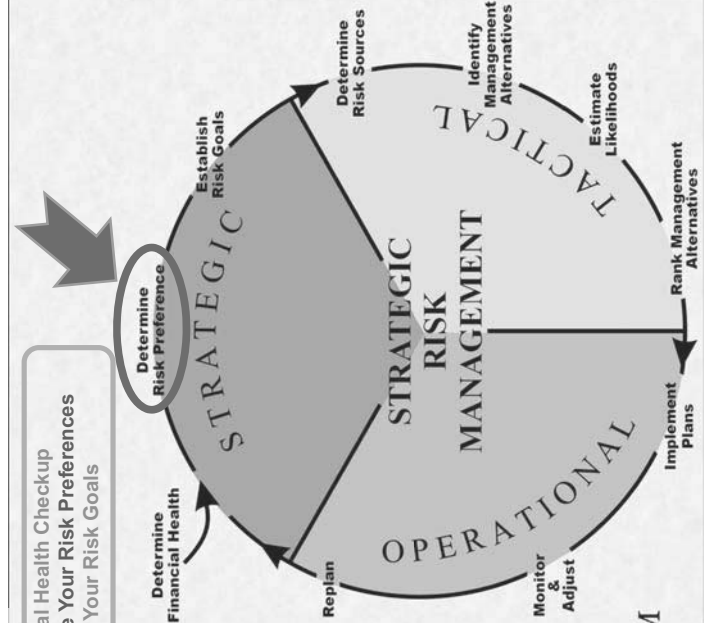
- Step 8 Implement Plans
- Step 9: Monitor and Adjust
- Step 10: Replan



RiskNavigator SRM



- Step 1: A Financial Health Checkup
- Step 2: Determine Your Risk Preferences
- Step 3: Establish Your Risk Goals

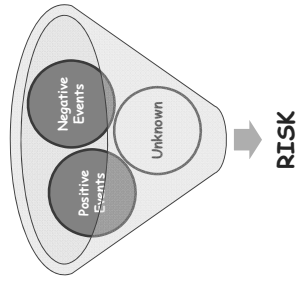


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What is RISK?

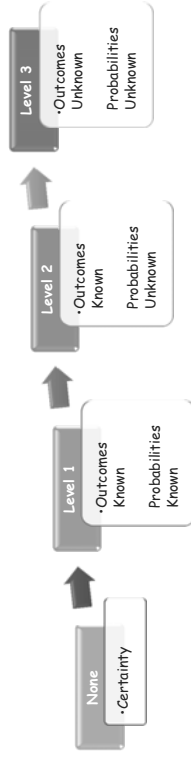
- **Certainty**- lack of doubt
- **Uncertainty**- doubt about future events
- **RISK**- potential variation in the outcome of future events



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What is RISK?

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



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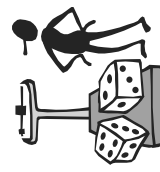
Types of Risk Preference



Risk Averse



Risk Neutral



Risk Loving



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Strategies for Managing Risk

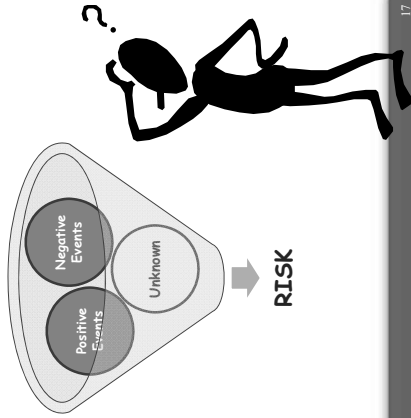
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2. Reduce it
 - a) Reduce the probability it will happen
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3. Transfer it outside the business
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4. Increase capacity to bear
 - a) Increase reserves
 - b) Maintain flexibility
5. Accept it



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What is RISK?

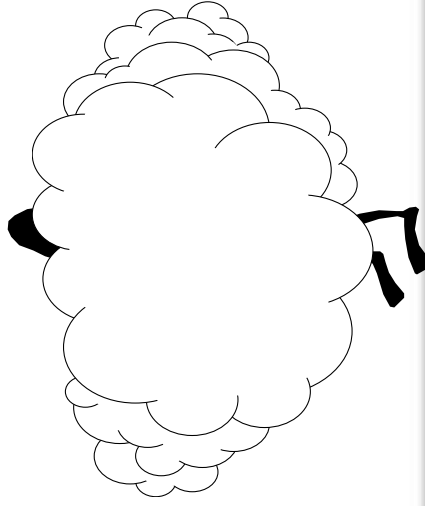
- **Cost of Loss**
 - *Income*
 - *Resources*
 - *Productive capacity, etc.*
- **Cost of Uncertainty**
 - *Worry, doubt, fear, misallocation of resources, etc.*
 - *With potential for gain or loss comes moral or ethical implications*



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The HUMAN Dimension of Risk Management

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



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The HUMAN Dimension of Risk Management

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



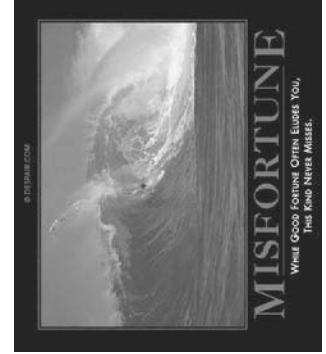
Tversky and Kahneman, 1992

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Risk Tradeoffs

Profits are returns for taking risks

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



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Risk Tolerance

Introduction Strategic Tactics Operational Analytics Big Data Investment Risk Navigator SRM

Risk Tolerance: Emotional Style*

Risk Navigator SRM

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

Risk Tolerance: Emotional Style*

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Resilience: *how quickly or slowly you recover from life's setbacks*

- When flooded with emotions, the brain and body attempt to return to the baseline mood, **resilience** is a measure of how quickly that occurs.

