The background features a dark blue and purple gradient with a faint, glowing globe. Overlaid on the globe are various faint, light-colored lines and shapes, including circles, squares, and complex geometric patterns, suggesting a technical or architectural drawing. The overall aesthetic is modern and professional.

# **“Opportunity” Accounting**

# The “Fat Farm”

- Good markets mask inefficiencies
- Fat or muscle?
  - Rents?
  - Inputs?
  - Equipment?
  - Labor?
  - Overhead?



# Strategies

- Mimic other farmers' cost-cutting strategies?
- When the only game in town is cost control, your options are rarely quick, simple and not potentially-counter-productive
- Challenges
  - Your business structure and resources are as unique, complex and variable as your soils
  - Reducing direct input costs by lowering rates or quality doesn't necessarily result in corresponding direct savings to bottom line
  - Indirect costs are hard to trace and accurately allocate between farms, crops and activities.

# Opportunity Cost

- Economic concept for evaluating the trade-offs between alternatives
- Easy if tied to production coefficients
- Much murkier when evaluating changes that affect indirect and/or fixed costs
  - Equipment turnover
  - Acreage changes

# How "Opportunity Accounting" Transformed Agriculture

- From diversified to specialized
- Not by a top-down, corporate edict
- Process of trial-and-error experiments
- Often counter-intuitive strategies
- Economic opportunity costs of adopting (or not adopting) a new practice are unknown
  - Not enough experiments have been run to predict the response
  - Results are too dependent on the unique variables within an operation

# Review (continued)

- Direct Costs
  - Can be traced to the cost object in an economically feasible way
- Indirect Costs
  - Cannot be traced to the cost object in an economically feasible way

# Review (continued)

- Variable Costs
  - Change in total in proportion to changes in the related level of activity or volume
- Fixed Costs
  - Remains unchanged in total for a given time period despite wide changes in the related level of total activity or volume

# Review (continued)

- Variable or fixed based on:
  - Cost object
  - Time period
- Examples:
  - Labor
    - Variable to project
    - Fixed to the center (in given time period)
  - Licenses
    - Variable to company
    - Fixed to the vehicle (in given time period)

# Cost Behavior

	Direct Costs	Indirect Costs
Variable Costs	<b>Cost Object: Crop</b> <ul style="list-style-type: none"><li>• Seed</li><li>• Custom hire</li><li>• Day labor</li><li>• Crop share rent</li></ul>	<b>Cost Object: Crop</b> <ul style="list-style-type: none"><li>• Fuel</li><li>• Hourly machine rent</li><li>• Farm labor</li><li>• Flex rent</li></ul>
Fixed Costs	<b>Cost Object: Crop</b> <ul style="list-style-type: none"><li>• Cash rent</li><li>• Crop insurance</li><li>• Real estate taxes?</li></ul>	<b>Cost Object: Crop</b> <ul style="list-style-type: none"><li>• Depreciation</li><li>• Repairs</li><li>• Liability insurance</li></ul>

# Limitations of Spreadsheets

- Many interrelated “moving parts”
- Changing or reallocating numerators (dollars)
- Changing or reallocating denominators (acres, hours, machinery capacity)
- Resulting in “Whack-A-Mole”
- Biggest limitation: your assumptions

# Strategies

	Direct Costs	Indirect Costs
Variable Costs	<ul style="list-style-type: none"> <li>• Discounts</li> <li>• Product substitution</li> <li>• Reduce rates</li> </ul> <p><b>Short-term savings</b></p>	<ul style="list-style-type: none"> <li>• Cut steps</li> <li>• Services substitution</li> <li>• Contracting</li> </ul> <p><b>Operating efficiency</b></p>
Fixed Costs	<ul style="list-style-type: none"> <li>• Renegotiate rent</li> <li>• Crop insurance options</li> </ul> <p><b>Long-term sustainability</b></p>	<ul style="list-style-type: none"> <li>• Spread overhead               <ul style="list-style-type: none"> <li>- Expand production</li> <li>- Profit centers</li> </ul> </li> <li>• Outsourcing</li> <li>• “Variablize”</li> </ul> <p><b>Long-term efficiency</b></p> 

