RISK SCENARIO PLANNING

Evaluating Grass-Finished Beef for Hawaii Beef Production

John P. Hewlett – University of Wyoming

Case 3: Convert to Grass-Finished Beef

- The X Bar Ranch runs 500 mother cows on Guinea grass pasture near Koloa, Kauai. The ranch calves in April – May and has an average calf crop of 90 percent or about 450 calves each year.

- After accounting for replacement heifers (75 head), the X Bar is left with 375 head (225-steers and 150-heifers) available for sale. The ranch traditionally markets their weaned calves at the farm gate, at an average weight of 400 pounds each year in October.

Case 3: Convert to Grass-Finished Beef

- The X Bar is considering retaining animals for a Grass Finish Program to help spread the risk from volatile mainland markets and diversify their operation:
  - *Over the past 15 years beef cattle price at the farm gate for Hawaii cattle has averaged $94.40/cwt, but varied from a low of $58/cwt to a high of $171/cwt.*
  - *Average local price for grass-finish beef animals (under 30 months) is $1.90/lb-carcass price, and has varied up or down less than $0.30/lb in recent years.*

Case 3: Convert to Grass-Finished Beef

- The X Bar has determined that if they reduce the cow herd to 300 head they can run approximately 200 grass-finish animals in two cohorts (100 per calf crop) each year.
- To make the program work, they would select the top 100 animals from each calf crop for their grass-finish beef program leaving 125 head to be marketed at the farm gate as weaned calves, bound to the mainland as usual.
- From UH research they know their grass-finish beef animals should reach a finish weight of 1,200 lbs. live-weight, with an average carcass-weight of 648 lbs. at around 24 months of age.
- After the first year, the ranch would be running two, 100-head cohorts each year and would market the two-year-old beef animals beginning in April for local slaughter.

