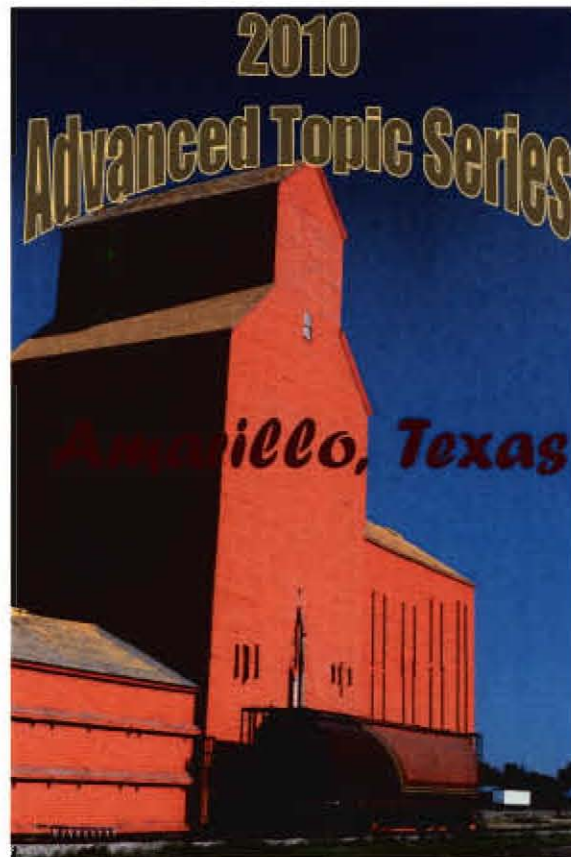


Improving Lives. Improving Texas.

Developing This Year's Marketing Plan-Feedgrains



Presented by:
Dr. Steve Amosson
Regents Fellow
Professor and Extension Economist
And
Dr. Mark Welch
Assistant Professor



Developing This Year's Marketing Plan – Feedgrains

January 19 – 20, 2010

Agenda

Tuesday, January 19, 2010

| | |
|-------------------------|---|
| 8:30 a.m. – 8:45 a.m. | Introduction and Pre-test – Steve Amosson |
| 8:45 a.m. – 9:15 a.m. | Marketing Plan Overview – Steve Amosson |
| 9:15 a.m. – 9:55 a.m. | Goals/Production Schedule/ Breakeven Prices – Steve Amosson |
| 9:55 a.m. – 10:15 a.m. | Break |
| 10:15 a.m. – 11:30 a.m. | Feedgrain Fundamentals – Mark Welch |
| 11:30 a.m. – 12:15 p.m. | Weather Trends and Forecast – Steve Drillette, NWS |
| 12:15 p.m. – 1:00 p.m. | Lunch |
| 1:00 p.m. – 1:55 p.m. | The Ethanol Industry – Steve Amosson |
| 1:55 p.m. – 2:15 p.m. | Break |
| 2:15 p.m. – 3:30 p.m. | Feedgrains Panel - TBA |
| 3:30 p.m. | Adjourn |

Wednesday, January 20, 2010

| | |
|-------------------------|--|
| 8:30 a.m. – 9:00 a.m. | Review and Updating the Marketing Plan - Steve |
| 9:00 a.m. – 9:30 a.m. | Corn and Sorghum Basis Information – Mark Welch |
| 9:30 a.m. – 10:00 a.m. | Contract Seasonality – Steve Amosson |
| 10:00 a.m. – 10:20 a.m. | Break |
| 10:20 a.m. – 10:50 a.m. | Technical Analysis – Mark Welch |
| 10:50 a.m. – 12:00 p.m. | Marketing Tools and Strategies – Mark Welch |
| 12:00 p.m. – 12:45 p.m. | Lunch |
| 12:45 p.m. – 1:55 p.m. | Advanced Marketing Tools and Strategies – Mark & Steve |
| 1:55 p.m. – 2:15 p.m. | Break |
| 2:00 p.m. – 3:00 p.m. | Simulation Exercise – Mark Welch |
| 3:00 p.m. – 3:30 p.m. | Finalizing the Marketing Plan, Wrap-up and Post-test – Steve |
| 3:30 p.m. | Adjourn |



Improving Lives. Improving Texas.