# Cost Reduction Strategies

- **Direct variable costs**
  - Volume purchasing, off-label or generic products, reduced application rates, switching to less cost-intensive crops
  - Every other sharp manager is likely following this same practice

# Cost Reduction Strategies

- **Indirect variable costs**
  - Increase operating efficiency either by lowering outlays for these indirect costs, increasing production
  - Most of the opportunities for reducing indirect variable costs are long-term (switching to contract labor or renegotiating flex rents)

# Cost Reduction Strategies

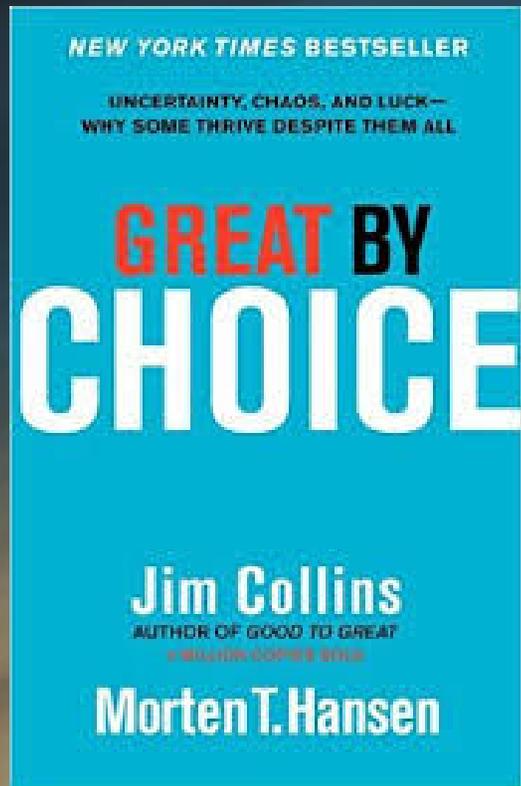
- **Direct fixed costs**
  - Cash rents, crop insurance and real estate taxes
  - Harder to control or adjust

# Cost Reduction Strategies

- **Indirect fixed costs**
  - Spread fixed costs over more output
  - Turn excess capacity into a profit center
  - Outsource services
  - “Variabalize” fixed machinery costs

# Machinery Cost Opportunity

- **LHHP/Russell benchmarks**
- **Awareness of aggregate overhead, labor and machinery costs is a start**
  - Not the same as **managing those costs**
  - Nor evaluating activities in which you are **efficient** (and should expand to drive down costs) and in which ones you are **inefficient** (and should outsource)



# Empirical Creativity

- Punctured myth that innovation is the key to success
- A threshold you have to maintain to be a contender in your industry
- Once you're above that threshold, "innovation doesn't matter much."

# Empirical Creativity

- Apply discipline by “firing bullets, then calibrated cannonballs”
- “Bullets” are empirical tests aimed at learning what works and which meet three criteria:
  - Low cost
  - Low risk
  - Low distraction



# 10X Companies

- Are usually **less innovative** than their comparison cases
- **Can't predict the future** any better than their competition
- Are successful at **scaling innovation**
- Their **bullets often miss**, but when pockets of success appear they home in with more bullets
- When possible rely on **other companies' bullets** to build their empirical knowledge base (Southwest Airlines)

# How Does EC Apply to Opportunity Accounting in Ag?

- **Early adopters** achieve the best returns by incorporating new innovations that actually work (but not necessarily pay).
- **Threshold level** (the minimum needed to compete) of production innovation is constantly rising
- **Economic returns** from production innovations are much **more difficult to empirically test**

# **How Does EC Apply to Opportunity Accounting in Ag?**

- Empirical testing is slowed by crop and livestock production cycles and affected by outside factors such as weather and disease
- Through precision farming technologies growers can fire “bullets” that are low cost, low risk and low distraction in evaluating "raw" yields and production practices

# How Does EC Apply to Opportunity Accounting in Ag?

- Having the confidence to fire calibrated “cannonballs” requires a **deep empirical foundation and knowledge** of the **unique costs and margins** within the enterprise
- Most operations lack the **"accounting bullets"** to calibrate the direction of their business.

