

Profitability: Looking to the Future of Your Operation

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In the future you will:

- A) Make a positive profit
- B) Make a negative profit
- C) both A & B

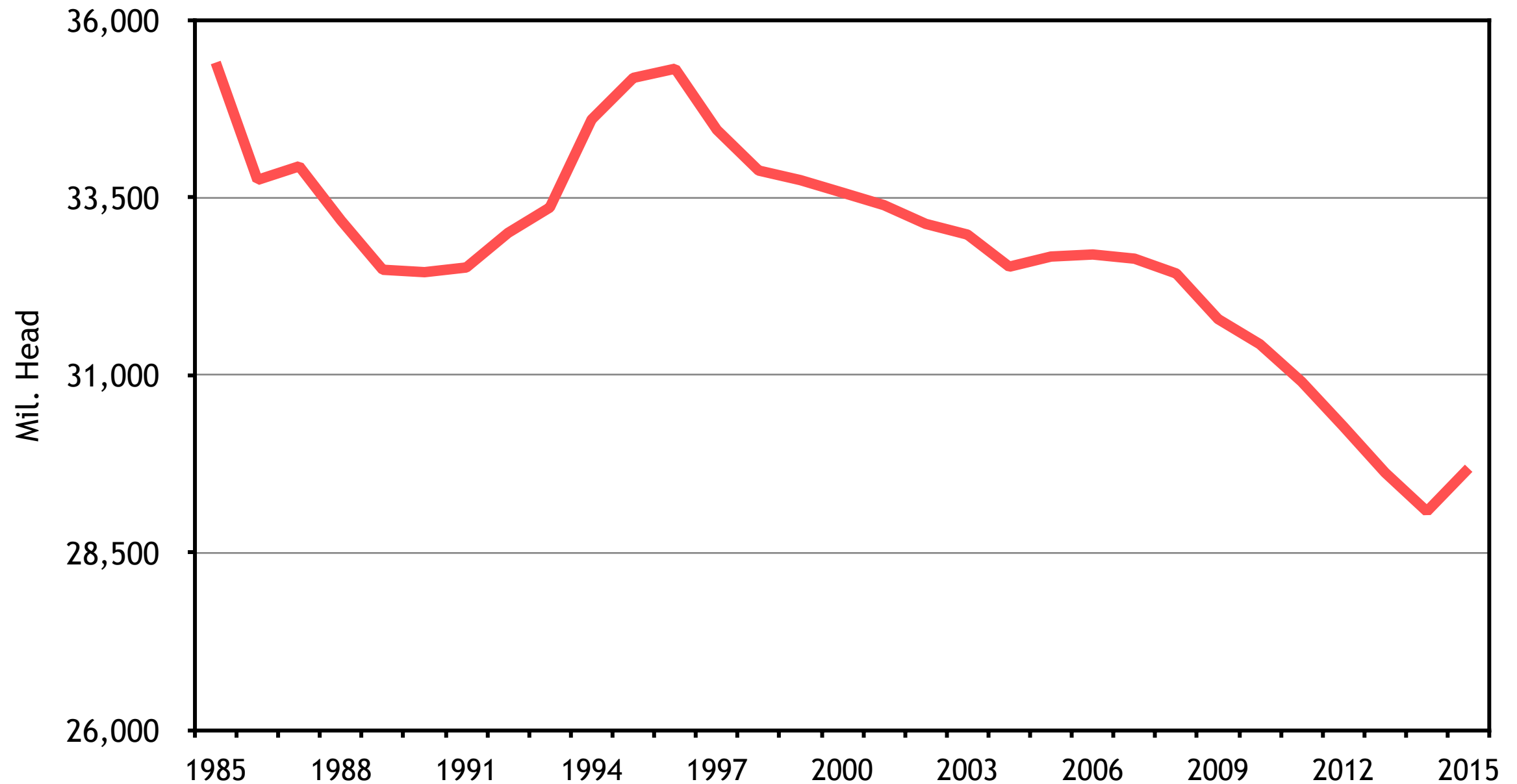
Economist's Answer (myself included): "C"

Beef Herd Dynamics

- The beef cow herd has been shrinking
- Total beef productivity has been increasing
- Per capita consumption is declining
- Population is growing
- Beef demand remains robust



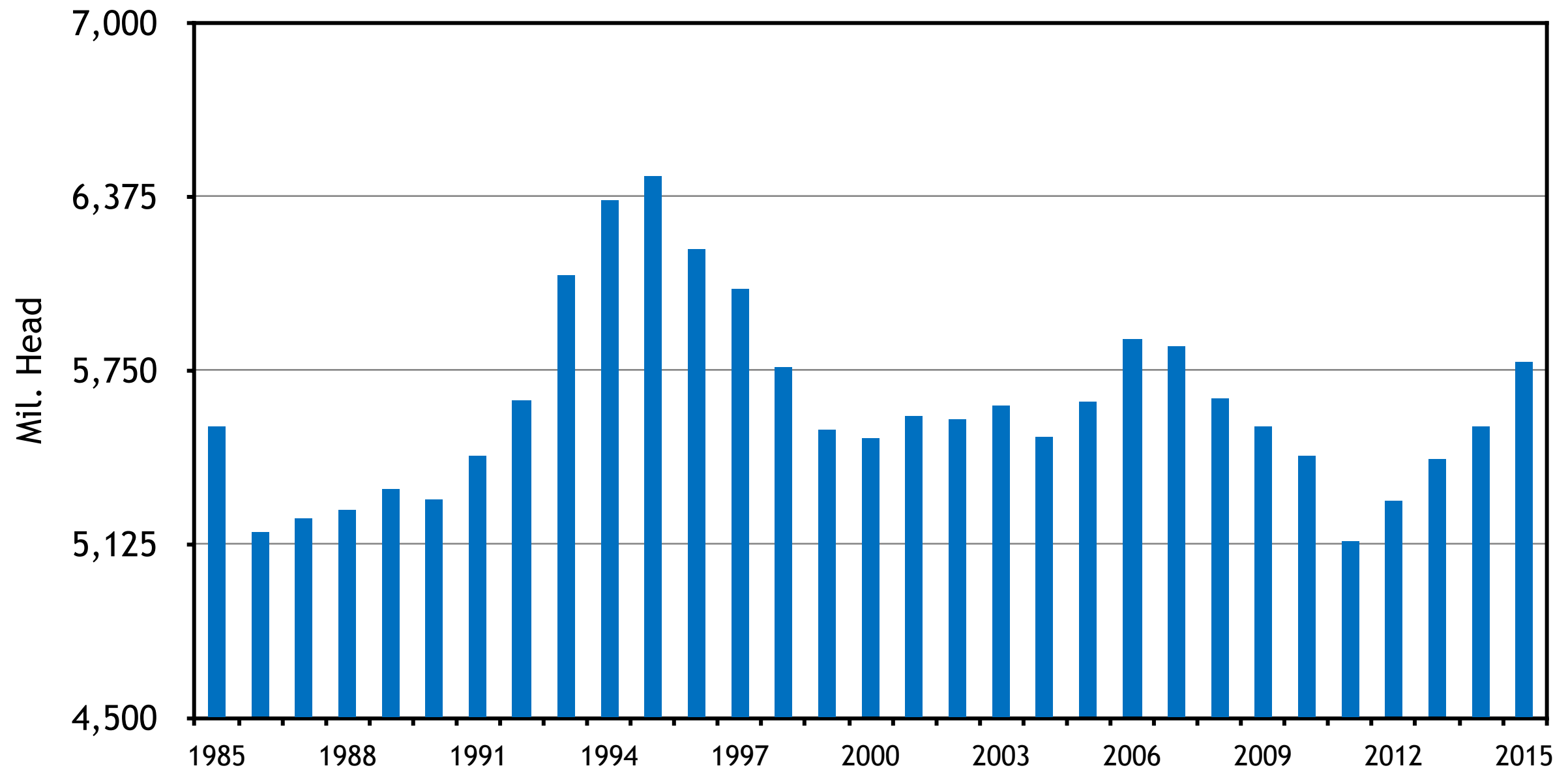
Beef Cow Inventory



Source: USDA NASS

Herd Expansion

HEIFERS HELD AS BEEF COW REPLACEMENTS
January 1, U.S.



Source: USDA NASS

Breaking Point

Break even calf prices

Cost/ Cow	Calf Weight when sold							
	400	450	500	550	600	650	700	750
\$450	\$1.13	\$1.00	\$0.90	\$0.82	\$0.75	\$0.69	\$0.64	\$0.60
\$500	\$1.25	\$1.11	\$1.00	\$0.91	\$0.83	\$0.77	\$0.71	\$0.67
\$550	\$1.38	\$1.22	\$1.10	\$1.00	\$0.92	\$0.85	\$0.79	\$0.73
\$600	\$1.50	\$1.33	\$1.20	\$1.09	\$1.00	\$0.92	\$0.86	\$0.80
\$650	\$1.63	\$1.44	\$1.30	\$1.18	\$1.08	\$1.00	\$0.93	\$0.87
\$700	\$1.75	\$1.56	\$1.40	\$1.27	\$1.17	\$1.08	\$1.00	\$0.93
\$750	\$1.88	\$1.67	\$1.50	\$1.36	\$1.25	\$1.15	\$1.07	\$1.00
\$800	\$2.00	\$1.78	\$1.60	\$1.45	\$1.33	\$1.23	\$1.14	\$1.07