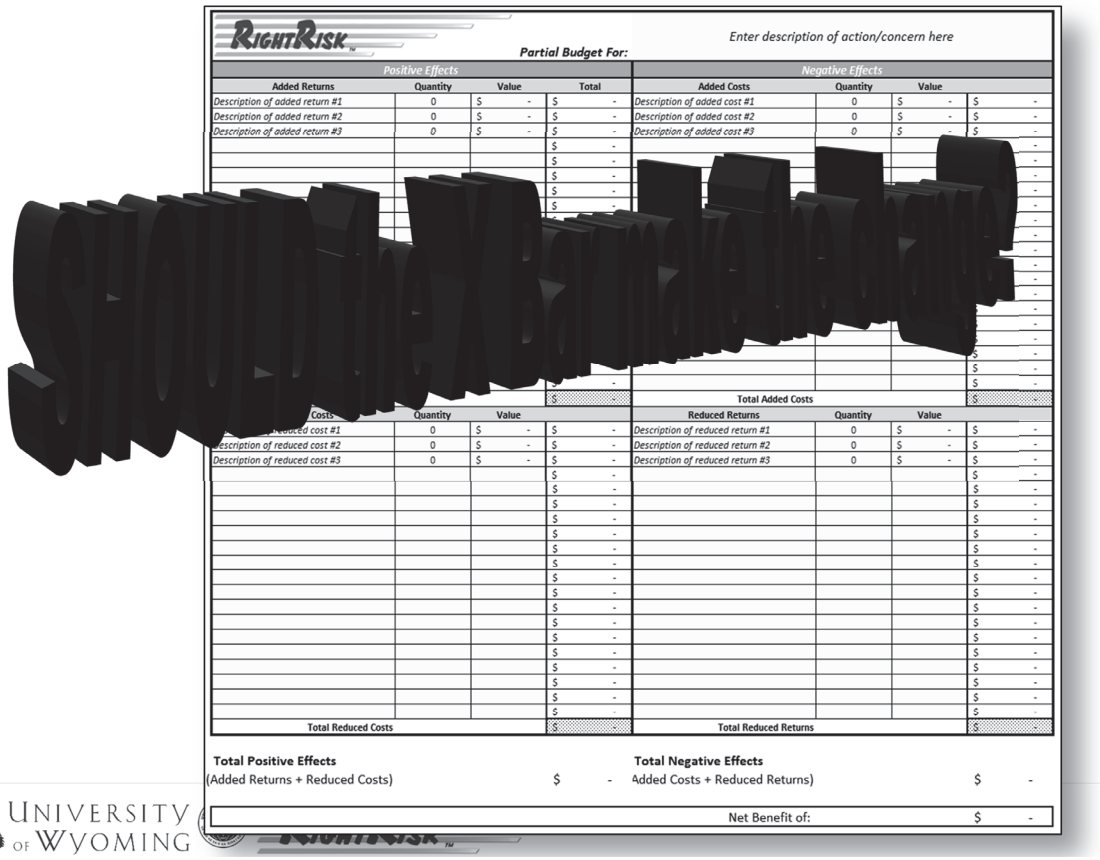
Case 3: Convert to Grass-Finished Beef

- Carrying 300 head of cows, the calf crop would be reduced to about 270 head each year (90 percent of 300), comprised of approximately 135 steers and 135 heifers.
- Heifer retention would remain the same at 15 percent of the cow herd (45 replacement heifers) leaving 225 head (135-steers and 90-heifers) for marketing.
- With fewer cows, fewer bulls will be needed. The X Bar estimates that they can reduce their bull battery by about 10 head. Currently they are paying about $1,500/bull and expect bulls to last about 6 years under their management. Opportunity interest rates are expected to remain at around 7 percent.

Case 3: Convert to Grass-Finished Beef

- Given recent information on grass-fed beef carcass prices, they anticipate prices to range between $1.60/lb and $2.20/lb.
- Further, based on past experience, they expect that the farm-gate price for calves to vary between $58/cwt and $171/cwt.

RSP Input Page



RightRisk™

Partial Budget For: *Enter description of action/concern here*

Positive Effects				Negative Effects			
Added Returns	Quantity	Value	Total	Added Costs	Quantity	Value	
Description of added return #1	0	$ -	$ -	Description of added cost #1	0	$ -	$ -
Description of added return #2	0	$ -	$ -	Description of added cost #2	0	$ -	$ -
Description of added return #3	0	$ -	$ -	Description of added cost #3	0	$ -	$ -
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			$ -	Total Added Costs			$ -
Reduced Costs	Quantity	Value		Reduced Returns	Quantity	Value	
Description of reduced cost #1	0	$ -	$ -	Description of reduced return #1	0	$ -	$ -
Description of reduced cost #2	0	$ -	$ -	Description of reduced return #2	0	$ -	$ -
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Total Reduced Costs			$ -	Total Reduced Returns			$ -

Total Positive Effects (Added Returns + Reduced Costs) $ -

Total Negative Effects (Added Costs + Reduced Returns) $ -

Net Benefit of: $ -

Case 3: Convert to Grass-Finished Beef, TOTAL/year

RightRisk™

Partial Budget For: *CONVERT to Cow/Calf with Grass-Finish Beef (TOTAL/year)*

Positive Effects				Negative Effects			
Added Returns	Quantity	Value	Total	Added Costs	Quantity	Value	
Grass-finish weaned calf sales	64800	$ 1.90	$ 123,120.00	Veterinary costs: 1st cohort	100	$ 10.00	$ 1,000.00
			$ -	Mineral costs: 1st cohort	100	$ 34.66	$ 3,466.00
			$ -	Water costs: 1st cohort	100	$ 7.01	$ 701.00
			$ -	Veterinary costs: 2nd cohort	100	$ 10.00	$ 1,000.00
			$ -	Mineral costs: 2nd cohort	100	$ 34.66	$ 3,466.00
			$ -	Water costs: 2nd cohort	100	$ 7.01	$ 701.00
			$ -	Management costs	10	$ 50.00	$ 500.00
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Total Added Returns			$ 123,120.00	Total Added Costs			$ 10,834.00
Reduced Costs	Quantity	Value		Reduced Returns	Quantity	Value	
Veterinary costs: 200 cows+10 bulls	210	$ 10.00	$ 2,100.00	Farm-gate weaned calf sales	1000	$ 94.40	$ 94,400.00
Mineral costs: 200 cows+10 bulls	210	$ 34.66	$ 7,278.60				$ -
Water costs: 200 cows+10 bulls	210	$ 7.01	$ 1,472.10				$ -
Bull costs: 10 bulls	10	$ 250.00	$ 2,500.00				$ -
Opportunity interest on bulls	10	$ 17.50	$ 175.00				$ -
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Total Reduced Costs			$ 13,525.70	Total Reduced Returns			$ 94,400.00

