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# 2010 Pork Management Conference

## Managing Your Profit Margin Despite Unpredictable Hog Prices & Feed Costs



## Today's Topics:

Establishing a commodity price management policy (hedge policy)

Modeling your operation to identify forward margin opportunities

Basics of strategy selection



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Establishing a  
Commodity Price Management Policy  
(Hedge Policy)  
and Internal Reporting



## **What is a Commodity Price Management Policy?**

A Commodity Price Management Policy states the company's views regarding transactions in cash (physical) contracts, futures contracts and option contracts.

### ***Benefits of a Commodity Price Management Policy include:***

- Promotes discipline throughout the organization
- Allows for Executive Management oversight and review
- Delegates administrative duties and management decisions
- Defines responsibilities and accountabilities
- Provides direction to everyone involved in price management



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# Sample Commodity Price Management Policy

***Mission Statement:***

Our objective is to actively monitor and manage forward margins in an effort to reduce or eliminate the effect of adverse commodity prices on our company's profitability.

***Overall Goal::***

To identify an acceptable range of margin or margin percentiles to either 1.) protect above average margins and/or 2.) reduce the effect of adverse market conditions. Once the range of margins or margin percentiles is established a price risk management plan will be put into place transacting in either cash and/or exchange traded markets to simultaneously protect inputs costs and revenues consistent with the plan.

***Approved Commodities & Annual Volumes:***

Corn	# bushels
Soybean Meal	# tons
Lean Hogs	# head

***Identification of range of Margin and/or Margin Percentiles:***

The price management team will utilize several resources to identify margin opportunities including internal staff and outside advisors. One of those advisors, Commodity & Ingredient Hedging, LLC provides a web based margin management software that forecasts a forward margin using our companies profile against forward futures prices on corn, meal and lean hogs. That software also utilizes historical futures values to rank projected forward margin opportunities in terms of a historical margin percentile. These percentiles are then used to identify the range of acceptable margin and subsequently coverage levels based on that range. Below is the default margin management plan. The margin management plan may change due the market conditions.

(Sample margin management plan)

Margin Percentile	Incremental Coverage	Cumulative coverage
70	25%	25%
80	25%	50%
90	25%	75%



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### *Responsible Party/Parties:*

Commodity Price Management Team (Group) is responsible for monitoring margins and has the authority to make price management commitments up to 100% of purchases/sales up to 1 year in advance. The Team will report and recommend price management strategies to the owners and report positions to the accounting department and/or lender if required.

### *Internal Reporting Procedures:*

The Commodity Price Management Team will maintain a position record showing the net long or short position of the company. The position report will reflect at least 4 quarters in advance of the current quarter. This report will be forwarded to the owners upon completion. The CPM Team will notify the owners if a price management decision is executed. The CPM Team will provide the owners with recommendations for price management strategies for time periods beyond the CPM Team's authority. The CPM Team will notify the accounting department and/or lender of all transactions if required.

### *Accounting Procedures*

We will follow commonly accepted practices of accounting including: the allocation of futures and options gains or losses to the appropriate physical market transactions. Company auditors will be asked to provide guidelines.



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Creating a model of your operation:

Worksheet Information



## Worksheet - 1st Quarter 2011

Prices Current as of: 06/14/2010

Quarterly Hog Production			Edit
<b>Projected Carcass Pounds</b>			13,338,000 lbs
Head Count			67,109 head
Average Weight			265.00 lbs
Average Yield			75.00 %
<b>Quarterly Feed Requirements</b>			
Corn			650,000 bu
Soybean Meal			4,865 tons
<b>Quarterly Costs</b>			
Other-Feed Cost per carcass cwt		<i>Total Other Feed Requirements: 7,262,736 lbs.</i>	\$9.69 \$/cwt
Non-Feed Cost per carcass cwt			\$30.67 \$/cwt

Prices						
	Futures Contract	Price	Proj. Basis ?	Proj. Cash Price	Cash Price Based on Inputs & Position ?	Coverage
Corn	Mar '11	\$ 3.882	\$ 0.000	\$3.88	\$3.88 /bu	<div style="width: 0%; background-color: gray;">0%</div>
Soybean Meal	Mar '11	\$ 259.30	\$ 4.500	\$263.80	\$263.80 /ton	<div style="width: 0%; background-color: gray;">0%</div>
Lean Hogs	Feb '11 Apr '11	\$ 73.626	\$ 0.000	\$73.63	\$73.63 /cwt	<div style="width: 0%; background-color: gray;">0%</div>