Replacement Economics

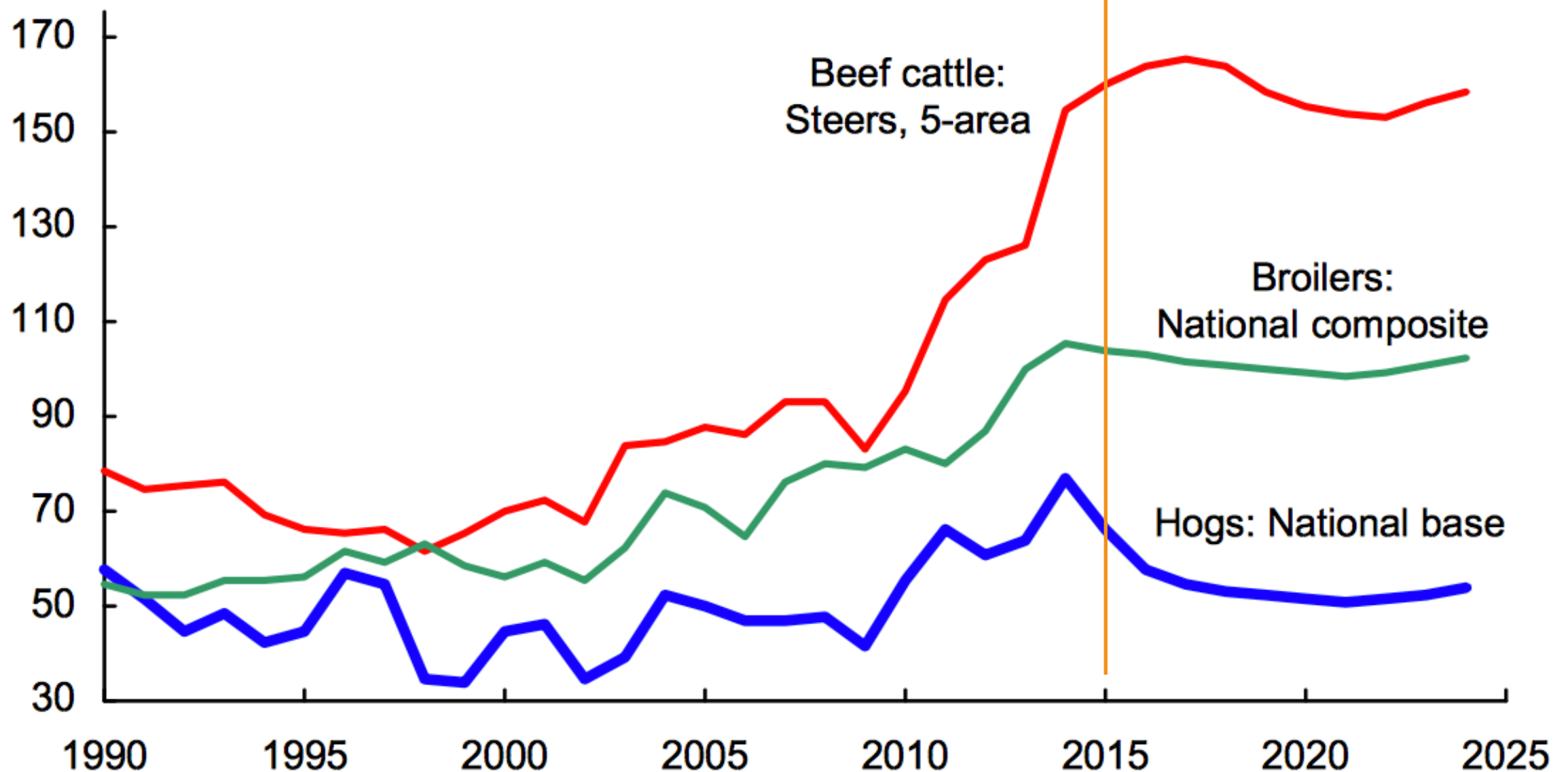
		Annual Cow Cost									
		\$500	\$550	\$600	\$650	\$700	\$750	\$800	\$850	\$900	\$950
Calf Price Growth	+5.0%	\$3,446.28	\$3,060.19	\$2,674.10	\$2,288.02	\$1,901.93	\$1,515.84	\$1,129.75	\$743.67	\$357.58	(\$28.51)
	+2.5%	\$2,703.98	\$2,317.89	\$1,931.80	\$1,545.72	\$1,159.63	\$773.54	\$387.46	\$1.37	(\$384.72)	(\$770.80)
	0.0%	\$2,053.96	\$1,667.87	\$1,281.78	\$895.70	\$509.61	\$123.52	(\$262.56)	(\$648.65)	(\$1,034.74)	(\$1,420.83)
	-2.5%	\$1,484.83	\$1,098.75	\$712.66	\$326.57	(\$59.51)	(\$445.60)	(\$831.69)	(\$1,217.77)	(\$1,603.86)	(\$1,989.95)
	-5.0%	\$986.52	\$600.44	\$214.35	(\$171.74)	(\$557.82)	(\$943.91)	(\$1,330.00)	(\$1,716.08)	(\$2,102.17)	(\$2,488.26)

