



# **Analyzing The Economics of The Top 20% of DFBS Farms**

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# Key Points

- ⌘ Variability
- ⌘ Milk Production
- ⌘ Cost Control
- ⌘ People
- ⌘ Investment Balance
- ⌘ Continuous Improvement
- ⌘ Prepared for Opportunities

# 6 Year Trend Numbers

- ⌘ 124 farms participating in Dairy Farm Business Summary for six years.
- ⌘ 2007 – 2012
- ⌘ Capturing 3-year cycles – normally!
- ⌘ Top 20% of farms by ROA w/o appreciation vs remaining 80% of farms



## Top 20% of Farms vs. Remaining 80% of Farms

Same 124 Farms, 2007 through 2012

Dairy Farm Business Summary, New York State

	2007	2008	2009	2010	2011	2012
<b>Net Farm Income per Cow w/o Appreciation</b>						
Top 20%	<b>\$1,624</b>	<b>\$1,100</b>	<b>\$72</b>	<b>\$1,194</b>	<b>\$1,675</b>	<b>\$975</b>
Remaining 80%	<b>\$1,187</b>	<b>\$568</b>	<b>-\$328</b>	<b>\$545</b>	<b>\$976</b>	<b>\$509</b>
<b>Return on Equity w/o Appreciation</b>						
	<b>26.0%</b>	<b>14.8%</b>	<b>-1.6%</b>	<b>17.1%</b>	<b>21.2%</b>	<b>10.2%</b>
	<b>18.1%</b>	<b>6.1%</b>	<b>-8.9%</b>	<b>6.4%</b>	<b>12.5%</b>	<b>4.4%</b>
<b>Return on Assets w/o Appreciation</b>						
Top 20%	<b>19.6%</b>	<b>11.6%</b>	<b>0.1%</b>	<b>12.9%</b>	<b>16.4%</b>	<b>8.3%</b>
80%	<b>14.2%</b>	<b>5.6%</b>	<b>-0.1%</b>	<b>5.5%</b>	<b>9.4%</b>	<b>4.2%</b>
<b>Net Worth</b>						
Top 20%	<b>\$4,880,086</b>	<b>\$5,207,853</b>	<b>\$4,998,865</b>	<b>\$5,854,536</b>	<b>\$7,225,994</b>	<b>\$7,899,620</b>
80%	<b>\$2,918,395</b>	<b>\$3,091,615</b>	<b>\$2,817,902</b>	<b>\$3,132,114</b>	<b>\$3,731,888</b>	<b>\$4,083,806</b>



# Variability

⌘ Have been on cycles for some time

⌘ Previous poor years

☑ 1997

☑ 2000

☑ 2002-2003

☑ 2006

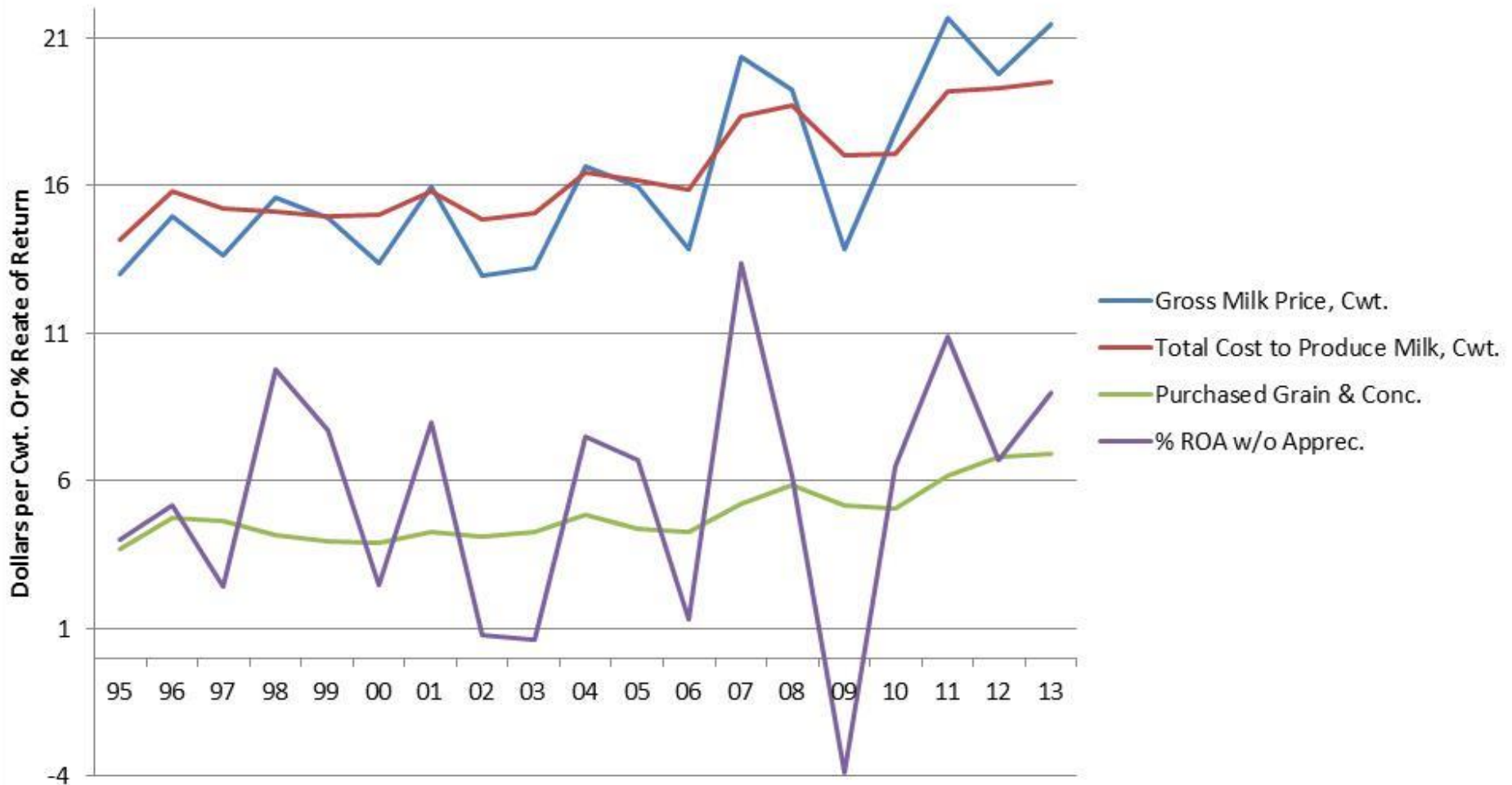
☑ 2009

☑ 2013?



