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Analyzing Proposed Dairy Margin Protection Program Enhancements

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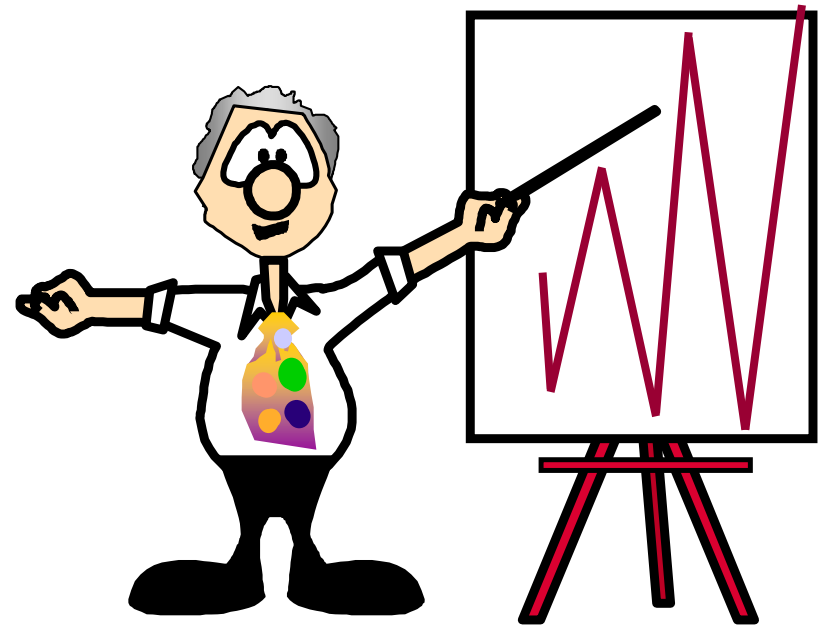
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Overview

- Motivation for the study
- Methods
- Results
- Conclusions
- Questions



Motivation

- Dairy Margin Protection Program hasn't provided the support that was intended
- Very few producers have received payments over the first 3+ years of the program
- Major shift in the protection levels farmers are electing

Purpose

- Examine the program as it was designed to determine where some of the flaws are
 - Would the results looked better in a different time period
- Looking for adjustments to the program to make it more effective
 - \$5-9 coverage range instead of \$4-8
 - Calculate the MPP payments on a monthly basis instead bi-monthly

What is in the Margin Protection Program

- The MPP provides
 - Base program starts if calculated margin falls below \$4.00/cwt
 - Cost \$100/Dairy
 - Supplemental program covers margins below \$8.00/cwt at \$0.50 increments
 - Can buy supplemental on 25 to 90 percent of production in 5 percent increments

Premium Rates for Different Coverage Production Level

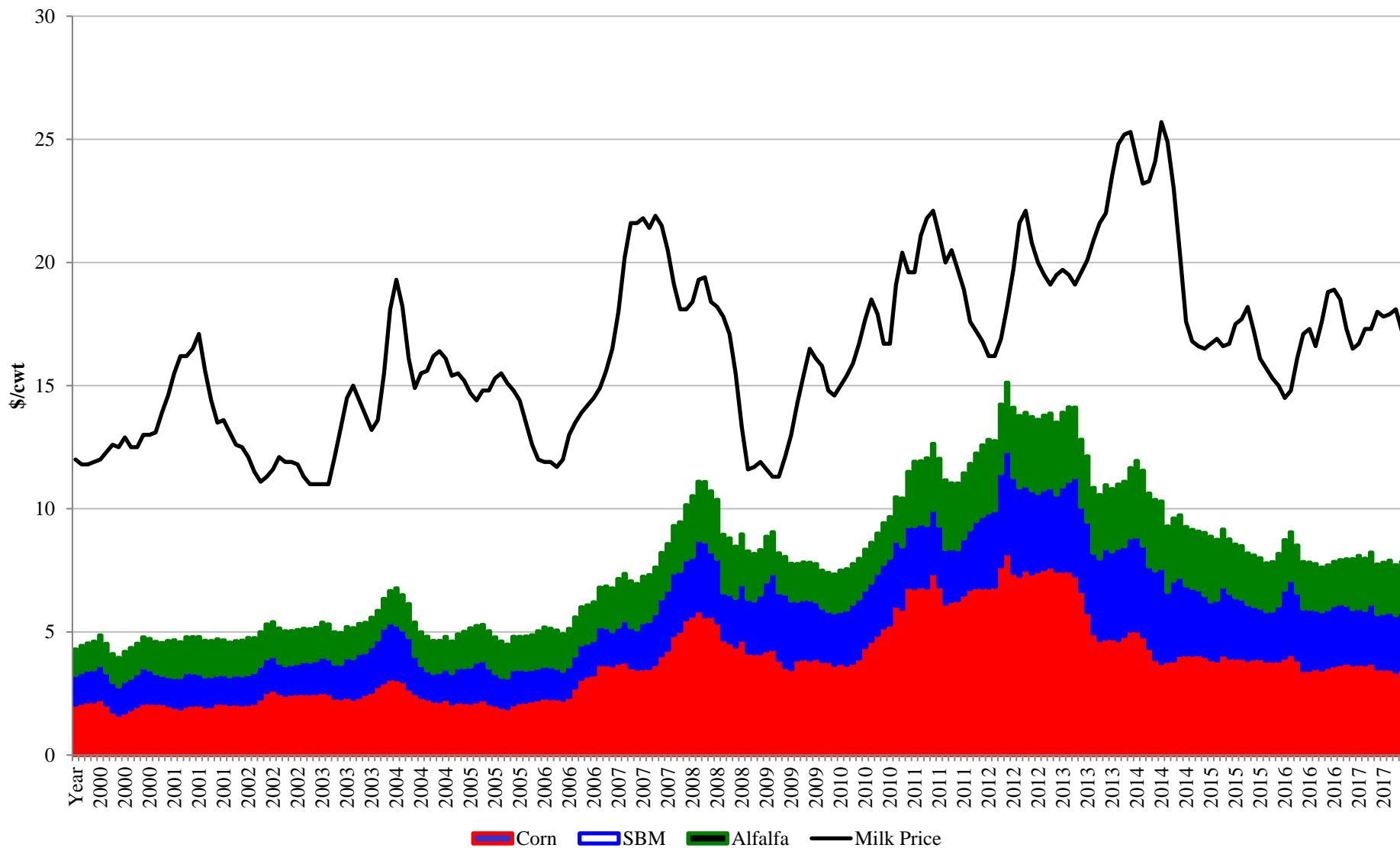
Margin Coverage level	\$/cwt (first 4 Million lbs)	\$/cwt (4+ Million lbs)
4.50	0.010	0.020
5.00	0.025	0.040
5.50	0.040	0.100
6.00	0.055	0.155
6.50	0.090	0.290
7.00	0.217	0.830
7.50	0.300	1.060
8.00	0.475	1.360

- 2014 and 2015 premiums were reduced by 25% for coverage levels \$4.50 to \$7.50
- \$4 Margin coverage is \$100 per dairy