Total Positive Effects (Added Returns + Reduced Costs) $ 136,645.70

Total Negative Effects (Added Costs + Reduced Returns) $ 105,234.00

Net Benefit of: CONVERT to Cow/Calf with Grass-Finish Beef (TOTAL/year) $ 31,411.70

Case 3: Convert to Grass-Finished Beef, per COW/year

RightRisk™ — Partial Budget For: CONVERT to Cow/Calf with Grass-Finish Beef (per cow/year)

Positive Effects				Negative Effects			
Added Returns	Quantity	Value	Total	Added Costs	Quantity	Value	
Grass-finish weaned calf sales	216	$ 1.90	$ 410.40	Veterinary costs: 1st cohort	1	$ 3.33	$ 3.33
			$ -	Mineral costs: 1st cohort	1	$ 11.55	$ 11.55
			$ -	Water costs: 1st cohort	1	$ 2.34	$ 2.34
			$ -	Veterinary costs: 2nd cohort	1	$ 3.33	$ 3.33
			$ -	Mineral costs: 2nd cohort	1	$ 11.55	$ 11.55
			$ -	Water costs: 2nd cohort	1	$ 2.34	$ 2.34
			$ -	Management costs	1	$ 1.67	$ 1.67
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Total Added Returns			$ 410.40	Total Added Costs			$ 36.11
Reduced Costs	Quantity	Value		Reduced Returns	Quantity	Value	
Veterinary costs: 200 cows+10 bulls	1	$ 7.00	$ 7.00	Farm-gate weaned calf sales	4.33	$ 94.40	$ 408.75
Mineral costs: 200 cows+10 bulls	1	$ 24.26	$ 24.26				$ -
Water costs: 200 cows+10 bulls	1	$ 4.91	$ 4.91				$ -
Bull costs: 10 bulls	1	$ 8.33	$ 8.33				$ -
Opportunity interest on bulls	1	$ 0.58	$ 0.58				$ -
			$ -				$ -
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Total Reduced Costs			$ 45.08	Total Reduced Returns			$ 408.75

Total Positive Effects (Added Returns + Reduced Costs)	$ 455.48	Total Negative Effects (Added Costs + Reduced Returns)	$ 444.86
Net Benefit of: CONVERT to Cow/Calf with Grass-Finish Beef (per cow/year)			$ 10.62

Case 3: Convert to Grass-Finished Beef

Risk Scenarios

Uncertain Value 1 — ☑ Include

Description	Cell
Grass-finish weaned calf sales $/lb	D6
Current Value (Most Likely)	1.90
Minimum Value	1.60
Maximum Value	2.20

The X Bar first sets the grass-finished weaned calf sales as uncertain.

- The grass-finished calf price in $/lb-carcass-weight is contained in cell D6, so we enter “Grass-finished weaned calf sales” as the description and “D6” as the cell under Uncertain Value 1.
- We use $1.90/lb. as the current value,
- $1.60/lb. as a possible minimum value, and
- $2.20/lb. as a possible maximum value

