



DROUGHT AND PERENNIAL CROPS: Risk Management Implications for Southern California

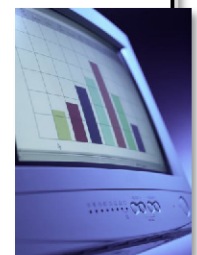
The University of California Cooperative Extension, in collaboration with the USDA Risk Management Agency and the San Diego County Farm Bureau invite you to join us for a risk management workshop that will explore the water situation and outlook, the impacts of drought on perennial crops in Southern California and offer techniques for managing the associated risks to help you and your farm thrive in today's challenging environment.



Tuesday, July 8th 2014
7:30 a.m. - 3:00 p.m.

San Diego County Farm Bureau
1670 East Valley Parkway | Escondido, CA 92127

7:30 am	Registration, Continental Breakfast & Welcome Ramiro Lobo – UCCE Advisor, Small Farms & Agricultural Economics
8:00 am	San Diego Region's Current Water Supply Situation & Drought Response Actions Dana Frieauff – Acting Water Resources Manager, San Diego Co. Water Authority
8:30 am	Current Water Situation and Outlook in Valley Center Metropolitan Water District Gary Arant – Director, Valley Center Municipal Water District
9:00 am	The San Diego County Irrigated Lands Working Group Eric Larson – Executive Director, San Diego County Farm Bureau
9:30 am	Water/Irrigation Efficiency Research in Southern California Ramiro Lobo – UCCE Advisor, Small Farms & Agricultural Economics
10:00 am	BREAK
10:15 am	Drought Management Strategies for Grapes/Vineyards Alex McGeary – Owner/Manager, Shadow Mountain Vineyards & Winery
10:45 am	Drought Management Strategies for Tree Crops Gary Bender – UCCE Advisor Emeritus, Avocados, Citrus & Subtropical Crops
11:15 am	Ag Risk 5: Sources of Risk and Management Strategies for Growers John Hewlett – Farm/Ranch Management Specialist, University of Wyoming
12:00 noon	LUNCH – Provided & Catered by Phil's Barbeque
1:00 pm	Tools to Evaluate your Risk Management Strategies Dr. Jay Parsons – Risk Management Specialist, Colorado State University
2:00 pm	Hands-on, Practice Session Using Risk Management Tools: Manage your Risks by Selecting and Comparing Risk Management Strategies
3:00 pm	ADJOURN



How Much Risk Is Right For You?

Registration/Fee:

\$20 per farm/ranch in advance
Please register and pay online at: <http://California.eRightRisk.com> to secure a space and to help us plan for the event.
The registration fee covers handout materials, refreshments, and lunch.

Information:



Ag Risk-5

sources of risk and management strategies for risk control



John P. Hewlett
University of Wyoming

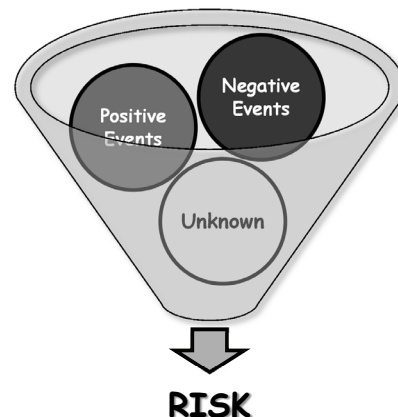
Jay Parsons
University of Nebraska-Lincoln

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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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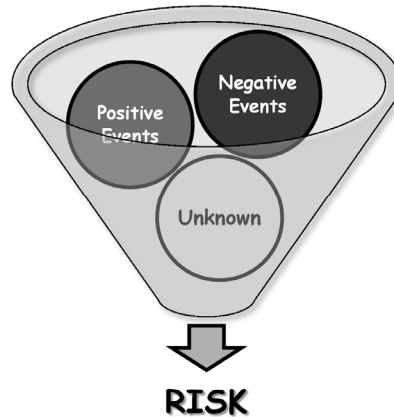
What is RISK?

- **Cost of Loss**

- *Income*
- *Resources*
- *Productive capacity, etc.*

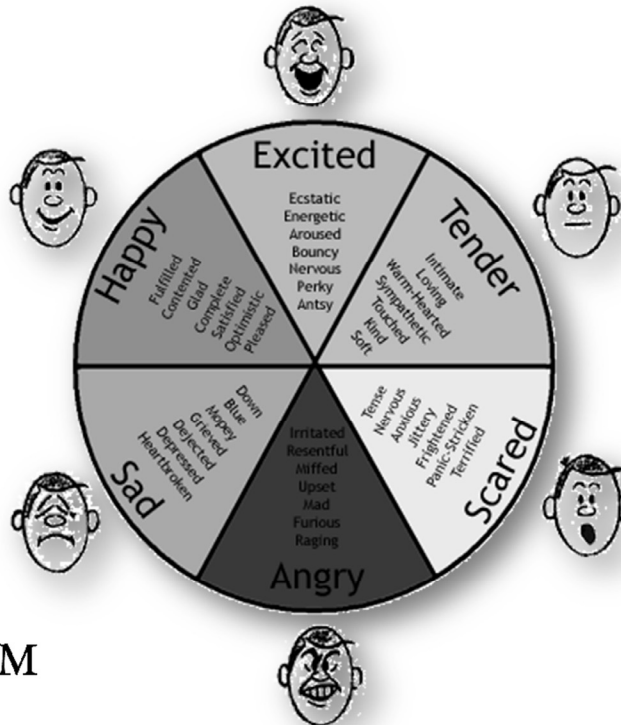
- **Cost of Uncertainty**

- *Worry, doubt, fear, misallocation of resources, etc.*
- *With potential for gain or loss comes moral or ethical implications*