# 19 Years of Variability

## DFBS Farms, New York State, 1995 - 2013



# Management Implications

- ⌘ What is done during good years?
- ⌘ What is done during poor years?
- ⌘ How is the business positioned?
- ⌘ Self insurance vs risk management plans
  - ☑ Working Capital
  - ☑ Debt Level



# Same Farms, 2007-2012

Working Capital as Percent of Expenses						
Top 20%	25%	22%	14%	22%	30%	27%
Remaining 80%	23%	17%	12%	17%	19%	19%





# Same Farms, 2007-2012

					Percent	Percent Difference	
Debt Per Cow, End of Year		2007	2012	Change	Change	in 2007	in 2012
	Top 20%	\$2,709	\$2,961	\$251.67	9.3%	-3%	-19%
	80%	\$2,793	\$3,668	\$874.90	31.3%		
Net Worth, Beginning of 2006 to End of 2012							
	Top 20%	\$3,682,096	\$7,899,620	\$4,217,524	114.5%	64%	93%
	80%	\$2,244,704	\$4,083,806	\$1,839,102	81.9%		

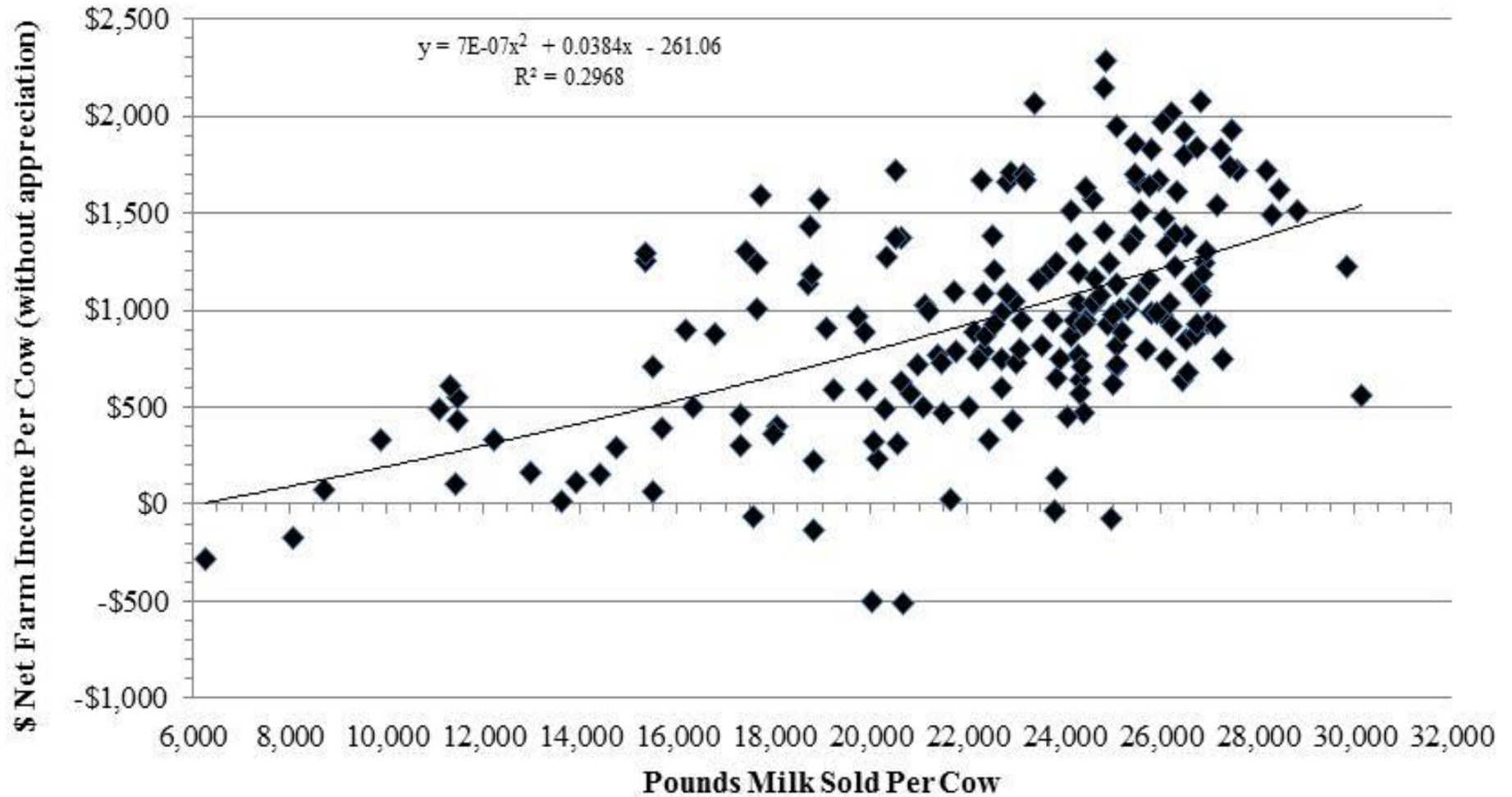


# Milk Production

- ⌘ What is the trend?
- ⌘ How fast is it changing?
- ⌘ Never comfortable
  - ☑ Component level
  - ☑ Feed conversion
- ⌘ Forage Quality
- ⌘ Cow Comfort
- ⌘ Others?

