12. Managing Risk in Today's Environment

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Abstract/Summary

Risk management is central to successful farm management. Traditionally, most farms have focused their attention on one particular aspect of risk, namely price and yield risk. In reality, farms face countless risks to their operations including prices and yields, but also including weather, operation, human resource, legal, and other risks. Understanding the interactions and management of these risk is no small task. This interactive session will guide you to think about risk on the farm more holistically as well as provide strategies for managing in times of financial stress.

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August 20-21, 2015

Thinking about Risk

- Risk can be difficult to discuss
  - Overconfidence in forecasts and ability to influence events
  - Challenging to assess range of possible outcomes
- Important to
  - Recognize sources of vulnerability
  - Ways to manage risk
    - Agriculture is in the midst of unprecedented volatility
    - High income and increased wealth to protect

Types of Risk

- Business Risk
- Financial Risk
- Strategic Risk

Potential Loss Exposures

The Paradox of Uncertainty

- Uncertainty Creates Risk (Loss Exposures)

BUT

- Uncertainty Creates Opportunities

The Fundamental Challenge

- Minimize the Downside
- Capture the Upside

Vulnerabilities to Continued Prosperity

- Margin Compression
- Weak Working Capital Positions
- Excess and/or Poorly Structured Debt
- Asset Value Declines
- Availability of Credit
- Increased Tax Burdens/Reduced Preferences

Strategies To Use In This Environment

- Lock in Margins
- Buy Crop Insurance
- Consider Fixing some Interest Rates
- De-leverage – Pay Down Debt

Strategies To Use In This Environment

(cont'd)

- Hold Financial Reserves
- Conservative Bidding & Buying
- Slow Growth & Fund with Equity
- Make Investments in Operational Excellence

Changing Business Climate in Agriculture

- Crop agriculture is transitioning out of an extraordinarily profitable era
- Long-run future in crop agriculture is still bright, but the next several years will test managerial skills
- Aggressively manage all input costs
- Look for both cash rents and land prices to adjust downward the next several years
- Livestock sector will rebound and expand

Budgeting for $4.00 corn

Table 1. 2016 Budgets for Central Illinois Farmland with Lower Productivity

	2016 Budgets[1]		With $100 of Cuts [1]	
	Corn	Soybeans	Corn	Soybeans
Yield per acre	184	53	184	53
Price per bu	$4.00	$9.25	$4.00	$9.25
Crop revenue	$736	$490	$736	$490
ARC/PLC	20	10	20	10
Crop insurance proceeds	0	0	0	0
Gross revenue	**$756**	**$500**	**$756**	**$500**
Fertilizers	$138	$39	$126	$29
Pesticides	60	40	60	40
Seed	128	78	110	60
Drying	18	1	18	1
Storage	5	4	5	4
Crop insurance	26	18	26	18
Total direct costs	**$375**	**$180**	**$347**	**$152**
Machine hire/lease	$13	$9	$13	$9
Utilities	5	4	5	4
Machine repair	28	23	28	23
Fuel and oil	20	20	20	20
Light vehicle	2	1	2	1
Mach. depreciation	68	63	48	43
Total power costs	**$136**	**$120**	**$116**	**$100**
Hired labor	$18	$16	$18	$16
Building repair and rent	11	5	11	5
Building depreciation	13	11	13	11
Insurance	10	10	10	10
Misc	8	8	6	6
Interest (non-land)	15	11	15	11
Total overhead costs	**$75**	**$61**	**$73**	**$59**
Total non-land costs	**$586**	**$361**	**$536**	**$311**
Operator and land return	**$170**	**$139**	**$220**	**$189**
Cash rent	**$236**	**$236**	**$186**	**$186**
Net Farmer Income	**-$66**	**-$97**	**$34**	**$3**

[1] The first two columns are from the 2016 Crop Budgets. The final two columns include budgets with $100 per acre of cost cuts.