The Human Dimension of Risk Management

EMOTION

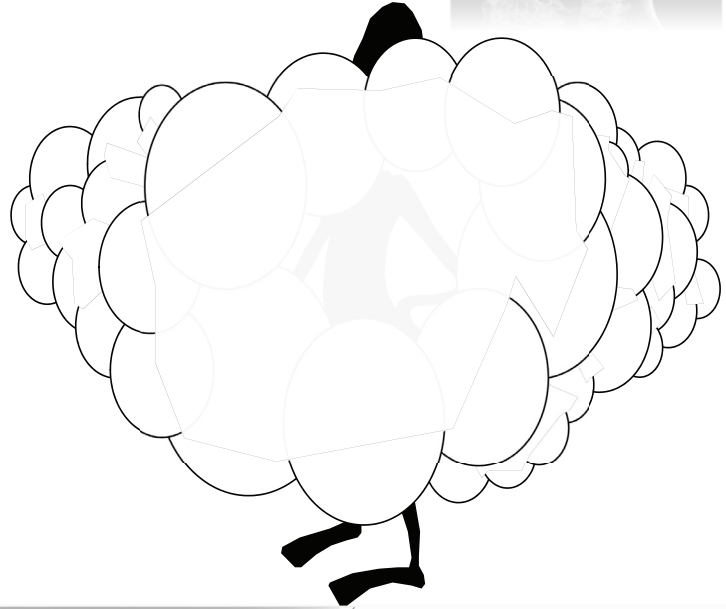


- Introduction
- Strategic
- Tactical
- Operational
- Ag Risks
- Do it Yourself
- Risk Navigator SRM

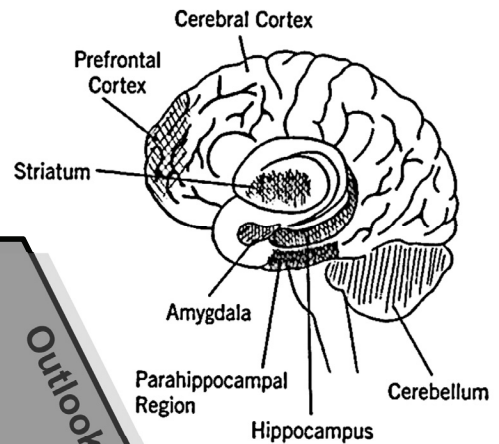
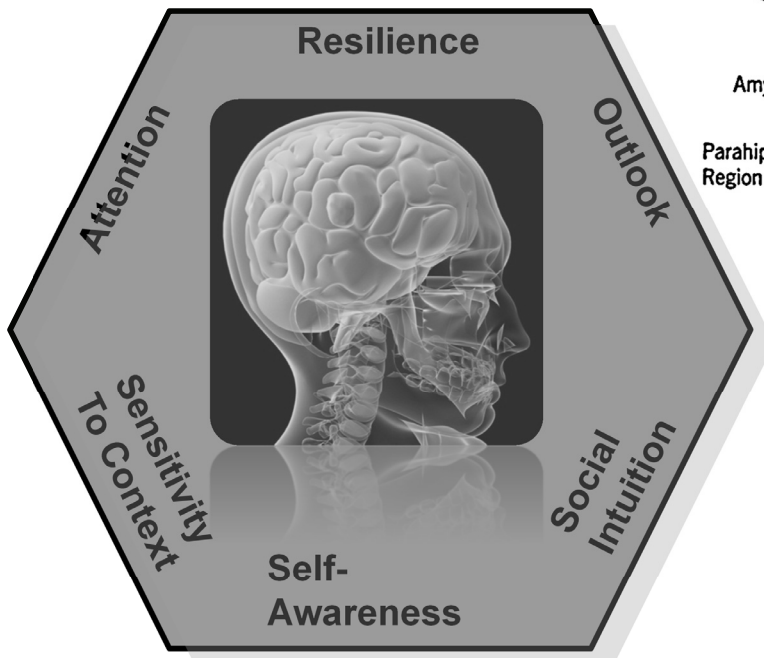
The HUMAN Dimension of Risk



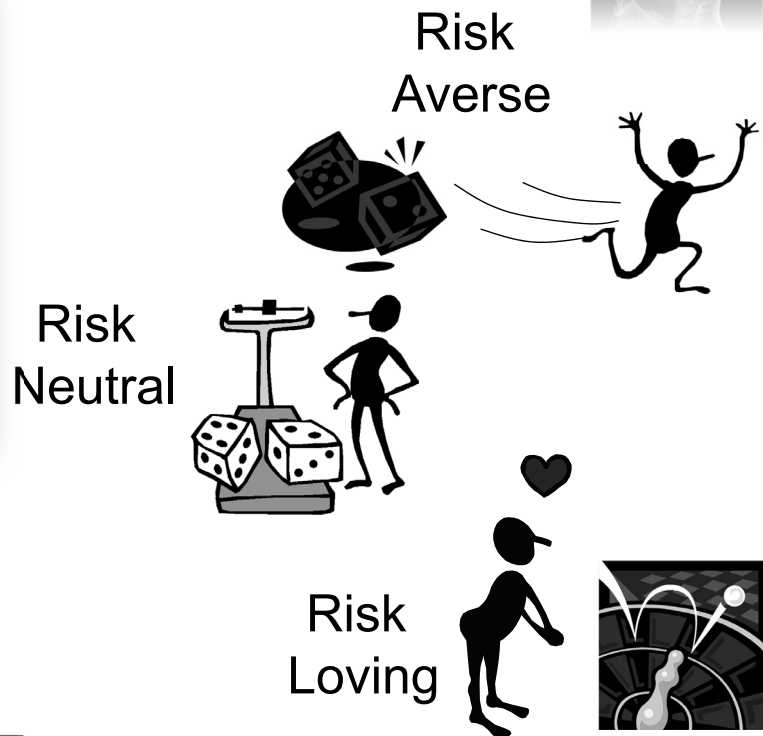
- Emotionally we avoid risk (uncertainty) to avoid the shame of:
 - Failure,
 - Being wrong,
 - Being laughed at
 - Being made fun of,
 - Loosing the farm, etc.



Risk Tolerance: Emotional Style*



Types of Risk Preference



Personal Perspectives on Risk

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

dynamic and changing over time.





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

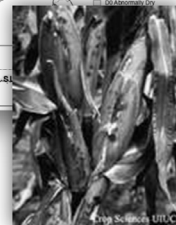
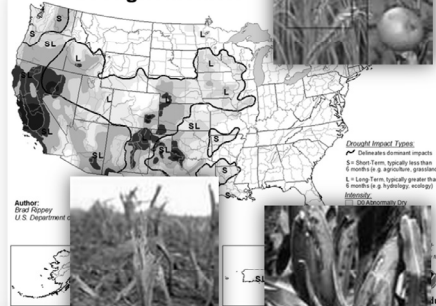
Uncontrollable events such as weather, pests or disease make yields, quality, or outputs unpredictable.