Fast ← → Slow

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

Risk Tolerance: Emotional Style*

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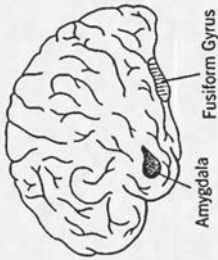
Outlook: *reflects how long and how well you can sustain positive emotions*

- The *outlook* dimension measures how long your brain can sustain feelings of joy or pleasure after a positive event or having positive thoughts.

Negative ← → Positive

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

Risk Tolerance: Emotional Style*



Social Intuition: *how attuned you are to nonverbal social cues*

- *Socially-intuitive* persons can read the body language of others, know what mood they are in, understand meaning from subtle voice intonations or facial expressions.

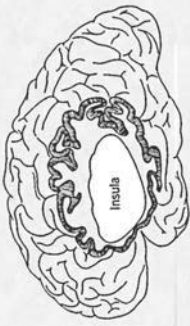
Puzzled ← Socially Intuitive →

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

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Risk Tolerance: Emotional Style*



Self-Awareness: *how well you understand or are in tune with your feelings, thoughts, and body messages.*

- Your level of understanding of why you act or react to certain things versus being completely unaware of what is going on inside yourself.

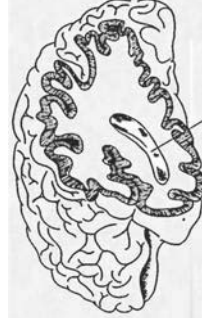
Self-opaque ← Self-aware →

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

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Risk Tolerance: Emotional Style*



Sensitivity to Context: *how well you pick up on the rules of social interaction*

- The outer-directed version of Self-Awareness; how attuned you are to the social environment and actions appropriate to where you are now.

Tuned-out ← Tuned-in →

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

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Risk Tolerance: Emotional Style*



Attention: *how well you can screen out emotional or other distractions and remain focused*

- A capacity to remain receptive to whatever thoughts, sensory input, or emotion might pass through but remain non-judgmental about it.

Unfocused ← Focused →

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

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Resilience Scores

How quickly you recover from setbacks

2.33	Team 2
0.67	Team 1

Score	Resilience Scores
1-2	Very fast to recover
3-5	Fast to recover
6-8	Slow to recover
9-10	Very slow to recover

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Outlook Scores

How long and how well you sustain positive emotions

902.33	Team 2
767.33	Team 1

Score	Outlook Scores
100-200	Very positive outlook
300-500	Positive outlook
600-800	Negative outlook
900-1000	Very negative outlook

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New Risk Management



- Factor #1
- Factor #2
- Factor #3
-

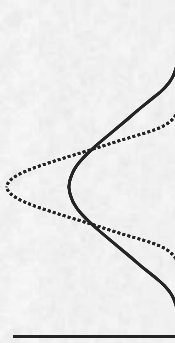


Risk Navigator SRM

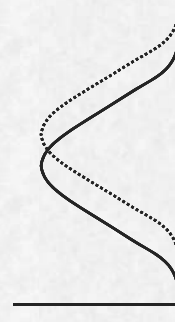
* The Emotional Life of Your Brain, Davidson and Begley, 2012.

Strategy Choices

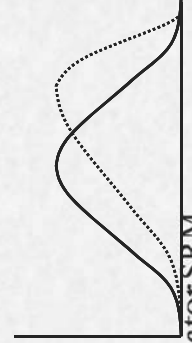
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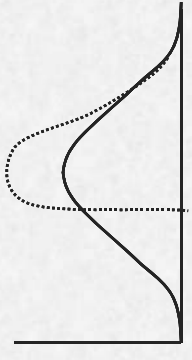
Panel 2: Same Dispersion, Higher Mean



Panel 3: Skewing the distribution



Panel 4: Truncating the Distribution



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Other False Assumptions

FALSE

- Men are better decision makers (risk managers) under stress than women
- Decision-making capacity declines with age
- Managers under stress are able to make good decisions about advice they receive

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The Human Dimension of Risk Management

- Emotion matters
- We can better understand ourselves and how we process information
- From that we can learn to apply new approaches for better success

Better understand how much risk is right for you and your operation

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QUESTIONS?

University of California
Agriculture and Natural Resources



for SRM CAS RMA USDA
Custom Ag Solutions

RightRisk™

Livestock Gross Margin Insurance



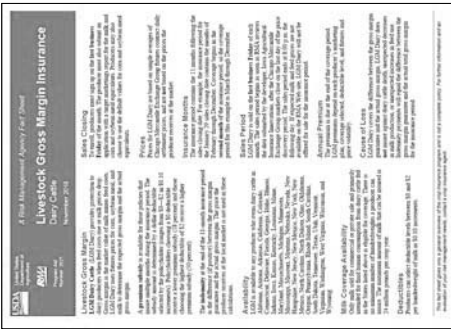
Production Risk Management for Dairy Producers

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*



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



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 milk and the associated feed costs.



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 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.

