

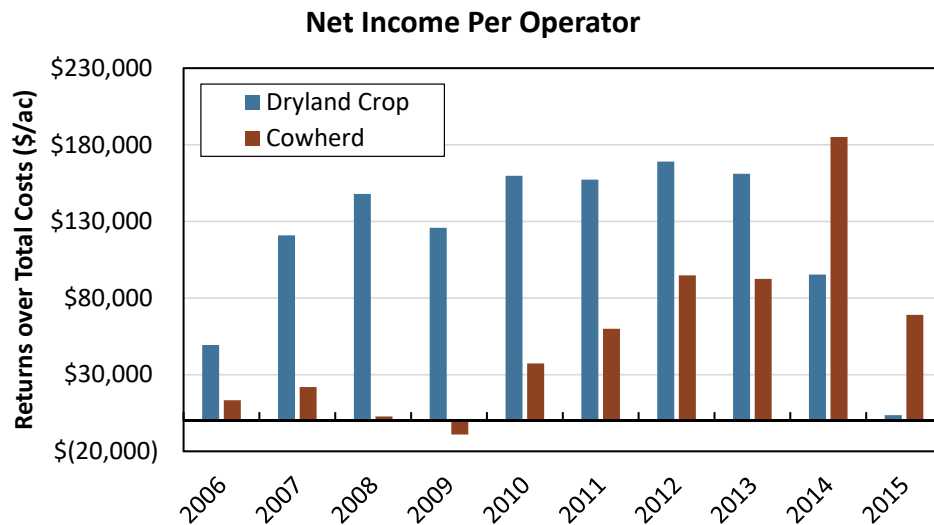


Kansas Farm Economy Update

Mykel Taylor
Kansas State University
January 10, 2017

Land and Leasing

Net Farm and Ranch Income



Land Values

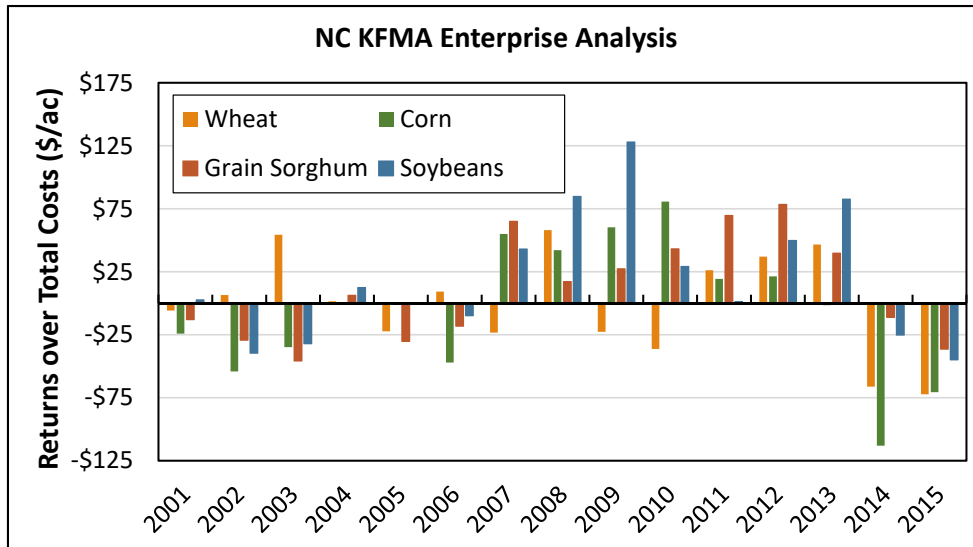
Affected by profitability in ag sector

But land values do not adjust as quickly as profitability to changes in commodity prices