Margin	Live	Carcass
<b>Open Market Margin</b>	9.41 \$/head	3.55 \$/cwt
	4.73 \$/cwt	
<b>Unrealized Net Margin</b>		
Current Hog Price Based on Inputs & Position	146.33 \$/head	55.22 \$/cwt
Current Cost of Production Based on Inputs & Position	136.93 \$/head	51.67 \$/cwt
Current Net Margin Based on Inputs & Position	9.41 \$/head	3.55 \$/cwt
	4.73 \$/cwt	
<b>Total Net Margin</b>		<b>\$631,288</b>

[Start Here](#)[Worksheets ▾](#)[Stats & Graphs ▾](#)[Strategies ▾](#)[Positions ▾](#)[Resources ▾](#)Hello [dward ▾](#)

## Worksheet - 1st Quarter 2011

Prices Current as of: 06/14/2010

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**Margin**

**Live**

**Carcass**

Open Market Margin

9.41 \$/head

3.55 \$/cwt

4.73 \$/cwt

Unrealized Net Margin

Current Hog Price Based on Inputs & Position

146.33 \$/head

55.22 \$/cwt

73.63 \$/cwt

Current Cost of Production Based on Inputs & Position

136.93 \$/head

51.67 \$/cwt

68.89 \$/cwt

Current Net Margin Based on Inputs & Position

9.41 \$/head

3.55 \$/cwt

4.73 \$/cwt

Total Net Margin

\$631,288

Delete

What If



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Creating an objective comparison:

Margin Percentiles & Graphs

# Statistics - 1st Quarter 2011

[Graphs](#)

Statistics information covering 10 year(s) from 06/14/2000 to 06/14/2010. These statistics are based upon daily futures prices averaged on a weekly basis.



Worksheet: 1st Quarter 2011

Percentile Range: 10 Year

Corn		Meal		Lean Hogs		Open Market Margin	
2010/06/14	3.88	2010/06/14	259.30	2010/06/14	73.63	2010/06/14	4.73
High	7.86	High	425.95	High	87.21	High	20.39
90th	4.37	90th	305.28	90th	71.99	90th	4.90
80th	3.99	80th	275.76	80th	68.93	80th	1.90
70th	3.67	70th	242.82	70th	66.41	70th	0.39
Average	2.58	Average	189.82	Average	60.13	Average	-1.66
30th	2.37	30th	169.04	30th	56.91	30th	-3.88
20th	2.25	20th	162.70	20th	55.50	20th	-5.37
10th	2.13	10th	153.60	10th	52.93	10th	-8.17
Low	1.96	Low	143.70	Low	40.06	Low	-19.32
Current %	76.09	Current %	74.57	Current %	92.22	Current %	89.75

# Graphs - 1st Quarter 2011

[View as Table](#)

Open market margin from 06/14/2009 to 06/14/2010.

Worksheet:  Range:  Percentile:  Percentile Range:



# Graphs - 1st Quarter 2011

[View as Table](#)

Open market margin from 06/14/2000 to 06/14/2010. These statistics are based upon daily futures prices averaged on a weekly basis.

Worksheet:  Range:  Percentile:  Percentile Range:



■ 1st Qtr 2011 Margin ■ 90th Percentile ■ Quarterly Rollover



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# Current Margin Percentiles