Projected Annual Prices

Nominal U.S. livestock prices

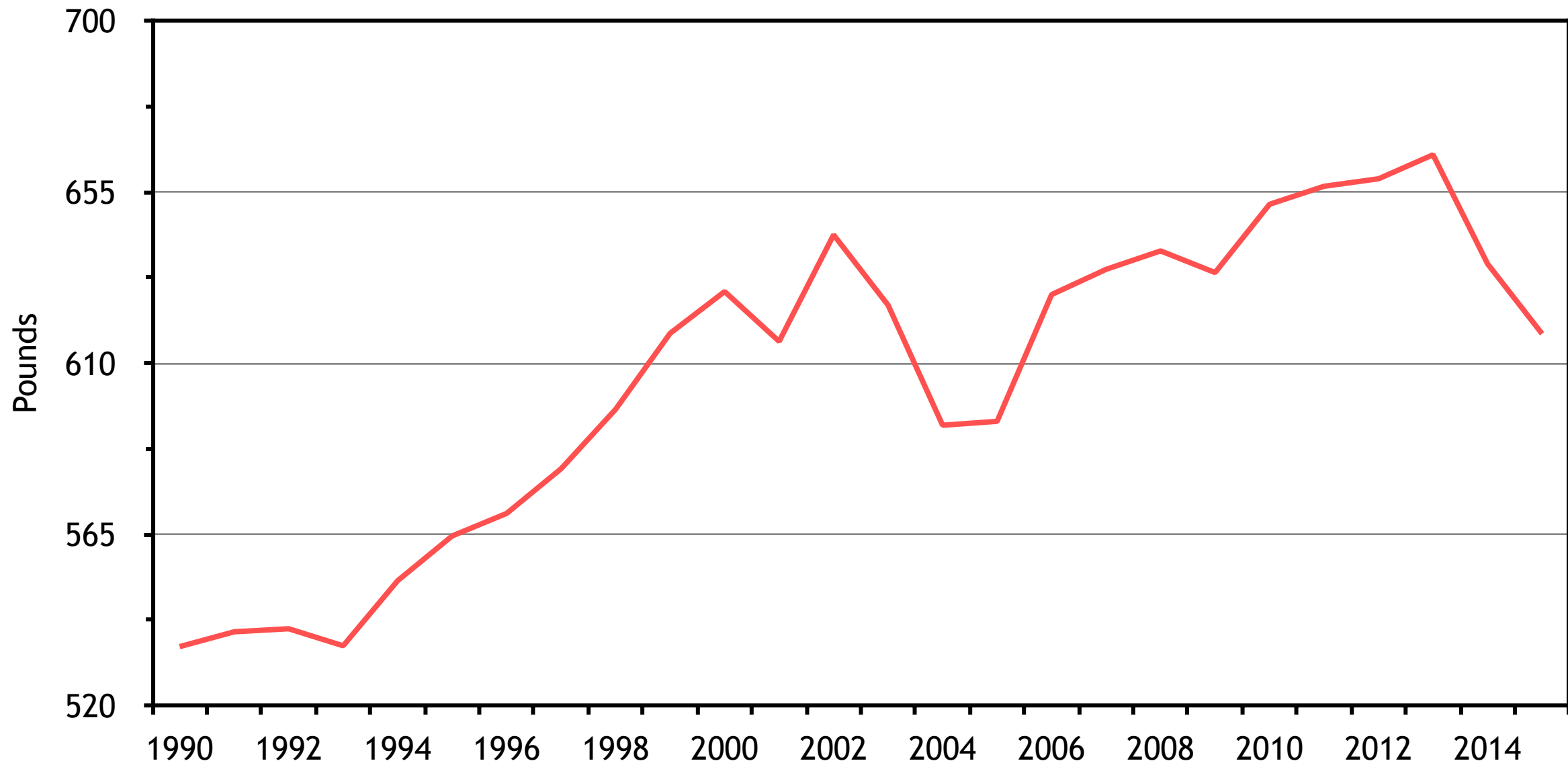
Source: USDA ERS

Dollars per hundredweight



Productivity (mostly) Growing

BEEF PRODUCTION PER COW
1989-2014 (Est.), Annual



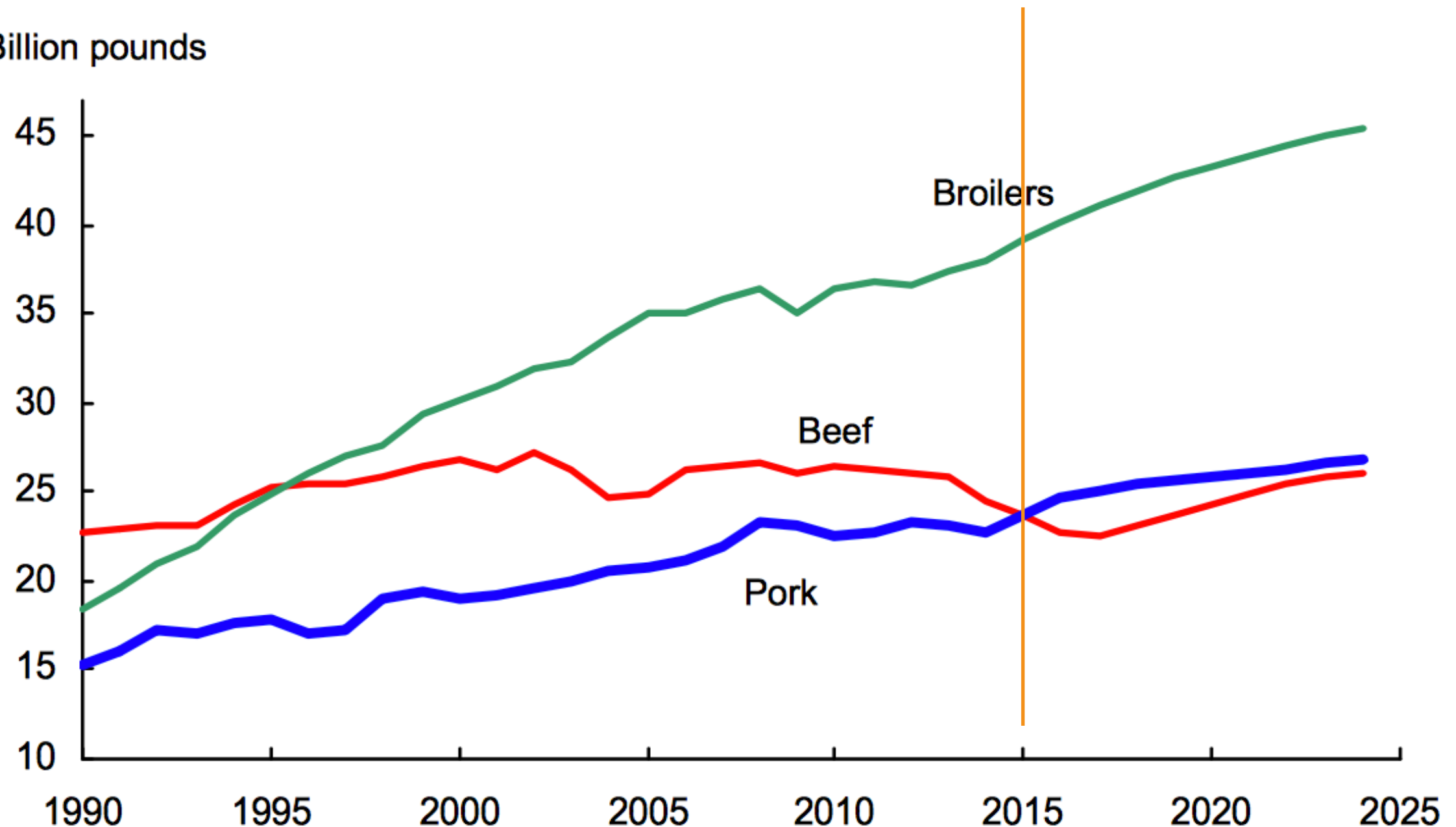
Source: USDA NASS

Projected Meat Production

U.S. red meat and poultry production

Source: USDA ERS

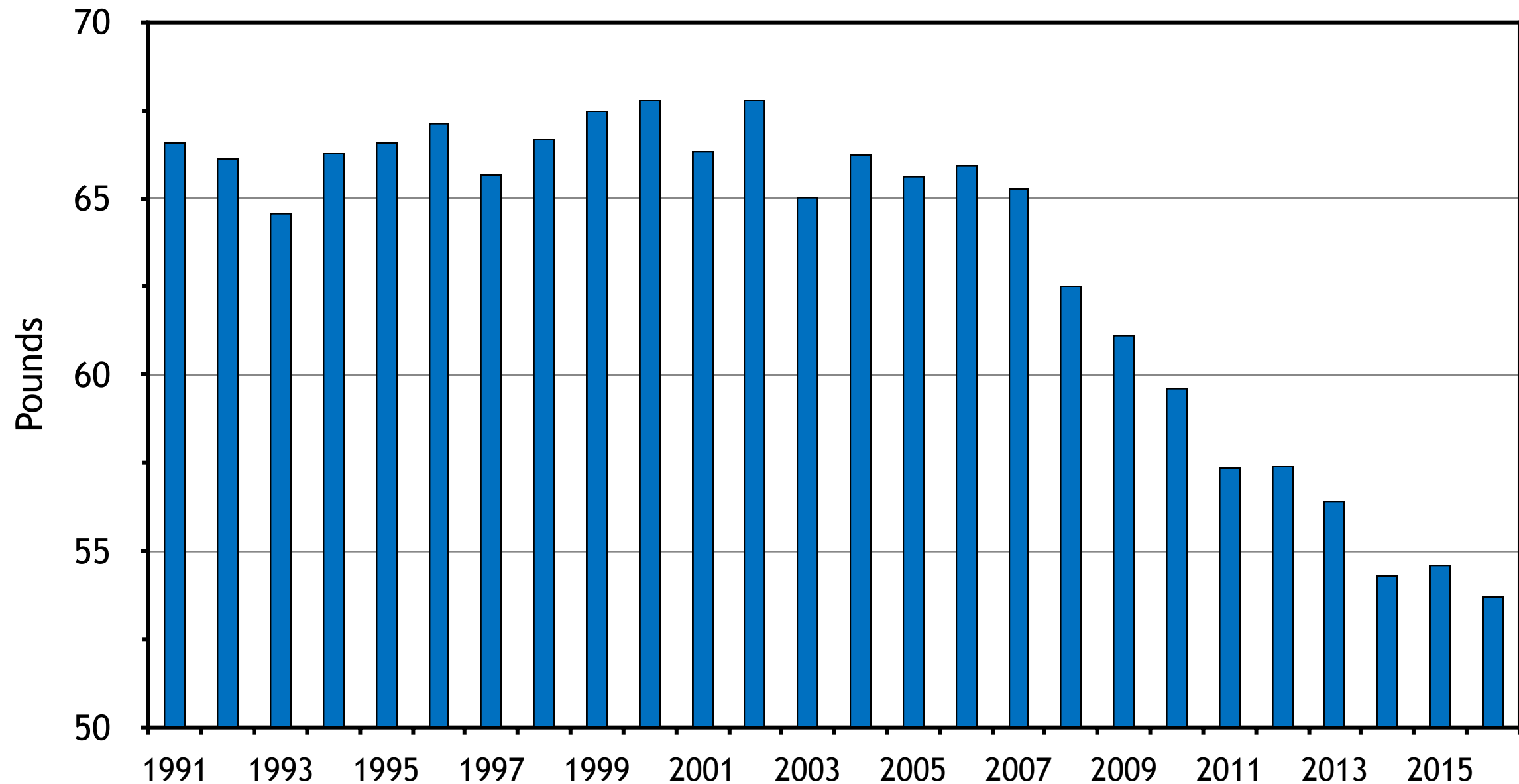
Billion pounds



Consumption is Shrinking (not demand)