Adjustment period due to

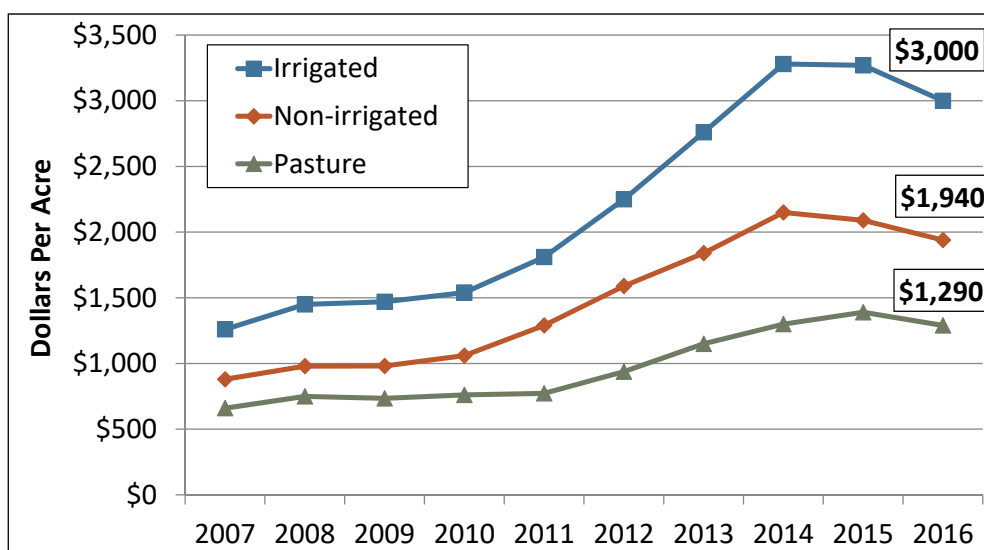
- Long-run reason for buying and holding land
- Expectations of buyers/sellers

Returns to Farming



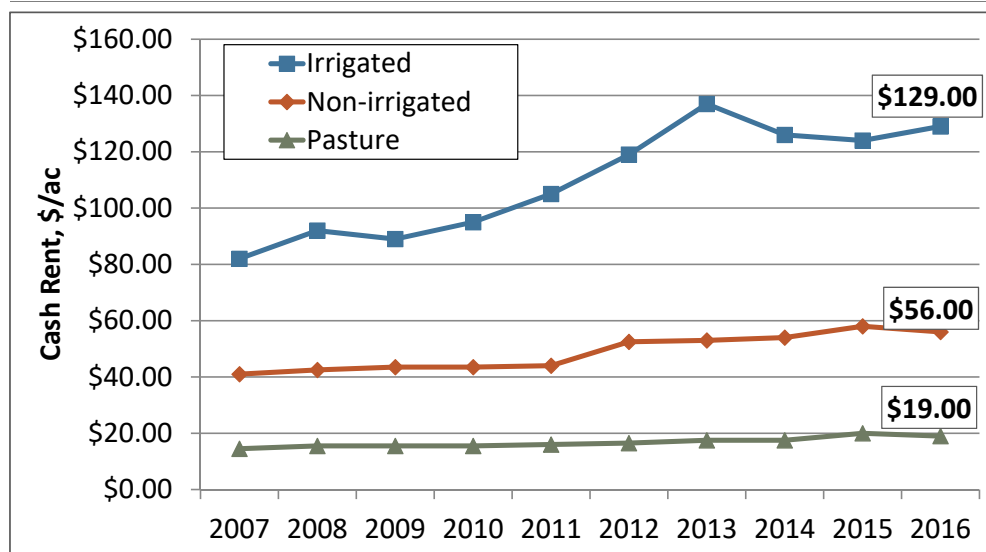
Source: KFMA Enterprise Reports (<http://www.agmanager.info/kfma>)

Kansas Land Values



Source: USDA-NASS

Kansas Rental Rates



Source: USDA-NASS

Rental Rates

Do not change quickly. Why?

- Multi-year leases (3-5 year average) with fixed cash rent
- Negotiating a lower rent is difficult and some landowners dislike volatility in returns
- Landowners may drop tenant rather than take a lower rate

Adjustment in rents will get messy...