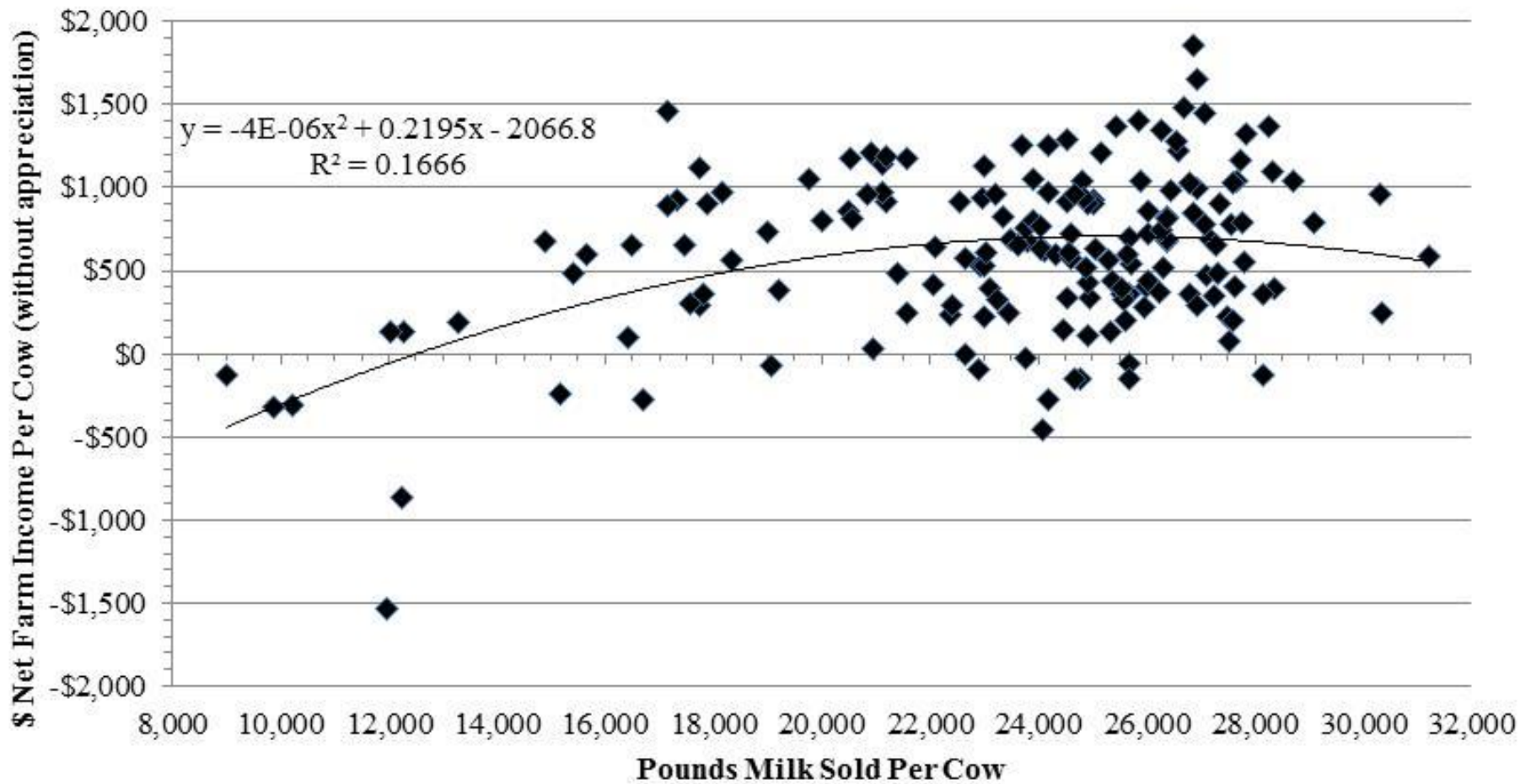


### NET FARM INCOME PER COW BY MILK PER COW 190 New York Dairy Farms, 2011





### NET FARM INCOME PER COW BY MILK PER COW 169 New York Dairy Farms, 2012





# Same Farms, 2007 - 2012

					Percent	Percent Difference	
Milk per Cow, Lbs.		2007	2012	Change	Change	in 2007	in 2012
	Top 20%	25,462	26,871	1,409	5.5%	9.0%	7.2%
	80%	23,364	25,067	1,703	7.3%		

# Cost Control

⌘ Know numbers

⌘ Question everything

☑ Will it work on this farm?

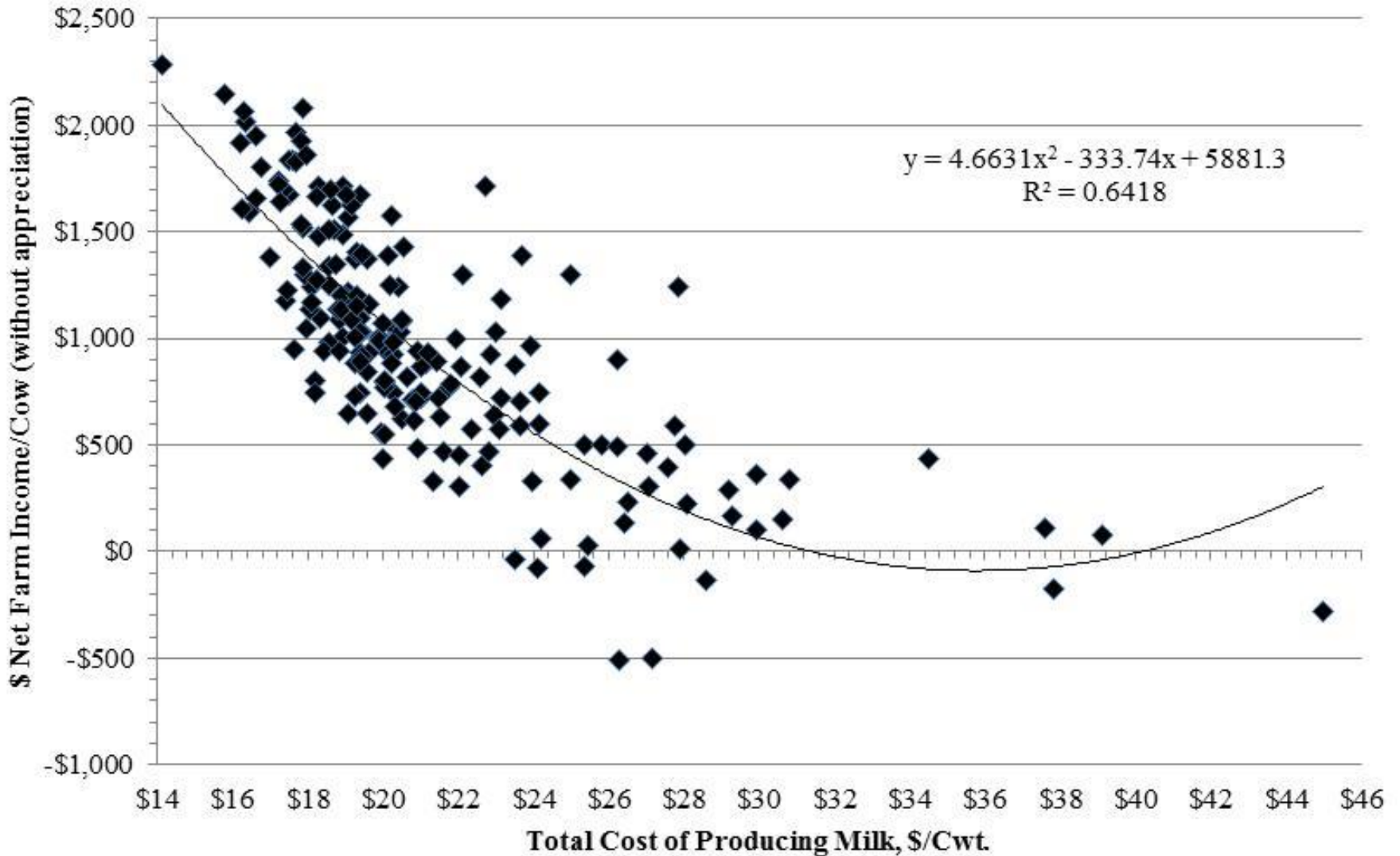
☑ How will you know?

☑ When will you know?