US BEEF CONSUMPTION
Per Capita, Retail Weight, Annual

Source: USDA WAOB

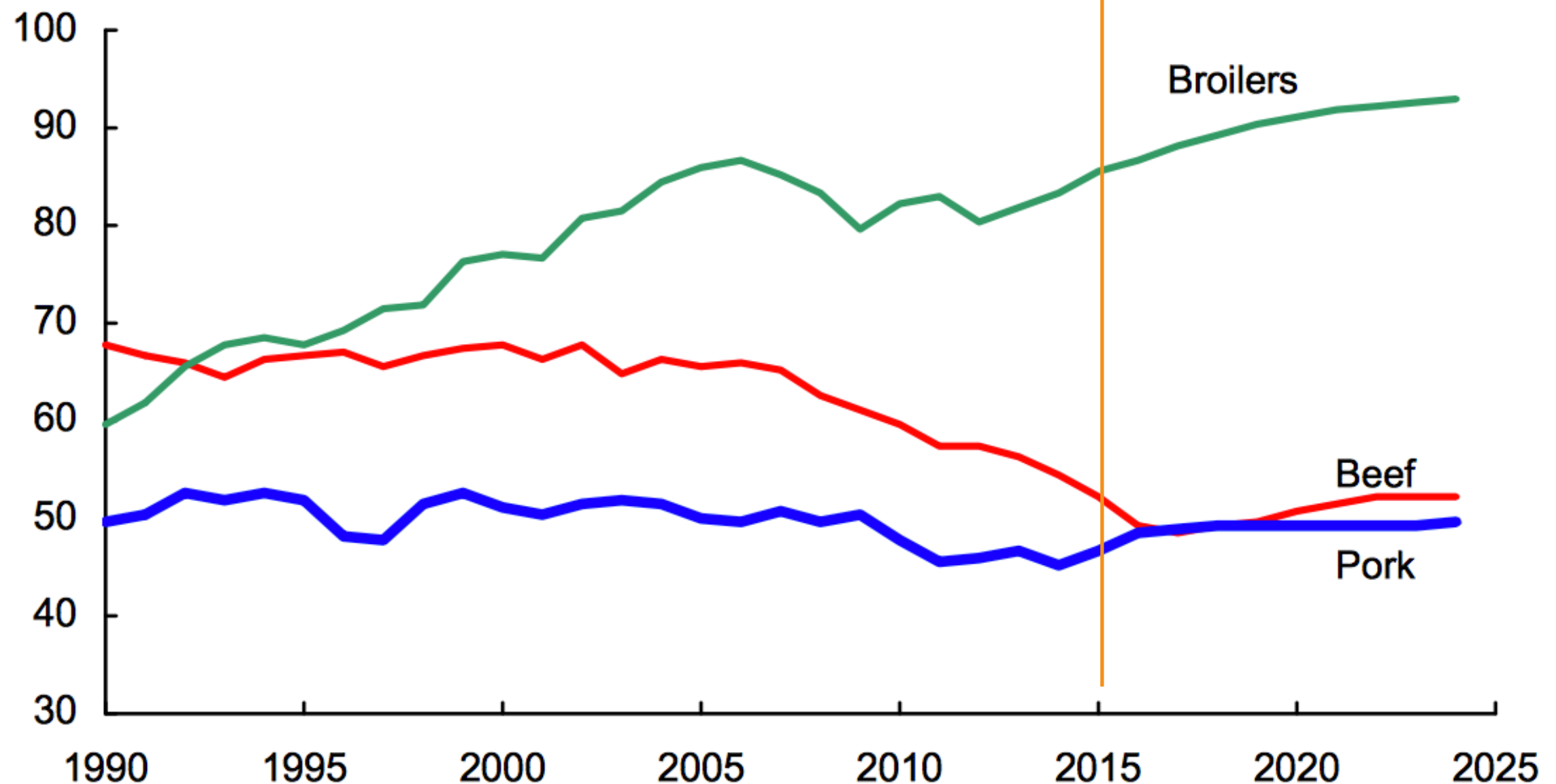


Projected Meat Consumption

U.S. per capita meat consumption

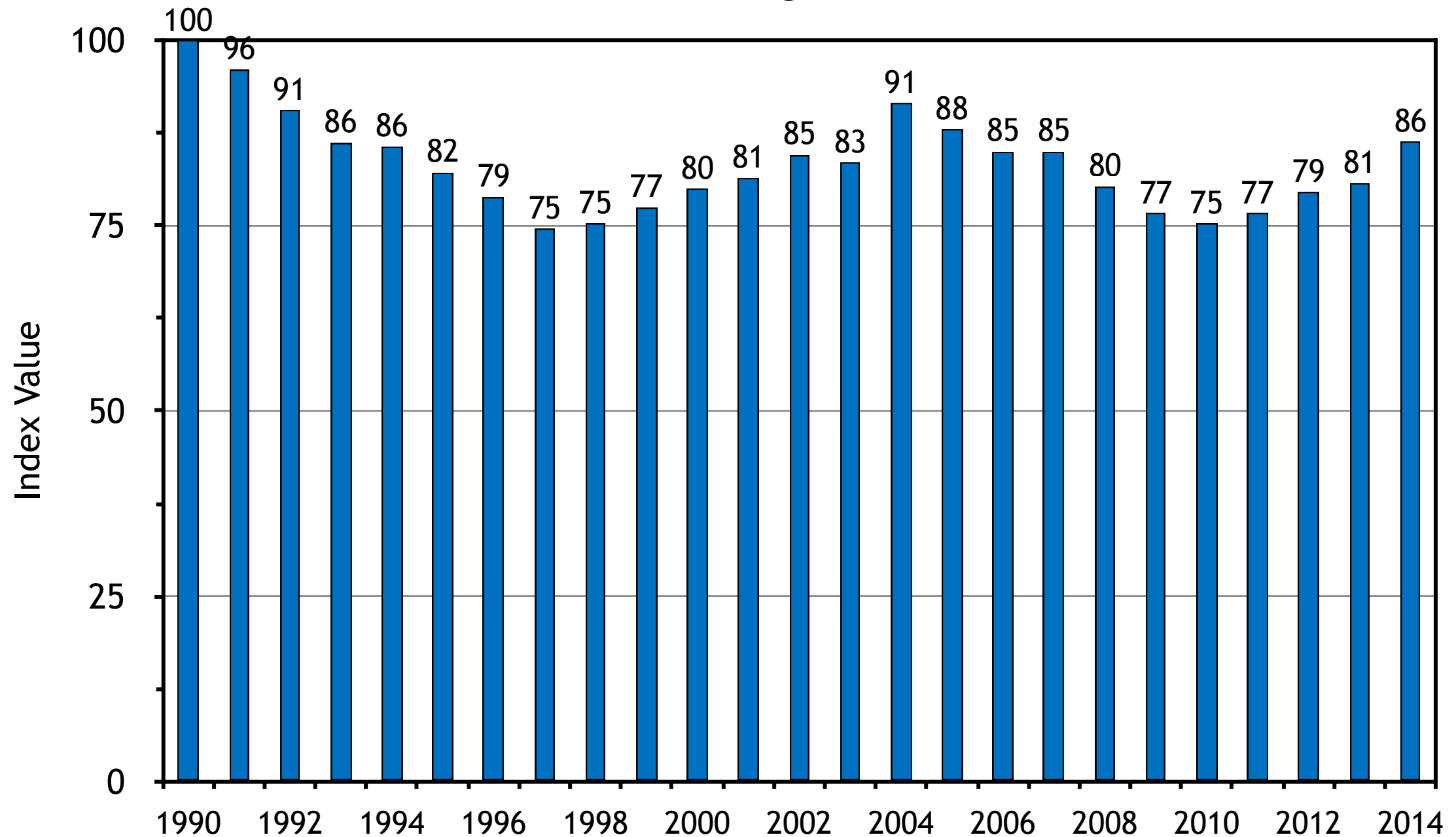
Source: USDA ERS

Pounds per capita, retail weight



Demand IS Growing

RETAIL ALL FRESH BEEF DEMAND INDEX
Annual, Using CPI 1990=100



Source: Tonsor (K-State) & LMIC

Profitability

- What is PROFIT?
- Revenue - Costs = Profit
- Accounting -vs- Economic Profit
- Opportunity costs

Revenue - (Tangible Expenses) - (Opportunity Costs) = Economic Profit

Opportunity Costs

- Land
 - Using land with a high value for something else
- Equipment
 - Buying equipment versus paying someone else
- Our Time
 - Doing one thing, when the value of our time is greater in another endeavor

Profitability

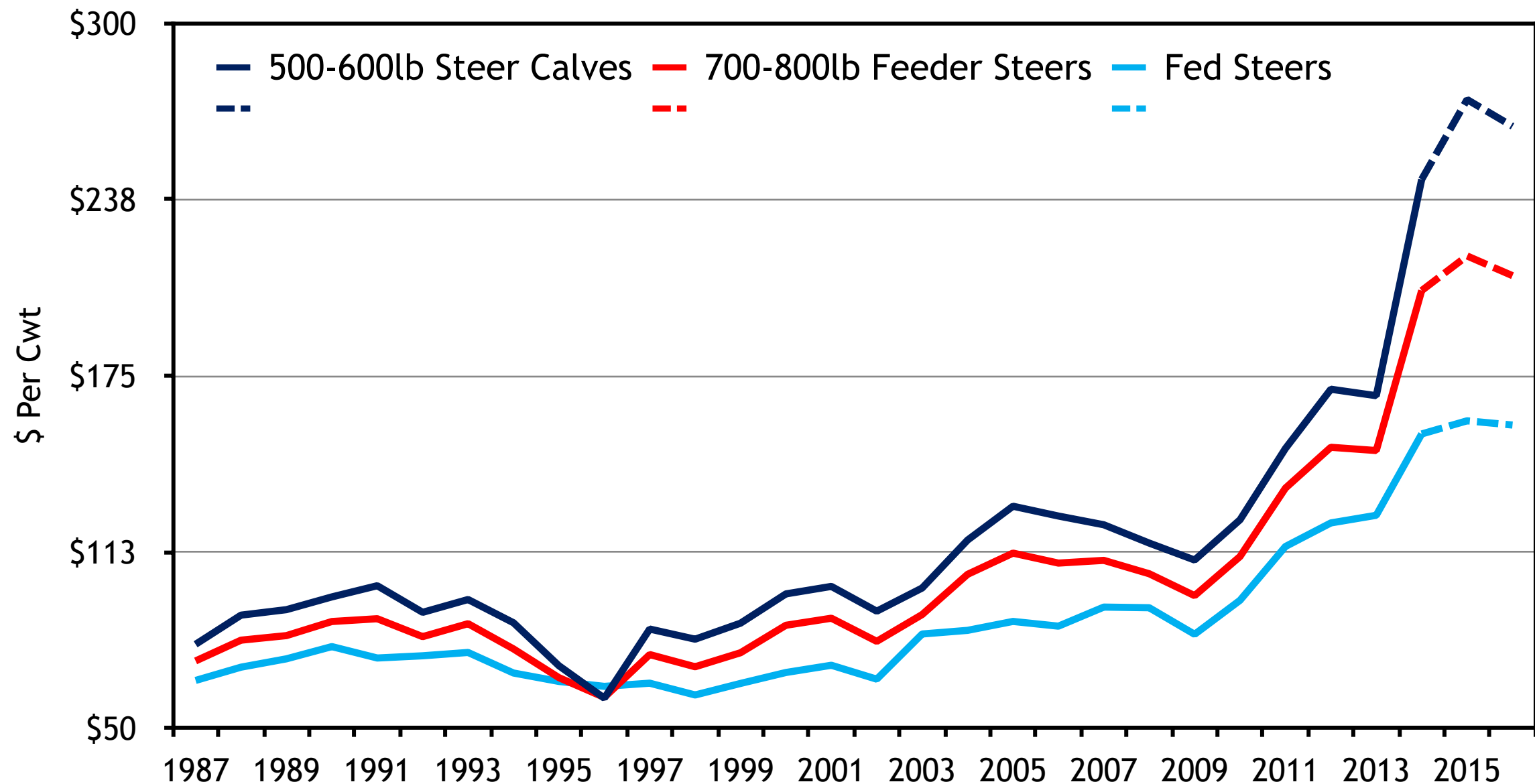
- What is PROFIT?
- Accounting -vs- Economic Profit
- Accounting profits :: often the most impactful to your bottom line

Cow-Calf Profitability

- Cattle market *has been* ON FIRE!
- Implications for beef cow profitability
- What really influences cow-calf operation profitability