What are Your Sources?

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



U.S. Drought Monitor



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



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



What are Your Management Controls?

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



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



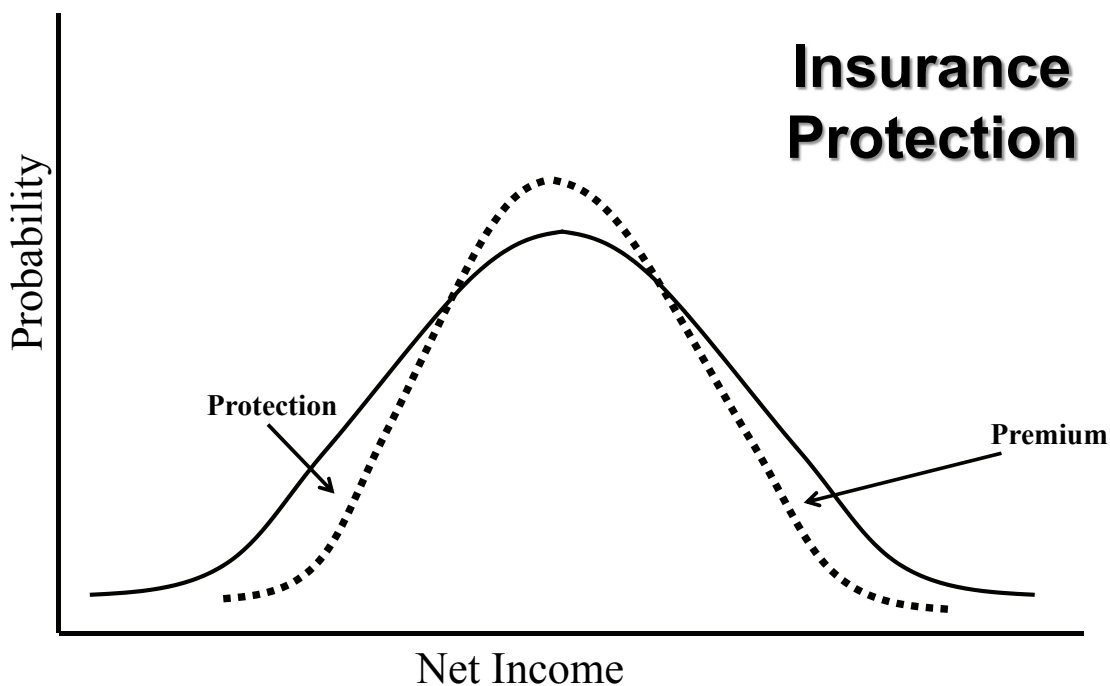
Strategies for Managing Risk

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



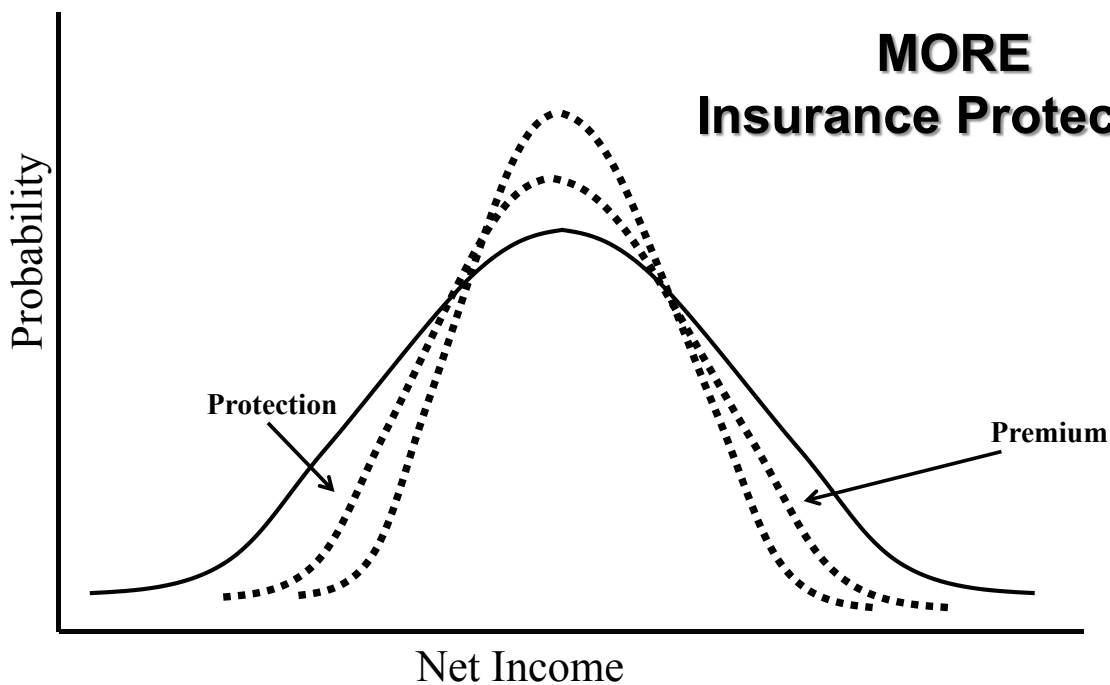
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How much risk is right for you?



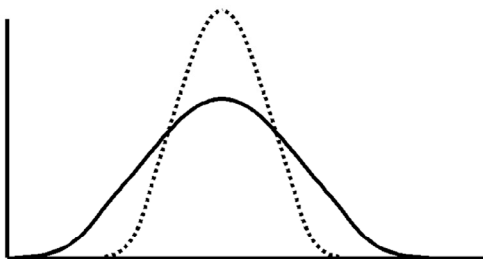
How much risk is right for you?

MORE Insurance Protection

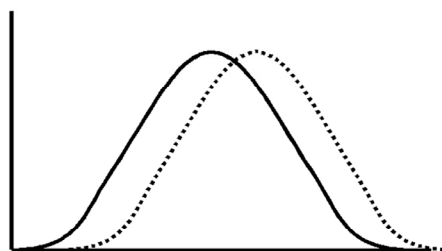


Strategy Impacts

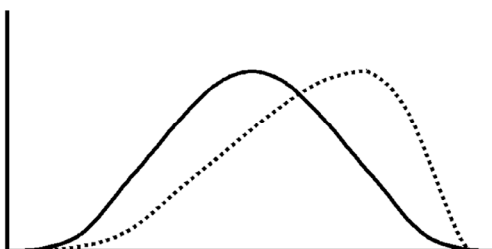
Panel 1: Same Mean, Less Dispersion



Panel 2: Same Dispersion, Higher Mean



Panel 3: Skewing the distribution



Panel 4: Truncating the Distribution



Current Federal Insurance Options – Crops cont.