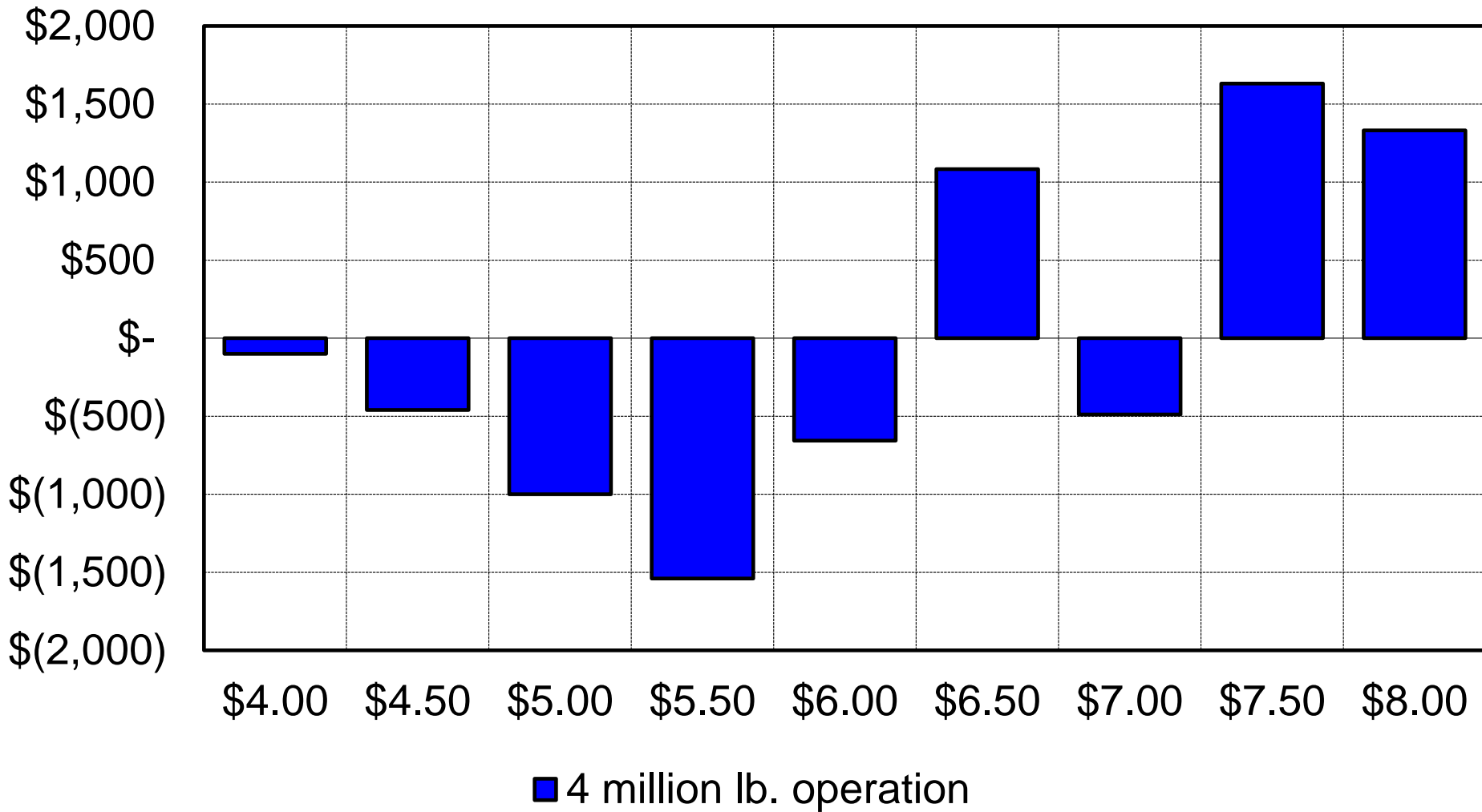
Margin Protection Program Calculation

- Margin = US all milk price (USDA/NASS) – 1.0728 x US corn price (USDA/NASS) – 0.00735 x soybean meal price (USDA/AMS, Central IL) – 0.0137 US alfalfa price (USDA/NASS)
- If the average margin falls below the trigger for “a consecutive 2 month” period then a payment is made (Jan-Feb, Mar-Apr, May-Jun, Jul-Aug, Sep-Oct, Nov-Dec)

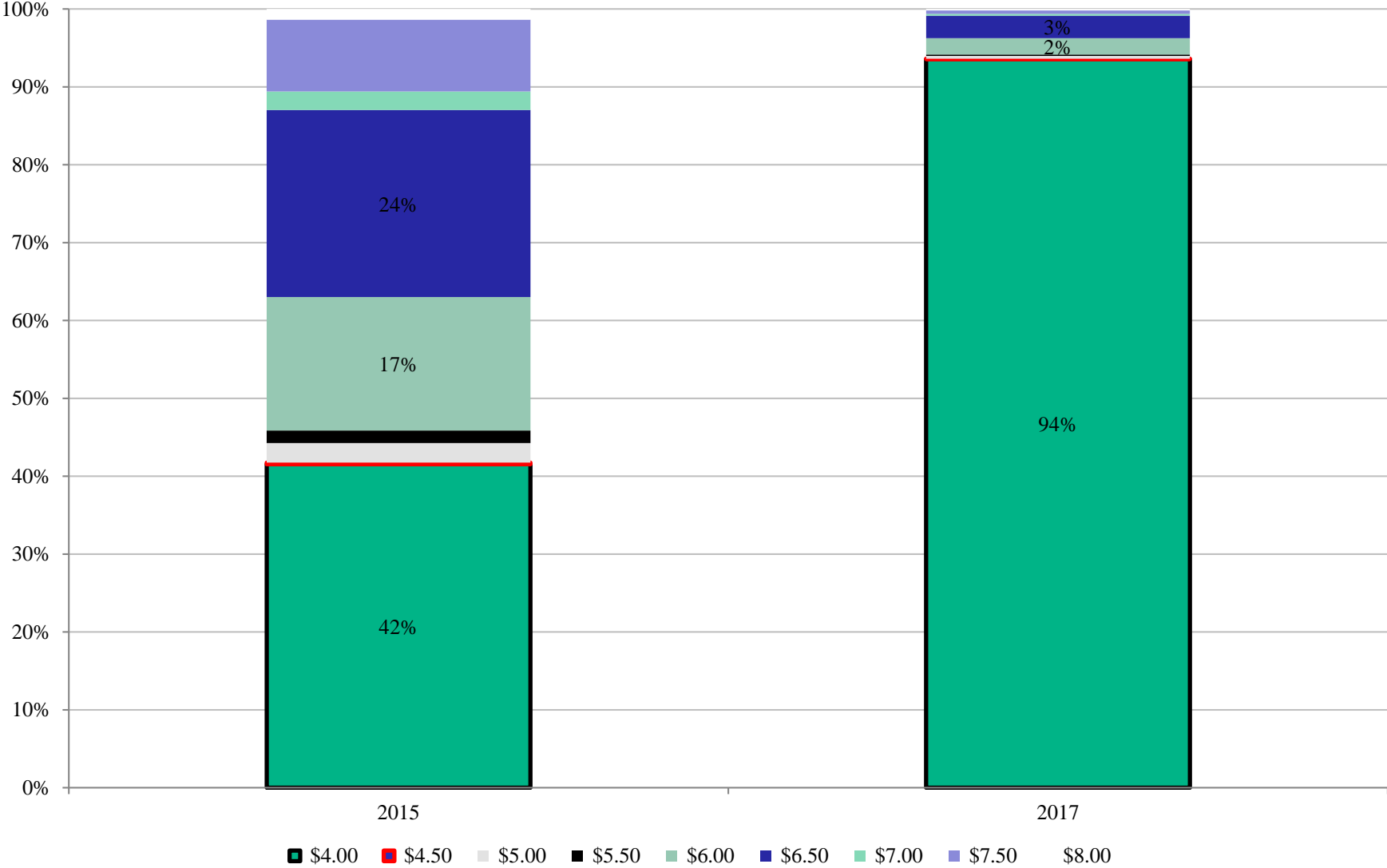
Milk Price vs Margin Components 2000-2017