Mar '13	Apr '13	May '13	Jun '13	Jul '13	Aug '13	Sep '13	Oct '13	Nov '13	Dec '13	Jan '14	Feb '14
Covered Months	10000 cwt.	10000 cwt.	15000 cwt.	10000 cwt.			10000 cwt.	15000 cwt.	15000 cwt.	10000 cwt.	10000 cwt.
Corn	140 tons	210 tons	210 tons	140 tons			140 tons	210 tons	210 tons	140 tons	140 tons
Soybean Meal	20 tons	30 tons	30 tons	20 tons			20 tons	30 tons	30 tons	20 tons	20 tons

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

Mar '13	Apr '13	May '13	Jun '13	Jul '13	Aug '13	Sep '13	Oct '13	Nov '13	Dec '13	Jan '14	Feb '14
		1	2	3	4	5	6	7	8	9	10
Purchase at End of Month	No Coverage	Insurance Contract Period									
Covered Months	10000 cwt.	15000 cwt.	15000 cwt.				10000 cwt.	15000 cwt.	15000 cwt.	10000 cwt.	10000 cwt.

Expected Total Gross Margin

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

Mar '13	Apr '13	May '13	Jun '13	Jul '13	Aug '13	Sep '13	Oct '13	Nov '13	Dec '13	Jan '14	Feb '14
Expected Prices											
Milk (\$/cwt.)	18.31	18.99	18.99				19.01	18.72	18.30	17.94	17.62
Corn (\$/bu.)	7.31	7.23	7.23				5.87	5.77	5.67	5.70	5.73
Soybean Meal (\$/ton)	418.67	415.85	415.85				357.10	356.69	356.27	357.97	359.07

Expected Total Gross Margin

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

	Mar '13	Apr '13	May '13	Jun '13	Jul '13	Aug '13	Sep '13	Oct '13	Nov '13	Dec '13	Jan '14	Feb '14
Expected Values (\$)												
Milk Revenue			183100	284850				190100	280800	274500	179400	176200
Feed Cost			44923.4	66700.5				36492	53975.7	53213.1	35659.4	35831.4
Gross Margins			138176.6	218149.5				153608	226824.3	221286.9	143740.6	140368.6

- Expected Total Gross Margin = \$1,242,155.**

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 = \$1,242,155
 - Total Expected Target Marketings = 85,000 cwt.
- Assume a \$2.00 Deductible Level
 - Gross Margin Guarantee = \$1,242,155 - (2 * 85,000) = \$1,072,155
- Assume a \$0 Deductible Level
 - Gross Margin Guarantee = \$1,242,155

How Does LGM-Dairy Work?

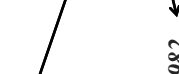
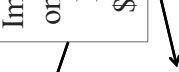
- Indemnity payments are made when the actual gross margin falls below the gross margin guarantee
- The actual gross margin is calculated based on expected target marketings each month of coverage and actual prices
- Actual prices are determined by Average Futures Settle Prices from 1st, 2nd, and 3rd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



Annual Premium

- Premiums are due at the end of the coverage period
- 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 = \$1,242,155
 - Average of expected payouts = \$66,282
 - Total Premium = $66,282 * 1.03 = \$68,271$
 - Premium Subsidy = $68,271 * 0.18 = \$12,289$
 - **Producer Premium = $68,271 - 12,289 = \$55,982$**

Implied Floor
on Net Gross
Margin =
\$1,186,173



LGM-Dairy Summary

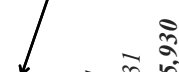
- LGM-Dairy is flexible insurance program for dairy producers to protect against falling milk prices and/or rising feed prices.
 - Customizable to your production and insurance needs
 - Need not insure all months or all production
- LGM-Dairy can be thought of as Bundled Option Insurance.
 - Similar 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.



How Does LGM-Dairy Work?

- In our example, \$2.00 Deductible Level
 - Gross Margin Guarantee = \$1,072,155
 - Average of expected payouts = \$11,516
 - Total Premium = $11,516 * 1.03 = \$11,861$
 - Premium Subsidy = $11,861 * 0.50 = \$5,931$
 - **Producer Premium = $11,861 - 5,931 = \$5,930$**
- The premium is due at the end of the coverage period.

Implied Floor
on Net Gross
Margin =
\$1,066,225



California: LGM-Dairy Policy Data

2012

County	Pol Sold	Pol Earn Prem	Pol Indem	Units Earn Prem	Units Indem	Number of Head	Liabilities	Total Premium	Subsidy	Indemnity Ratio	Loss
Fresno	5	4	1	4	1	811,000	14,085,330	360,061	177,778	10,342	0.03
Kern	2	2	0	2	0	420,000	7,308,000	159,764	79,883	0	0
Kings	3	2	0	2	0	314,980	5,484,851	130,194	62,493	0	0
Madera	1	1	0	1	0	120,000	2,083,200	85,004	39,842	0	0
Merced	8	8	4	8	4	897,280	15,600,833	354,070	173,200	144,993	0.41
Sacramento	1	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
Sonoma	2	2	0	2	0	71,000	1,232,560	31,027	14,893	0	0
Stanislaus	11	10	2	10	2	1,321,278	22,944,001	632,866	298,940	14,105	0.02
Sutter	1	1	0	1	0	80,000	1,388,800	38,434	18,448	0	0
Tulare	18	17	2	17	2	2,267,736	39,461,922	1,118,362	475,394	12,659	0.01
Grand Total:	53	48	9	48	9	6,413,274	111,499,097	2,961,235	1,366,528	182,099	0.06