Perspective on Price

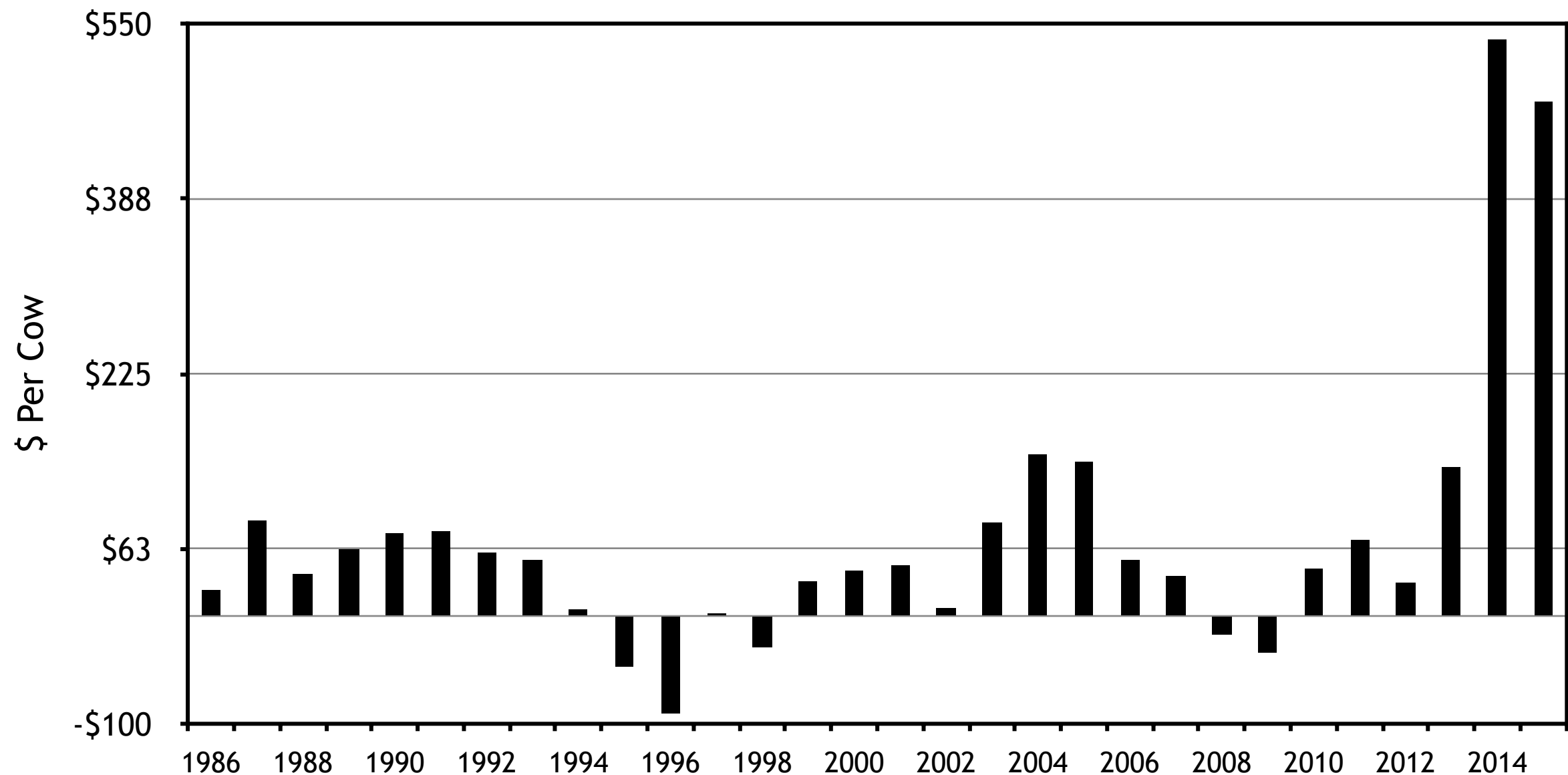
AVERAGE ANNUAL CATTLE PRICES Southern Plains



Source: USDA NASS; Projection by LMIC

Accounting Profits > \$0

ESTIMATED AVERAGE COW CALF RETURNS
Returns Over Cash Cost (Includes Pasture Rent), Annual



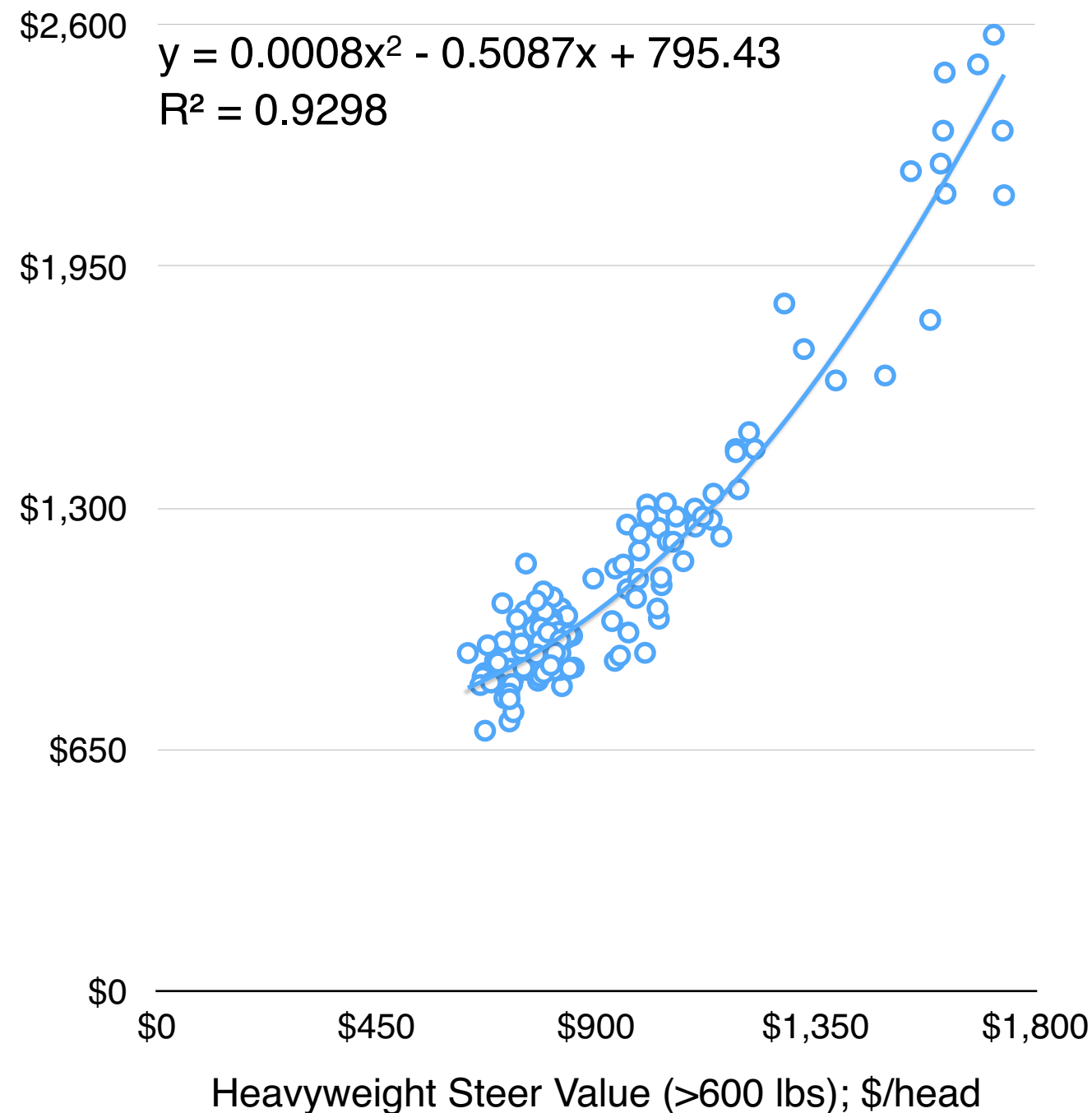
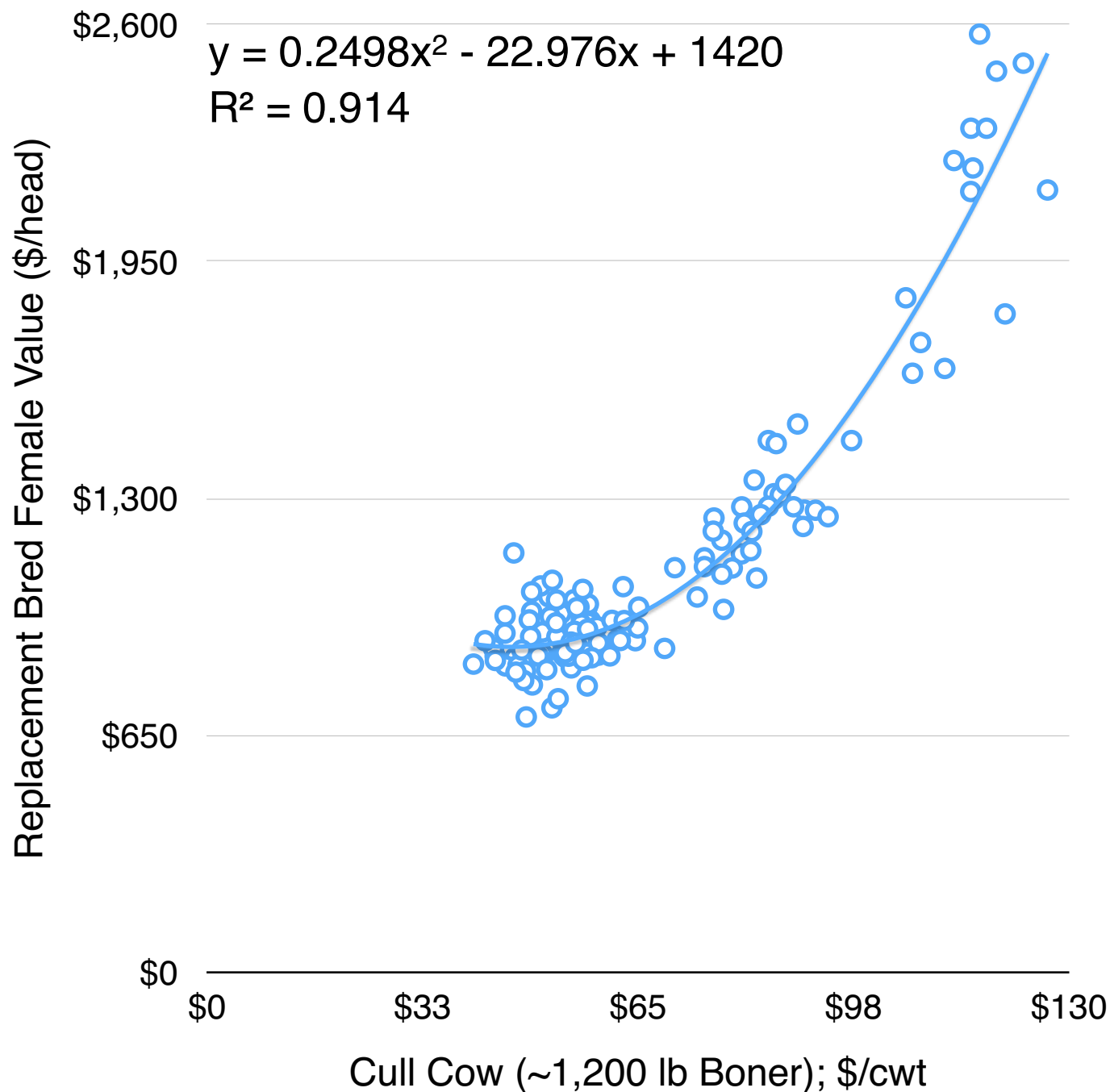
Source: LMIC