2016 Net MPP Revenue



Coverage Level Purchased Across Southern States in 2015 and 2017



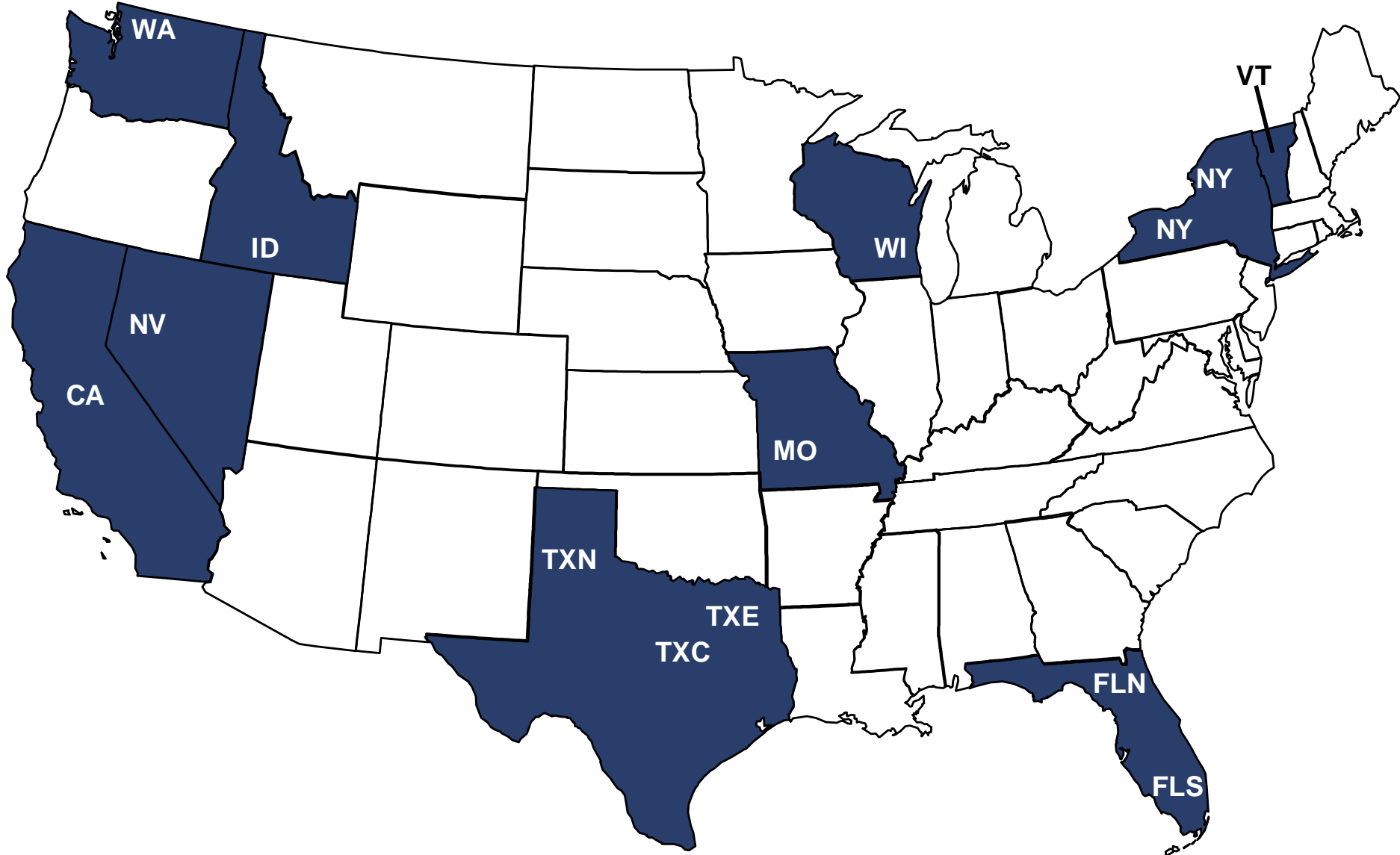
Method

- Using AFPC Representative Dairy Farm production levels to calculate their net returns based off simulated margins

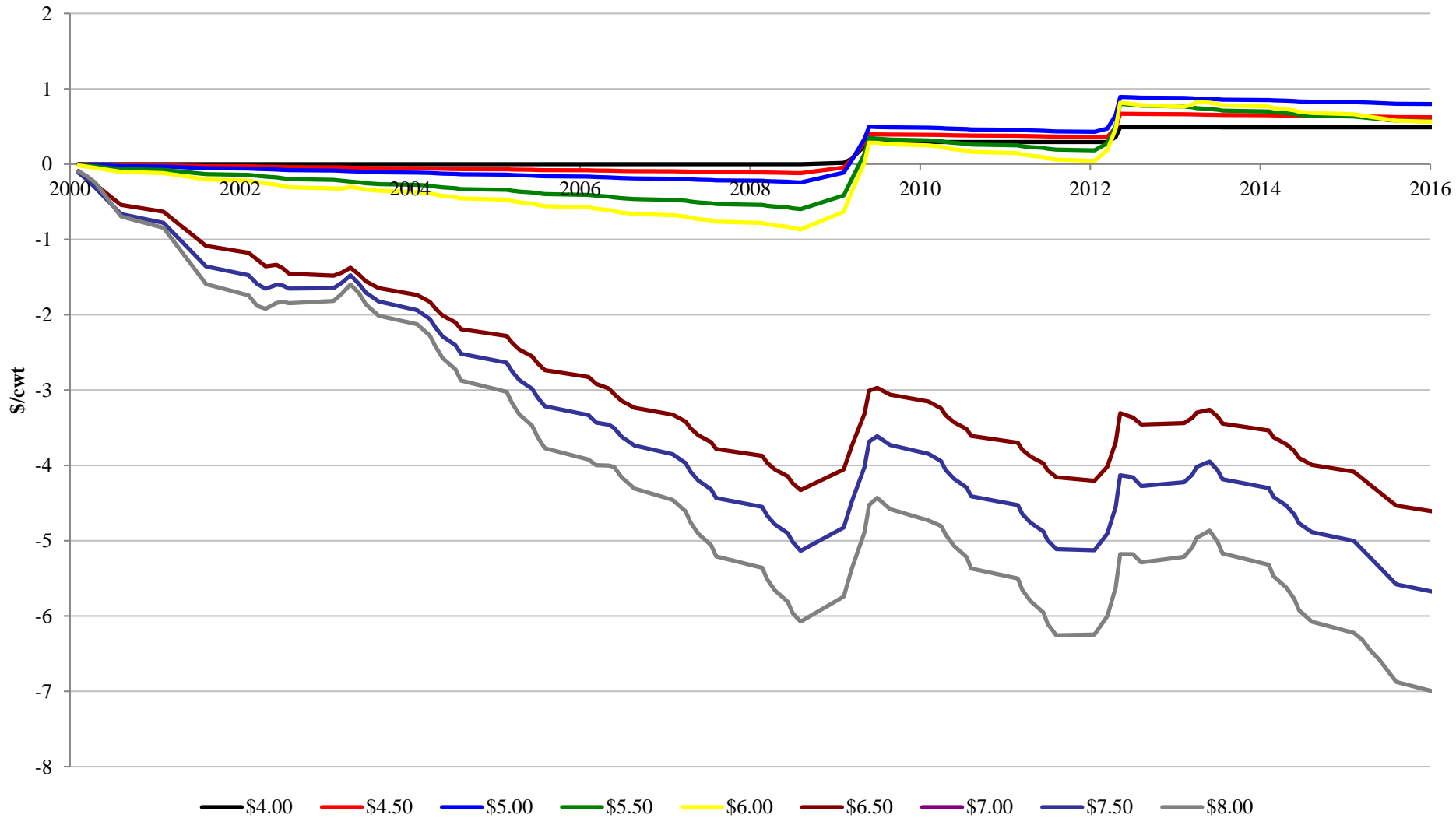
Representative Farm Process

- 3-6 producers in region
- Similar in size and scope
- Farms updated every 2-3 years with face-to-face meetings
- In many cases, we have a moderate and large farm in the same location to show the effect of economies of size