2010 Developing This Year's Marketing Plan- Feedgrains



NO. 1

**Marketing Plan
& Breakeven Prices**

NO. 2

**Feedgrain
Fundamentals**

NO. 3

The Ethanol Industry

NO. 4

**Corn and Sorghum
Basis Information**

NO. 5

Contract Seasonality

NO. 6

Technical Analysis

NO. 7

**Marketing Tools and
Strategies**

NO. 8

**Marketing Simulation
Exercise**

1.

Marketing Plan & Break Even Prices

Developing and Implementing a Successful Marketing Plan



Presented By:

Dr. Steve Amosson

Regents Fellow

Professor and Extension Economist



Texas A&M System

Developing and Implementing the Farm Marketing Plan

The Ten Steps to Success

- Identify short and long term goals
- Establish production estimates
- Calculate breakeven and profit price goals
- Assess cash-flow needs and Quantify price risk you are willing to assume
- Identify who is responsible for decision making
- Know the market and market outlook
- Identify the marketing tools to be used
- Invest time and money to do it right
- Revise and Review marketing plan as conditions warrant
- Maintain Discipline



Production Estimates

▣ Grain – Total bushels

- ◆ 5 year Average Yields
- ◆ On Farm Storage
- ◆ Production Availability



▣ Livestock – Animals to Market

- ◆ Dates (months) and weights to Market
- ◆ Retained marketing alternatives

Know Your Production Costs

| | <u>PER ACRE</u> | <u>TOTAL</u> | |
|--|------------------|------------------------|---|
| Seed | \$ 90.00 | \$ 135,00.00 | Enterprise breakeven for 1,500 acres of corn would be: |
| Fertilizer | \$ 77.00 | \$ 141,000.00 | |
| Chemicals | \$ 67.00 | \$ 130,500.00 | |
| Harvest and Haul | \$ 55.00 | \$ 132,000.00 | |
| Irrigation Fuel | \$ 183.00 | \$ 202,000.00 | |
| Allocated direct costs (Fuels, repairs, interest) | \$ 131.00 | \$ 160,000.00 | |
| Allocated overhead (Services, accounting, insurance, utilities) | \$ 10.00 | \$ 52,500.00 | |
| Land | \$ 90.00 | \$ 165,000.00 | |
| TOTAL | \$ 664.00 | \$ 1,119,000.00 | |

If your yield is 225 bushels per acre, your breakeven costs are \$3.32 per bushel.

From Your Production Records

Low Corn Yield 200 Bushels Per Acre

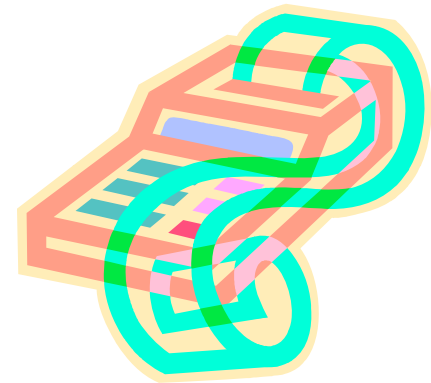
Average Corn Yield 225 Bushels per Acre

High Corn Yield 250 Bushels Per Acre



Knowing All Your Costs

| | |
|-------------------------------------|------------------------|
| Total estimated production cost | \$ 1,119,000.00 |
| <i>Plus</i> | |
| Family living expenses | \$ 65,000.00 |
| <i>Plus</i> | |
| Annual debt service | \$ 50,000.00 |
| <i>Minus</i> | |
| AMTA (farm program) payments | \$ 45,000.00 |
| Total Cash Expenditures | \$ 1,189,000.00 |
| <i>Plus</i> | |
| Depreciation (beyond payments) | \$ 60,000.00 |
| Total cash/non-cash expenses | \$ 1,249,000.00 |
| <i>Plus</i> | |
| Profit and/or growth capital | \$ 100,000.00 |
| Sales/gross income objective | \$ 1,349,000.00 |



How do you determine your Growth Capital Goal?

ROI – Return on Investment?

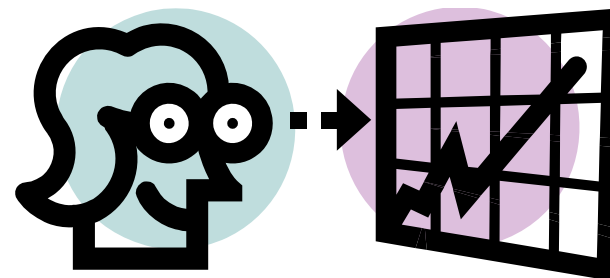
ROE – Return on Equity?