Case 3: Convert to Grass-Finished Beef

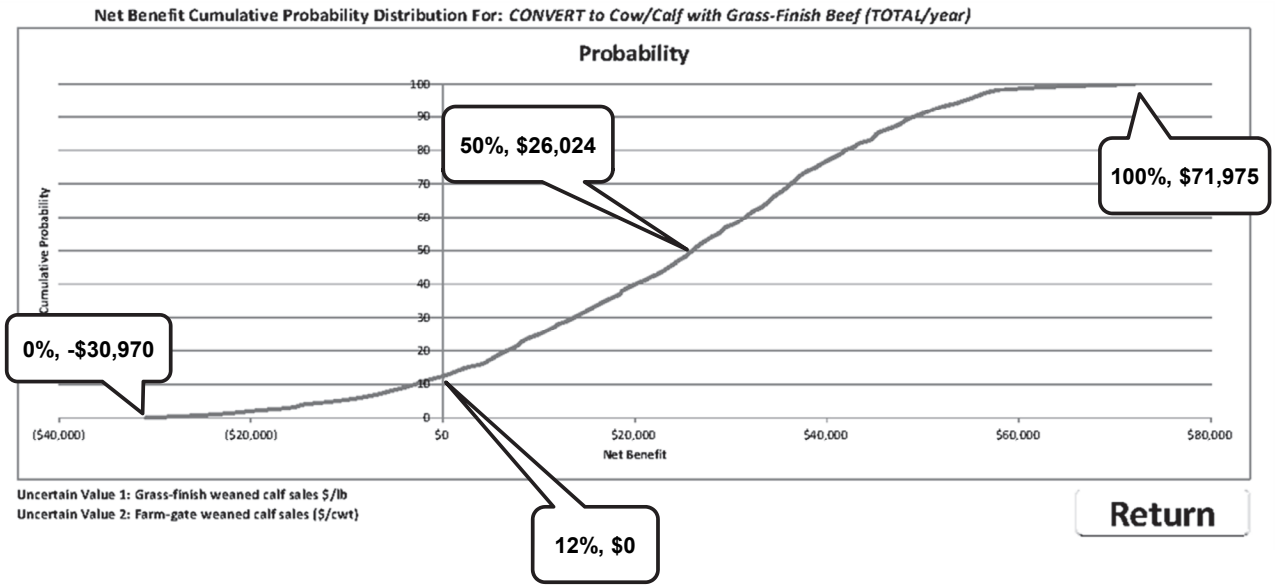
Risk Scenarios

Uncertain Value 1		Include	Uncertain Value 2		Include
Description	Cell		Description	Cell	
Grass-finish weaned calf sales $/lb	D6		*Farm-gate weaned calf sales ($/cwt)*	H28	
Current Value (Most Likely)	1.90		Current Value (Most Likely)	94.40	
Minimum Value	1.60		Minimum Value	58.00	
Maximum Value	2.20		Maximum Value	171.00	

The X Bar also sets farm-gate weaned calf sale prices as uncertain.

- The farm-gate calf price in $/cwt is contained in cell H28, so we enter "Farm-gate weaned calf sales" as the description and "H28" as the cell under Uncertain Value 2.
- We use $94.40/cwt as the current value,
- $58/cwt as a possible minimum value, and
- $171/cwt as a possible maximum value

Case 3: Convert to Grass-Finished Beef

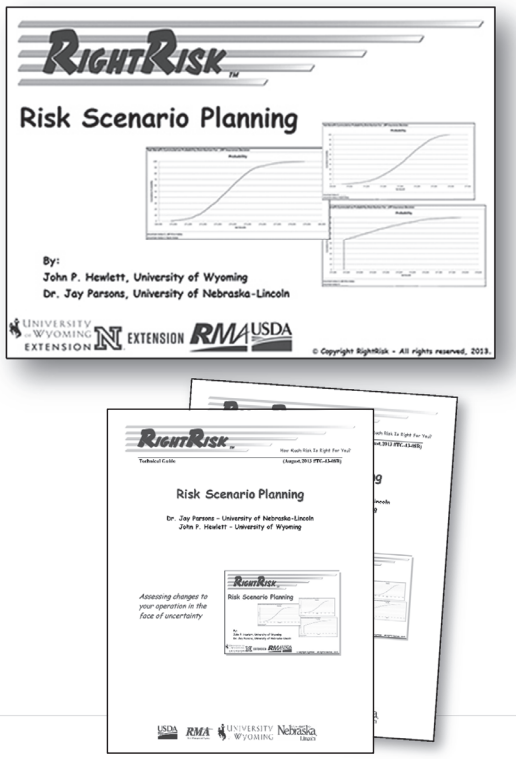


- A cumulative distribution graph gives the probability of earning a net return at or below any certain value.