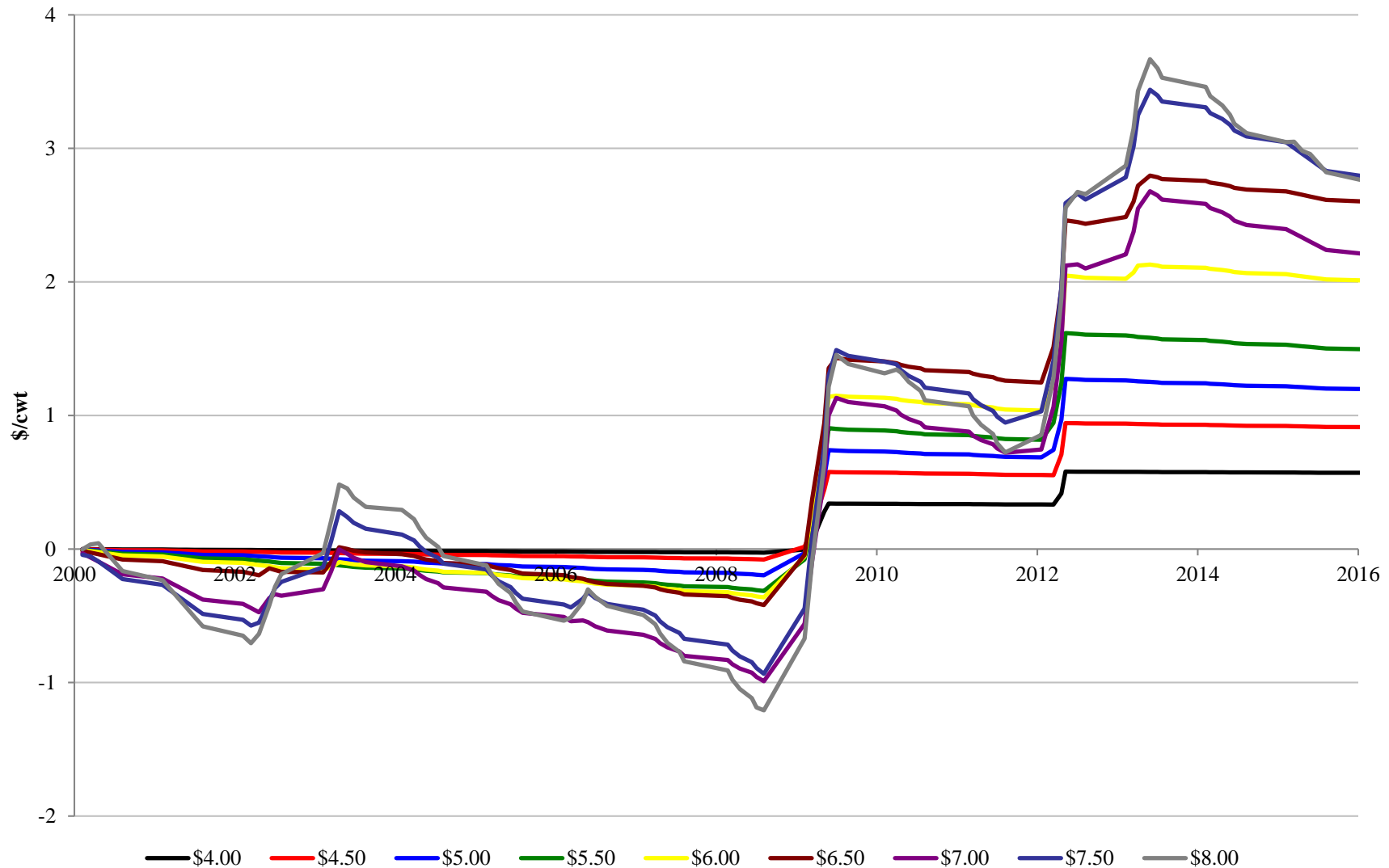
Location of Representative Dairies



Bi-Monthly Net Returns TXN3800

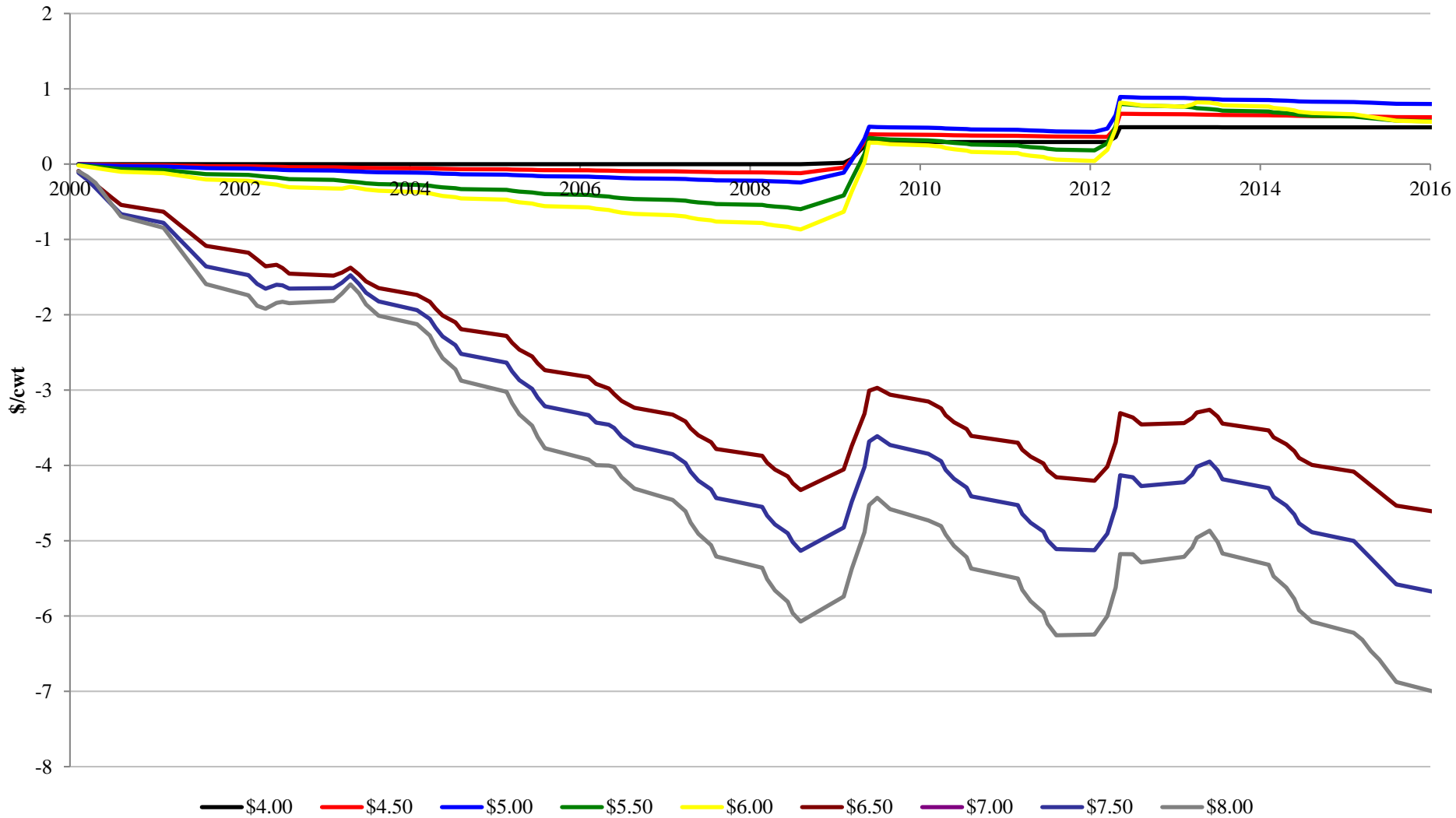


Bi-Monthly Net Returns WI145

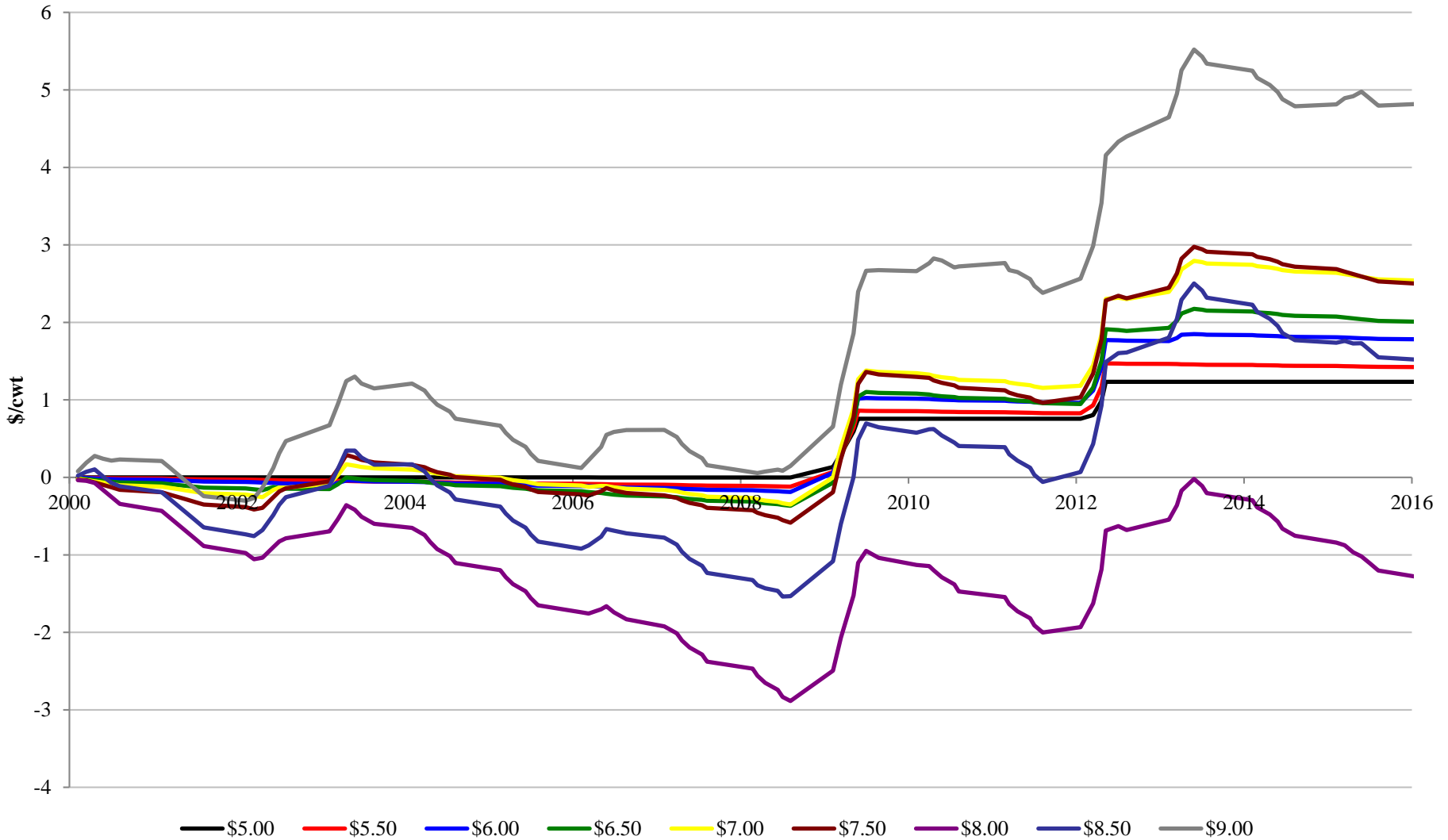


Bi-Monthly Net Returns

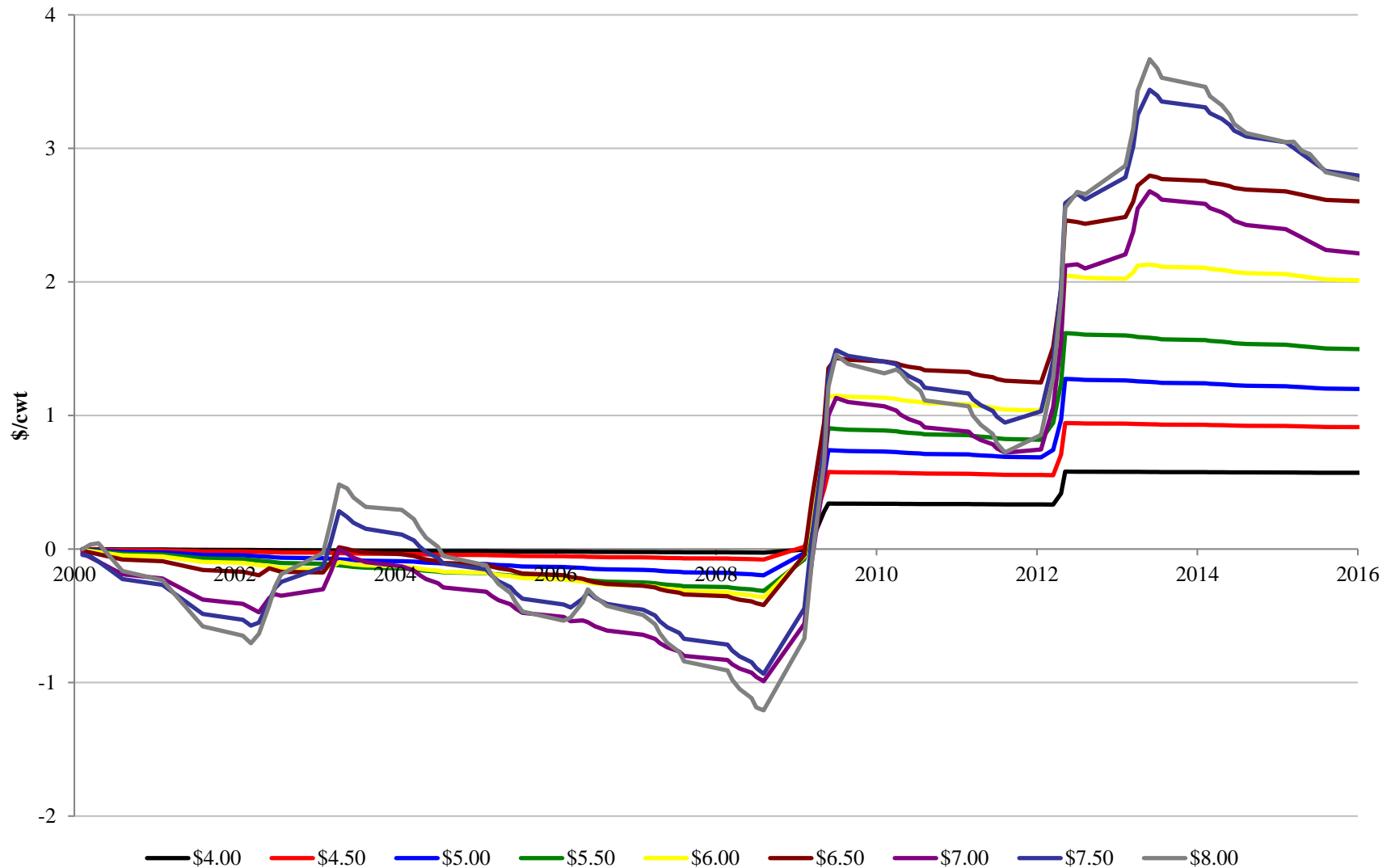
TXN3800 \$4-8



Bi-Monthly Net Returns TXN3800 \$5-9

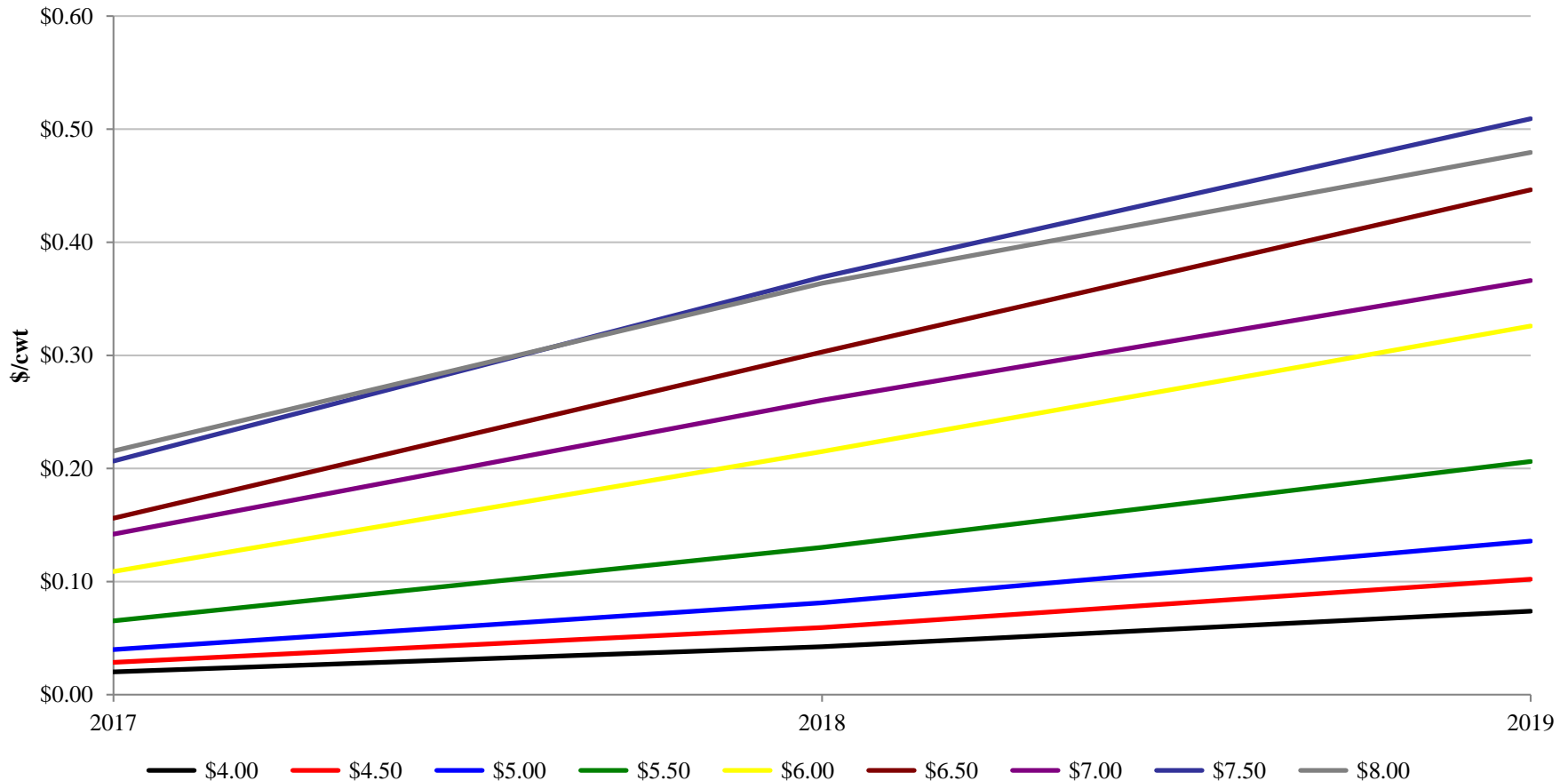


Bi-Monthly Net Returns WI145 \$4-8



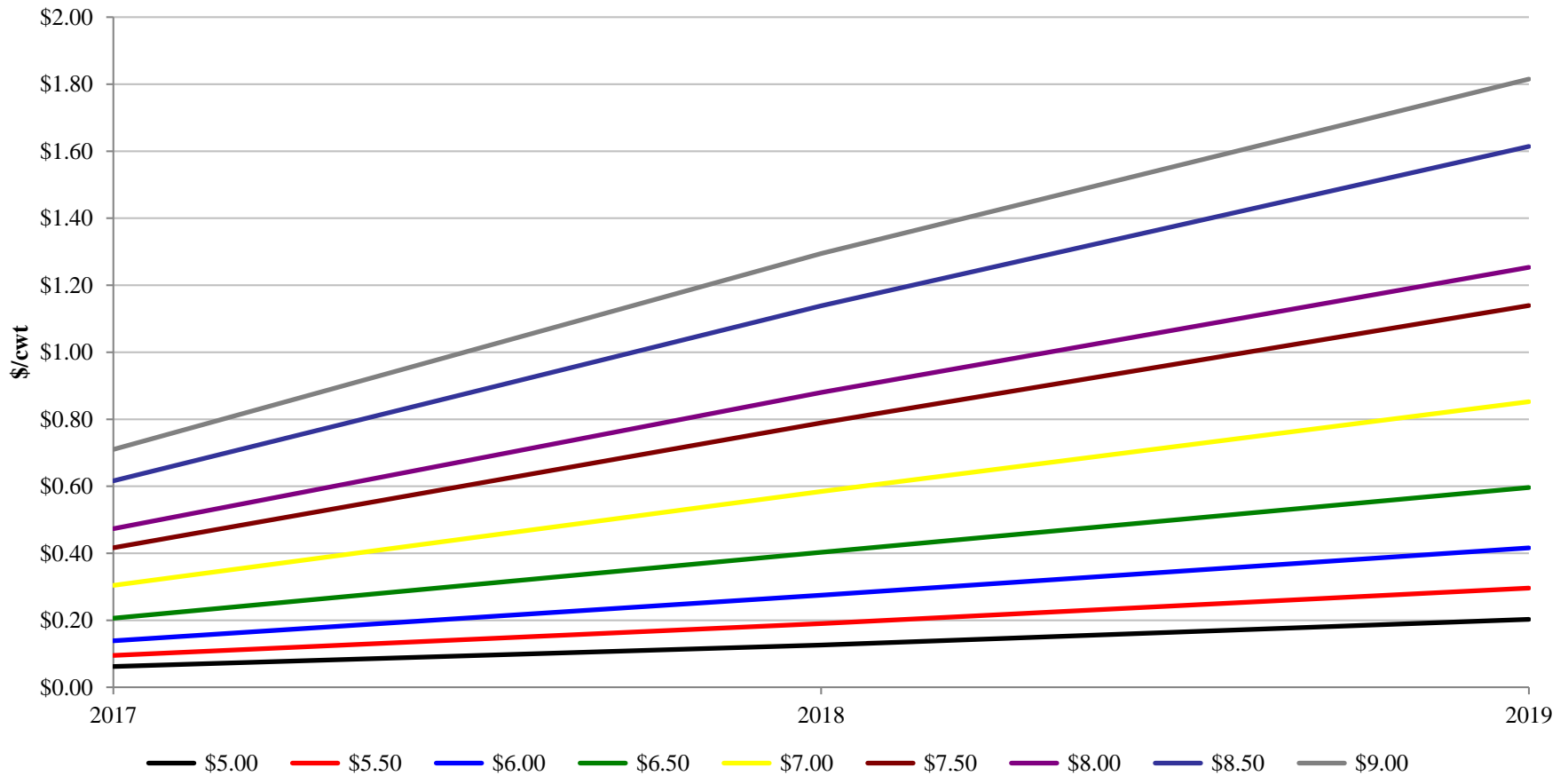
WI145 SERF Results

\$4-8 Net Returns/cwt

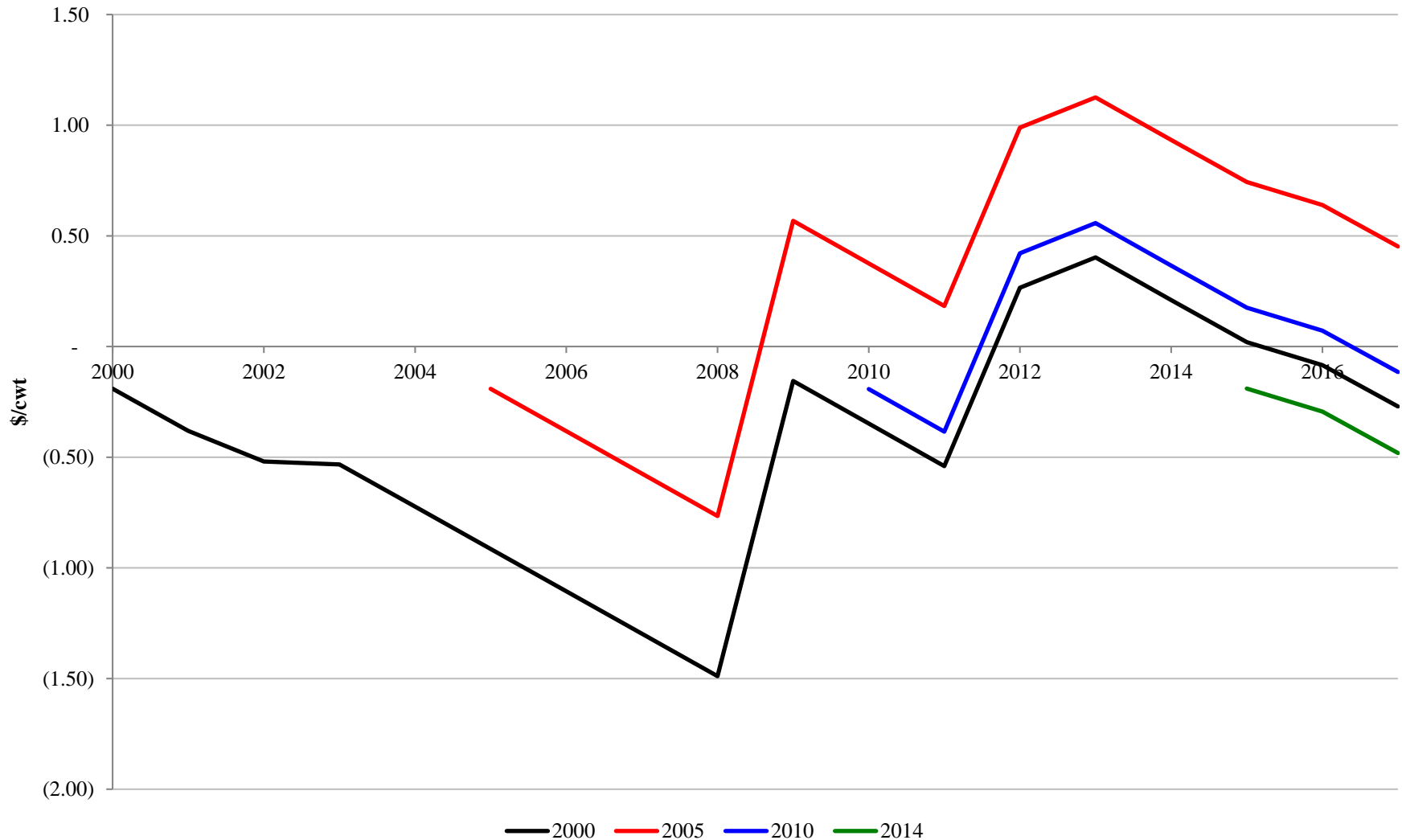