⌘ Slippage

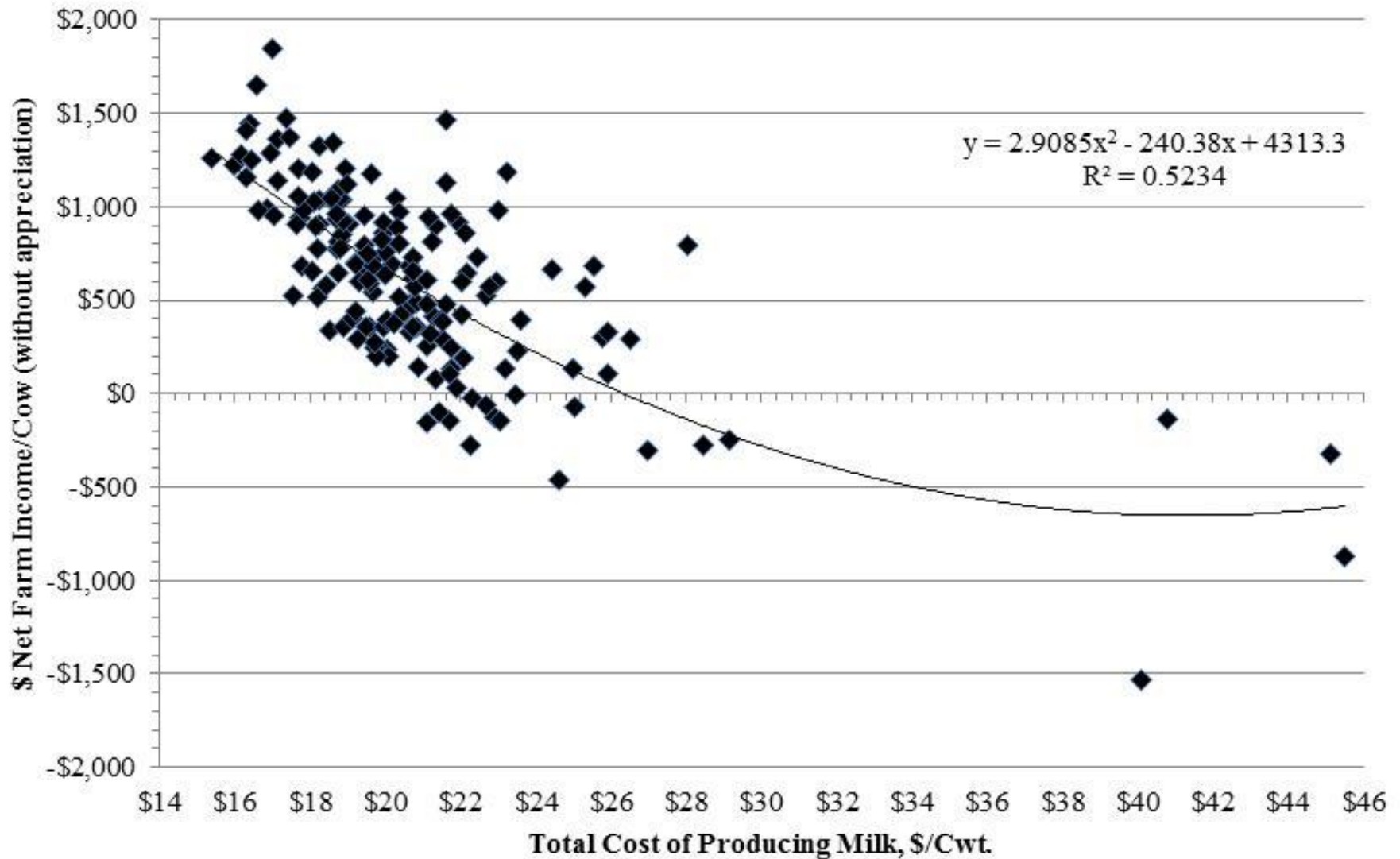


**NET FARM INCOME PER COW BY TOTAL COST OF PRODUCING MILK PER HUNDREDWEIGHT**  
**190 New York Dairy Farms, 2011**





**NET FARM INCOME PER COW BY TOTAL COST OF PRODUCING MILK PER HUNDREDWEIGHT**  
**169 New York Dairy Farms, 2012**







# Same Farms, 2007-2012

	2007	2008	2009	2010	2011	2012
<b>Operating Cost to Produce Milk per Cwt.</b>						
Top 20%	\$12.92	\$13.74	\$12.57	\$12.28	\$14.33	\$14.96
Remaining 80%	\$13.87	\$15.49	\$13.86	\$14.11	\$15.99	\$16.06
<b>Total Cost to Produce Milk per Cwt.</b>						
	\$15.81	\$16.85	\$15.56	\$15.32	\$17.74	\$18.53
	\$17.25	\$19.02	\$17.23	\$17.42	\$19.58	\$19.81



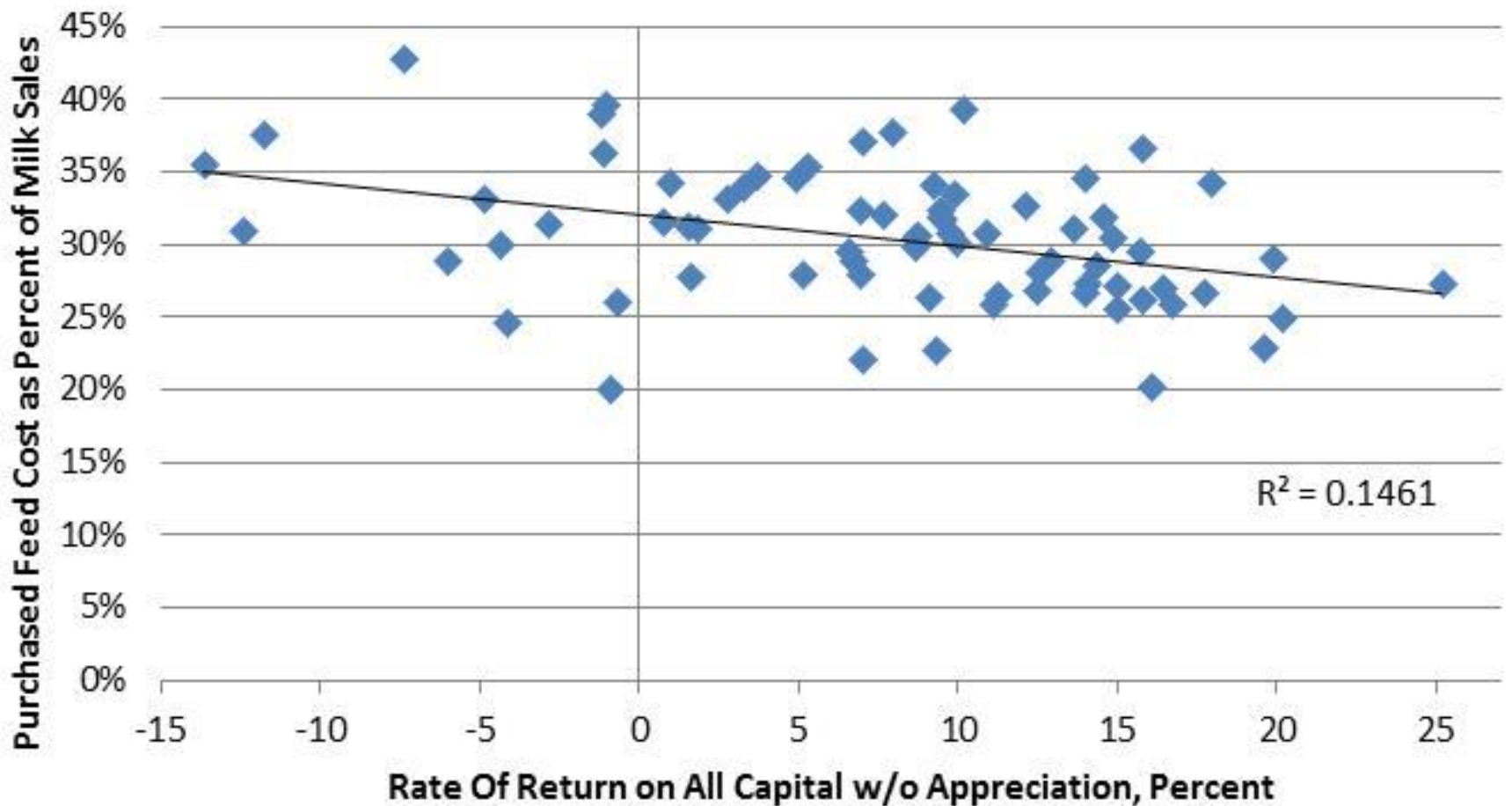
# Purchased Feed Cost Control

- ⌘ Single largest expense on dairy farms in New York
- ⌘ What is the focus of the manager
  - ☑ Lowest possible cost?
  - ☑ Highest output?
  - ☑ Maximize income over feed costs