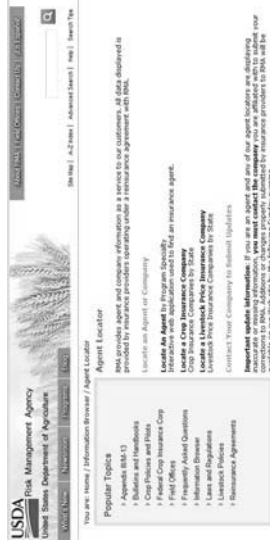
California: LGM-Dairy Policy Data

2013

County	Pol Sold	Pol Earn Prem	Pol Indem	Units Earn Prem	Units Indem	Number of Head	Liabilities	Total Premium	Subsidy	Indemnity Ratio	Loss Ratio
Fresno	1	0	0	1	0	57,000	1,159,380	25,333	12,160	0	0
Kings	4	4	0	4	0	900,000	18,306,000	317,624	158,813	0	0
Merced	3	2	0	2	0	190,200	3,689,868	58,394	28,529	0	0
Sacramento	1	1	0	5	0	162,000	3,017,540	92,449	43,557	0	0
San Joaquin	2	2	0	2	0	118,542	2,158,197	43,673	19,663	0	0
Sonoma	1	1	0	1	0	15,000	305,100	12,480	5,990	0	0
Stanislaus	12	11	0	24	0	1,316,694	26,076,135	815,040	330,838	0	0
Tulare	11	7	0	12	0	872,000	17,113,716	519,101	214,658	0	0
Grand Total:	35	29	0	51	0	3,631,436	71,825,936	1,884,094	814,208	0	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.



QUESTIONS?

Thank You!

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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

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-Dairy 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	<i>Expected Target Marketings</i> – <i>Expected Feed Costs</i>	\$180,951
Deductible Level		\$0.00
Gross Margin Guarantee	<i>Expected Total Gross Margin</i> – <i>(Total Target Marketings X Deductible)</i>	\$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	<i>Expected Target Marketings</i> – <i>Expected Feed Costs</i>	\$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.





Program Aid
Number 2021

Livestock Gross Margin Insurance

Dairy Cattle

November 2010

Livestock Gross Margin

LGM Dairy Cattle (LGM Dairy) provides protection to dairy producers when feed costs rise or milk prices drop. Gross margin is the market value of milk minus feed costs. LGM Dairy uses futures prices for corn, soybean meal, and milk to determine the expected gross margin and the actual gross margin.

A **premium subsidy** is available for those policies that insure multiple months during the insurance period. The subsidy amount is determined by a dollar deductible selected by the policyholder (ranges from \$0—\$2 in \$0.10 increments). Policyholders choosing a \$0 deductible receive a lower premium subsidy (18 percent) and those choosing the highest deductible of \$2 receive a higher premium subsidy (50 percent).

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 Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginian, Washington, West Virginia, Wisconsin, and Wyoming.

Milk Coverage Availability

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

Deductibles

Producers can select deductible levels between \$0 and \$2 per hundredweight of milk in \$0.10 increments.

Sales Closing

To enroll, producers must sign up on the **last business Friday** of the month. The producer must also submit an application with a target marketings report for the milk and corn and soybean meal equivalents. Producers may also choose to use the default values for corn and soybean meal equivalents.

Prices

Prices for LGM Dairy are based on simple averages of Chicago Mercantile Exchange Group 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 the sales closing date. For example, the insurance period for the January 29 sales closing date contains the months of February through December. Coverage begins in the **second month** of the insurance period, so the coverage period for this example is March through December.

Sales 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 developer, Iowa Agricultural Insurance Innovations, after the Chicago Mercantile Exchange Group markets close on the last day of the price discovery period. The sales period ends at 8:00 p.m. the following day. If expected milk and feed prices are not available on the RMA Web site, LGM Dairy will not be offered for sale for the insurance period.

Annual Premium

The premium is due at the end of the coverage period. LGM premiums depend on each producer's marketing plan, coverage selected, deductible level, and futures and price volatility.

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, unexpected decreases in milk production, or unexpected increases in feed use. Indemnity payments will equal the difference between the gross margin guarantee and the actual total gross margin for the insurance period.

This fact sheet gives only a general overview of the crop insurance program and is not a complete policy. For further information and an evaluation of your risk management needs, contact a crop insurance agent.

Advantages

Convenience: Producers can sign up for LGM Dairy 12 times each year and insure all of their milk production that 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* Cover

- ♦ 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 a producer sells each month of the insurance period for which there is a 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 the producer elects not to insure. Allowable deductible amounts range from \$0 to \$2 per hundredweight, in \$0.10 increments. The deductible equals the selected hundredweight deductible multiplied by 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.

Loss of Gross Margin: Market value of milk minus feed costs.

Marketing Report: A report the producer submits on the insurance company's form showing actual, monthly marketings of milk insured under this 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: The producer's determination of the number hundredweight of milk insured each month during the insurance period. Only the hundredweight of milk in which the producer has a share can be reported.

Target Marketings Report: A report that the producer submits on the insurance company's form showing the target marketings for each month.