WI145 SERF Results

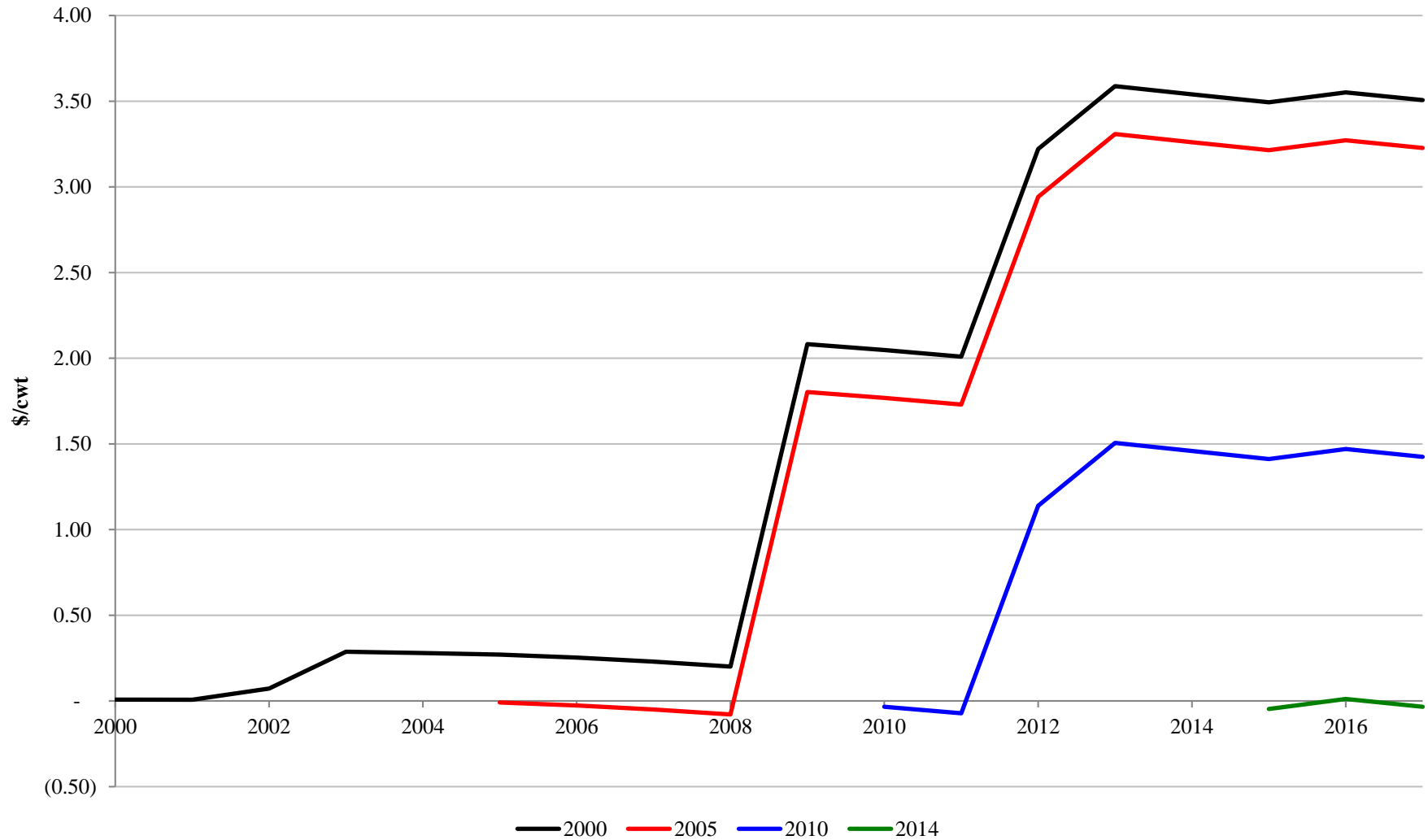
\$5-9 Net Returns/cwt



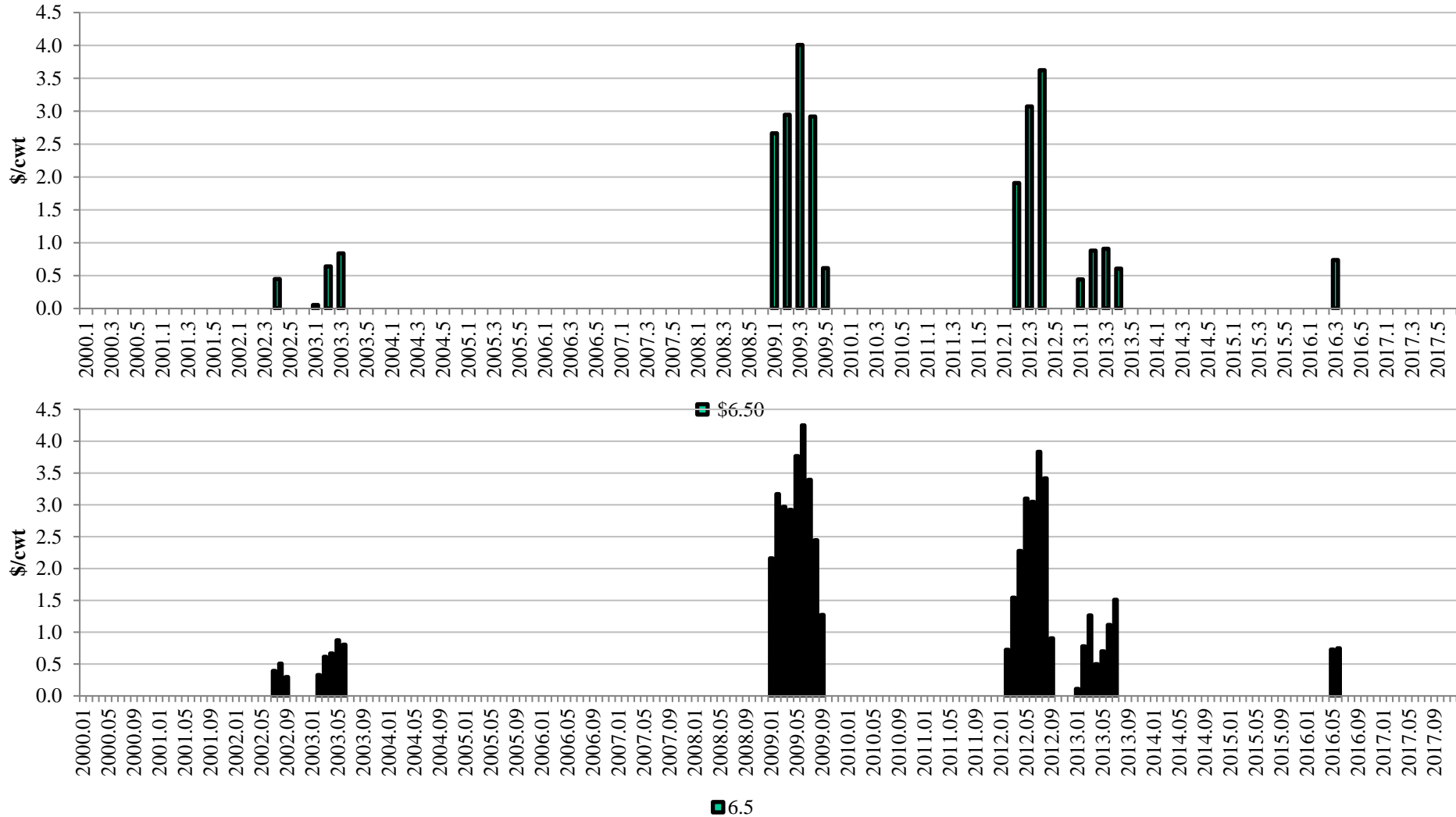
TXN3800 Net Returns Using Different Start Years



WI145 Net Returns Using Different Start Years



MPP Payments at \$6.50 Buy-up Bi-Monthly vs Monthly



Payment Differences TXN 3800

Monthly vs Bi-Monthly

(Sept 2014 – Dec 2016)

	Payments	Total MPP \$	Total \$/Cow	Payments	Total MPP \$	Total \$/Cow	Diff \$/Cow
\$4.00	0	0	0	0	0	0	0
\$4.50	0	0	0	0	0	0	0
\$5.00	0	0	0	0	0	0	0
\$5.50	0	0	0	0	0	0	0
\$6.00	1	26,718	7	2	26,718	7	0