Costs of Production

DR. DUSTIN PENDELL & DR. MYKEL TAYLOR

EMAIL: DPENDELL@KSU.EDU

PHONE: 785-532-3525

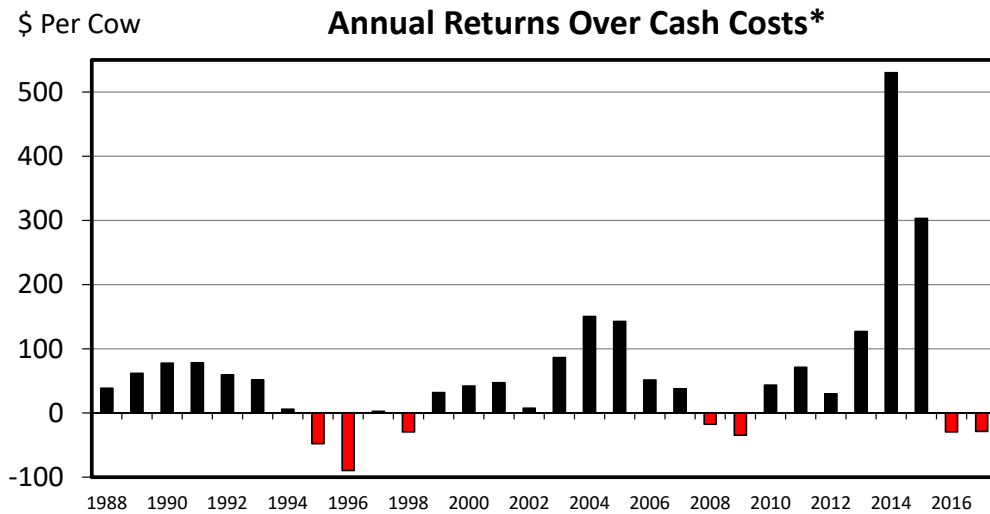
USDA Long-Term Projection

Beef long-term projections		Recent		Next 5 Years					10 Years Out	
Item	Units	2015	2016	2017	2018	2019	2020	2021	2022	2026
Prices:										
Beef cattle, farm	\$/cwt	147.92	119.47	105.87	117.57	118.15	114.88	115.69	110.80	104.16
Calves, farm	\$/cwt	263.00	171.85	165.24	172.03	169.23	156.15	152.81	145.33	138.81
Steers, 5-area	\$/cwt	148.12	119.94	106.25	117.99	118.57	115.28	116.10	111.19	104.52
Feeder steers, Oklahoma City	\$/cwt	202.92	144.25	139.00	144.71	142.36	131.36	128.54	122.25	116.77
Cattle inventory	1,000 head	89,143	91,988	93,300	93,700	94,200	94,600	94,900	95,100	95,450
Beef cow inventory	1,000 head	29,302	30,331	30,944	30,616	31,121	31,328	31,785	31,668	31,246
Total cow inventory	1,000 head	38,609	39,646	40,300	40,000	40,532	40,755	41,222	41,108	40,645

Note: Cwt = hundredweight.

Source: <http://www.usda.gov/oce/commodity/projections/>; Released November 29, 2016

Estimated Cow-Calf Returns



* Includes pasture rent

Data Source: USDA-NASS, Livestock Marketing Information Center

Budgeting

What are the cost and return categories that separate the top third profitable farms from the bottom third?

Beef Cow-Calf Enterprise Returns over Variable Costs, 2011-2015

	Profit Category		
	High 1/3 Head / \$	Mid 1/3 Head / \$	Low 1/3 Head / \$
Number of Farms	24	24	24
Labor allocated to livestock, %	37.1	34.4	29.6
Number of Cows in Herd	162	138	121
Number of Calves Sold	149	128	108
Calves Sold per Cow in Herd	0.922	0.925	0.897
Weight of Calves Sold	643	608	603
Calf Sales Price / Cwt	\$170.29	\$161.11	\$170.25
Gross Income	\$1,091.59	\$968.82	\$956.59
Feed	\$314.26	\$346.39	\$447.26
Pasture	\$158.44	\$172.69	\$161.85
Interest	\$17.50	\$12.44	\$33.94
Vet Medicine / Drugs	\$27.16	\$27.07	\$30.97
Livestock Marketing / Breeding	\$14.56	\$21.55	\$21.35
Machinery	\$83.98	\$96.34	\$108.86
Labor	\$15.67	\$15.15	\$36.10
Other	\$44.20	\$42.27	\$59.49
Total Variable Cost	\$675.78	\$733.90	\$899.82
Return over Variable Costs	\$415.81	\$234.92	\$56.77

Beef Cow-Calf Enterprise Returns over Variable Costs, 2011-2015

Budgeting

Income

- Price does not differ much
- Weight is higher

Herd size is larger

- More efficient labor and capital use

	Profit Category		
	High 1/3 Head / \$	Mid 1/3 Head / \$	Low 1/3 Head / \$
Number of Farms	24	24	24
Labor allocated to livestock, %	37.1	34.4	29.6
Number of Cows in Herd	162	138	121
Number of Calves Sold	149	128	108
Calves Sold per Cow in Herd	0.922	0.925	0.897
Weight of Calves Sold	643	608	603
Calf Sales Price / Cwt	\$170.29	\$161.11	\$170.25
Gross Income	\$1,091.59	\$968.82	\$956.59
Feed	\$314.26	\$346.39	\$447.26
Pasture	\$158.44	\$172.69	\$161.85
Interest	\$17.50	\$12.44	\$33.94
Vet Medicine / Drugs	\$27.16	\$27.07	\$30.97
Livestock Marketing / Breeding	\$14.56	\$21.55	\$21.35
Machinery	\$83.98	\$96.34	\$108.86
Labor	\$15.67	\$15.15	\$36.10
Other	\$44.20	\$42.27	\$59.49
Total Variable Cost	\$675.78	\$733.90	\$899.82
Return over Variable Costs	\$415.81	\$234.92	\$56.77