For More Information

LGM Coverage Prices, Rates, and Actual Ending Values:

http://www3.rma.usda.gov/apps/livestock_reports/

Premium Calculator:

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

Purchase Locations

All multi-peril crop insurance policies are available from private insurance agents. A list of livestock insurance agents is available on the RMA Web site at:

<http://www3.rma.usda.gov/tools/agents/>

Contact Us

USDA/RMA

Mail Stop 0801

1400 Independence Ave., SW

Washington, DC 20250-0801

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

rma.cco@rma.usda.gov

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Financial Health & Enterprise Risk Analysis



John Hewlett
Jay Parsons

EnterpriseRiskAnalyzer_v1.01.xlsx - Microsoft Excel

H2 2011

	A	B	C	D	E	F	G	H
1								2011
2								
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SCHEDULE F (Form 1040) - Profit or Loss From Farming

PART I Farm Income - Cash Method

1a Sales of livestock and other resale items

1b Sales of livestock and other resale items not reported on line 1a

1c Total of lines 1a and 1b

1d Cost or other basis of livestock or other items reported on line 1c

2a Subtract line 1d from line 1c

2b Specified sales of products you raised

3a Sales of products you raised not reported on line 2a

3b Cooperative distributions (Form(s) 1099-PATR) - taxable amount

4b Agricultural program payments - taxable amount

5a Commodity Credit Corporation (CCC) loans reported under election

5b CCC loans forfeited - taxable amount

6a Crop insurance proceeds and federal crop disaster payments

6b Amount received in 2011 - taxable amount

7a Amount deferred from 2010

7b Specified custom hire (machine work) income

7c Custom hire income not reported on line 7a

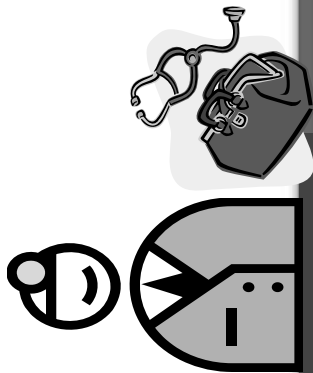
8a Specified other income

8b Other income not reported on line 8a

9 Gross income - Add amounts in the right column (lines 1e, 2a, 2b, 3b, 4b, 5b, 6b, 6d, 7a, 7b, 8a, and 8b)

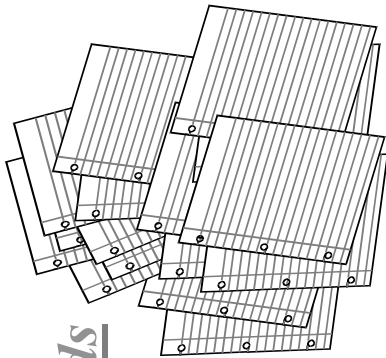


GOT financial health?

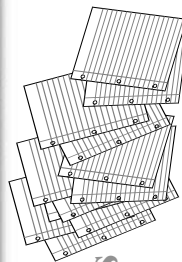


Determining
Your Financial Health: HOW?

× Financial Records

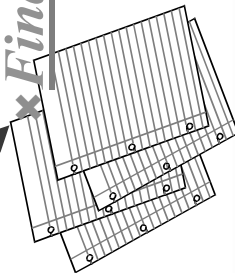


Determining
Your Financial Health: HOW?



× Financial Records

× Financial Statements

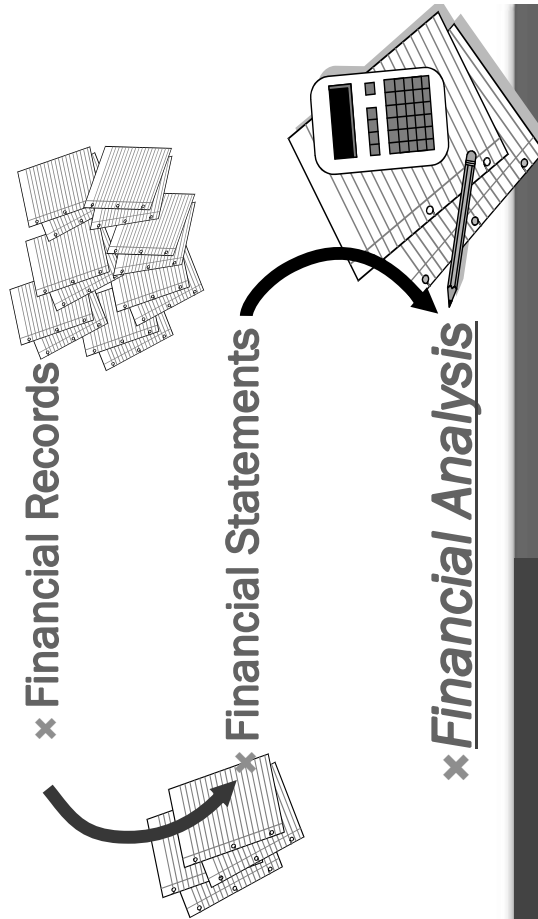


Determining
Your Financial Health: HOW?