ROA – Return on Assets?

Price Goals

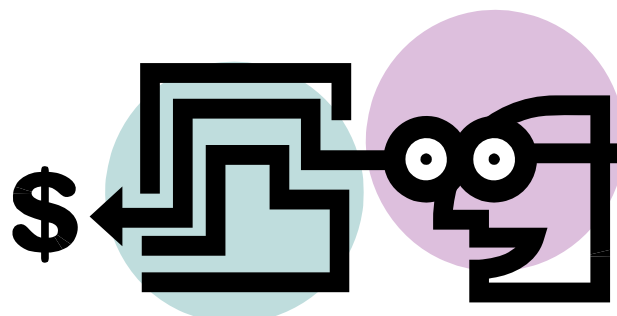
□ Set Goals

- ◆ Costs of production
- ◆ Family/Living expenses
- ◆ Profit margin desired
- ◆ Projected growth of operation



□ Write Them Down

- ◆ Study Them
- ◆ Share them with spouse/partner/banker



Calculating Breakeven Prices



| | Low Production | Average Production | High Production |
|---|-------------------|-----------------------|--------------------|
| Bushels/A | 200 | 225 | 250 |
| Total Bushels | 300,000 | 337,500 | 375,000 |
| Cash Expenses | 1,174,375 | 1,189,000 | 1,203,625 |
| BEP - CE | \$3.91 | \$3.52 | \$3.21 |
| Total Expenses | 1,234,375 | 1,249,000 | 1,263,625 |
| BEP - TE | \$4.11 | \$3.70 | \$3.37 |
| Total Expenses + Profit/Growth | 1,334,375 | 1,349,000 | 1,363,625 |
| BEP - TEP | \$4.45 | \$4.00 | \$3.64 |

Determine the amount of risk you're willing to take

- Leverage
- Debt structure
- Age
- Off-farm income
- Cash flow needs/obligations
- On farm storage



Projected Marketing Schedule

| Commodity | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | C/O |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Corn | | | | | | | | | | | | | |
| Soybeans | | | | | | | | | | | | | |
| Wheat | | | | | | | | | | | | | |
| Milo | | | | | | | | | | | | | |
| Others: | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| Payments: | | | | | | | | | | | | | |
| Land | | | | | | | | | | | | | |
| Leases | | | | | | | | | | | | | |
| Machinery | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |



Market Outlook

- Political Situation
- Fundamental Situation
 - ◆ Supply
 - ◆ Demand
- Marketing Psychology
- Seasonality/Cycles
- Technical Situation



Fundamentals

2007 Feedgrains EWAG Analysis



| | Low | Average | High |
|------------------------------------|--------|---------|--------|
| Planted Acres (mil AC) | 87.0 | 87.0 | 87.0 |
| Harvested Acres/ Planted Acres (%) | 88.00 | 90.45 | 90.50 |
| Harvested Acres (mil AC) | 76.56 | 78.69 | 78.74 |
| Yield (BU/AC) | 140.6 | 152.0 | 167.2 |
| Production (mil BU) | 10,764 | 11,961 | 13,164 |
| Imports (mil BU) | 10 | 10 | 10 |
| Carry In (mil BU) | 935 | 935 | 935 |
| Total Supply (mil BU) | 11,709 | 12,906 | 14,109 |

USE:

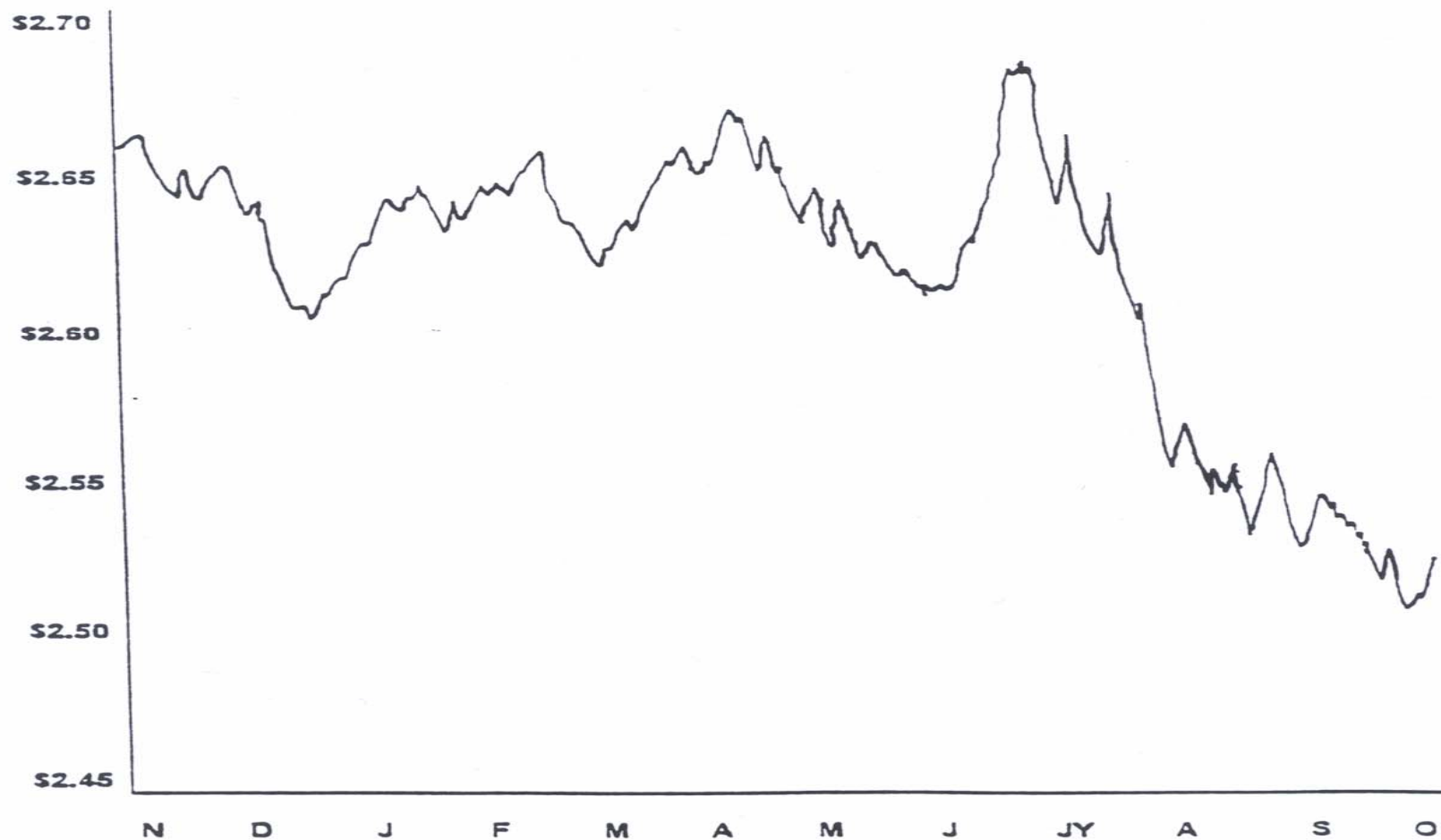
| | | | |
|-------------------------------------|--------|--------|--------|
| Feed (mil BU) | 5,600 | 5,900 | 6,100 |
| Food, Seed, and Industrial (mil BU) | 4,250 | 4,500 | 4,750 |
| Export (mil BU) | 1,600 | 2,000 | 2,250 |
| Total Use (mil BU) | 11,450 | 12,400 | 13,100 |
| Carry Out (mil BU) | 259 | 506 | 1,009 |
| CO/USE (%) | 2.3% | 4.1% | 7.7% |
| Price (\$/BU) | \$6.60 | \$4.20 | \$2.80 |

Notes:

Your Allies

* ***TIME*** (to a limit)

December Corn Futures, 1974-1993
(Average Daily Closing Price)



Pricing Alternatives

- ❑ Cash Market at Harvest
- ❑ Speculative Storage
- ❑ Forward Contract
- ❑ Hedge to Arrive Contract
- ❑ Basis Contract
- ❑ Minimum Price Contract
- ❑ Hedging in Futures Markets
 - Pre-harvest hedge
 - Post-harvest storage hedge
- ❑ Options Markets
 - Pre-harvest hedge
 - Post-harvest storage hedge
- ❑ Farm Program
- ❑ Cooperatives/Groups