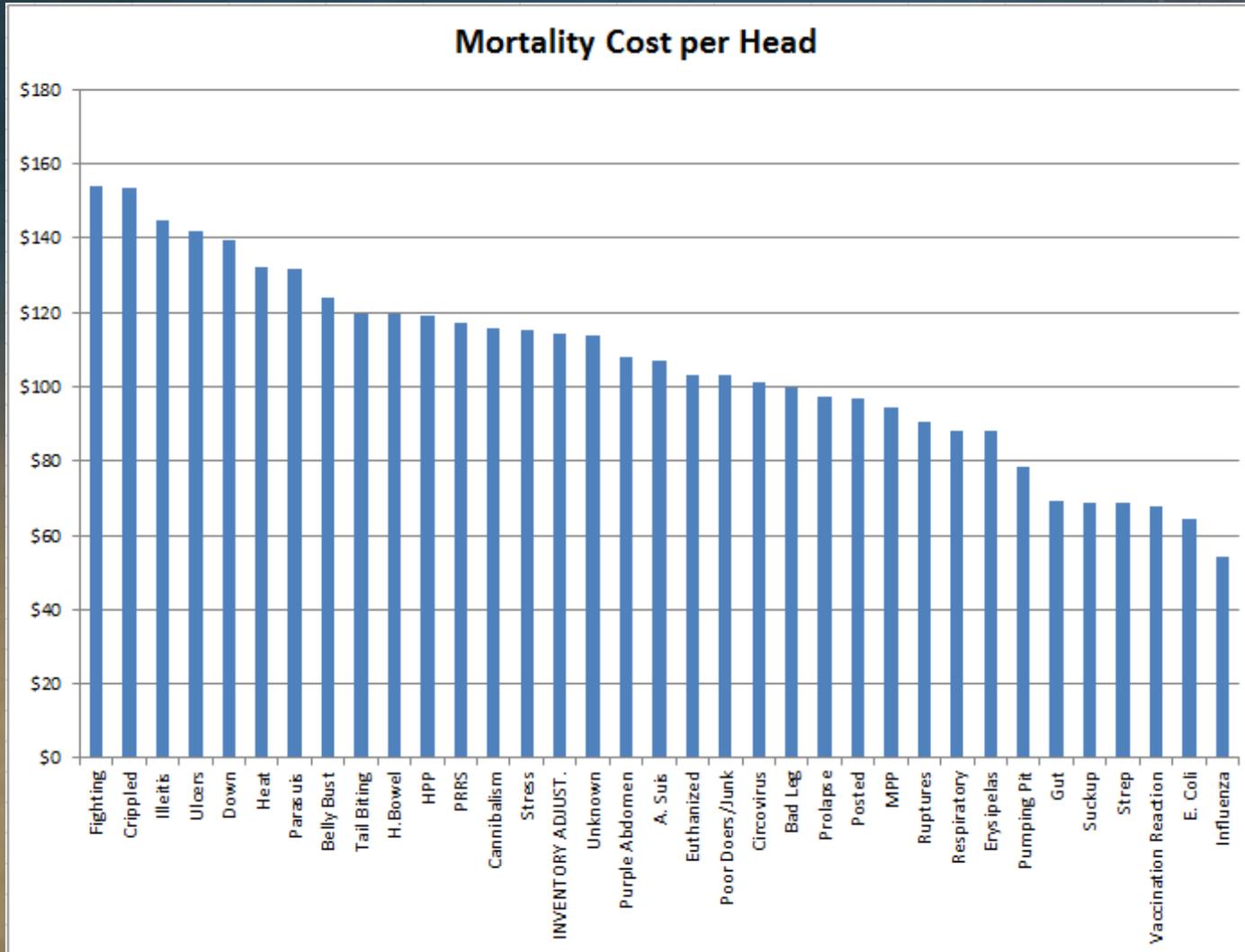
# Opportunity Processes

- Standardized KPIs
- Benchmark and rank
- Lowest common denominator
- Reverse engineer
- Statistical analysis
- Market value
- Model