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

Crop	Ins Plan	Poi Sold	Poi Earn Prem	Poi 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	200,652,586	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	8,675	5,147,936	214,573	131,364	0	0	0	3,234	.02
	RPHE	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	0.00
SWEET ORANGES	APH	75	65	3	67	3	436	842,230	65,669	38,120	0	0	0	10,517	.16
Strawberries	APH	7	2	0	3	0	136	2,519,606	74,728	47,872	0	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
	RPHE	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 – Crops cause of loss: GRAPEFRUIT

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	County				Crop	Cause of Loss Description							Net Acres	Liability	Prem.	Subsidy	Indem.	Loss Ratio					
2	2013	6	CA	19	Fresno	201	GRAPEFRUIT	90	APH	A	H	31	Excess Moisture/Precip/Rain	4	APR	1	1	4.2	9,077	772	455	4,495	5.82
3	2013	6	CA	19	Fresno	201	GRAPEFRUIT	90	APH	A	H	42	Freeze	1	JAN	1	1	2.8	6,052	515	304	2,996	5.82
4	2013	6	CA	25	Imperial	201	GRAPEFRUIT	90	APH	A	H	12	Heat	8	AUG	1	1	16	13,680	712	392	8,940	12.56
5	2013	6	CA	25	Imperial	201	GRAPEFRUIT	90	APH	A	H	42	Freeze	12	DEC	1	1	34.01	41,922	2,182	1,200	13,045	5.98
6	2013	6	CA	25	Imperial	201	GRAPEFRUIT	90	APH	A	H	61	Wind/Excess Wind	5	MAY	1	1	646.19	796,510	41,452	22,798	247,848	5.98
7	2013	6	CA	65	Riverside	201	GRAPEFRUIT	90	APH	A	H	12	Heat	4	APR	2	2	66.6	195,749	3,020	1,986	41,246	13.66
8	2013	6	CA	65	Riverside	201	GRAPEFRUIT	90	APH	A	UH	12	Heat	10	OCT	1	1	1	1,587	72	42	632	8.78
9	2013	6	CA	65	Riverside	201	GRAPEFRUIT	90	APH	A	H	12	Heat	9	SEP	3	3	39.9	70,694	956	613	19,930	20.85
10	2013	6	CA	65	Riverside	201	GRAPEFRUIT	90	APH	A	H	41	Frost	12	DEC	1	1	0.9	2,059	115	63	379	3.31
11	2013	6	CA	65	Riverside	201	GRAPEFRUIT	90	APH	A	H	42	Freeze	1	JAN	3	3	8.34	17,602	523	302	7,430	14.21
12	2013	6	CA	65	Riverside	201	GRAPEFRUIT	90	APH	A	H	42	Freeze	12	DEC	1	1	1.28	2,800	146	80	1,318	9.03
13	2013	6	CA	65	Riverside	201	GRAPEFRUIT	90	APH	A	H	51	Flood	9	SEP	1	1	3.06	8,513	173	102	4,496	26.01
14	2013	6	CA	65	Riverside	201	GRAPEFRUIT	90	APH	A	H	61	Wind/Excess Wind	2	FEB	1	1	131.02	275,470	15,705	8,638	206,675	13.16
15	2013	6	CA	65	Riverside	201	GRAPEFRUIT	90	APH	A	H	61	Wind/Excess Wind	1	JAN	2	2	44.4	130,500	2,013	1,324	27,497	13.66
16	2013	6	CA	71	San Bernardino	201	GRAPEFRUIT	90	APH	A	UH	42	Freeze	1	JAN	1	1	10.9	19,594	603	355	3,570	6.92
17	2013	6	CA	73	San Diego	201	GRAPEFRUIT	90	APH	A	UH	12	Heat	10	OCT	1	1	10	20,734	308	206	11,709	38.02
18	2013	6	CA	73	San Diego	201	GRAPEFRUIT	90	APH	C	H	41	Frost	1	JAN	1	1	36.8	23,575	350	350	20,955	59.87
19	2013	6	CA	107	Tulare	201	GRAPEFRUIT	90	APH	A	H	12	Heat	10	OCT	1	1	4.95	7,934	565	333	(860)	-1.52
20	2013	6	CA	107	Tulare	201	GRAPEFRUIT	90	APH	A	UH	12	Heat	6	JUN	1	1	3.6	5,770	411	242	4,680	11.39
21	2013	6	CA	107	Tulare	201	GRAPEFRUIT	90	APH	A	UH	12	Heat	10	OCT	1	1	4.95	7,934	565	333	6,434	11.39
22	2013	6	CA	107	Tulare	201	GRAPEFRUIT	90	APH	A	H	12	Heat	6	JUN	1	1	3.6	5,770	411	242	(625)	-1.52
23	2013	6	CA	107	Tulare	201	GRAPEFRUIT	90	APH	A	H	42	Freeze	6	JUN	1	1	0.45	721	51	30	(78)	-1.52
24	2013	6	CA	107	Tulare	201	GRAPEFRUIT	90	APH	A	UH	42	Freeze	6	JUN	1	1	0.45	721	51	30	585	11.39
25	2013	6	CA	111	Ventura	201	GRAPEFRUIT	90	APH	A	H	42	Freeze	1	JAN	1	1	3.5	7,434	407	224	2,149	5.28
26																		1,079	1,666,402	72,078	40,644	635,446	298



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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

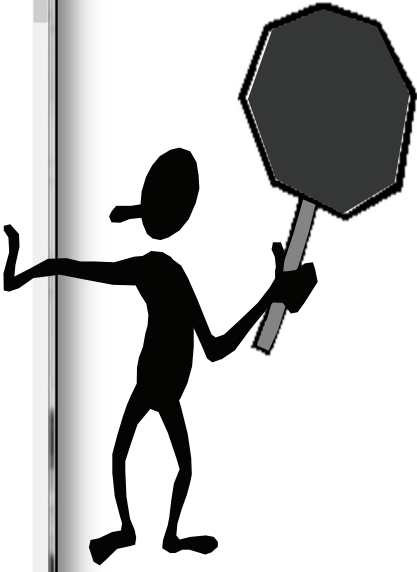
- USDA Agricultural Marketing Service - [California Weekly Hay Report](#)
- USDA Agricultural Marketing Service - [Colorado Weekly Hay Report](#)
- USDA Agricultural Marketing Service - [Idaho Weekly Hay Report](#)
- USDA Agricultural Marketing Service - [Montana Weekly Hay Report](#)
- USDA Agricultural 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