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Budgeting for $4.00 corn

COST-RETURN PROJECTION — CENTER-PIVOT-IRRIGATED CORN — NORTH CENTRAL KANSAS

	Yield Level (bu/a)			Your Farm
	195	213	231	
INCOME PER ACRE				
A. Yield per acre	195	213	231	
B. Price per bushel	$ 3.67	$ 3.67	$ 3.67	
C. Net government payment	$	$	$	
D. Indemnity payments	$	$	$	
E. Miscellaneous income	$	$	$	
F. Returns/acre ((A × B) + C + D + E)	$ 715.65	$ 781.71	$ 847.77	
COSTS PER ACRE				
1. Seed	$ 118.80	$ 118.80	$ 118.80	
2. Herbicide	36.96	36.96	36.96	
3. Insecticide / Fungicide				
4. Fertilizer and Lime	173.45	191.18	207.82	
5. Crop Consulting				
6. Crop Insurance*	15.86	17.43	19.00	
7. Drying	25.35	27.69	30.03	
8. Miscellaneous	10.00	10.00	10.00	
9. Custom Hire / Machinery Expense	157.62	165.72	173.82	
10. Non-machinery Labor	18.00	18.00	18.00	
11. Irrigation				
a. Labor	7.50	7.50	7.50	
b. Fuel and Oil	34.80	40.60	46.40	
c. Repairs and Maintenance	3.96	4.62	5.28	
d. Depreciation on Equipment and Well	45.48	45.48	45.48	
e. Interest on Equipment and Well	37.08	37.08	37.08	
12. Land Charge / Rent	138.00	195.00	252.00	
G. SUB TOTAL	$ 822.86	$ 916.06	$ 1,008.17	
13. Interest on ½ Nonland Costs	18.75	19.85	20.92	
H. TOTAL COSTS	$ 841.61	$ 935.91	$ 1,029.08	
I. RETURNS OVER COSTS (F - H)	$ -125.96	$ -154.20	$ -181.31	
J. TOTAL COSTS/BUSHEL (H ÷ A)	$ 4.32	$ 4.39	$ 4.45	
K. RETURN TO ANNUAL COST (I ÷ 13) ÷ G	-13.03%	-14.67%	-15.91%	

*Reflects expected net premium paid.

COST-RETURN PROJECTION — CENTER-PIVOT-IRRIGATED CORN — SOUTHWEST KANSAS

	Yield Level (bu/a)			Your Farm
	170	210	250	
INCOME PER ACRE				
A. Yield per acre	170	210	250	
B. Price per bushel	$ 4.25	$ 4.25	$ 4.25	
C. Net government payment	$	$	$	
D. Indemnity payments	$	$	$	
E. Miscellaneous income	$	$	$	
F. Returns/acre ((A × B) + C + D + E)	$ 722.50	$ 892.50	$ 1,062.50	
COSTS PER ACRE				
1. Seed	$ 102.96	$ 126.72	$ 142.56	
2. Herbicide	51.00	51.00	51.00	
3. Insecticide / Fungicide	16.54	19.07	19.07	
4. Fertilizer and Lime	117.52	144.96	172.40	
5. Crop Consulting	6.50	6.50	6.50	
6. Crop Insurance*	13.68	20.23	26.78	
7. Drying	22.10	27.30	32.50	
8. Miscellaneous	10.00	10.00	10.00	
9. Custom Hire / Machinery Expense	149.39	168.13	186.13	
10. Non-machinery Labor	18.00	18.00	18.00	
11. Irrigation				
a. Labor	7.50	7.50	7.50	
b. Fuel and Oil	63.12	94.68	126.24	
c. Repairs and Maintenance	3.96	5.94	7.92	
d. Depreciation on Equipment and Well	64.26	64.26	64.26	
e. Interest on Equipment and Well	48.36	48.36	48.36	
12. Land Charge / Rent	60.00	95.00	130.00	
G. SUB TOTAL	$ 754.90	$ 907.66	$ 1,049.23	
13. Interest on ½ Nonland Costs	16.21	21.86	25.16	
H. TOTAL COSTS	$ 771.10	$ 929.52	$ 1,074.38	
I. RETURNS OVER COSTS (F - H)	$ -50.60	$ -37.02	$ -11.88	
J. TOTAL COSTS/BUSHEL (H ÷ A)	$ 4.55	$ 4.43	$ 4.30	
K. RETURN TO ANNUAL COST (I ÷ 13) ÷ G	-4.29%	-1.67%	1.27%	

*Reflects expected net premium paid.

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What is working capital?