## Purchased Grain Costs as Percent of Milk Sales VS ROA w/o Apprec.

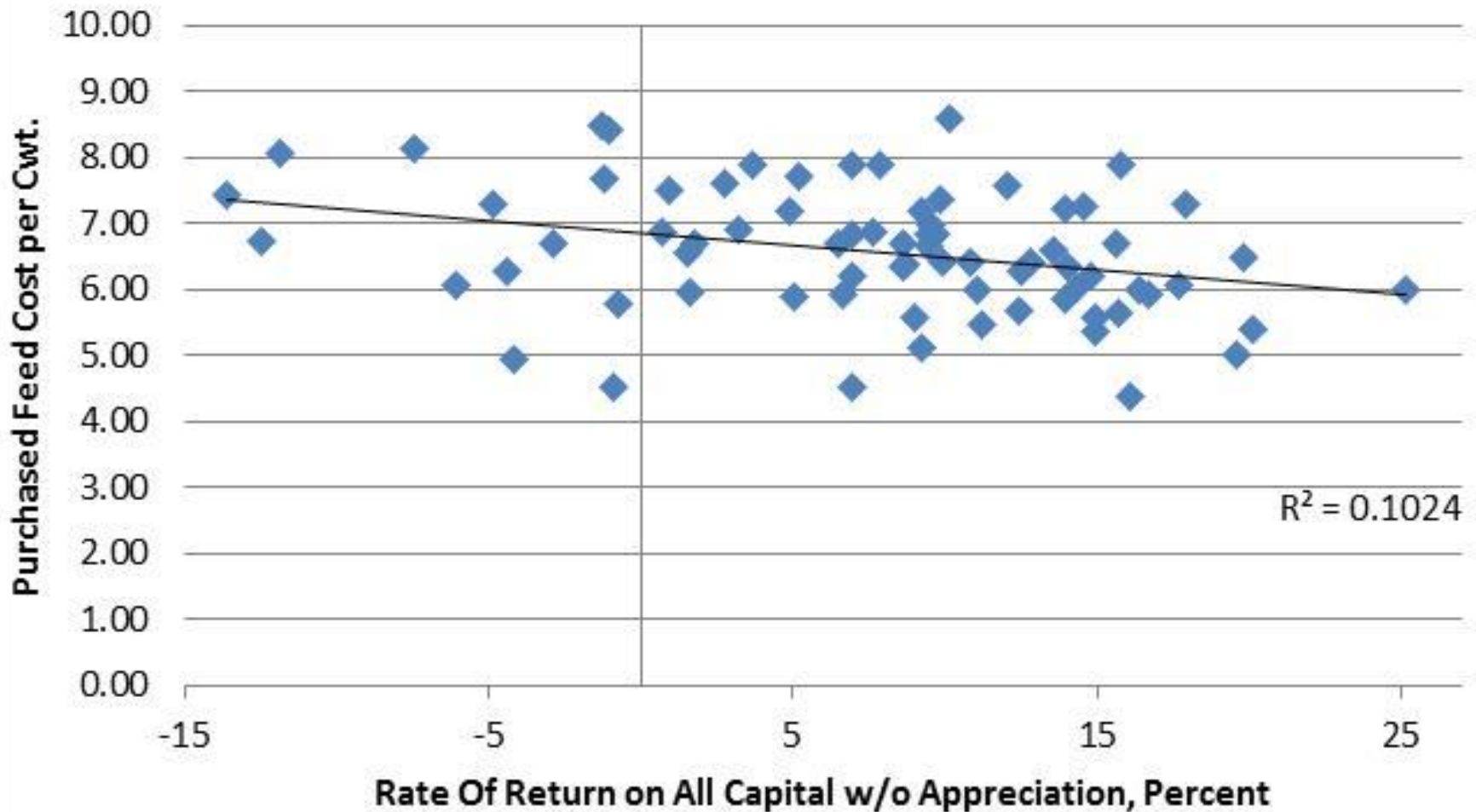
74 New York State DFBS, Raising No Grain, Not Grazing, 2011





## Purchased Grain Costs per Cwt. VS ROA w/o Apprec.

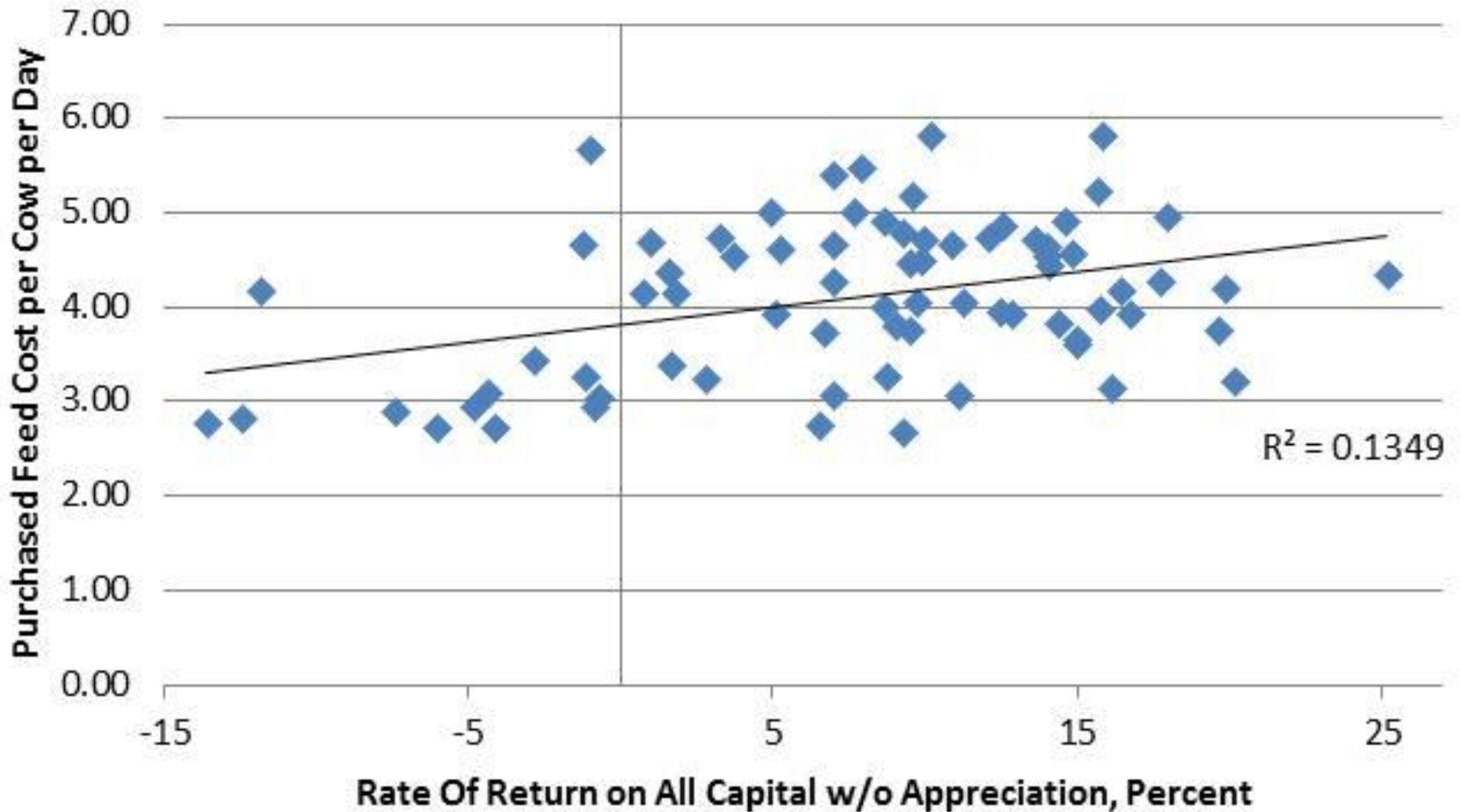
74 New York State DFBS, Raising No Grain, Not Grazing, 2011