Worksheet: **3rd Quarter 2010** ▾Percentile Range: **10 Year** ▾

Corn		Meal		Lean Hogs		Open Market Margin	
<b>2010/06/16</b>	3.66	<b>2010/06/16</b>	269.30	<b>2010/06/16</b>	78.84	<b>2010/06/16</b>	10.70
<b>High</b>	7.49	<b>High</b>	433.30	<b>High</b>	84.46	<b>High</b>	16.51
<b>90th</b>	4.43	<b>90th</b>	315.02	<b>90th</b>	74.10	<b>90th</b>	8.37
<b>80th</b>	4.04	<b>80th</b>	274.58	<b>80th</b>	71.37	<b>80th</b>	4.63
<b>70th</b>	3.70	<b>70th</b>	252.62	<b>70th</b>	69.82	<b>70th</b>	2.78
<b>Average</b>	2.49	<b>Average</b>	188.70	<b>Average</b>	62.91	<b>Average</b>	0.36
<b>30th</b>	2.36	<b>30th</b>	170.78	<b>30th</b>	58.13	<b>30th</b>	-1.90
<b>20th</b>	2.28	<b>20th</b>	162.16	<b>20th</b>	56.48	<b>20th</b>	-4.07
<b>10th</b>	2.19	<b>10th</b>	155.10	<b>10th</b>	54.55	<b>10th</b>	-7.50
<b>Low</b>	1.76	<b>Low</b>	142.93	<b>Low</b>	42.51	<b>Low</b>	-22.52
<b>Current %</b>	68.88	<b>Current %</b>	76.09	<b>Current %</b>	96.96	<b>Current %</b>	95.45

Worksheet: **4th Quarter 2010** ▾Percentile Range: **10 Year** ▾

Corn		Meal		Lean Hogs		Open Market Margin	
<b>2010/06/16</b>	3.77	<b>2010/06/16</b>	258.80	<b>2010/06/16</b>	73.15	<b>2010/06/16</b>	4.82
<b>High</b>	7.69	<b>High</b>	421.93	<b>High</b>	77.77	<b>High</b>	19.16
<b>90th</b>	4.43	<b>90th</b>	298.44	<b>90th</b>	70.77	<b>90th</b>	3.95
<b>80th</b>	3.95	<b>80th</b>	271.12	<b>80th</b>	66.94	<b>80th</b>	-0.01
<b>70th</b>	3.62	<b>70th</b>	238.64	<b>70th</b>	64.20	<b>70th</b>	-1.68
<b>Average</b>	2.54	<b>Average</b>	187.10	<b>Average</b>	57.79	<b>Average</b>	-4.47
<b>30th</b>	2.37	<b>30th</b>	168.78	<b>30th</b>	53.72	<b>30th</b>	-6.70
<b>20th</b>	2.28	<b>20th</b>	161.30	<b>20th</b>	51.81	<b>20th</b>	-8.38
<b>10th</b>	2.12	<b>10th</b>	153.74	<b>10th</b>	50.14	<b>10th</b>	-13.27
<b>Low</b>	1.88	<b>Low</b>	142.50	<b>Low</b>	34.92	<b>Low</b>	-24.96
<b>Current %</b>	74.00	<b>Current %</b>	76.28	<b>Current %</b>	92.98	<b>Current %</b>	92.22

Worksheet: **1st Quarter 2011** ▼Percentile Range: **10 Year** ▼

Corn		Meal		Lean Hogs		Open Market Margin	
<b>2010/06/16</b>	3.90	<b>2010/06/16</b>	259.80	<b>2010/06/16</b>	73.53	<b>2010/06/16</b>	4.51
<b>High</b>	7.86	<b>High</b>	425.95	<b>High</b>	87.21	<b>High</b>	20.39
<b>90th</b>	4.37	<b>90th</b>	305.28	<b>90th</b>	71.99	<b>90th</b>	4.90
<b>80th</b>	3.99	<b>80th</b>	275.76	<b>80th</b>	68.93	<b>80th</b>	1.90
<b>70th</b>	3.67	<b>70th</b>	242.82	<b>70th</b>	66.41	<b>70th</b>	0.39
<b>Average</b>	2.58	<b>Average</b>	189.82	<b>Average</b>	60.13	<b>Average</b>	-1.66
<b>30th</b>	2.37	<b>30th</b>	169.04	<b>30th</b>	56.91	<b>30th</b>	-3.88
<b>20th</b>	2.25	<b>20th</b>	162.70	<b>20th</b>	55.50	<b>20th</b>	-5.37
<b>10th</b>	2.13	<b>10th</b>	153.60	<b>10th</b>	52.93	<b>10th</b>	-8.17
<b>Low</b>	1.96	<b>Low</b>	143.70	<b>Low</b>	40.06	<b>Low</b>	-19.32
<b>Current %</b>	76.85	<b>Current %</b>	74.95	<b>Current %</b>	92.41	<b>Current %</b>	89.37