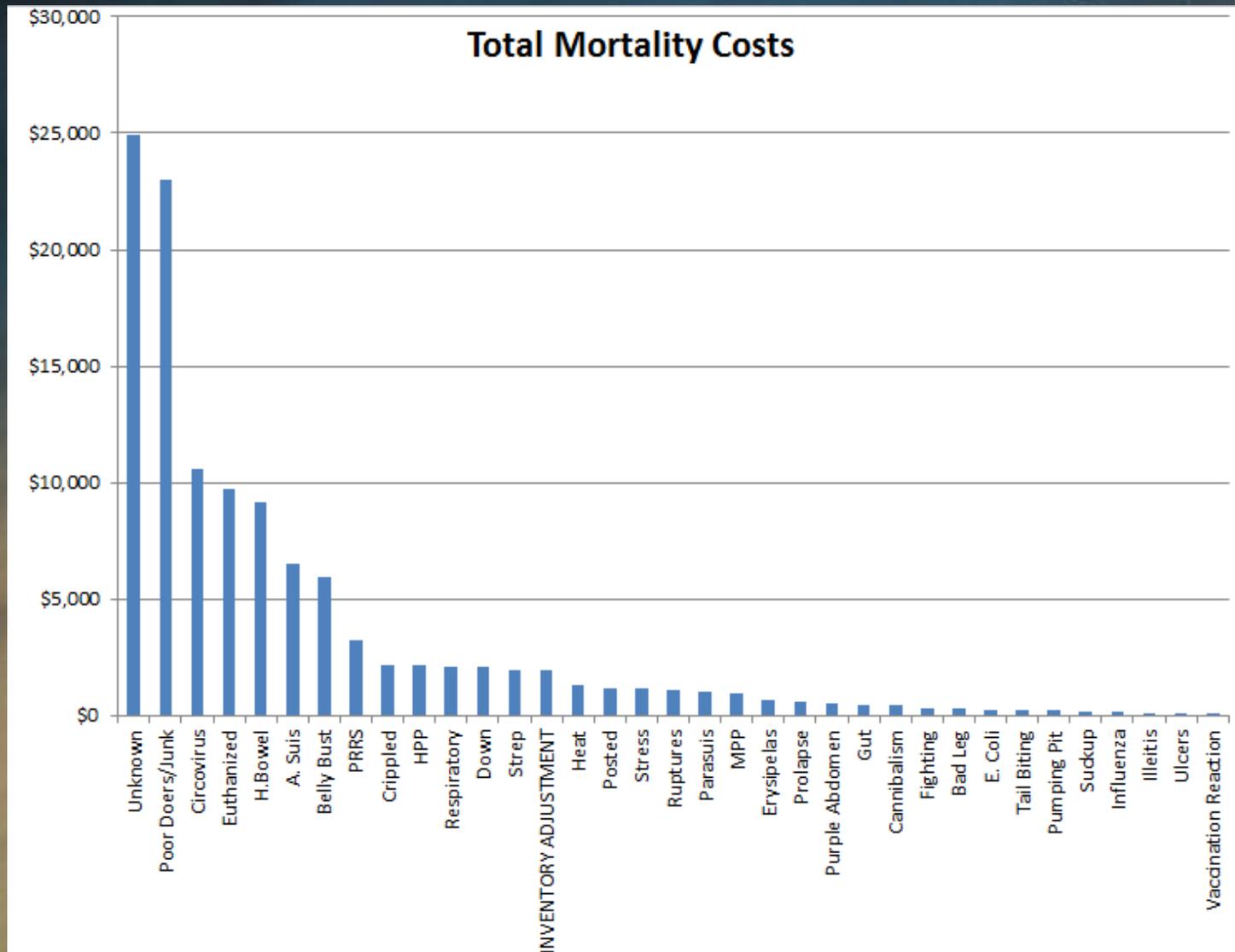
# Standardize

- Roll up / roll down
  - Owned, crop share
  - Contract barns, owned barns
  - Internal, external services
- Budget prices
- Use Management and Market Value levels