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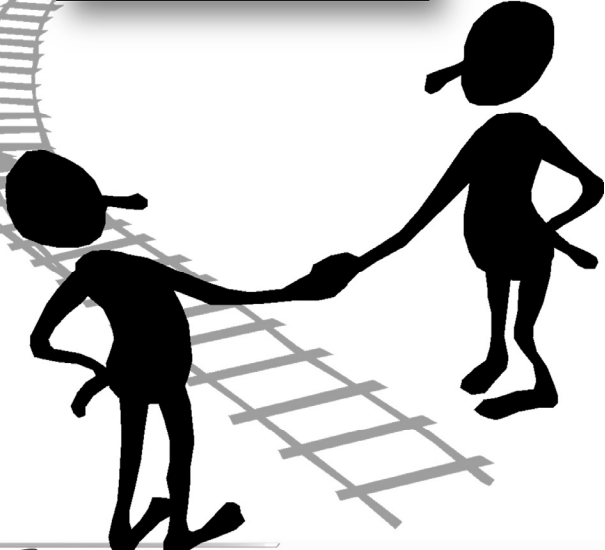
Risk Scenario Planning

Version 1.10

By: John P. Hewlett, University of Wyoming
Dr. Jay Parsons, Colorado State University

USDA RMA UNIVERSITY OF WYOMING COLORADO STATE

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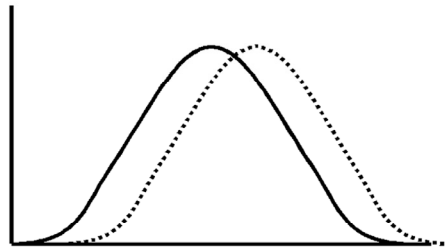


Strategy Impacts

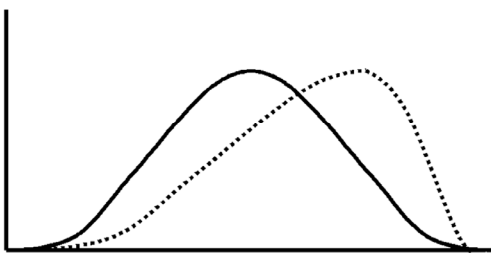
Panel 1: Same Mean, Less Dispersion



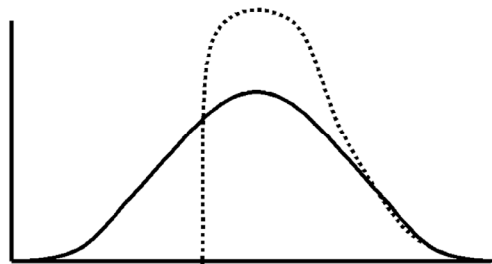
Panel 2: Same Dispersion, Higher Mean



Panel 3: Skewing the distribution



Panel 4: Truncating the Distribution



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



Risk Treatment

- Selecting one or more **options for modifying risks** and implementing those options
- Involves a **cyclical process** of assessing a risk treatment and deciding whether residual risk levels are acceptable
- If not, then selecting a **new risk treatment** and assessing the effect of that treatment until the residual risk matches the risk goal(s)

LIKELIHOOD (Probability) How likely is the event to occur at some time in the (Linear Scale time specific matrix)	CONSEQUENCES				
	What is the Severity of injuries / potential damages / financial impacts (if the risk event actually occurs)? (Logarithmic Scale, property industry specific matrix)				
	Insignificant	Minor	Moderate	Major	Catastrophic
	No Injuries First Aid No Envir Damage < \$1,000 Damage	Some First Aid required Low Envir Damage < \$10,000 Damage	External Medical Medium Envir Damage < \$100,000 Damage	Extensive Injuries High Envir Damage < \$1,000,000 Damage	Death or Major Injuries Toxic Envir Damage > \$1,000,000 Damage
Almost certain - expected in normal circumstances (100%)	MODERATE RISK	HIGH RISK	HIGH RISK	CRITICAL RISK	CRITICAL RISK
Likely - probably occur in most circumstances (75%)	MODERATE RISK	MODERATE RISK	HIGH RISK	HIGH RISK	CRITICAL RISK
Possible - might occur at some time (25%)	LOW RISK	MODERATE RISK	HIGH RISK	HIGH RISK	CRITICAL RISK
Unlikely - could occur at some future time (8.1%)	LOW RISK	MODERATE RISK	MODERATE RISK	HIGH RISK	HIGH RISK
Rare - only in exceptional circumstances (0.1%)	LOW RISK	LOW RISK	MODERATE RISK	MODERATE RISK	HIGH RISK

Risk Treatment Options

- Avoiding the risk
- Deciding to start or continue an activity likely to create or enhance the risk
- Removing the source of the risk
- Changing the nature and magnitude of the likelihood
- Changing the consequences
- Sharing the risk with another
- Retaining the risk

Not all options are mutually exclusive

Not all options are appropriate in every circumstance



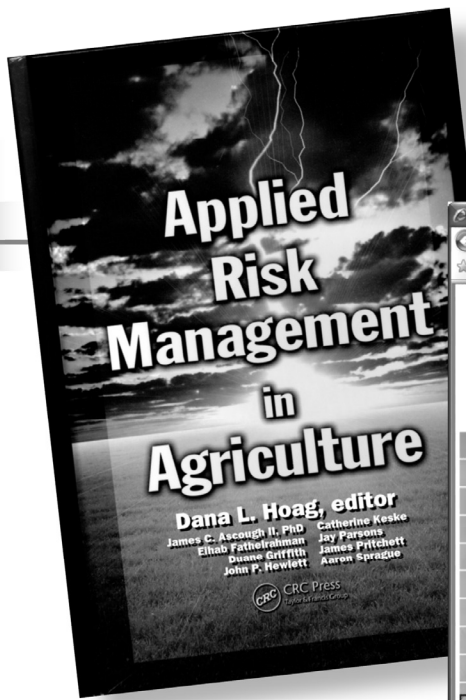
Risk Treatment Selection Criteria

- Balance **cost and effort** of implementation with the **benefit derived**, considering the impacts on:

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

and

- Protection of the **resource base**



Risk Navigator SRM



<http://RightRisk.org>

Questions?