Summary

The Risk Scenario Planning tool:

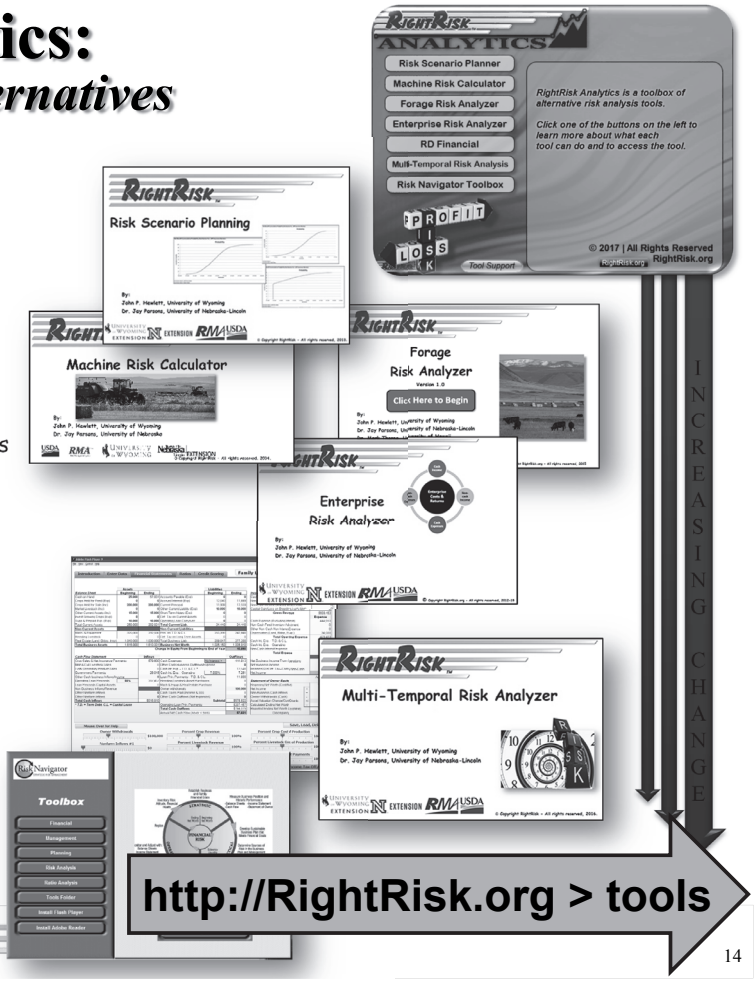
- Can be a useful tool for analyzing **management** strategies and decisions involving **risk**
- Represents a better way to handle the presence of **uncertainty** by thinking in terms of **distributions** of possible outcomes over time
- Results in more **informed** decision-making
- GUIDE offers **15-page** description of the tool and working examples
- Website offers examples for **download** and a place to get started



RightRisk Analytics:

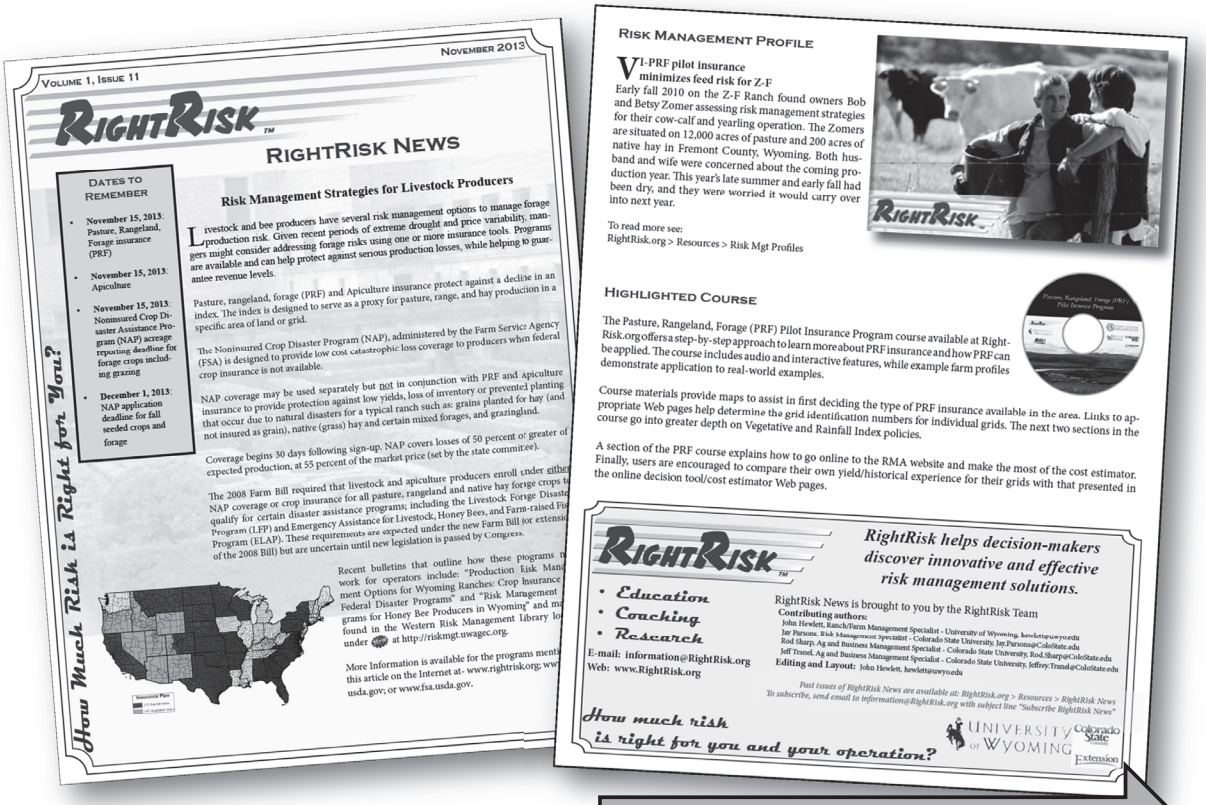
~ tools to evaluate alternatives

- **Risk Scenario Planner**
  relatively minor changes, risk analysis
- **Machine Risk Calculator**
  machine costs, custom rates, risk analysis
- **Forage Risk Analyzer**
  lease arrangements, forage supply, housing costs
- **Enterprise Risk Analyzer**
  larger enterprise-level, enterprise mix changes
- **RDFinancial**
  substantial changes, whole farm budgets, financial analysis, credit scoring
- **Multi-Temporal Risk Analysis**
  partial budgets incorporating time, risk analysis
- **Risk Navigator**
  strategic risk planning and analysis



Risk Management Profiles

RightRisk Newsletter



Volume 1, Issue 11 — November 2013

RightRisk™

RightRisk News

How Much Risk is Right for You?

Dates to Remember

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

Risk Management Strategies for Livestock Producers

Livestock and bee producers have several risk management options to manage forage production risk. Given recent periods of extreme drought and price variability, managers might consider addressing forage risks using one or more insurance tools. Programs are available and can help protect against serious production losses, while helping to guarantee revenue levels.

Pasture, rangeland, forage (PRF) and Apiculture insurance protect against a decline in an index. The index is designed to serve as a proxy for pasture, range, and hay production in a specific area of land or grid.

The Noninsured Crop Disaster Program (NAP), administered by the Farm Service Agency (FSA) is designed to provide low cost catastrophic loss coverage to producers when federal crop insurance is not available.

NAP coverage may be used separately but not in conjunction with PRF and apiculture insurance to provide protection against low yields, loss of inventory or prevented planting that occur due to natural disasters for a typical ranch such as: grains planted for hay (and not insured as grain), native (grass) hay and certain mixed forages, and grazingland.

Coverage begins 30 days following sign-up. NAP covers losses of 50 percent or greater of expected production, at 55 percent of the market price (set by the state committee).

The 2008 Farm Bill required that livestock and apiculture producers enroll under either NAP coverage or crop insurance for all pasture, rangeland and native hay forage crops to qualify for certain disaster assistance programs; including the Livestock Forage Disaster Program (LFP) and Emergency Assistance for Livestock, Honey Bees, and Farm-raised Fish Program (ELAP). These requirements are expected under the new Farm Bill (or extension of the 2008 Bill) but are uncertain until new legislation is passed by Congress.

Recent bulletins that outline how these programs w
work for operators include: "Production Risk Manag
ment Options for Wyoming Ranches: Crop Insurance
Federal Disaster Programs" and "Risk Management
grams for Honey Bee Producers in Wyoming" and ma
found in the Western Risk Management Library lo
under at http://riskmgt.uwagec.org.