Cow vs Calf Price



Source: USDA NASS

Cow Price versus Other Prices

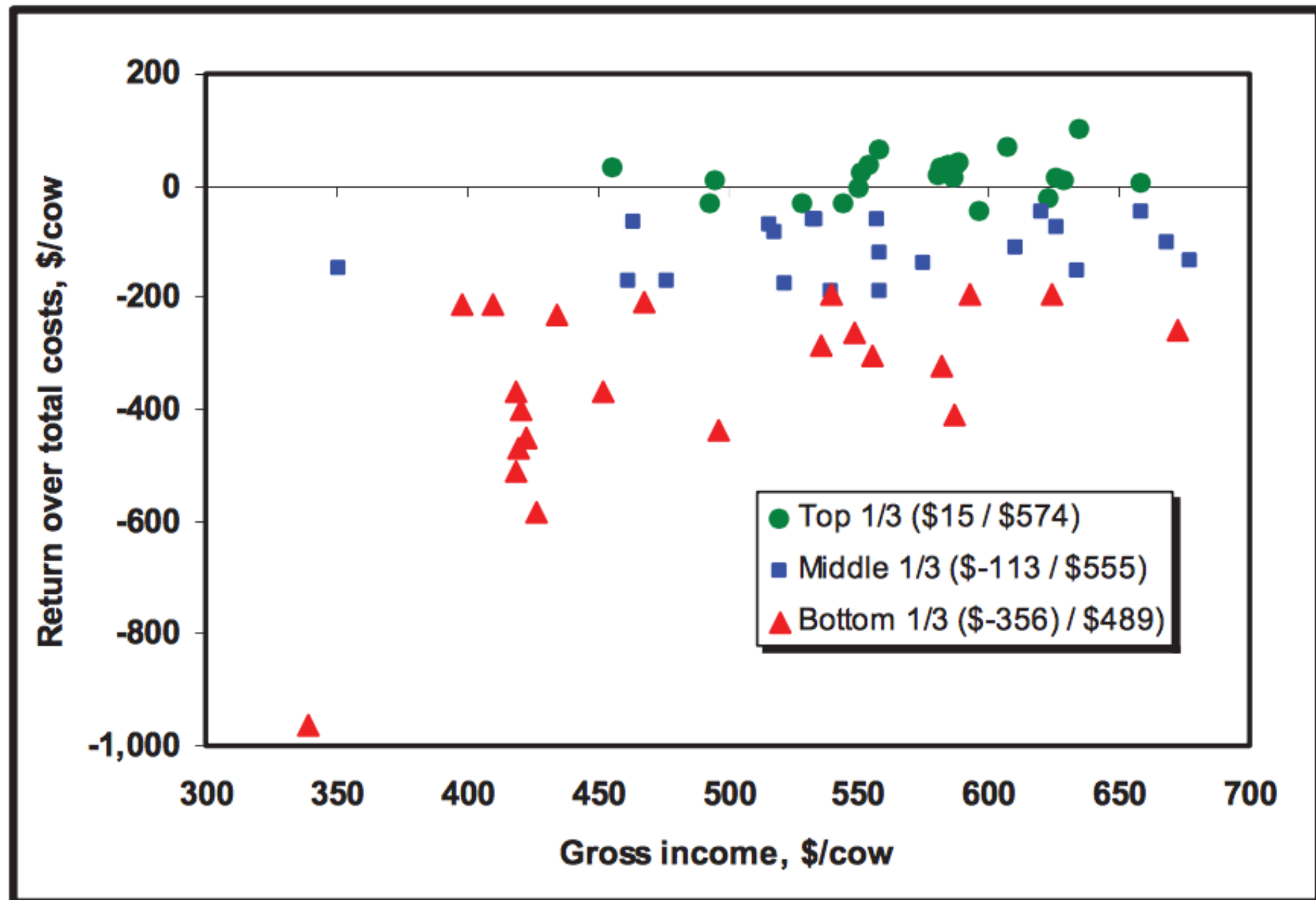


Factors Influencing Cow-Calf Profit

- Obviously calf weight and price received
- Reducing non-feed costs is paramount
- "Jack of All Trades" has a costs