\$6.50	1	83,031	22	2	83,031	22	0
\$7.00	1	139,343,	37	3	148,901	39	2.52
\$7.50	2	235,223	62	6	239,238	63	1.06
\$8.00	6	439,067	116	12	494,860	130	14.68
\$8.50	8	840,639	221	15	883,483	232	11.27
\$9.00	10	1,300,160	342	19	1,364,714	359	16.99

- At \$6.50 protection paying \$44.31/cow/year
- At \$8.00 protection paying \$208.35/cow/year

Payment Differences TXN3800

Monthly vs Bi-Monthly (2000-2017)

	Payments	Total MPP \$	Total \$/Cow	Payments	Total MPP \$	Total \$/Cow	Diff \$/Cow
\$4.00	6	476,990	125	10	499,244	131	5.86
\$4.50	6	814,865	214	13	830,441	219	4.10
\$5.00	7	1,198,837	315	15	1,199,359	316	0.14
\$5.50	7	1,593,025	419	18	1,658,281	436	17.17
\$6.00	14	2,181,779	574	29	2,308,408	607	33.32
\$6.50	17	3,076,723	809	34	3,216,356	846	36.75
\$7.00	23	4,215,278	1,109	46	4,318,244	1,136	27.10
\$7.50	29	5,665,231	1,490	63	5,834,641	1,535	44.58
\$8.00	42	7,662,261	2,016	90	7,927,333	2,086	69.76
\$8.50	58	10,513,780	2,766	110	10,744,656	2,827	60.76
\$9.00	64	13,904,798	3,659	130	14,156,347	3,725	66.20

Summary

- The number of dairies signing up for the Margin Protection Program are decreasing and buying a lower protection levels each year
- Starting the program in September of 2014 was detrimental to its success
- Using a \$5-9 range would have paid more often and the dairies likely would have continued to buy at a higher level

Next Steps

- Future Research
 - Analyze all portions of the potential changes using whole farm simulation model on the representative dairies
 - Analyze additional alternatives to the current policy
 - Impact of 5 million pounds at the lower rate over 4 million pounds
 - Analyze the lower new price forecast expected out this spring