× Financial Records

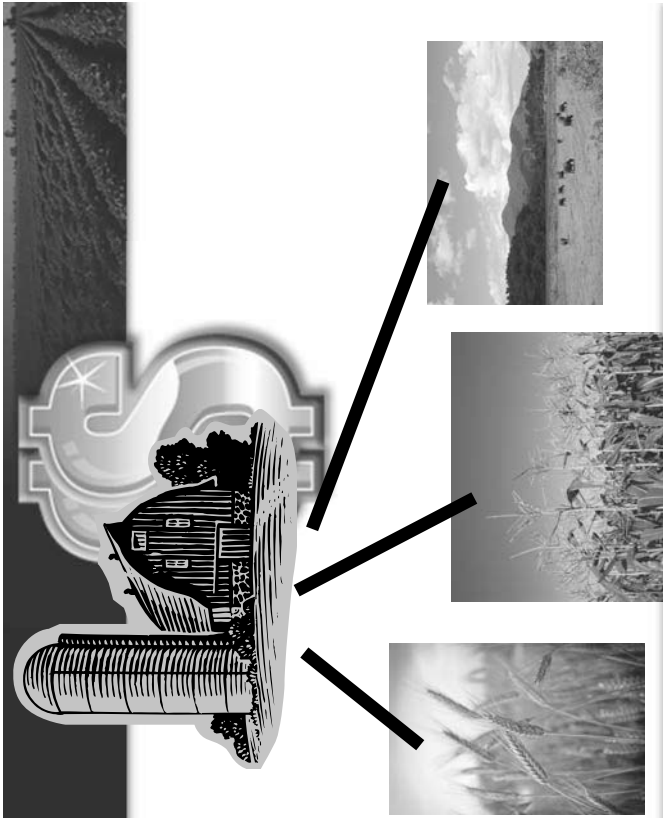
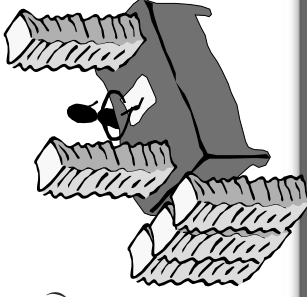
× Financial Statements

× Financial Analysis



Enterprise Profitability

- Whole-farm profitability is derived from *enterprise profitability*
- One enterprise may be profitable but another may have only marginal profitability or may have costs greater than returns
- May be defined as returns greater than the sum of ALL costs:
 - *Cash and non-cash (e.g. depreciation)*
 - *Actual and imputed (e.g. unpaid family labor)*
 - *Variable and fixed (ownership costs)*



Enterprise Risk Analyzer



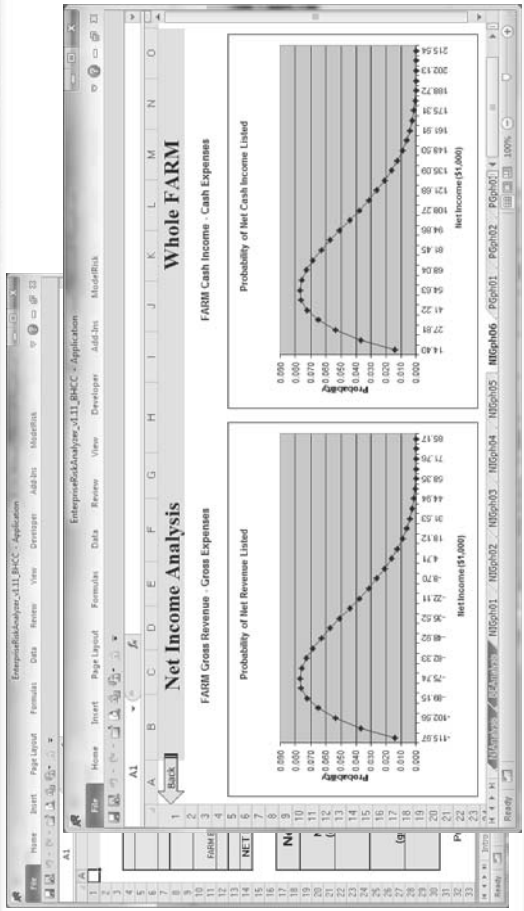
Enterprise Profitability cont.

- Estimates require information from past financial statements or records
- Estimates allow assessment of net returns
- Estimates allow calculation of break even:
 - *Breakeven price*
 - *Breakeven quantity*
- Can help management decide where to make adjustments in the crop or livestock mix



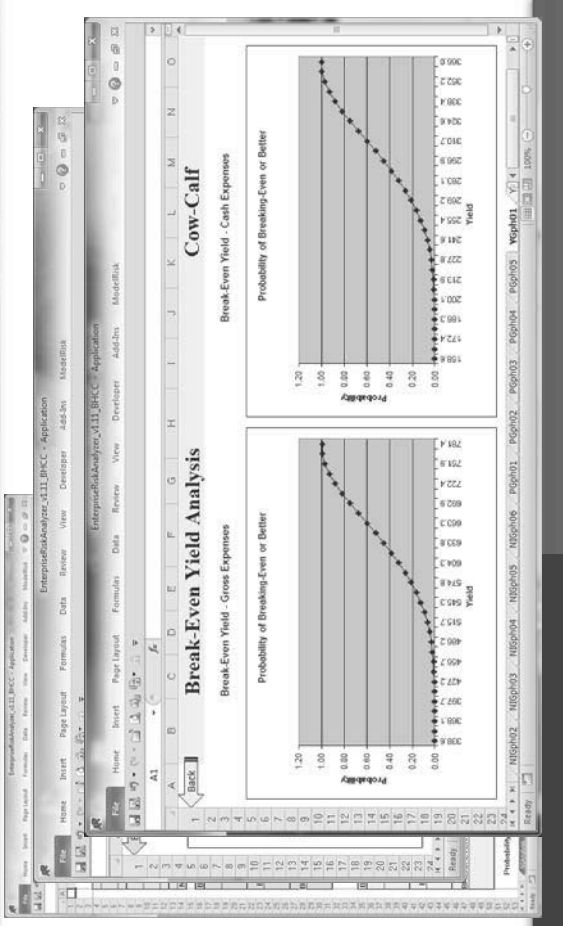
Enterprise Risk Analyzer

Net Return Analysis



Enterprise Risk Analyzer

Break-even Analysis



RightRisk LLC

Who We Are

Educational Programs

Consulting

Research

Members Only

Contact Us:

RightRisk, LLC
1000 E. 10th St.
Fort Collins, CO 98501 U.S.A.
Phone: 970.225.1111
1921 Laramie Rd.
Ft. Collins, CO 98501 U.S.A.