# Benchmark and rank



# Benchmark and rank



# Lowest Common Denominator

(BFH16) Crop Cost Analysis - Production										
	SHARE	151_3	151_16	151_1	151_26	151_15	151_10	151_12	151_14	Totals
		/EAST OF N.B.	AST RANDALL	HOME NORTH	i Corn/KINKAID	RTH RANDALL	i Corn/THE 120	IF MAID'S RUN	EST RANDALL	
<b>GROSS REVENUE</b>										
Internal Transfers	100.00	792.40	707.86	706.65	542.58	772.03	805.85	810.74	752.16	746.41
Total GROSS REVENUE		792.40	707.86	706.65	542.58	772.03	805.85	810.74	752.16	746.41
Gross Revenue		792.40	707.86	706.65	542.58	772.03	805.85	810.74	752.16	746.41
<b>DIRECT EXPENSE</b>										
Fertilizer	100.00	165.75	158.15	101.37	69.73	221.28	132.81	250.33	166.93	158.75
Fungicides	100.00	34.21	11.09	35.48	0.00	11.46	10.86	10.94	11.00	13.21
Herbicides	100.00	24.73	24.71	25.13	25.16	25.24	24.43	23.67	24.42	25.40
Insecticides	100.00	10.76	10.75	10.96	10.91	10.96	10.63	10.30	10.64	10.60
Nematicides/Other	100.00	10.76	8.02	11.00	7.20	8.17	7.93	7.72	7.95	8.19
Seed	100.00	128.98	117.91	148.63	93.57	99.53	142.61	117.68	144.65	129.23
Machine Hire	100.00	0.00	0.00	0.00	0.00	0.00	76.35	0.00	0.00	19.17
Custom Applications	100.00	56.09	37.53	55.35	20.48	41.76	34.61	43.77	42.53	38.30
Total DIRECT EXPENSE		431.28	368.15	387.92	227.04	418.40	440.22	464.40	408.12	402.85
<b>SERVICE CENTERS</b>										
Shop & Maintenance	100.00	63.23	57.48	57.48	63.22	51.73	63.22	51.73	51.73	55.84
Land	100.00	58.25	58.25	58.25	58.25	58.25	58.25	58.25	58.25	58.25
Crop Tillage	100.00	28.44	8.82	16.68	8.82	27.93	27.93	27.93	27.93	22.14
Crop Planting	100.00	41.61	41.91	41.61	37.32	43.00	42.49	42.08	41.47	41.77
Crop Harvest	100.00	53.37	53.74	53.37	47.86	55.14	54.49	53.96	53.19	53.56
Drying	100.00	31.29	34.56	29.11	22.37	34.83	33.03	32.70	31.95	32.71
General Corn or Beans	100.00	0.15	0.14	0.14	0.15	0.12	0.15	0.12	0.12	0.13
General Crop	100.00	11.54	10.49	10.49	11.54	9.45	11.54	9.45	9.44	10.20
Agronomy	100.00	19.98	18.16	18.16	19.98	16.34	19.97	16.34	16.34	17.64
Storage	100.00	27.47	30.35	25.56	19.64	30.58	29.00	28.71	28.05	28.72
Total SERVICE CENTERS		335.32	313.89	310.84	289.15	327.36	340.08	321.26	318.47	320.96
<b>RISK MANAGEMENT</b>										
Crop Insurance Direct	100.00	25.79	25.82	26.30	26.39	26.27	25.54	25.08	25.56	25.64
Total RISK MANAGEMENT		25.79	25.82	26.30	26.39	26.27	25.54	25.08	25.56	25.64
<b>PRODUCTION PROFIT</b>										
		0.00	0.00	-18.41	0.00	0.00	0.00	0.00	0.00	-3.04
<b>COST OF PRODUCTION</b>										
		792.39	707.86	725.06	542.58	772.03	805.85	810.74	752.16	749.45