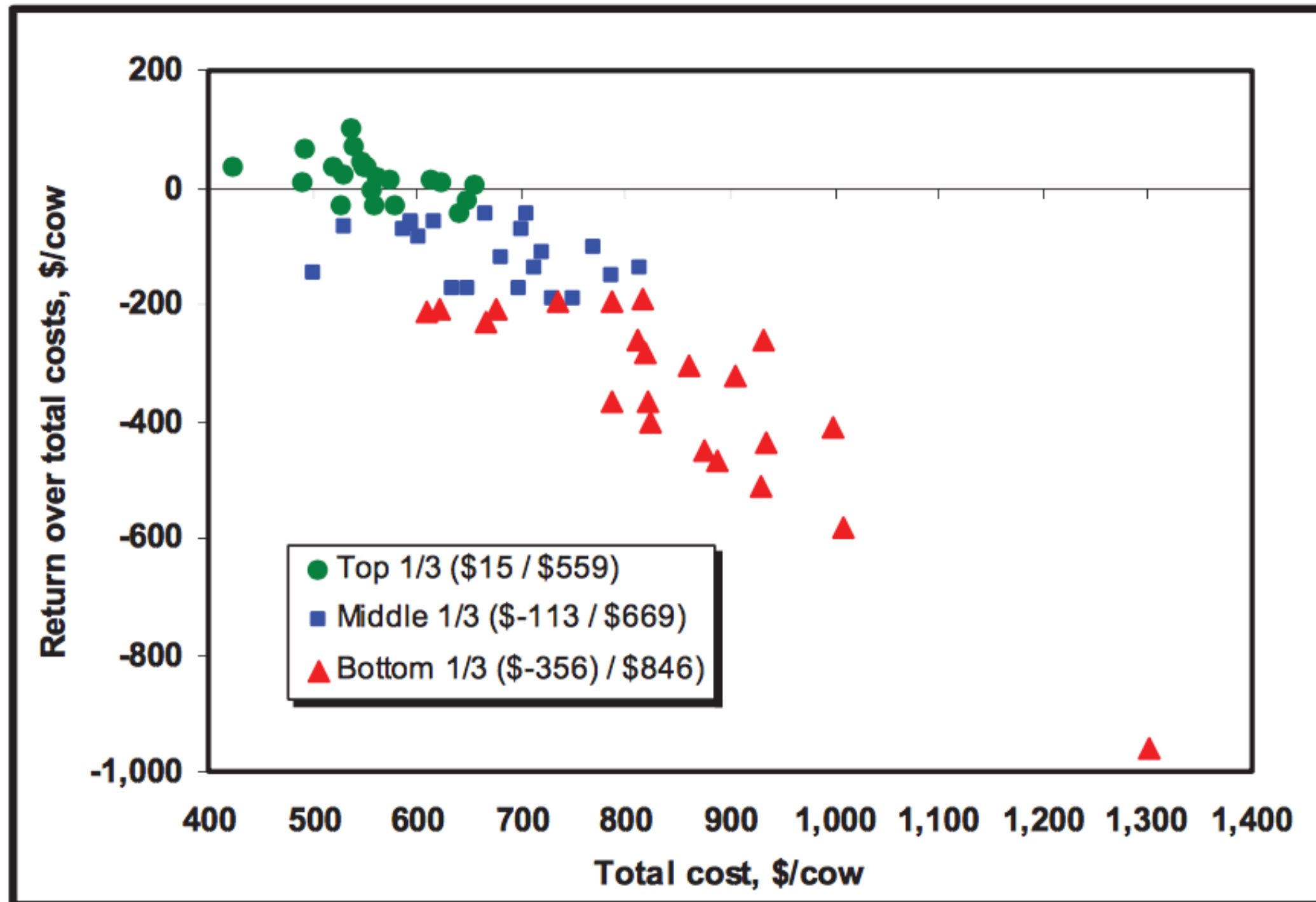
"Profit" & Revenue

Source: Dhuyvetter & Langmeier, K-State



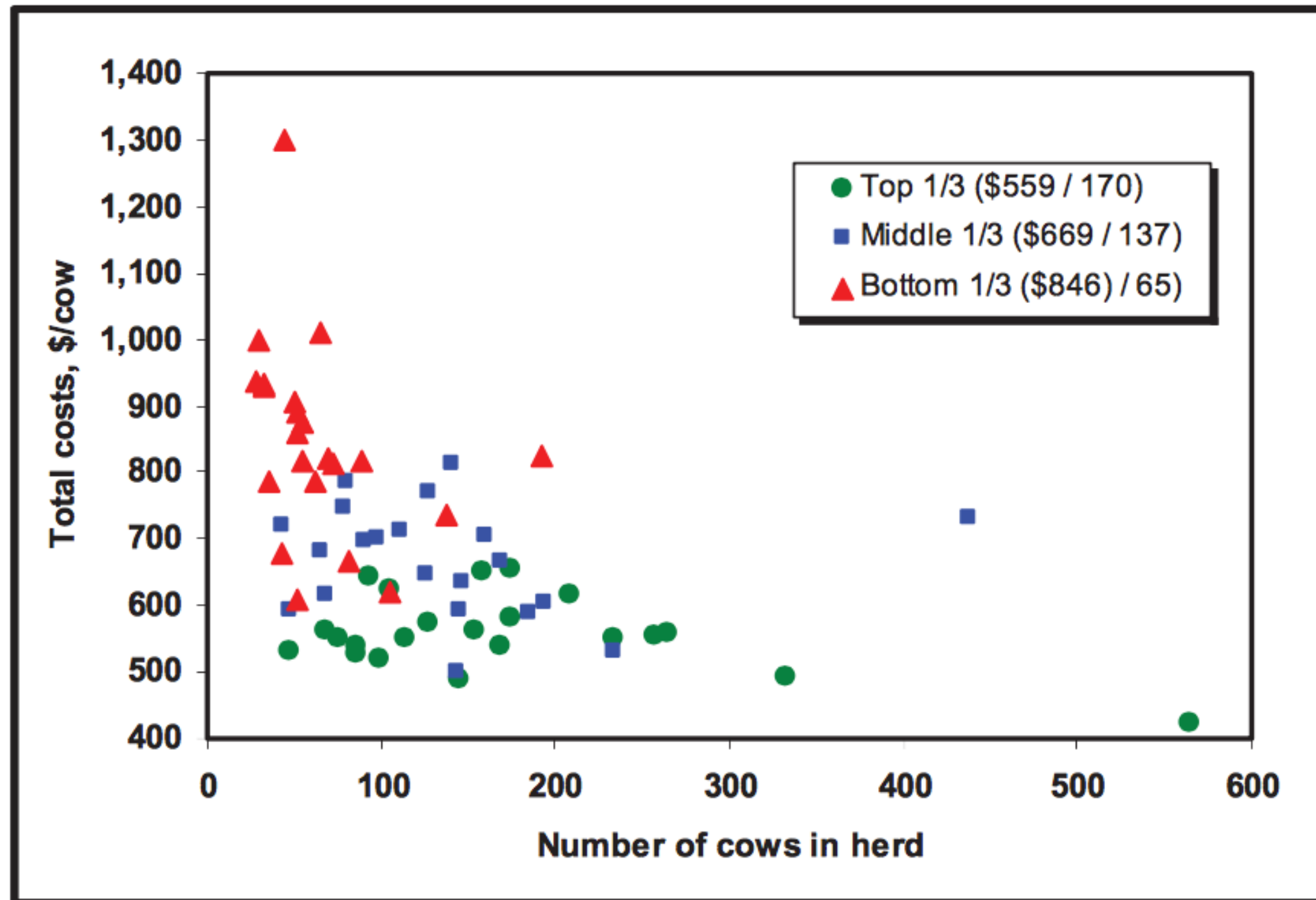
"Profit" & Total Costs

Source: Dhuyvetter & Langmeier, K-State



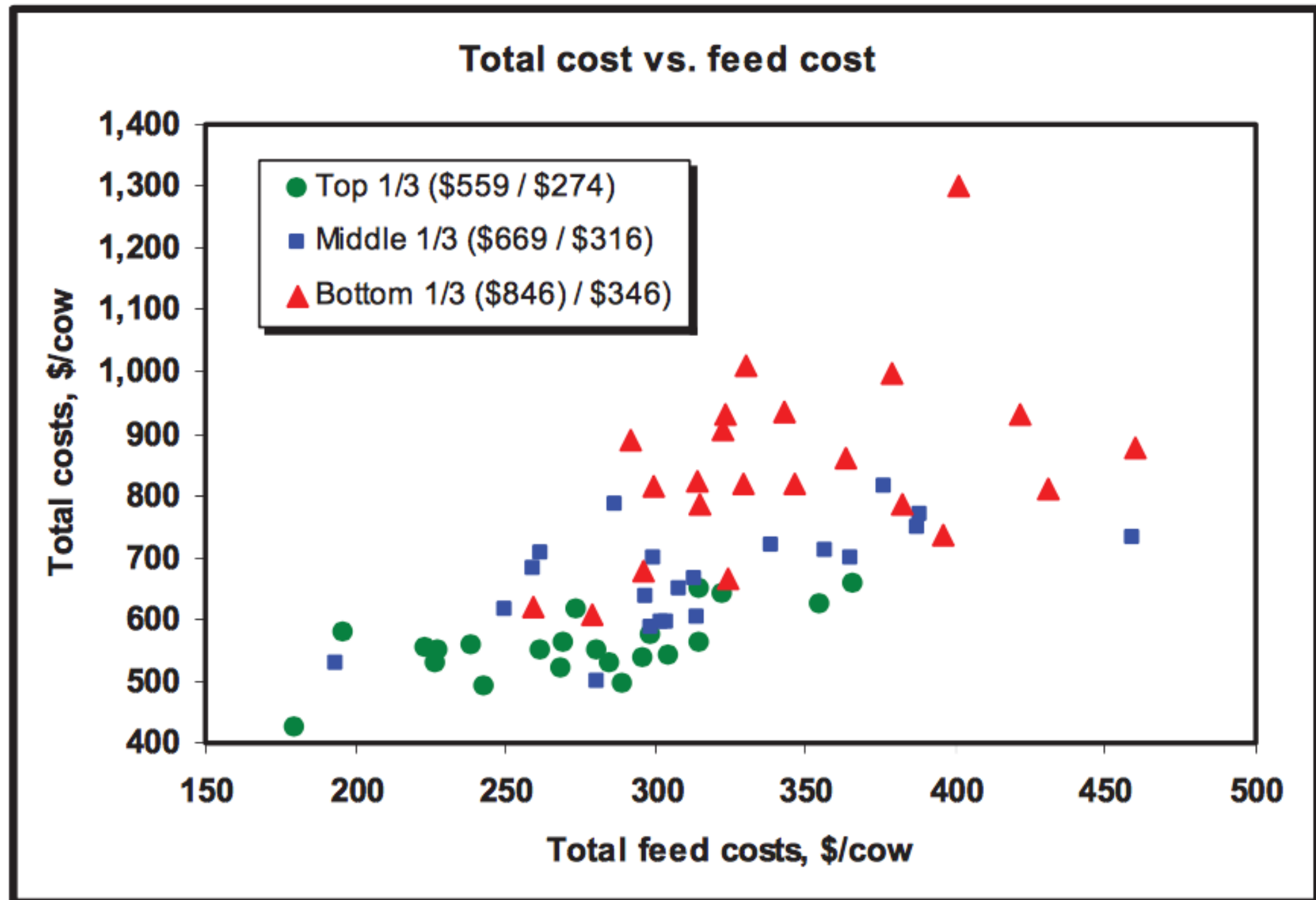
Cow-Calf Costs & Herd Size

Source: Dhuyvetter & Langmeier, K-State



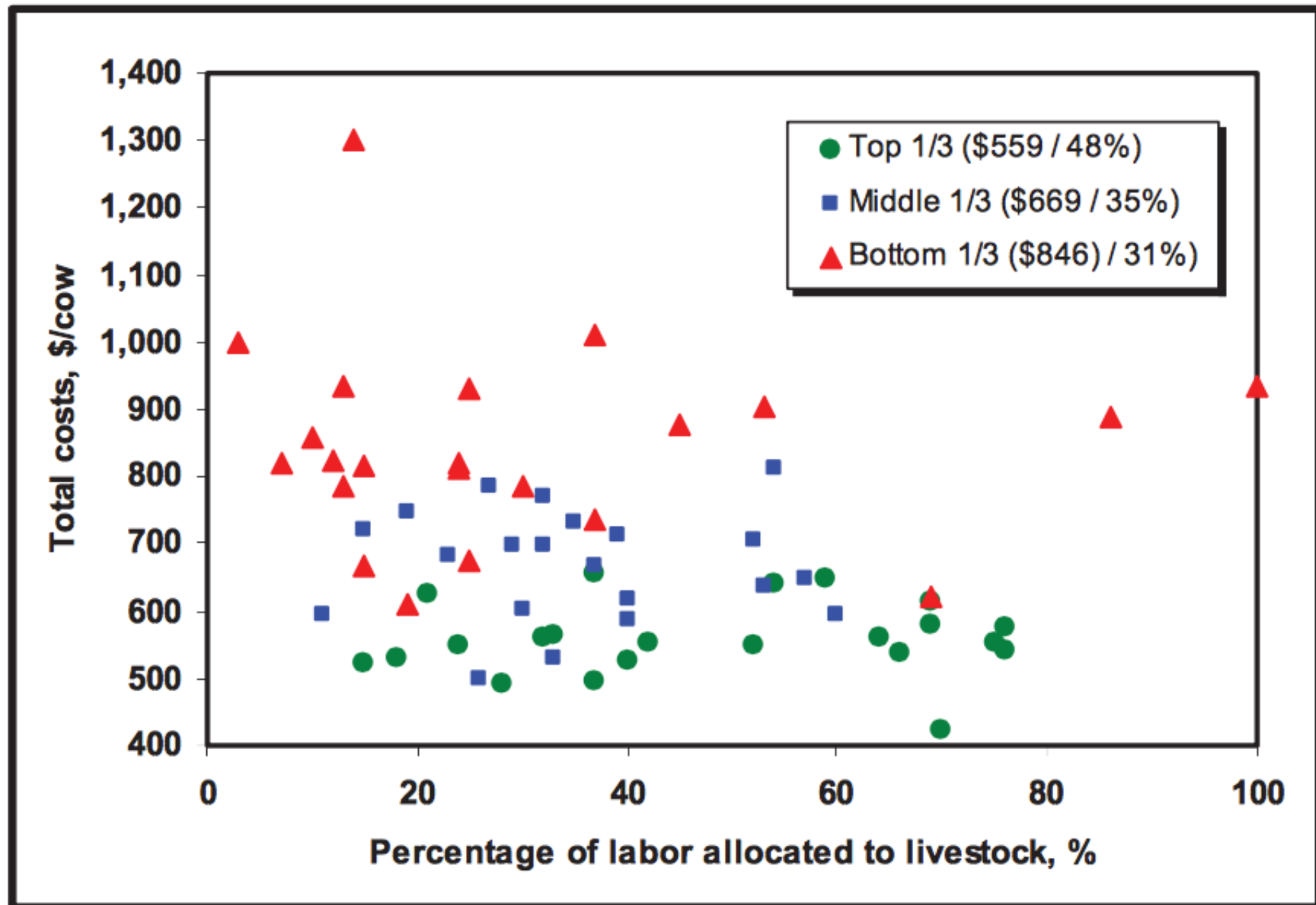
Total Costs & Feed

Source: Dhuyvetter & Langmeier, K-State



Cow-Calf Costs & Labor

Source: Dhuyvetter & Langmeier, K-State



Tallying the Costs

- Variable Costs
- Fixed Costs
- Opportunity Costs

Variable Costs

- Expenses that are incurred only if production occurs
 - Fertilizer, Fuel, Feed

Fixed Costs

- Expenses that incurred irregardless of production
 - Overhead
 - Equipment, Buildings, Land