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Agriculture and Natural Resources

CAS
Custom Ag Solutions

RMA USDA

USDA RMA CAS University of California
Agriculture and Natural Resources

RIGHT RISK

RIGHT RISK

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	876,195	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	8,045	52%
Forage Production	135,188	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	55,145	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	568,155	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)	\$19,806,133
Raisins	\$214,106,813

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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E-Mail: susan.choy@rma.usda.gov

Data as of January 2014



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

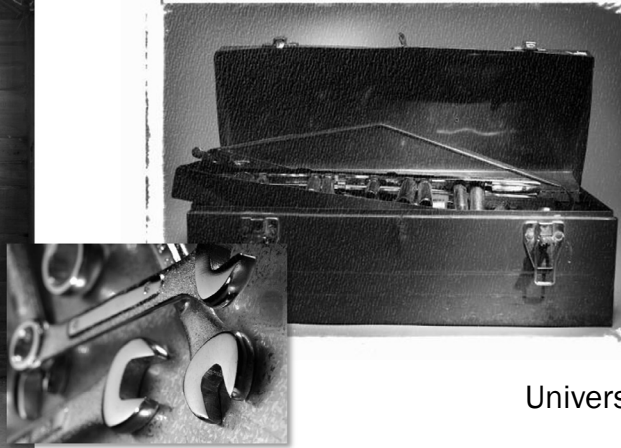
* 2013 numbers are incomplete

NOTE: To see detailed information on the above 15 Year Crop Insurance History by County, go to RMA's Summary of Business Application at: 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.



Risk Tools

evaluating risk management strategies



Jay Parsons
University of Nebraska-Lincoln

John P. Hewlett
University of Wyoming

1



Tools to Evaluate Alternatives

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

<http://RightRisk.org/tools>



Risk Scenario Planner

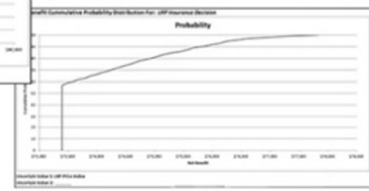
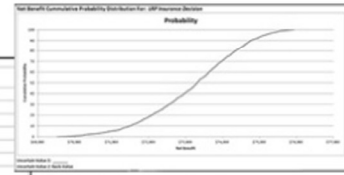
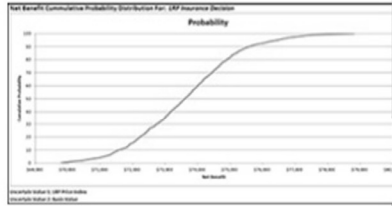
RightRisk		Partial Budget For:			Drought Management Strategy - VI-PRF		
Positive Effects		Negative Effects					
Added Returns	Quantity	Value	Total	Added Costs	Quantity	Value	
VI-PRF expected index	100	\$ -	\$ -	VI-PRF premium (unsubsidized)		\$ 1.12	
VI-PRF actual index	100	\$ -	\$ -	VI-PRF subsidy	0.51	\$ -	
VI-PRF dollar amount protection/acre @ 90%		\$ 7.85	\$ -	VI-PRF premium (subsidized)	640	\$ 0.55	
VI-PRF indemnity payment	640	\$ -	\$ -			\$ 351.23	
		\$ -	\$ -			\$ -	



Risk Scenario Planning

Version 1.10

By:
John P. Hewlett, University of Wyoming
Dr. Jay Parsons, Colorado State University



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351.23
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Enterprise Risk Analysis