Worksheet: **2nd Quarter 2011** ▼Percentile Range: **10 Year** ▼

Corn		Meal		Lean Hogs		Open Market Margin	
<b>2010/06/16</b>	4.07	<b>2010/06/16</b>	260.80	<b>2010/06/16</b>	77.34	<b>2010/06/16</b>	7.50
<b>High</b>	7.96	<b>High</b>	427.08	<b>High</b>	96.99	<b>High</b>	20.77
<b>90th</b>	4.39	<b>90th</b>	317.98	<b>90th</b>	76.90	<b>90th</b>	10.88
<b>80th</b>	4.03	<b>80th</b>	284.50	<b>80th</b>	74.60	<b>80th</b>	7.53
<b>70th</b>	3.74	<b>70th</b>	258.30	<b>70th</b>	72.33	<b>70th</b>	5.77
<b>Average</b>	2.57	<b>Average</b>	192.38	<b>Average</b>	66.37	<b>Average</b>	3.48
<b>30th</b>	2.39	<b>30th</b>	171.58	<b>30th</b>	62.41	<b>30th</b>	1.33
<b>20th</b>	2.31	<b>20th</b>	163.88	<b>20th</b>	61.06	<b>20th</b>	-0.46
<b>10th</b>	2.20	<b>10th</b>	157.34	<b>10th</b>	58.68	<b>10th</b>	-3.44
<b>Low</b>	1.92	<b>Low</b>	142.50	<b>Low</b>	46.39	<b>Low</b>	-15.39
<b>Current %</b>	80.83	<b>Current %</b>	70.59	<b>Current %</b>	91.65	<b>Current %</b>	80.08



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# Strategy Selection



## **Review Contracting Alternatives**

### **Physical Market:**

- What suppliers are available? (approved counterparties authorized to transact with for specific commodity)
- What types of agreements will they offer? (how much flexibility is available in a cash contract)

### **Futures Market:**

- What trading authorization do I have? (what types of contracts can I use and how far out in time)
- Is there any restriction on what types of strategy combinations I can employ? (margin exposure, etc.)
- What flexibility do I have in making adjustments to my position over time? (any restrictions in hedge policy)



## **Physical Contracts Advantages And Disadvantages**

- **Advantages**
  - Supplier managed
  - Potentially some alternatives
  - No out of pocket expense
- **Disadvantages**
  - Locked-in to a specific supplier
  - Pricing may not be transparent
  - Counter-party risk
  - Limited flexibility for adjustments



## **Exchange-Traded Contracts Advantages And Disadvantages**

- **Advantages**

- Lots of alternatives
- Added flexibility and liquidity
- Reduced counterparty risk

- **Disadvantages**

- Time commitment, have to manage
- Potential margin exposure, CF management
- Basis risk



## • **Strategy Considerations**

- What do prices normally do this time of year?
- How much flexibility do I need?
- How much cost can I afford?
- Is option cost high (low) seasonally or historically?
- Are there effective combinations available to reduce cost and retain protection/flexibility?
- Can I offset cost over time?
- What is the greatest risk to my physical position?

# Strategy Descriptions

When the  
Market is...



Protect Against  
Higher Prices



Protect Against  
Lower Prices

Bearish

Buy Call Spread

Sell Futures

Negative

Buy Call

Buy Put & Sell Call

Sell Put

Buy Put

Neutral

Buy Call Spread & Sell Put

Buy Put Spread & Sell Call

Friendly

Buy Call

Sell Call

Buy Call & Sell Put

Buy Put

Bullish

Buy Futures

Buy Put Spread





- **December hog strategy selection example**
  - **Sell futures**
    - **(delta=100)**
  - **Buy a 70 put and sell a 80 call at \$1.80**
    - **(delta=70)**
  - **Buy a 72 put, sell a 62 put and sell a 82 call at \$1.90**
    - **(delta=50)**



## CIH Strategy Guide Coverage

3<sup>rd</sup> Quarter 2010 – 100%

4<sup>th</sup> Quarter 2010 – 100%

1<sup>st</sup> Quarter 2011 – 75%

2<sup>nd</sup> Quarter 2011 – 50%

3<sup>rd</sup> Quarter 2011 – 0%



## Recap:

Before you start managing forward price risk establish a hedge policy to state your goals and methods ahead of time. Be objective.