## Purchased Grain Costs per Cow per Day VS ROA w/o Apprec.

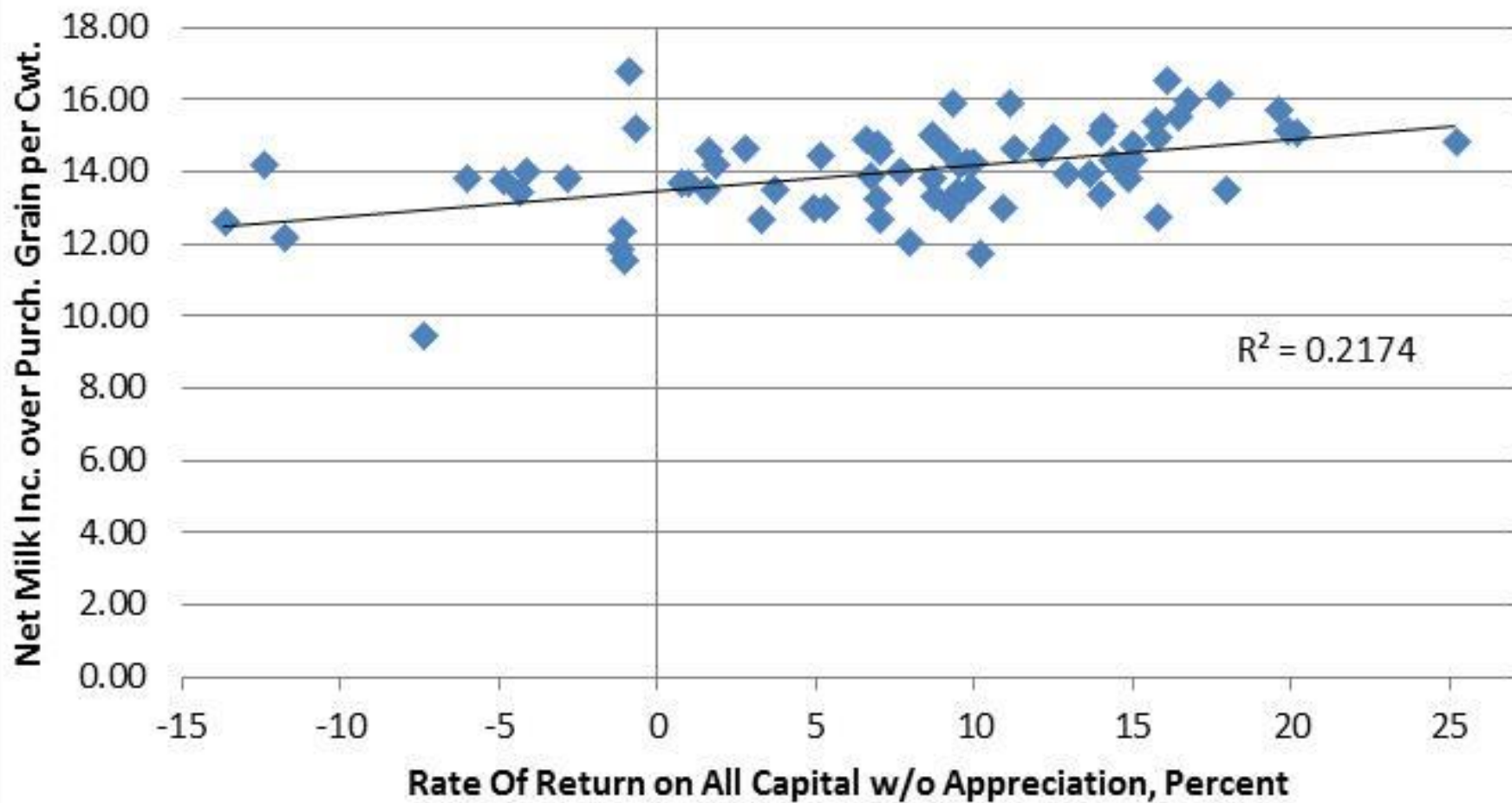
74 New York State DFBS, Raising No Grain, Not Grazing, 2011





# Net Milk Income over Purchased Grain per Cwt. VS ROA w/o Apprec.

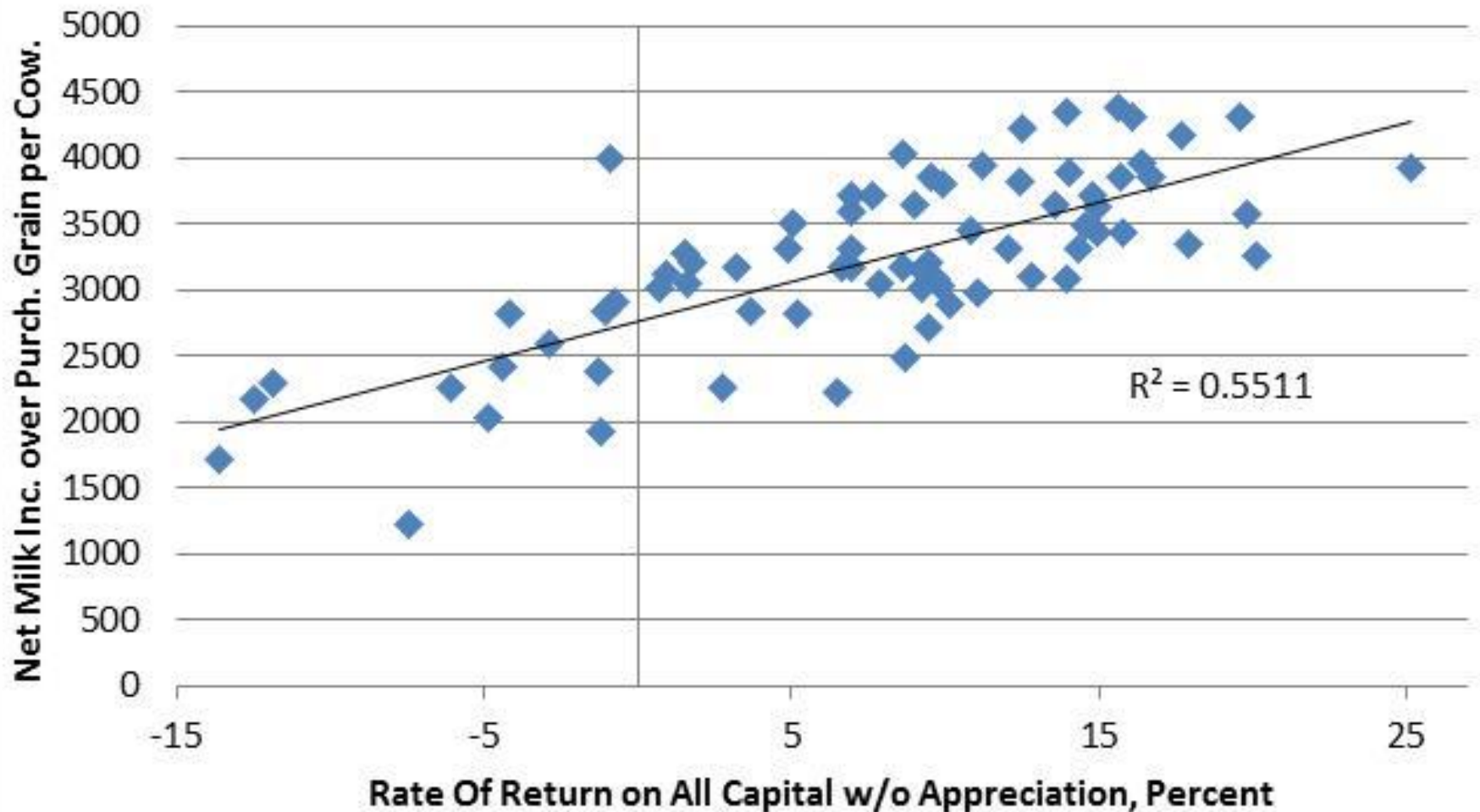
74 New York State DFBS, Raising No Grain, Not Grazing, 2011