Beef Cow-Calf Enterprise Returns over Variable Costs, 2011-2015

Budgeting

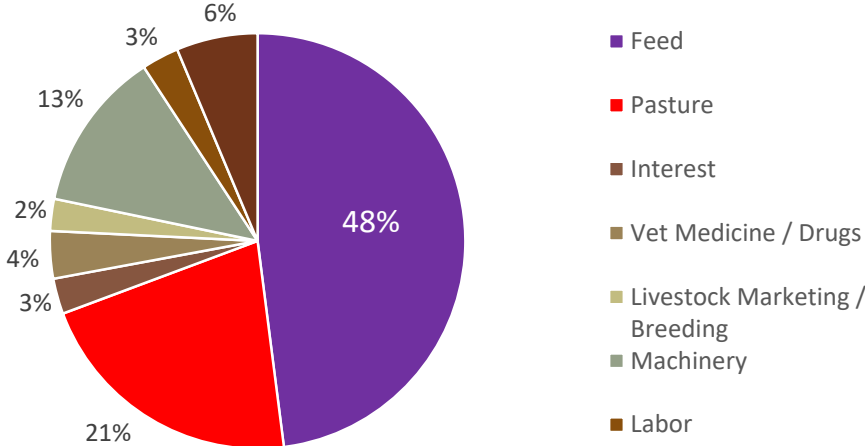
37% of difference is due to gross income

What accounts for the remaining 63% difference between the high and low profit operations?

	Profit Category		
	High 1/3 Head / \$	Mid 1/3 Head / \$	Low 1/3 Head / \$
Number of Farms	24	24	24
Labor allocated to livestock, %	37.1	34.4	29.6
Number of Cows in Herd	162	138	121
Number of Calves Sold	149	128	108
Calves Sold per Cow in Herd	0.922	0.925	0.897
Weight of Calves Sold	643	608	603
Calf Sales Price / Cwt	\$170.29	\$161.11	\$170.25
Gross Income	\$1,091.59	\$968.82	\$956.59
Feed	\$314.26	\$346.39	\$447.26
Pasture	\$158.44	\$172.69	\$161.85
Interest	\$17.50	\$12.44	\$33.94
Vet Medicine / Drugs	\$27.16	\$27.07	\$30.97
Livestock Marketing / Breeding	\$14.56	\$21.55	\$21.35
Machinery	\$83.98	\$96.34	\$108.86
Labor	\$15.67	\$15.15	\$36.10
Other	\$44.20	\$42.27	\$59.49
Total Variable Cost	\$675.78	\$733.90	\$899.82
Return over Variable Costs	\$415.81	\$234.92	\$56.77

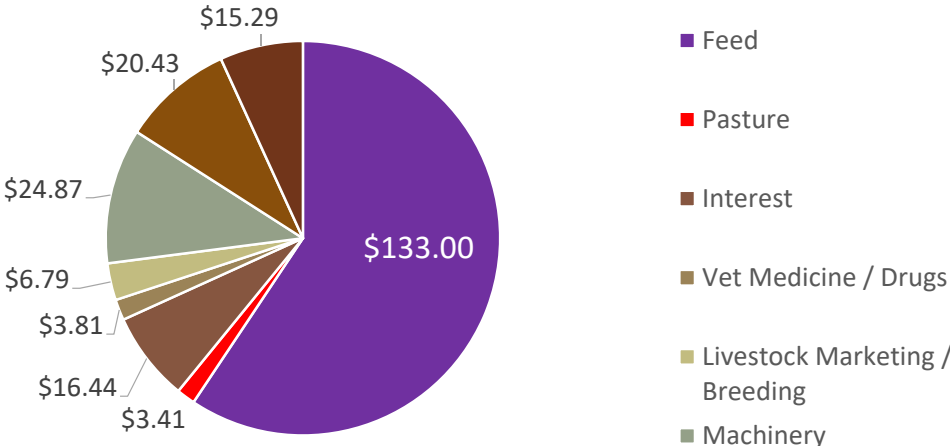
KFMA Cow-Calf Enterprise

Variable Expenses



KFMA Cow-Calf Enterprise

Difference Between Top and Bottom Third Profitability



Ways to Reduce Feed Costs

1. Enhance pasture productivity
2. Extend grazing season
3. Analyze forages
4. Incorporate alternative feeds
5. Critically evaluate "cure-alls"
6. Utilize a ration balancing program
7. Split cattle into age/size appropriate groups
8. Minimize waste
9. Efficient cattle through genetics
10. Improve record keeping to lower costs

Source: Gunn and Schwab (2016), Iowa State University

Crop Residue

Advantages

- Feed savings/additional weight gain
- Reduced wear-and-tear of facilities and equipment
- Additional income

Disadvantages

- Remove nutrients and organic matter
- Requires fencing and water source
- Lack of shelter
- Soil compaction?