Model your operation to identify forward margin opportunities.

Choose the best strategy that fits *your* operation.

The most important step - Implement your plan!



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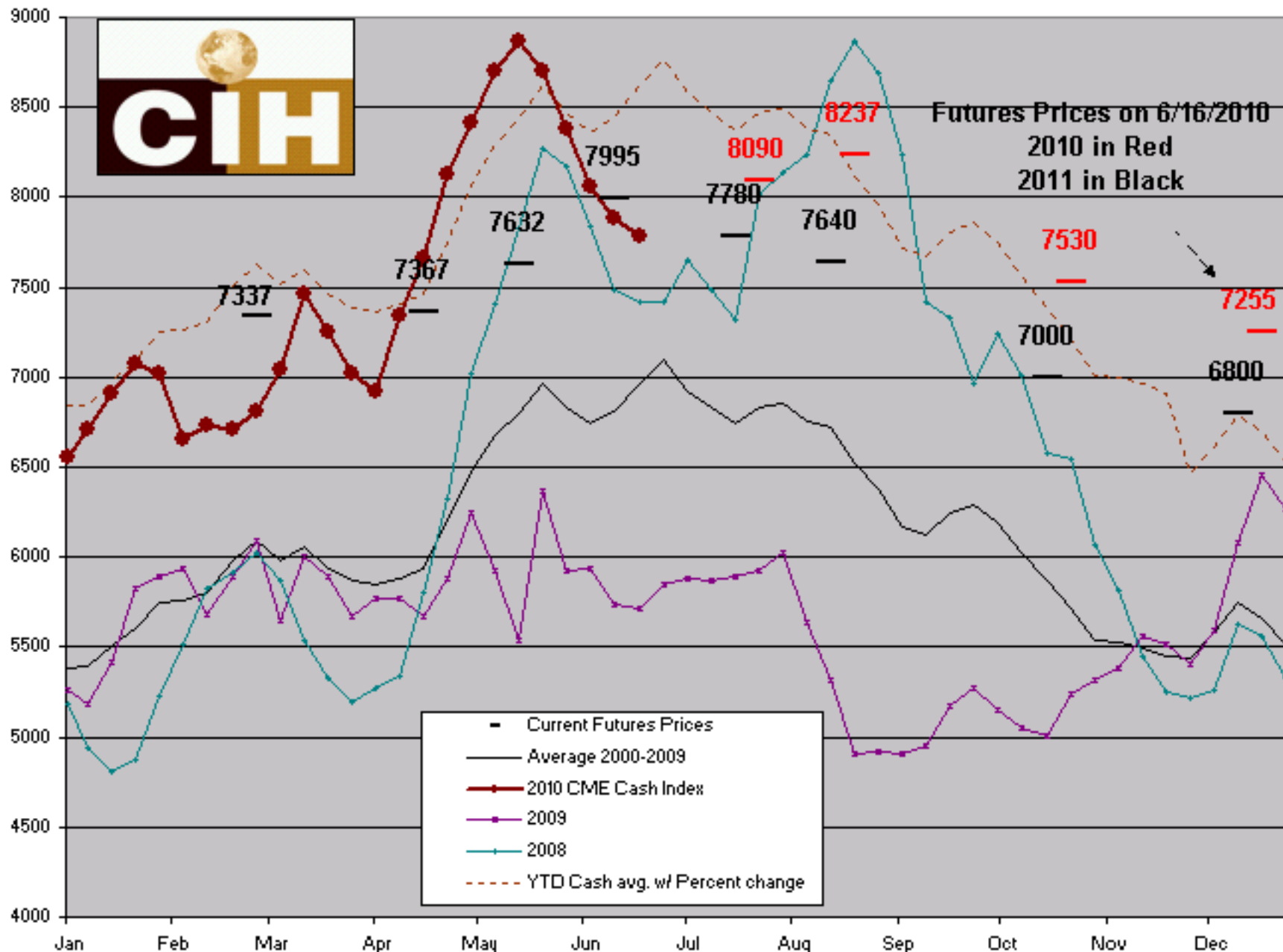
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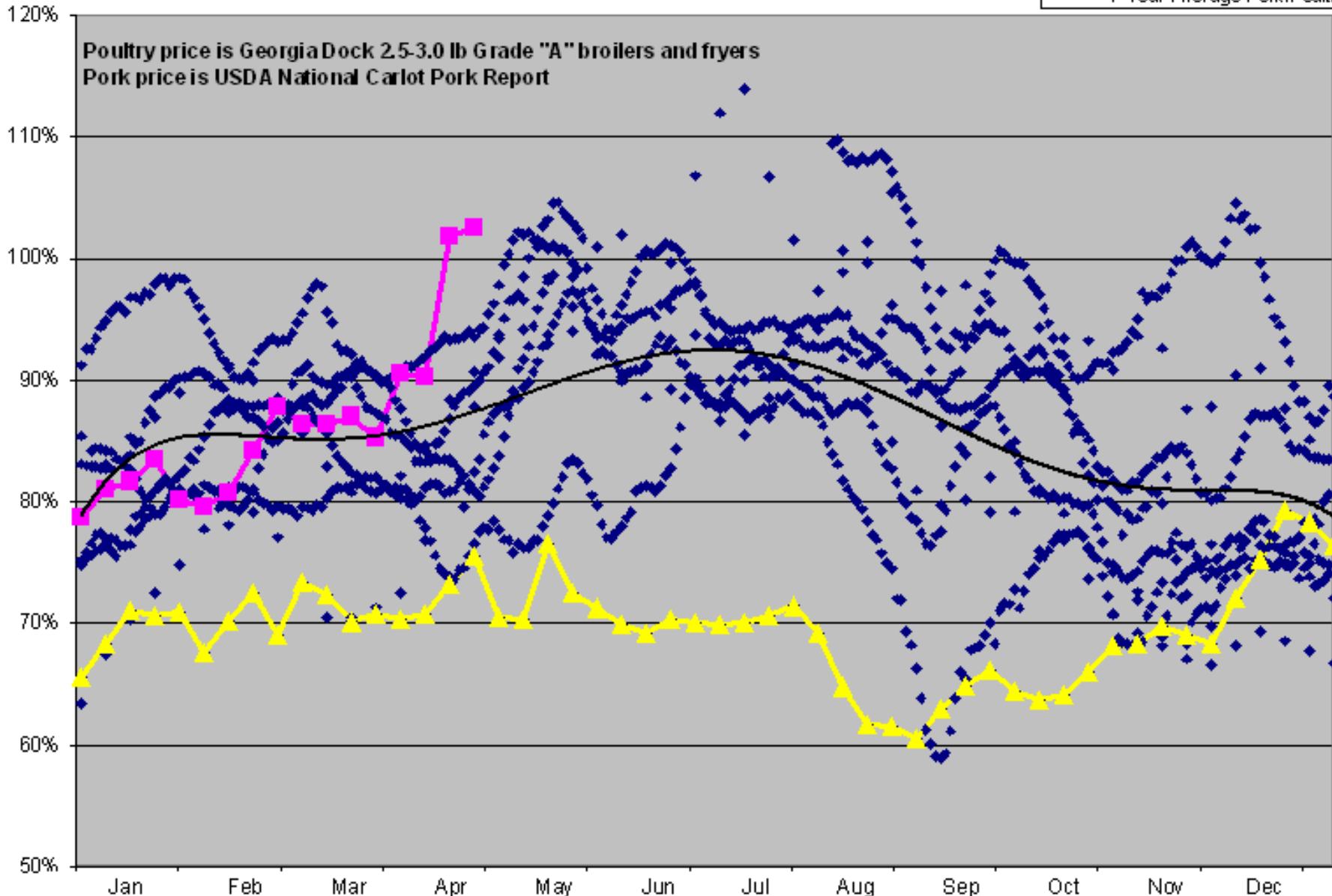
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## Additional Resources & Studies