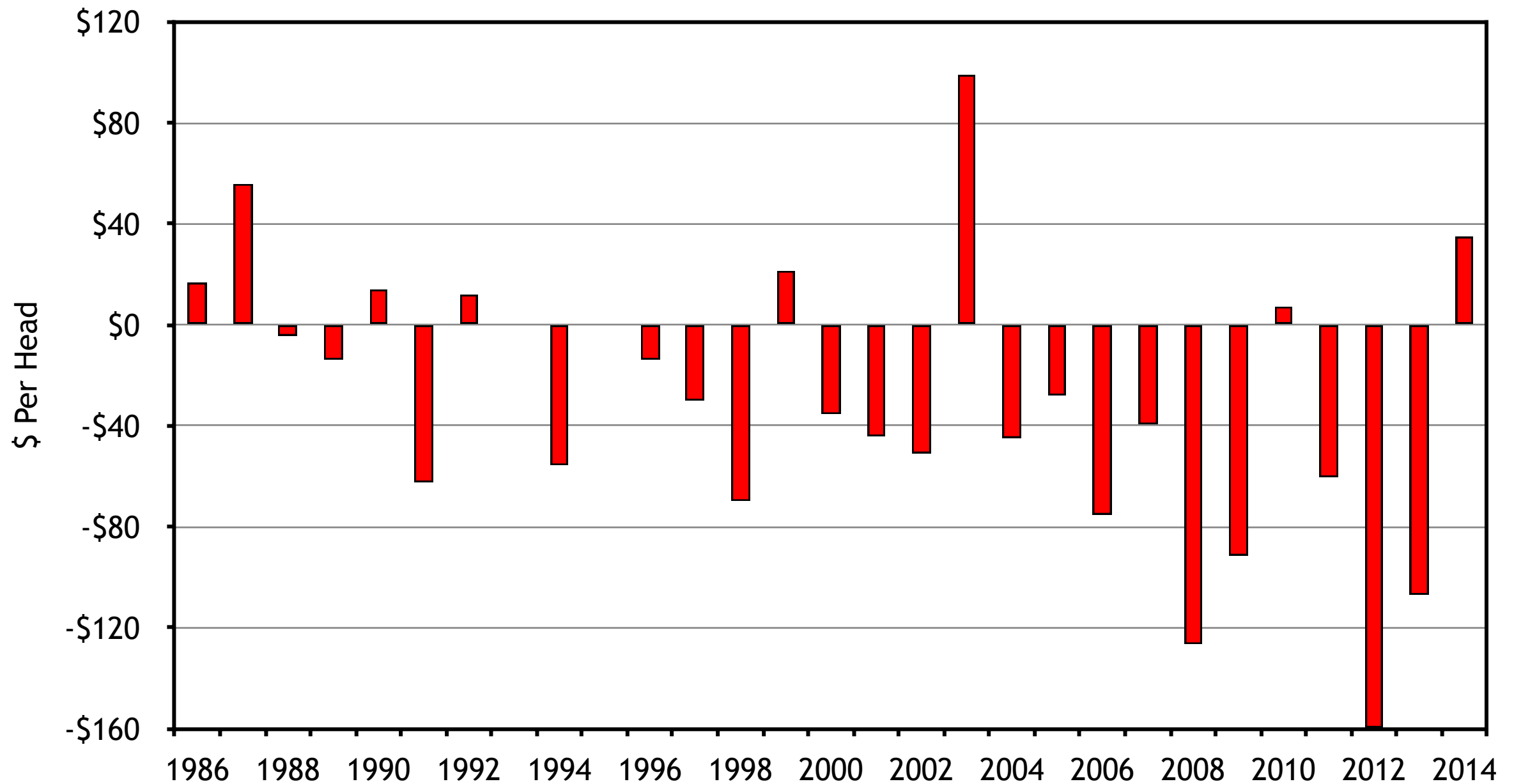
Feedlot Profitability

- Again:
Markets = Muy Caliente
- Factors that influence
feedlot profits

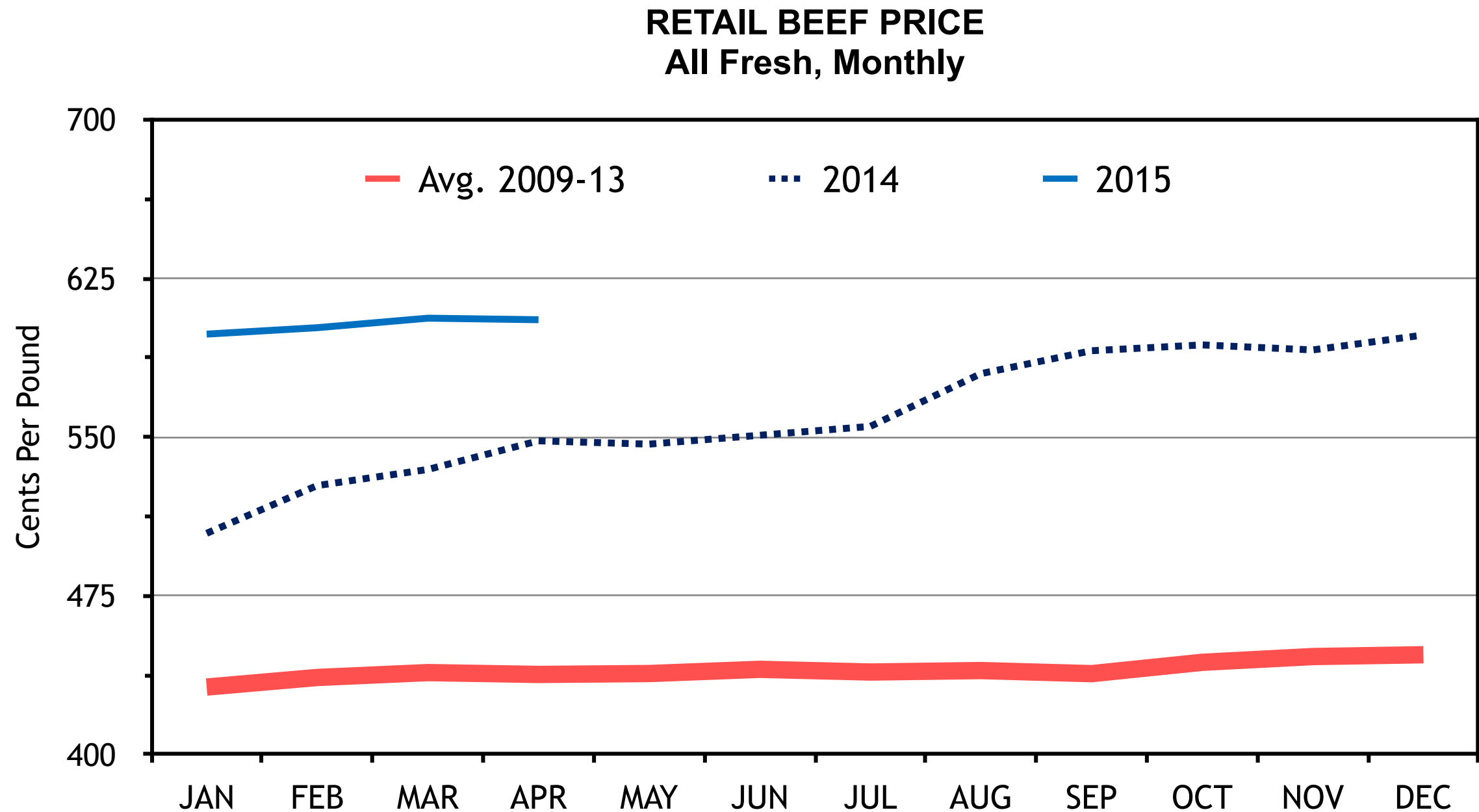


Feedlot Profitability

AVERAGE RETURNS TO CATTLE FEEDERS
Feeding 725 Lb. Steers, S. Plains, Annual



Beef Price: Up, Up, & Away?



Source: USDA ERS

Factors Influencing Feedlot Profits

- Fed steer price
 - +\$11 per \$1/cwt increase {Lawrence, Wang, Loy 1999}
 - +\$4 per \$1/cwt increase {Janzen, Riley, Coatney 2015}
- Feeder steer price
 - -\$7 per \$1/cwt increase
 - -\$3 per \$1/cwt increase
- Feed costs
 - -\$42 per \$1/bu increase
 - -\$40 per \$1/bu increase
- Collectively, these impact 70-90% of feedlot profits

Profitability: Your Operation & the Future



- Price Flexibility
- Managing Costs
- Adaptability ... "Cat like reflexes"

Price Takers

- Going back to Econ 101, most beef producers are price takers
 - Produce a "homogenous" product
 - Few can "name their own price"
- Differentiate your product and you have some ability
- Targeting costs is best way to increase

Managing Costs

- Genetics
- Nutrition
- Infrastructure
- Labor

Risk Management

- Not just price and production
 - But these are easiest to see and protect
- Other forms of risks are out there
 - Legal, Political, Human
- The next big thing?
 - Avian Influenza, PEDv, etc

Profit & Big Data

- Precision agriculture has vast roots in "big data"
- Maintaining a sharp pencil is important to manage costs

Summary

- Tough topic to tackle
- Every producer has a different structure
- Closely managing costs is likely the most effective protocol, but needs careful consideration

Questions?

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