Advantages & Disadvantages of Marketing Tools

| | Margin Risk | Basis Risk | Futures Risk | Easy Entry/Exit | Limited to 1,000 or 5,000 Bushels | Cash Delivery Required | Leave Upside Potential Opportunity |
|-----------------------|----------------|---------------|-----------------|--------------------|---|------------------------------|--|
| Cash Tools | | | | | | | |
| Cash Sale | N | N | N | N | N | Y | N ² |
| Non-Cash Tools | N | N | N | N | N | Y | N |
| Basis Contract | N | N | Y | N | N | Y | Y |
| Hedge-to-Arrive | N ¹ | Y | N | N | Y | Y | N ² |
| Min. Price Contract | N | N | N | N | Y | Y | Y |
| Non-Cash Tools | | | | | | | |
| Futures Hedge | Y | Y | Y | Y | Y | N | N ² |
| Buy Put | N | Y | N | Y | Y | N | Y |
| Buy Call | N | Y | N | Y | Y | N | Y |
| Fence | Y | Y | Y | Y | Y | N | L |

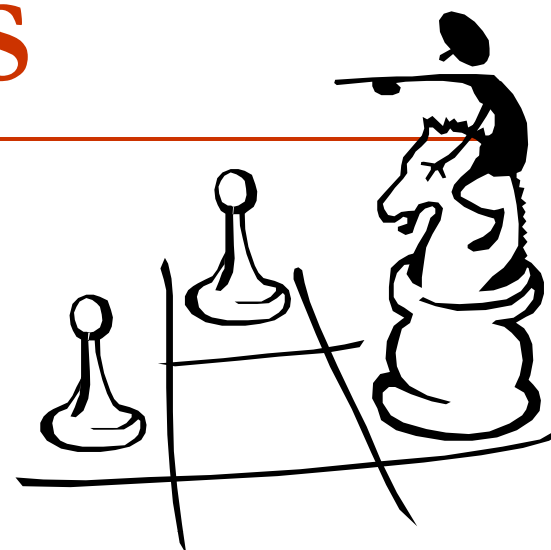
Y = yes, N = No, L = Limited

¹ Depends on contract agreements

² Upside Potential limited to improvement in basis

STRATEGIES

- ▣ Use More Flexible Tools
 - Early sales
 - Upper one-third of production
- ▣ Allocation Sales Over Time
 - Increase % of sales as price increases
 - Decrease % of sales as price declines
 - Consider multi-year sales in historically high prices
- ▣ Look For Pricing Opportunities
 - Grain
 - Basis





Feedgrains Marketing Plan for 2010

| | Pre-Plant | Planting to Harvest | (Harvest/Post Harvest) |
|----------------------------|-----------|---------------------|------------------------|
| Reports to Watch | | | |
| Marketable Production | | | |
| Contract Seasonality | | | |
| Price/Time Targets | | | |
| Marketing Tools to be Used | | | |
| Marketing Strategies | | | |
| What Did I Do and Why? | | | |

Closing Comments

“Amosson’s Words of Wisdom”

- ❑ Know the difference between hedging and speculating ----
 - ◆ Hedging you win
 - ◆ Speculating you lose
- ❑ Fundamentals control the long run price ----
 - ◆ Technicals control the short run price.
 - ◆ Seasonals reflect normal market psychology and need to be factored into marketing decisions.
- ❑ Marketing is not a point in time but a continuous activity.



Breakeven Prices

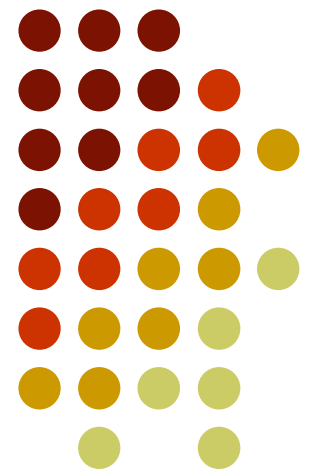
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Professor and Extension