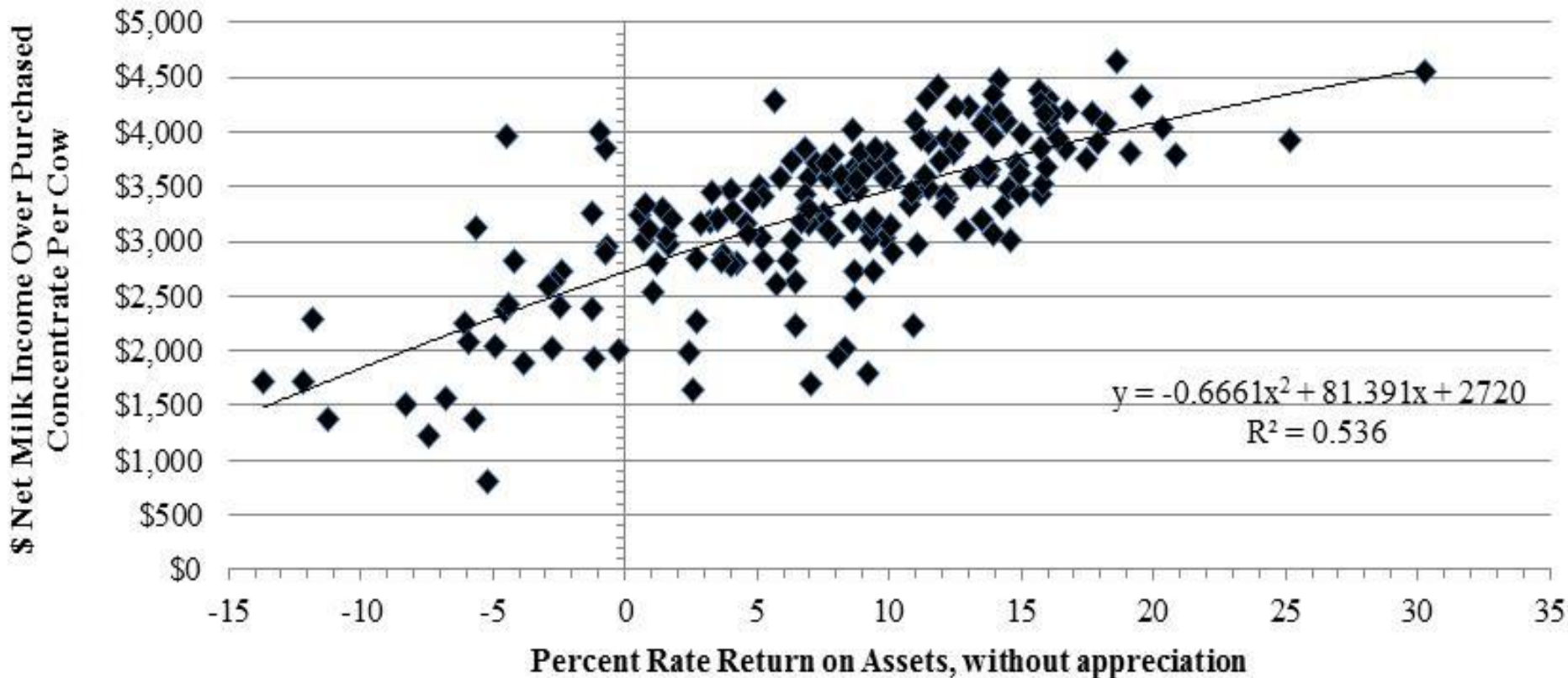
# Net Milk Income over Purchased Grain per Cow, Annual vs ROA w/o Apprec.

74 New York State DFBS, Raising No Grain, Not Grazing, 2011





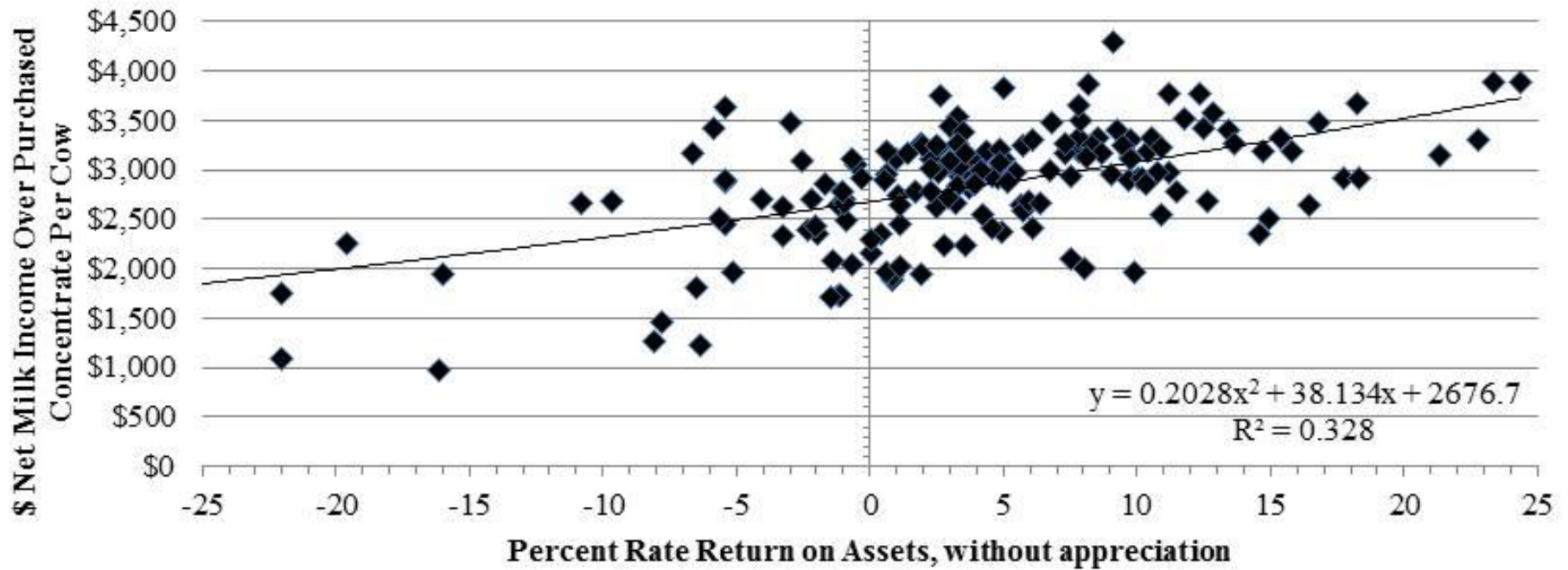
**NET MILK INCOME OVER PURCHASED CONCENTRATE PER COW BY  
RETURN ON ASSETS  
190 New York Dairy Farms, 2011**