More Information is available for the programs mentio
this article on the Internet at- www.rightrisk.org; www
usda.gov; or www.fsa.usda.gov.

Risk Management Profile

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

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

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

Highlighted Course

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

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

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

RightRisk™

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

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How much risk is right for you and your operation?

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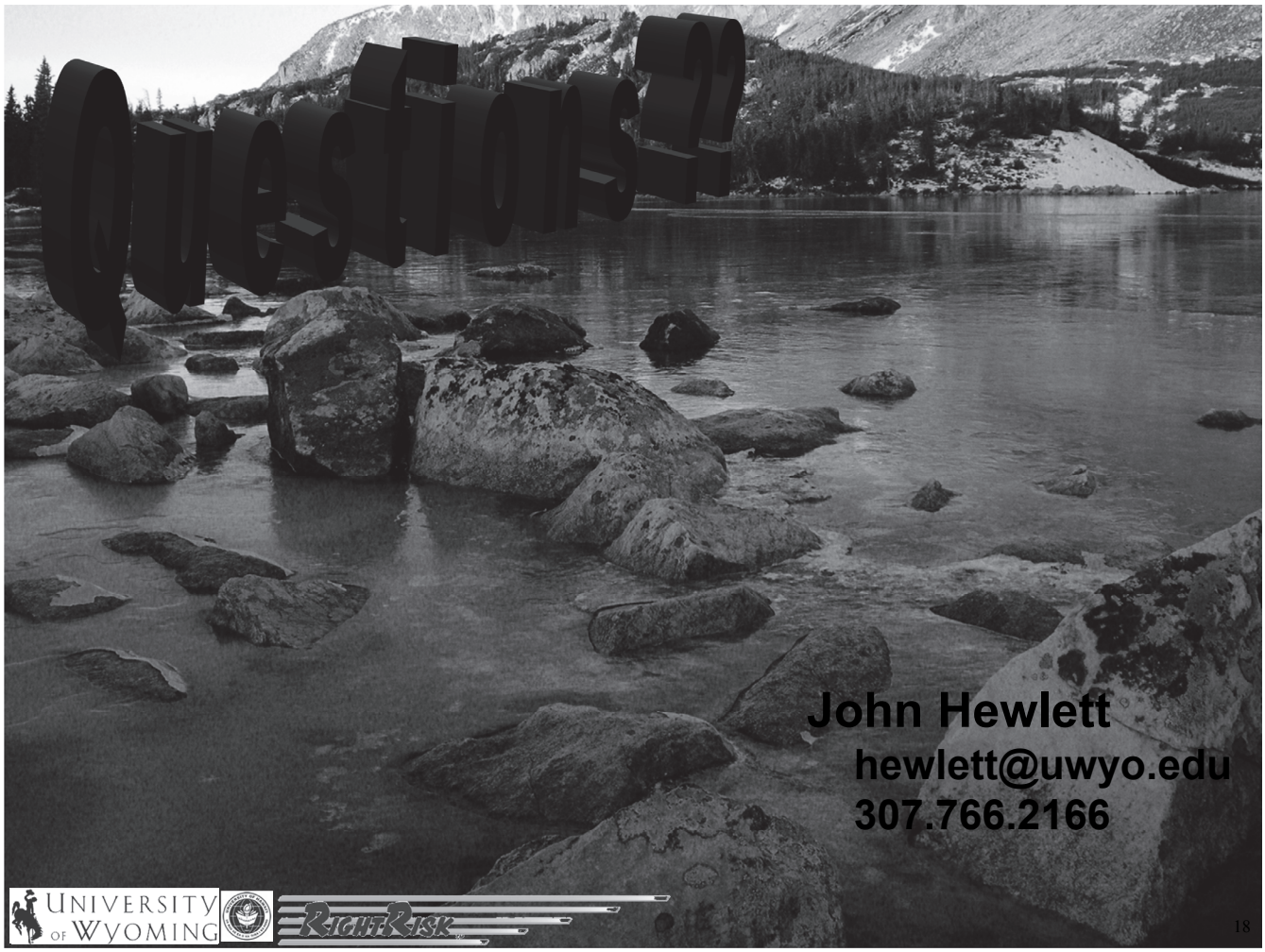

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