Working Capital =

Current Assets – Current Liabilities

To make it scale neutral, it's best examined as a ratio

Working Capital/Gross Revenue

Today's Scenario

- 3,600 acres corn/soybean operation
- Cash rent 1,800 acres at $175/acre average
- Purchased 100 acres at $2,400/acre in 2012
  - 50% financed with debt
- Total Assets = $2.5 million
- Total Liabilities = $0.5 million
- Taxable Income in 2014 = $50,000
- Recently updated machinery lineup

Additional Information

- Debt to Asset Ratio = 0.2
- Working Capital = $750,000
- Working Capital to Gross Revenue = 0.7

- Anticipate losing $100/acre this year
  - $360,000
- Burn rate = 2.08 years

Wait! How Do I Calculate my Burn Rate?

Working Capital = Current Assets – Current Liabilities

Burn Rate = Working Capital/Net Income Loss

Example: Working Capital = $500,000
& Net Income Loss = $200,000

Burn Rate = $500,000/$200,000 = 2.5 years

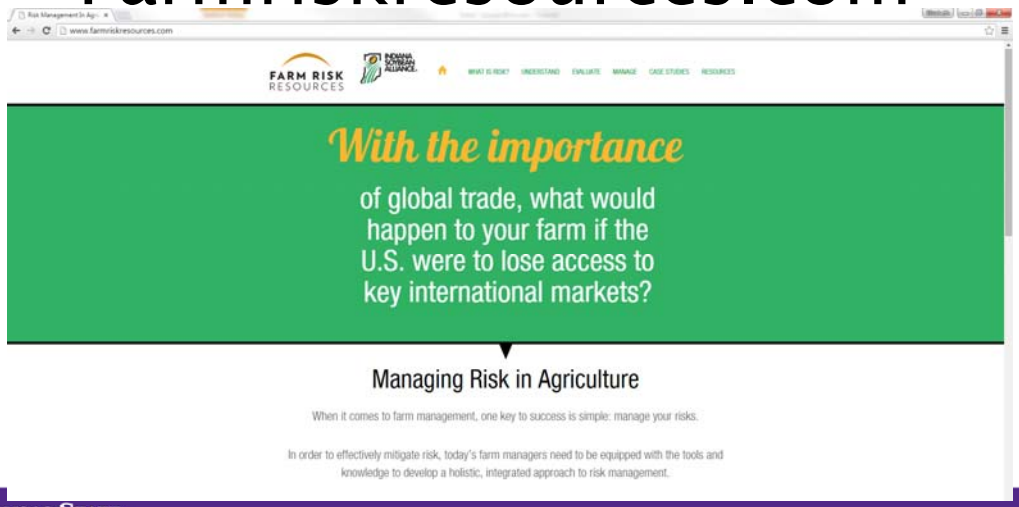
Why should I worry about "burn rate"?

- Working capital is a buffer to absorb short-run losses
- Burn rate helps us visualize how much "buffer capacity" we have…
- Burn rate tells us how long we can continue at our current pace before our working capital is exhausted
- Increasing working capital buys time to make improvements

How can I learn more?

- Farmriskresources.com
  - Integrated Risk Management Initiative
    - Advance the use of sound risk management
    - Assist farmers in identifying and managing risks on their businesses
    - Create and deliver education experiences
    - Resources include risk assessments, scenario analysis, potential loss exposure, risk perception, and contingency planning
    - Examples and illustrations demonstration how various risks impact farms
    - How tools can be used to manage risks
  - Key: Producers will be able to *assess and manage risks and implement* risk management plans

Farmriskresources.com



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Managing Relationship Risks: Huffman & Hawbaker Farms

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The Farm

- Acreage – 3100 Total
  - 2650 corn and soybeans
  - 450 specialty vegetable crops
    - (tomatoes and peppers primarily)
  - Lease 85% of land
- Livestock – 3050 pig spaces
  - Contract production
- Workforce – 4 family members and 4 full time employees

The Family

- Levi – General Manager
- Norma – Co-General Manager and Bookkeeper
- Aaron – Grain and Livestock Manager
- Jim – Vegetable Crop Manager

The Relationships

- Buyers
  - Grain – Andersons for both cash and futures
  - Hogs – pig space contract with Signature Farms
  - Tomatoes – Red Gold and two salsa companies
- Suppliers
  - Loyal to machinery and agronomic suppliers
- Landlords
  - 17 landowners (many long term)
  - 5 formal contracts

The Relationships (cont.)

- Lenders
  - Switched 10 years ago
  - New lender understand specialty crops
- Family/Employees
  - 4 family members with explicit responsibilities
  - 4 full time employees
  - Professional migrant workers – up to 120

For more information, please contact me at
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