**NET MILK INCOME OVER PURCHASED CONCENTRATE PER COW BY  
RETURN ON ASSETS  
169 New York Dairy Farms, 2012**





# Cost Control

- ⌘ Knowing costs important
- ⌘ Looking at performance and output associated with cost even more so!



# People

## ⌘ Labor Efficiency

- ☑ What milk is being produced per worker
- ☑ Cost per worker
- ☑ Cost per cwt



**MILK SOLD PER WORKER AND NET FARM INCOME**  
**190 New York Dairy Farms, 2011**

Pounds of Milk Sold Per Worker	No. of Farms	No. of Cows	Pounds of Milk Per Cow	Net Farm Income (without appreciation)	Labor & Management Income Per Operator
Under 500,000	22	107	20,515	\$68,951	\$12,887
500,000 to 699,999	31	125	19,152	94,106	24,672
700,000 to 899,999	27	288	23,007	257,453	88,241
900,000 to 1,099,999	48	611	23,834	613,725	217,514
1,100,000 & over	62	931	25,804	1,199,265	393,260



# Same Farms, 2007-2012

		2007	2012	Change	Percent Change	Percent Difference in 2007	Percent Difference in 2012
<b>Cows per Worker</b>							
	Top 20%	47.1	47.8	0.74	1.6%	11%	12%
	80%	42.3	42.5	0.18	0.4%		
<b>Milk Sold per Worker, Lbs.</b>							
	Top 20%	1,198,278	1,284,407	86,128	7.2%	21%	20%
	80%	989,354	1,065,928	76,574	7.7%		
<b>Hired Labor Cost per Cwt.</b>							
	Top 20%	\$2.77	\$2.79	\$0.02	0.7%	1%	-1%
	80%	\$2.76	\$2.81	\$0.05	2.0%		
<b>Cost per Hired Worker</b>							
	Top 20%	\$38,491	\$41,026	\$2,535	6.6%	13%	13%
	80%	\$34,185	\$36,369	\$2,184	6.4%		



# People

## ⌘ Labor Effectiveness

- ☑ How good a job are people doing?
- ☑ How are they impacting output?
- ☑ How are they impacting costs?

## ⌘ Impact on Slippage

## ⌘ How to manage



# People

⌘ Not just employee's

⌘ Service providers

☑ Part of the team

☑ Ask for input

☑ Evaluate advice



# People

## ⌘ The Owners/Operators

- ☑ Interacting with others that are positive
- ☑ Surrounding themselves with others trying to accomplish similar things
- ☑ Setting the culture of the business
- ☑ Continuous professional development



# Same Farms 2007 - 2012

## ⌘ Cost control

- ☑ Top 20% of farms
- ☑ Averaged lower cost per cwt for 21 of the 31 operating expense categories

## ⌘ How/Why

- ☑ Higher milk per cow
- ☑ Higher labor effectiveness
- ☑ Better decision making
- ☑ More control



# Investment

⌘ Balance

⌘ Capacity

⌘ Growth in earnings



**ASSET TURNOVER AND PROFITABILITY**  
**169 New York Dairy Farms, 2012**

Ratio	Number of Farms	Number of Cows	Farm Capital (average for year)		Labor & Management Income Per Operator	Net Farm Income (without appreciation)
			Per Cow	Per Worker		
≥ .70	36	802	\$8,111	\$370,517	\$139,134	\$458,723
.60 to .69	32	787	9,537	412,640	156,063	545,903
.50 to .59	46	656	10,518	453,107	100,631	505,321
Less than .50	55	340	13,441	486,967	-2,552	201,017

	2007	2008	2009	2010	2011	2012
<b>Net Investment Per Cow</b>						
Top 20%	-\$994	-\$1,001	-\$503	-\$671	-\$1,326	-\$1,125
Remaining 80%	-\$678	-\$1,039	-\$528	-\$576	-\$761	-\$908
<b>Farm Capital per Cow</b>						
	\$8,377	\$9,148	\$8,933	\$8,717	\$9,625	\$10,517
	\$8,385	\$9,148	\$9,218	\$9,193	\$9,760	\$10,430
<b>Tillable Acres per Cow</b>						
	1.81	1.84	1.90	1.82	1.85	1.85
	2.12	2.17	2.15	2.13	2.12	2.15



# Same Farms, 2007-2012

	2007	2012	Change	Percent Change	Percent Difference in 2007	Percent Difference in 2012
Herd Size, Milking & Dry						
Top 20%	758	988	230.24	30.4%	61%	75%
80%	470	565	94.89	20.2%		

	2007	2008	2009	2010	2011	2012
Corn Grain Acres per Cow						
	0.19	0.30	0.31	0.30	0.26	0.21
	0.29	0.32	0.30	0.31	0.30	0.27
Crop Revenue, Per Cow						
	\$129	\$232	\$100	\$220	\$123	\$245
	\$155	\$248	\$72	\$187	\$124	\$188
Cull Rate, Percent						
	33%	33%	34%	33%	35%	37%
	32%	34%	34%	35%	36%	34%
Net Calf & Cow Income, per Cow(1)						
	\$315	\$333	\$347	\$465	\$556	\$638
	\$278	\$256	\$274	\$267	\$312	\$380
Percent Heifers to Cows						
	79%	82%	84%	87%	88%	86%
	81%	84%	87%	86%	87%	87%

# Continuous Improvement

- ⌘ Never complacent
- ⌘ What to improve next
- ⌘ Set goals
- ⌘ Asking questions
  - ☑ What is new that we should be doing?
  - ☑ What is holding us back?
  - ☑ What are the next opportunities?



# Prepared for Opportunities

⌘ Earnings

⌘ Bank relationships

⌘ People

⌘ Working capital

⌘ Ability to make a decision



# Summary

- ⌘ Over time, the high profit farms
  - ☑ Know their numbers
  - ☑ Value people
  - ☑ Look at performance, not just cost
  - ☑ Always improve
  - ☑ Maximize investments
  - ☑ Position business for opportunities
  - ☑ Take advantage of opportunities