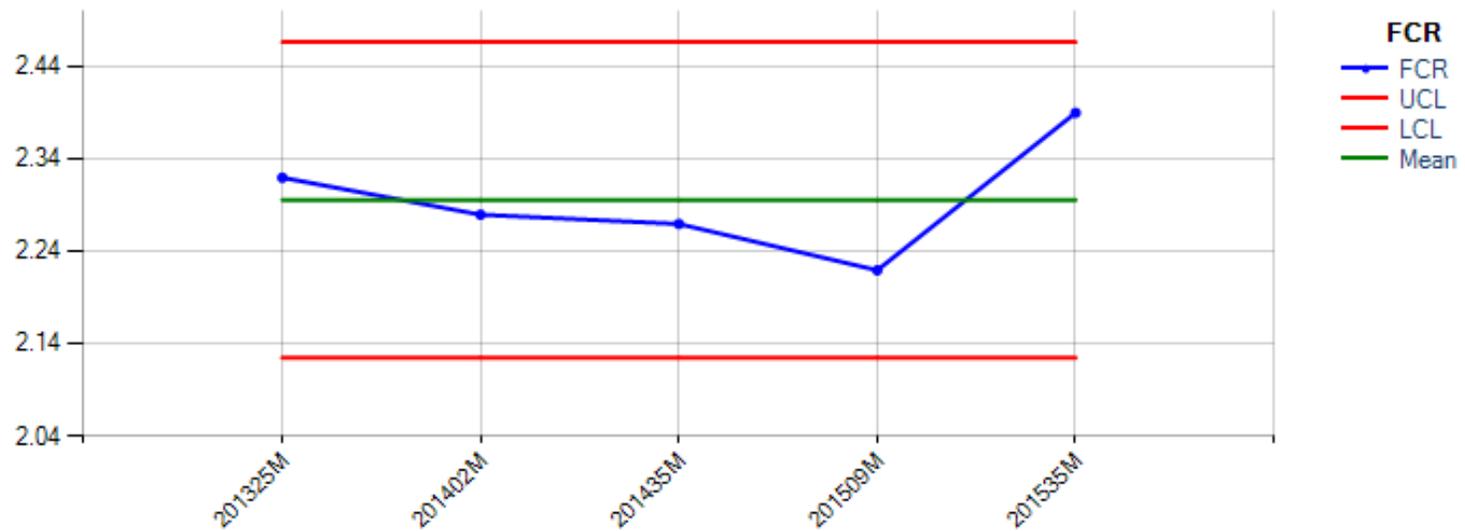
# Reverse Engineer

No.	Description	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total	Labor	Fuel	Machine
330	Custom Work	0	0	0	11,736.59	11,736.59			
CRPHR	CORN HARVESTING	0	0	0	-11,736.59	-11,736.59			
	Dollars Allocated From	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total			
CRPHR	CORN HARVESTING	0	0	0	-11,736.59	-11,736.59			
50		2,766.82	1,111.04	895.65	1,439.91	6,213.42	1,044.68	1,044.68	
95		4,904.11	3,955.27	3,888.19	3,641.68	16,389.25	2,755.57	2,755.57	
G1	Diesel -Home Dyed	200.51	164.11	436.81	538.11	1,339.54	225.22	225.22	
G8	Diesel Portable Dyed	505.39	747.56	583.26	2,716.02	4,552.23	765.38	765.38	
G9	Diesel Randalls Dyed	0	0	0	1,067.53	1,067.53	179.49	179.49	
T125	07 Toyota Tundra	74.79	3.44	51.89	12.42	142.54	23.97		
E0001	JM Grain Cart	336.78	336.78	336.78	2,487.23	3,497.57	588.06		588.06
E0043	122ORD Geringhoff	5,945.79	2,700.00	2,800.00	-4,240.00	7,205.79	1,211.53		1,211.53
E0044	JD 9670 STS Combine	3,274.35	6,720.01	8,139.68	3,948.73	22,082.77	3,712.84		3,712.84
E0047	JOHN DEERE 8360RT TR	4,403.21	4,403.21	4,631.39	-6,122.80	7,315.01	1,229.89		1,229.89
	Totals	22,411.75	20,141.42	21,763.65	-6,247.76	58,069.06	11,736.63		
	Standard Costs \$	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total			
151	15 Corn	0	0	24,597.41	33,471.62	58,069.03			
	Total Standard Costs	0	0	24,597.41	33,471.62	58,069.03			
	Variance	-22,411.75	-20,141.42	2,833.76	39,719.38	-0.03			