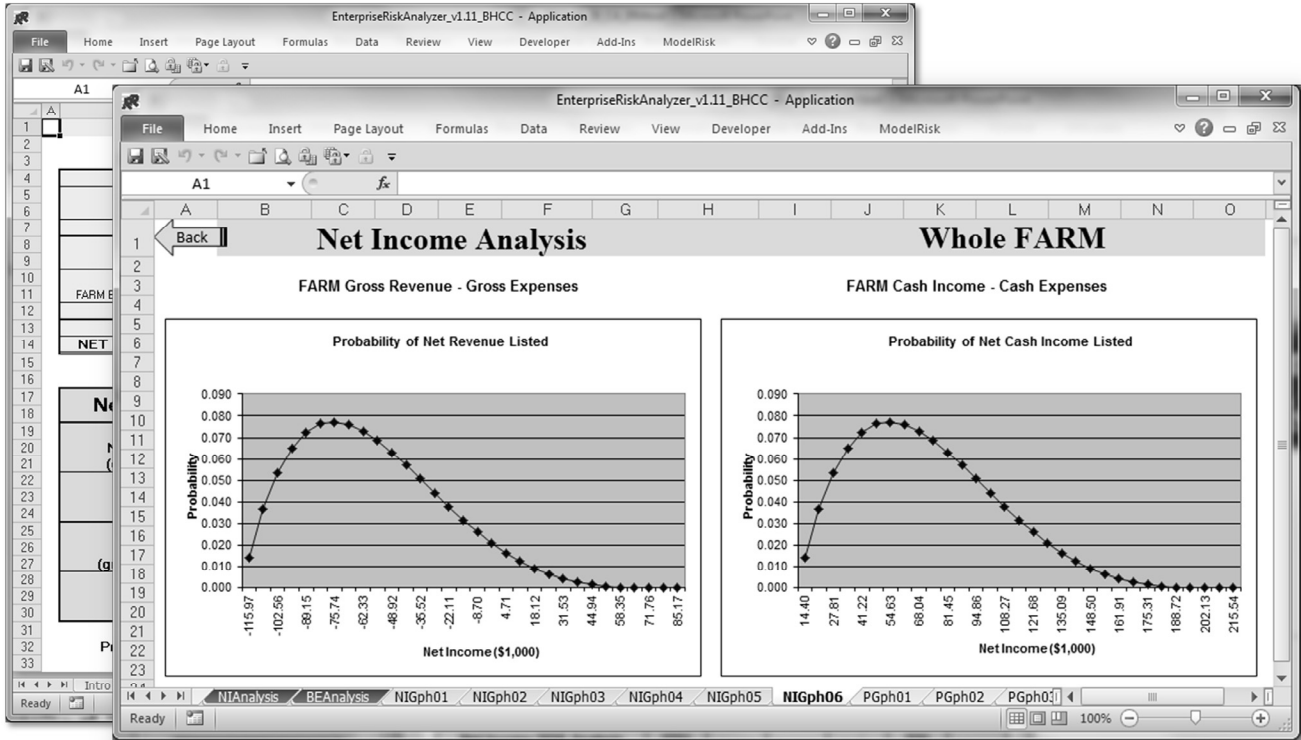
	A	B	C	D	E	F
1						
2						
3			Cow-Calf	Native Hay	Oat Hay	Alfalfa Establishment
4		FARM REVENUE				Alfalfa
5		TOTAL FARM INCOME - CASH	121,759.00	12,380.00	2,802.00	2,306.00
6		TOTAL NON-CASH INCOME ADJUSTMENTS				25,040.00
7		GROSS FARM REVENUE	121,759.00	12,380.00	2,802.00	2,306.00
8						25,040.00
9		FARM EXPENSES				
10		FARM EXPENSES - CASH	86,843.00	6,557.00	1,756.00	2,297.00
11		FARM EXPENSES - NON-CASH EXPENSE ADJUSTMENTS	98,550.00	11,245.00	2,709.00	2,536.00
12		GROSS FARM EXPENSES	185,393.00	17,802.00	4,465.00	4,833.00
13						27,403.00
14		NET FARM INCOME FROM OPERATIONS	(63,634.00)	(5,422.00)	(1,663.00)	(2,527.00)
15						(2,363.00)
16		Break-Even PRICE Analysis				
17		YIELD PER ENTERPRISE UNIT				
18			Cow-Calf	Native Hay	Oat Hay	Alfalfa Establishment
19		<i>Maximum</i>	400	1.75	4	4
20		<i>Most Likely</i>	373.97	1.5	3	2.54
21		<i>Minimum</i>	350	1	1.5	1.5
22						
23		BREAK-EVEN PRICE - CASH EXPENSES				
24		<i>Minimum</i>	0.59	32.30	33.77	44.17
25		<i>Most Likely</i>	0.64	37.68	45.03	69.56
26		<i>Maximum</i>	0.68	56.53	90.05	117.79
27						77.38
28		BREAK-EVEN PRICE - GROSS EXPENSES				
29		<i>Minimum</i>	1.27	87.69	85.87	92.94
30		<i>Most Likely</i>	1.36	102.31	114.49	146.37
31		<i>Maximum</i>	1.45	153.47	228.97	247.85
32						175.66

Probability Analysis (click button at right)



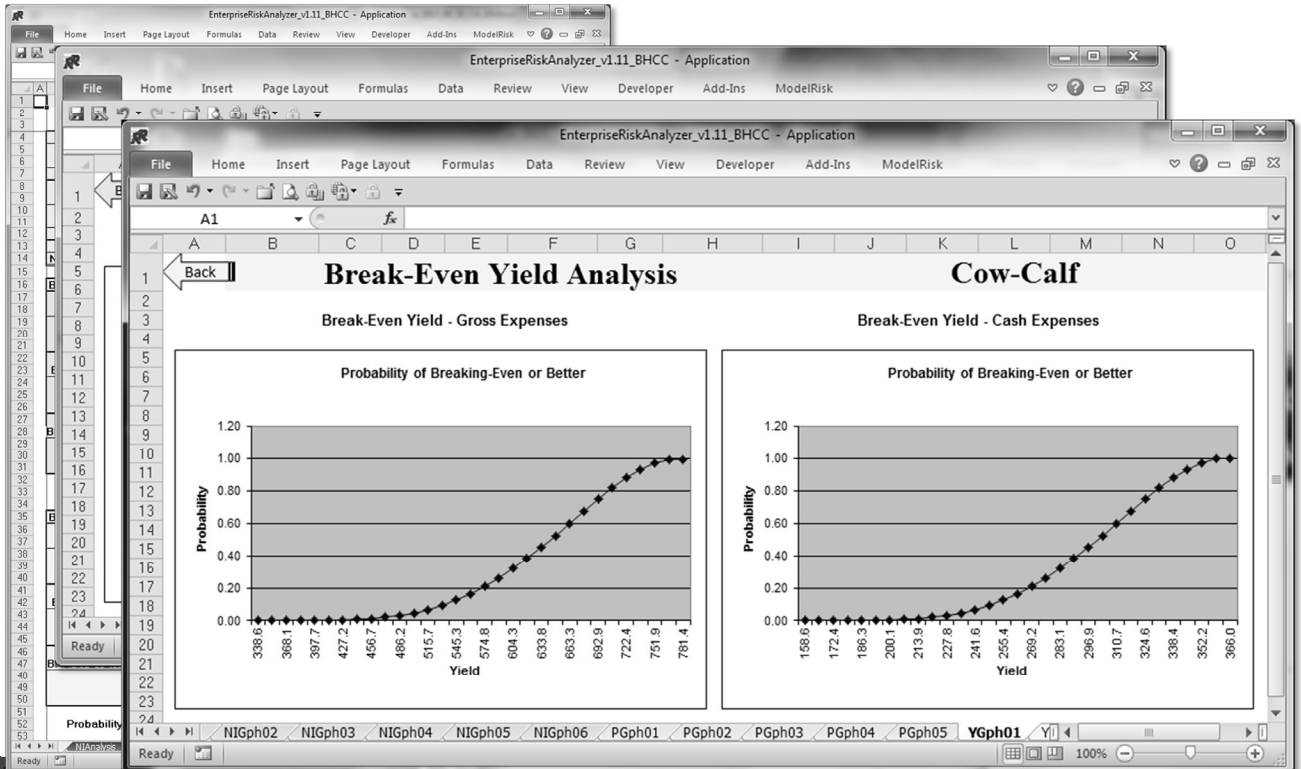
Enterprise Risk Analyzer

Net Return Analysis



Enterprise Risk Analyzer

Breakeven Analysis



Whole Farm Budget

Introduction Enter Data Financial Statements Ratios Credit Scoring Family Living, Revenues, Expenses