Crop Residue

River Valley and Post Rock Extension Districts 2015 Leasing Survey

- Crop Residue: \$9.00 per acre (Range \$3-\$25)
- Cover Crops: \$12.50 per acre (Range \$10-\$15)

University of Nebraska 2015 Survey

- Corn Stalks: \$11-\$15 per acre

Iowa State University 2016 Cash Rental Rates Survey

- Corn Stalks: \$12 per acre (Range \$8-\$19)
-

Cover Crops

Advantages

- Improve soil and water quality
- Erosion control
- Winter feed source

Disadvantages

- Increased costs, management & labor
- Requires fencing and water source
- Insufficient yields: grazing is a net loss

Cover Crop Cost-Return Budget

- Available on www.AgManager.info



Cover Crops

Profitability depends on cover crop yields

- Head per acre: 1, 1.5, 2.1

Assumed rental charge

- \$0.75/hd/day
- 75 grazing days

Good potential in SE KS

Cover Crop Cost-Return Budget

Cereal Rye & Turnip in Southeastern Kansas

Department of Agricultural Economics - www.AgManager.info

Robin Reid & Mykel Taylor
Agricultural Economics

Doug Shoup
Agronomy Specialist, SE

	Yield Level, tons/ac		
	1.00	1.75	2.50
INCOME PER ACRE			
A. Yield per acre			
B. Net Grazing Income	\$56.52	\$84.26	\$120.37
D. Government Payment	\$0.00	\$0.00	\$0.00
E. Miscellaneous income	\$0.00	\$0.00	\$0.00
F. Returns/acre (B+D+E)	\$56.52	\$84.26	\$120.37
COSTS PER ACRE			
1. Seed	\$33.00	\$33.00	\$33.00
2. Herbicide	0.00	0.00	0.00
3. Insecticide / Fungicide	0.00	0.00	0.00
4. Fertilizer	0.00	22.40	44.80
8. Miscellaneous	0.00	0.00	0.00
9. Machinery Expense	19.77	25.96	25.96
10. Non-machinery Labor	7.50	7.50	7.50
G. SUB TOTAL	\$60.27	\$88.86	\$111.26
13. Interest on 1/2 Nonland Costs	1.51	2.22	2.78
H. TOTAL COSTS	\$61.78	\$91.08	\$114.04
I. RETURNS OVER COSTS (F - H)	(\$5.26)	(\$6.82)	\$6.33
J. TOTAL COSTS/TON (H/A)	\$61.78	\$52.05	\$45.62
K. RETURN TO ANNUAL COST ((+13)/G)	-6.22%	-5.18%	8.19%

Winter Wheat

Grazing is more common in SC KS and in OK

- Graze part of crop and apply fertilizer in spring
- Fully graze out wheat and reseed to spring crop

Wheat Grazing Budget

- Available on www.AgManager.info
- Also check out OSU's Wheat Stocker Planner and Grazeout tool



Minimize Feed Waste

Storage

- 6% - 37% loss

Feeding

- Types of bales
- Feeding method
 - 4% - 50% loss

Losses due to storage and feeding

- \$12 - \$58/cow

Limit amount of hay fed




What is next?

How to Reduce Costs

Reduce costs using rationalization

- Unpaid operator labor ~ “I don’t have to be paid to be here”
- Land & interest charge ~ “The land is already paid for, so I don’t need a return”

Reduce costs in other ways

- Sell machinery, land
 - Reduce family living expenses
 - Intensify management decisions to lower cash costs of production
- 

The Way Forward


Actively manage debt

- Eroding working capital will cause cash flow issues
- Might require restructuring debt to long term

Land value declines

- Will affect your equity, ability to borrow
- Current debt to asset ratios are relatively strong

2017 may be more challenging

- If return to historic yields and commodity prices stay low (which is expected)
 - Feeding cattle will benefit from low crop prices, so livestock sector may be the first to recover
- 

The Way Forward

Plan your moves with a multi-year horizon

- Anticipate costs of production far enough in advance to take advantage of early purchase discounts
 - Use best available information to make your management decisions
 - Keep up good communications with your landowners/tenants to make sure you both understand the situation
-

The Way Forward

Recognize that there will be opportunities in the coming years

- Apply the same careful decision-making strategies for both challenges and opportunities





Kansas Farm Economy Update

Mykel Taylor
Kansas State University
January 10, 2017