# Statistical Analysis

CV = 0.024

## SPC Analysis of FCR



# Market Value

(BFH16) Smart Feeder Planning Recap - Scenario - 4 2016 V4 Current Mark										
	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	
TRYPTOPHAN	718.82	908.06	1,341.07	1,904.12	1,490.35	1,305.79	1,164.14	927.79	1,401.03	
ALIMET LQD BULK	696.50	1,159.20	1,444.38	825.15	579.49	1,561.29	1,600.62	1,175.15	1,171.15	
CALCIUM	216.10	306.79	412.06	520.80	415.13	398.01	364.92	304.79	410.83	
CHOLINE CHLORIDE	12.27	39.99	27.16	7.68	10.33	18.73	19.48	32.91	19.19	
LOL GF Vit Premix	2,343.98	3,353.34	4,486.38	5,279.67	4,210.59	4,452.31	4,179.16	3,366.07	4,355.46	
LOL/P Swine TM Prem	696.15	952.46	1,300.83	1,543.06	1,243.80	1,323.63	1,245.50	959.69	1,273.91	
LYSINE	4,033.62	5,440.92	7,672.20	9,685.86	7,761.89	7,757.38	7,102.03	5,542.01	7,638.98	
MonoCal Bulk (21%)	109.80	357.91	243.11	68.78	92.45	167.65	174.35	294.62	171.79	
NEWTR ASTRART	307.34	862.99	588.06	139.48	286.31	391.93	524.01	688.92	380.71	
Paylean	558.04	0.00	2,370.70	0.00	2,625.42	8,557.75	6,038.47	1,418.84	1,184.23	
Ronozyme1200	604.89	772.41	1,122.98	1,438.47	1,223.62	1,247.41	1,102.98	799.42	1,127.93	
TYLAN 40	825.85	1,184.21	1,756.42	2,613.77	2,538.53	1,600.67	1,232.88	832.37	2,334.89	
VETO VITALE	253.80	827.28	561.92	158.98	213.70	387.50	402.98	680.98	397.08	
Total Cost of Feed	163,868.38	206,749.90	235,669.95	266,479.39	248,809.06	245,031.45	286,148.86	189,672.84	233,228.81	2,850.00
DTN Sales Price					45.39	45.39	42.39	42.39	45.96	
DTN Corn Price					3.38	3.47	3.47	3.47	3.57	
Recap By Quarter										
Head Sold			5,541.00			11,744.00			7,736.00	
Contract Head			0.00			0.00			0.00	
Contract Value			0.00			0.00			0.00	
% Contracted			0.00			0.00			0.00	
% Sold of Quarter	58.53	2.87	38.60	26.12	26.23	47.65	71.12	8.87	20.01	