Adobe Flash Player 10

File View Control Help

Introduction Enter Data Financial Statements Ratios Credit Scoring Family Living, Revenues, Expenses

Off/On	Liquidity	Beginning	Ending
	Current Ratio	7.26	8.21
	Working Capital	\$215,552	\$248,383

Off/On	Solvency	Beginning	Ending
	Debt/Asset Ratio	0.179	0.172
	Equity/Asset Ratio	0.821	0.828
	Debt/Equity Ratio	0.22	0.208

Off/On	Profitability	Ending
	Rate of Return on Business Assets	4.96%
	Rate of Return on Business Equity	4.58%
	Operating Profit Margin Ratio	0.13
	Net Business Income	\$110,890

Off/On	Repayment Capacity	Ending
	Term Debt and Capital Lease Coverage Ratio	2.37
	Capital Replacement and Term Debt Repayment Margin	\$33,482

Off/On	Financial Efficiency	Ending
	Asset Turnover Ratio	0.38
	Operating Expense Ratio	0.73
	Depreciation Expense Ratio	0.06
	Interest Expense Ratio	0.03
	Net Farm Income From Operations Ratio	0.18

Check Sum 100.00%

Save, Load, Delete

Mouse Over for Help

Owner Withdrawals \$100,000

Nonfarm Inflows #1 \$0

Nonfarm Inflows #2 0

Percent Crop Revenue 100%

Percent Crop Cost of Production 100%

Percent Livestock Revenue 100%

Percent Livestock Cost of Production 100%

Percent Operating Expenses Borrowed 50%

Percent Government Payments 100%

Reset Print Cash Income Toggle Off/On Deferred Taxes Off/On Income Tax Off/On

Statement - Accrual Adj. Income

Income (Net of cull lvsstk sales)	\$554,721
Loss Income Adjustments	0
Loss Income (Raised Brdo Lvstk)	17,500
Gain/Loss on Breeding Lvstk (Net)	140
Gross Revenue	\$572,361
Expense	425,848
Expense (Excluding Interest)	0
Loss Feed Inventory Adjustment	0
Non-Cash Non-Interest Expense	0
Gain/Loss on Land, Bldgs, Equip.	65,500
Total Operating Expense	491,348
Exp. - T.D. & C.L.	28,759
Exp. - Operating	8,027
Loss Interest Expense	(3,455)
Total Expense	\$524,679
Business Income From Operations	47,681
Business Income	47,681
+SS+Def. Tax--Cash & Non-Cash	0
Income	\$47,681

Accrual

Statement of Owner Equity

Beginning Net Worth (Cost/Mrkt)	3,548,356
Income	47,681
Business Cash Inflows	0
Withdrawals (Cash)	50,000
Realization Chance/Cont./Distrib.	\$0
Ending Net Worth	3,546,037
Beginning Net Worth (Cost/Mrkt)	3,548,037
Discrepancy	\$0

Save, Load, Delete

Percent Crop Cost of Production 100%

Percent Livestock Cost of Production 100%

Percent Government Payments 100%

Off/On Income Tax Off/On

Risk Navigator Tool Box

Risk Navigator
STRATEGIC RISK MANAGEMENT

Toolbox

Financial

Management

Planning

Risk Analysis

Ratio Analysis

Tools Folder

Install Flash Player

Install Adobe Reader

Exit

Inventory Risk
Attitude, Financial
Health

Establish Business
and Family
Financial Goals

Measure Business Position and
Historic Performance
-Balance Sheets -Income Statement
-Cash Flow -Statement of Owner

Replan

Monitor and Adjust with:
Balance Sheets
Income Statement
Cash Flow
Statement of Owner
Equity

Operational

Implement
Plan

Develop
Implementation
Plan

Tactical

Develop Sustainable
Business Plan that
Meets Financial Goals

Determine Sources of
Risk in the Business
Plan and Management
Alternatives for Each

Evaluate Business
Plan Risks with Available
Financial Tools

FINANCIAL RISK

Ending Net Worth

Beginning Net Worth

Solvency
Liquidity
Profitability
Repayment Capacity
Financial Efficiency

Questions?

University of California
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CAS
Custom Ag Solutions

RMA USDA

USDA RMA CAS University of California
Agriculture and Natural Resources

RIGHT RISK

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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 Wild 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>

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 Analyzer 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 evaluate the 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



RISK MANAGEMENT PROFILES



RIGHT RISK

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. 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.

The Zomers looked at several options for addressing their production risks. They could:

1. Buy alfalfa hay to supplement native hay production. They knew this option might become expensive, though, with hay prices high and up-front cost tying up operating capital.
2. Rent additional pasture. Unfortunately, this option would be difficult to achieve (and expensive) due to the lack of locally available pasture. Plus, the Zomers would prefer not to travel long distances to their cattle.
3. Send the yearlings to a custom feed yard or sell them early. With high feed prices, this may or may not be economically viable.
4. Use the new Vegetative Index Pasture, Rangeland, Forage (VI-PRF) insurance. Bob recently became aware of a local extension meeting.
5. Insure against drought using Non-insured Crop Disaster Assistance Program (NAP) coverage.

Like many producers, the Zomers decided on a combination of available options. They chose to utilize VI-PRF insurance for 3,500 acres from April 1 to June 30; 5,500 acres from July 1 to September 30; and 200 acres of hay land from June 1 to August 30. They also chose to budget \$20,000 to purchase 200



Premium/acre	Indemnity/acre	Total indemnity	Total cost/acre
\$0.28	\$0.00	\$0	\$980
\$0.58	\$6.51	\$35,805	\$3,190
\$9.15	\$57.27	\$11,454	\$1,830
	Total	\$47,259	\$6,000

With the second method, calculate the carrying capacity of 19.48 acres per AU (or a normal carrying capacity of 462 AUs) multiplied by 30 days (\$13,860) multiplied by the daily feed cost (\$40.04/30 = \$1.334) multiplied by 60 percent to find a total payment of \$11,093.54. Therefore, the first calculation provides the smaller amount.

If the Zomers had utilized NAP coverage in 2010, they would have received two added benefits

<http://RightRisk.org/RiskManagementProfiles>

<http://RightRisk.org > Courses>

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>.

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.



How Much Risk is Right for You?

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.



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

- ***Education***
- ***Coaching***
- ***Research***

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Web: www.RightRisk.org

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How much risk is right for you and your operation?