The RightRisk Mission:

RightRisk, LLC is a premier organization helping today's and tomorrow's agricultural firms and farm and ranch families better understand their problems associated with:

- Financial Risks
- Market Risks
- Production Risks
- Legal Risks
- Human Risks

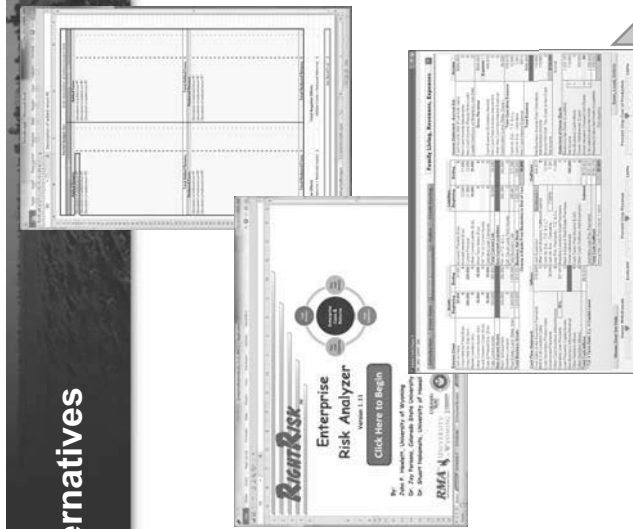
Our professional staff consists of members with over 20 years of experience in education, consulting with individual farmers, ranchers, small business owners, farm and ranch families, and farm and ranch communities. The professional staff of RightRisk, LLC have conducted educational programs in more than 30 U.S. states, and worked with more than 7,000 farm and ranch families.

How Much Risk is Right for You...

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Tools to Evaluate Alternatives

- **Partial Budget**
relatively minor changes
- **Enterprise Budget**
larger changes
- **Whole Farm Budget**
substantial changes



<http://RightRisk.org> > Tools

<http://California.eRightRisk.com>

Partial Budget

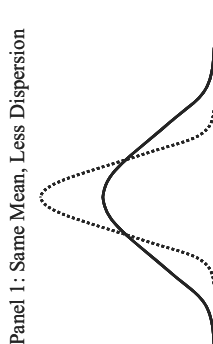


Account	Amount	Account	Amount
Accounts Payable (A/P)	15,000	Accounts Payable (A/P)	15,000
Accounts Receivable (A/R)	25,000	Accounts Receivable (A/R)	25,000
Accumulated Depreciation	100,000	Accumulated Depreciation	100,000
Capital Assets	150,000	Capital Assets	150,000
Current Liabilities	100,000	Current Liabilities	100,000
Current Assets	150,000	Current Assets	150,000
Equity	150,000	Equity	150,000
Fixed Assets	150,000	Fixed Assets	150,000
Income Tax Payable	15,000	Income Tax Payable	15,000
Inventory	15,000	Inventory	15,000
Land	150,000	Land	150,000
Liabilities	150,000	Liabilities	150,000
Long-Term Debt	150,000	Long-Term Debt	150,000
Net Worth	150,000	Net Worth	150,000
Other Assets	150,000	Other Assets	150,000
Other Liabilities	150,000	Other Liabilities	150,000
Other Equity	150,000	Other Equity	150,000
Prepaid Expenses	15,000	Prepaid Expenses	15,000
Retained Earnings	150,000	Retained Earnings	150,000
Short-Term Debt	15,000	Short-Term Debt	15,000
Stocks	15,000	Stocks	15,000
Trade Receivable	15,000	Trade Receivable	15,000
Trade Payable	15,000	Trade Payable	15,000
Unearned Revenue	15,000	Unearned Revenue	15,000
Wages Payable	15,000	Wages Payable	15,000
Yield	150,000	Yield	150,000

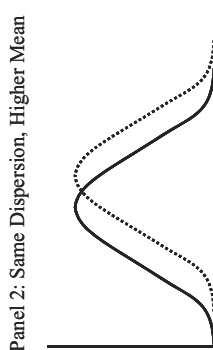
Whole Farm Budget

Category	Item	Amount	Category	Item	Amount
Assets	Accounts Payable (A/P)	15,000	Liabilities	Accounts Payable (A/P)	15,000
	Accounts Receivable (A/R)	25,000		Accounts Receivable (A/R)	25,000
	Capital Assets	150,000		Capital Assets	150,000
	Current Liabilities	100,000		Current Liabilities	100,000
	Current Assets	150,000		Current Assets	150,000
	Equity	150,000		Equity	150,000
	Fixed Assets	150,000		Fixed Assets	150,000
	Income Tax Payable	15,000		Income Tax Payable	15,000
	Inventory	15,000		Inventory	15,000
	Land	150,000		Land	150,000
Income Statement	Revenue	1,000,000	Expenses	Cost of Sales	400,000
	Cost of Sales	400,000		Operating Expenses	300,000
	Operating Expenses	300,000		Interest Expense	20,000
	Interest Expense	20,000		Income Tax Expense	10,000
	Income Tax Expense	10,000		Net Income	270,000
	Net Income	270,000		Retained Earnings	270,000
	Retained Earnings	270,000		Dividends	0
	Dividends	0		Equity	150,000
	Equity	150,000		Liabilities	100,000
	Liabilities	100,000		Assets	150,000