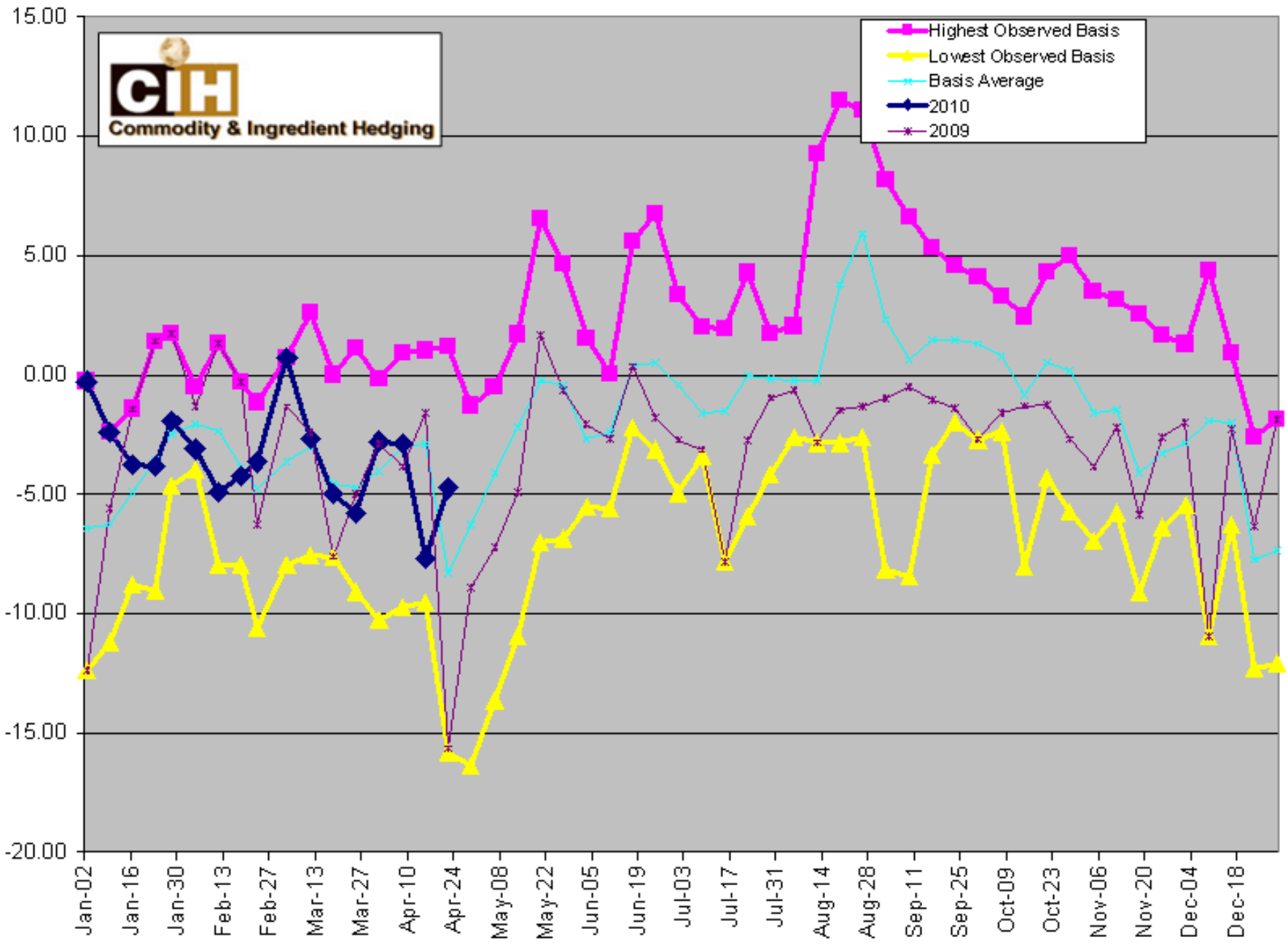
### Pork as a percentage of Poultry

- ◆ Pork/Poultry All Years
- Pork/Poultry Current Year
- ▲ Pork/Poultry 2009
- 7-Year Average Pork/Poultry



# Iowa/Southern Minnesota Basis

## Weekly Average, High & Low from 2000-2009



**CVC vs Futures Basis Seasonal**  
**Weekly Average, High & Low from 2000-2009**