# Management Accounting Departures from GAAP

- Total Unit Cost
- Blended market value
- Contribution margin

# Model

(BFH16) User Report: Opportunity Costs

	540	521	520	523	547	522	510	540	521	TOTALS
	201531H	201535M	201537E	201539D	201540W	201543F	201545B	201604H	201607M	
Sales										
Sort Adjust Target	6,357.00	6,963.00	13,926.00	7,002.00	7,131.00	8,634.00	12,648.00	6,201.00	6,999.00	75,861.00
Sort Adjust Actual	5,605.66	8,528.78	21,830.46	10,068.66	10,636.87	10,921.81	12,192.33	6,168.93	9,332.48	95,285.98
SORT OPPORTUNITY	751.34	-1,565.78	-7,904.46	-3,066.66	-3,505.87	-2,287.81	455.67	32.07	-2,333.48	-19,424.98
Substandard Quantity	33	29	84	28	37	44	67	69	32	423
Sub-std Target (2%)	43.04	47.00	94.52	47.24	48.28	58.44	85.66	42.72	47.30	514.20
Actual Sub-Std \$	2,423.57	1,794.80	6,931.24	2,186.71	2,889.17	3,126.97	6,089.40	4,958.94	2,573.09	32,973.89
SUBSTD. OPPORTUNITY	737.29	1,114.03	867.61	1,502.73	881.02	1,026.36	1,696.24	-1,888.65	1,230.30	7,108.00
Actual Weight/Head	286	275	280	280	283	289	283	276	284	282
WT OPPORTUNITY	-1,021.32	9,198.28	9,657.90	5,624.96	2,600.40	-4,643.57	4,144.77	10,399.66	1,119.50	36,016.37
Mortality Trgt (2%)	43.72	47.96	95.88	48.10	48.74	59.72	87.80	44.06	47.86	523.84
Actual Mortality	34	48	68	43	23	64	107	67	28	482
MORT. OPPORTUNITY	-1,059.38	4.02	-2,842.27	-522.57	-2,052.18	475.87	1,844.91	1,926.26	-2,029.50	-4,143.98
Feed										
Actual FCR	2.46	2.40	2.39	2.43	2.47	2.33	2.50	2.44	2.42	2.42
Actual # of Gain	587,094	612,399	1,255,739	629,425	649,095	804,722	1,145,411	552,147	638,335	6,874,367
FCR OPPORTUNITY	3,931.10	12,448.08	16,875.14	2,692.63	13,593.21	9,558.66	32,819.35	4,981.06	6,233.15	158,493.41
Facility Utilization										
Target Capacity	2,200	2,400	4,800	2,400	2,400	2,400	4,200	2,200	2,400	25,400
Target \$/Turn @ 2.2	42,000.00	45,818.18	91,636.36	45,818.18	45,818.18	45,818.18	80,181.82	42,000.00	45,818.18	484,909.09
Target Cost/Head	19.09	19.09	19.09	19.09	19.09	19.09	19.09	19.09	19.09	19.09
Actual Group Size	2,186	2,398	4,794	2,405	2,437	2,986	4,390	2,203	2,393	26,192
Actual Days on Feed	164	161	163	163	165	164	180	173	168	167
Actual Turns/Year	2.23	2.27	2.24	2.24	2.21	2.23	2.03	2.11	2.17	2.19
Actual Cost/Turn	40,565.92	49,892.26	89,768.38	46,995.15	47,687.39	66,111.86	79,874.55	43,098.78	52,121.94	516,116.23
Actual Cost/Head	18.56	20.81	18.73	19.54	19.57	22.14	18.19	19.56	21.78	19.71
CAPACITY OPPORTUNIT'	-1,434.08	4,074.08	-1,867.98	1,176.97	1,869.21	20,293.68	-307.27	1,098.78	6,303.76	31,207.14
TOTAL OPPORTUNITY	-966.77	12,820.61	753.07	5,238.00	1,844.76	14,388.66	5,989.41	9,641.86	6,320.08	54,906.53

# Parting Thoughts

“All models are wrong. Some models are useful.”

Jim Collins

How the Mighty Fall

# Parting Thoughts

“What looks like an overnight success is often a long, empirical process of try, fail, try, fail, try, succeed.”

Great by Choice

# Parting Thoughts

Learn to live sideways in a “what if” world.