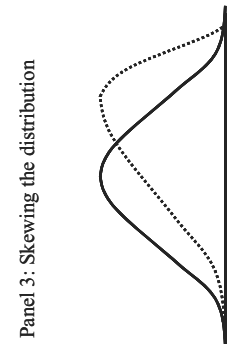
Risk Management Strategies:



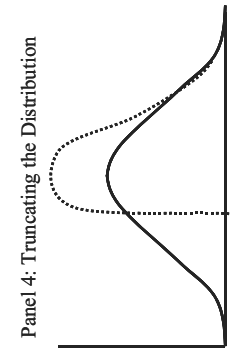
Panel 1: Same Mean, Less Dispersion



Panel 2: Same Dispersion, Higher Mean



Panel 3: Skewing the distribution



Panel 4: Truncating the Distribution



<http://RightRisk.org>

Practice Session

- Risk Preference Calculator
- Ag Survivor scenarios
- Enterprise Risk Analyzer
- General Risk Management Questions
- More . . .



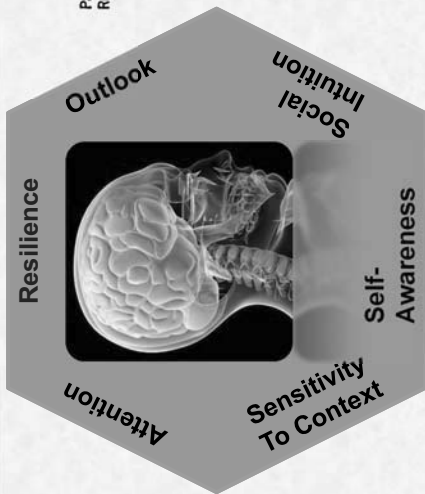
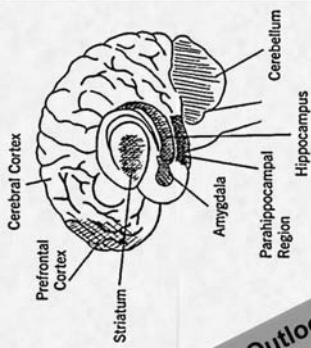
Wrap up ---



John Hewlett

Jay Parsons

Risk Tolerance: Emotional Style*



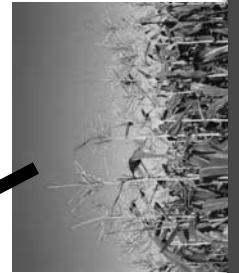
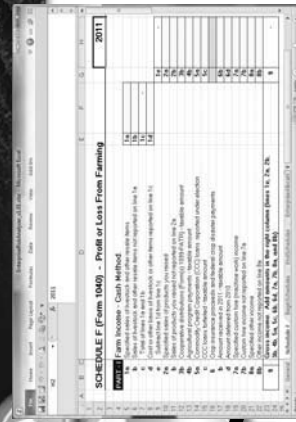
RiskNavigator SRM

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



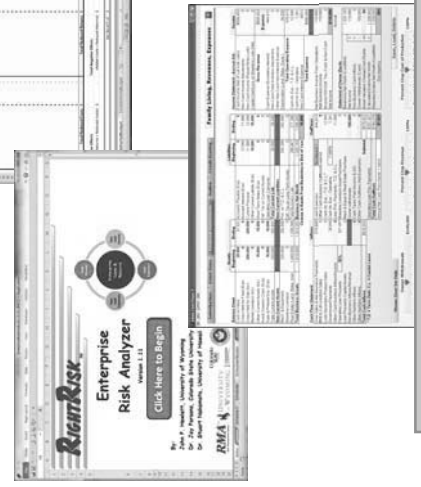
Strategies for Managing Risk

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



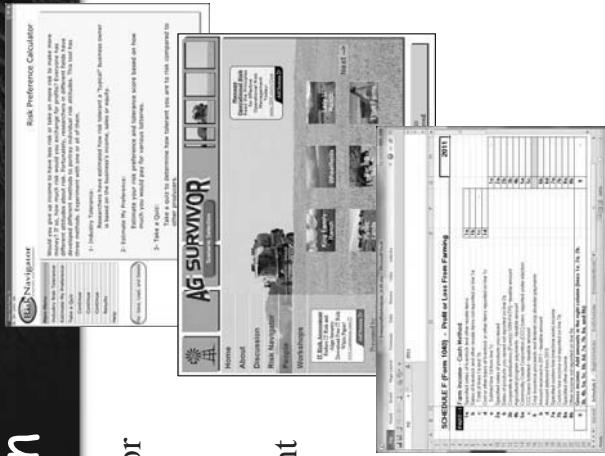
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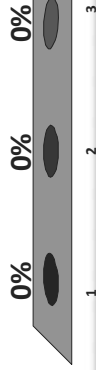
University of California
Agriculture and Natural Resources

California.eRightRisk.com

CAS RMA USDA RightRisk

Are you ever really FINISHED managing risk?

1. Yes
2. No
3. I'm not sure





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- Production Risks
- Legal Risks
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Educational Programs

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