Economist





Breakeven Prices

- **Quaisi Variable Cost (VC)** – All out-of-pocket expenses associated with or assigned to the crop. This includes seed, fertilizer, paid labor, family living with-drawals, land payments, equipment payments, government payments, etc.
- **Per Acre**: $VC \text{ Breakeven Price} = VC / \text{Yield}$
- **Total Cost (TC)**: Includes VC plus all non-cash expenses such as depreciation.
- **Per Acre**: $TC \text{ Breakeven Price} = TC / \text{Yield}$
- **Profit**: Total Cost plus a profit objective usually determined by the goals that have been set or an independent financial measure such as return on assets.
- **Per Acre Profit**: $\text{Breakeven Price} = TC + \text{Desired Profit} / \text{Yield}$

Allocating Costs



- By Crop Acre
- By Capital Investment
- By Time Investment
- By Use

Estimating Costs



| | Allocated to Crop | By Crop per Acre |
|---|----------------------|---------------------|
| Total Out-of-Pocket Production Costs | | |
| | Plus | |
| Overhead Cash Expenses (utilities, etc) | | |
| | Plus | |
| Family Living Expenses | | |
| | Plus | |
| Annual Debt Service (land, equipment, etc) | | |
| | Minus | |
| Direct Farm Program Payment | | |
| Total Cash Expenses (VC) | | |
| | Plus | |
| Depreciation (Beyond Pymts) | | |
| Total Cash/Non-Cash Expenses (etc) | | |
| | Plus | |
| Profit and/or Growth Capital | | |
| Sales/Gross Income Objective | | |

Breakeven Prices



| | <i>Yield Scenarios</i> | | |
|-----------------------------|------------------------|---------|------|
| | Low | Average | High |
| Yield | | | |
| Variable Cost | | | |
| BEP-VC | | | |
| BEP-VC+FC | | | |
| Variable+Fixed Cost (VC+FC) | | | |
| VC+FC+Profit (TC) | | | |
| BEP-TC | | | |

Closing Comments (continued)



- Use only the marketing tools you are comfortable with ---- Know them inside out!
- Futures price and basis are separate items ---- Know both and market both.
- Marketing is like playing baseball, sometimes you get a hit and sometimes you don't -- It's the relative percentage that's important.
- The key to being a good marketer is have a solid marketing plan and the discipline to execute it.

2010 Marketing Plan Summary

Fundamentals:

Notes:

Short Crop Price =
Average Crop Price =
Large Crop Price =

Basis:

Notes:

Strong Basis:
Average Basis:
Weak Basis:

Cash Market Alternatives:

Notes:

- 1.
- 2.
- 3.

What I need to learn:

How and when am I going to do it?

- 1.
- 2.
- 3.

Goals Short-Term

Goals Long-Term

- 1.
- 2.
- 3.

- 1.
- 2.
- 3.

Breakevens

| | Low Yield | Average Yield | High Yield |
|----------------------|-----------|---------------|------------|
| Variable Cost (VC) | | | |
| VC + Fixed Cost (FC) | | | |
| VC + FC + Profit | | | |

Feedgrains Marketing Plan for 2010

| | Pre-Plant | Planting to Harvest | (Harvest/Post Harvest) |
|----------------------------|-----------|---------------------|------------------------|
| Reports to Watch | | | |
| Marketable Production | | | |
| Contract Season | | | |
| Price/Time Targets | | | |
| Marketing Tools to be Used | | | |
| Marketing Strategies | | | |
| What Did I Do and Why? | | | |

Feedgrains Marketing Plan for 2010/2011

Preseason Price Forecast = \$4.05

Contract Price Range \$3.60-\$4.75

| | Pre-Plant | Planting to Harvest | Harvest/Post Harvest |
|-----------------------------------|---|---|--|
| Reports to Watch | Planting Intentions (PI) Report (March 31) PI Industry Reports starting early March Soil Moisture Conditions http://www.usda.gov/nass/pubs/staterpt.htm - NASS Crop Weather WASDE and other USDA reports Ethanol Industry Reports: EIA/ISU | Crop conditions/progress reports from NASS Crop Weather and http://www.extension.iastate.edu/information/weather.html - Elwynn Taylor (Iowa State) WASDE and other USDA reports especially August Crop Report Ethanol Industry Reports: EIA/ISU | WASDE and other USDA reports |
| Marketable Production | 75% | 25% - 75% depending on pre-plant sales with total pre-harvest sales not to exceed 100% | Remainder of unsold production |
| Contract Seasonality | First Seasonality price opportunity is normally early to the middle of March. Followed by the first half of April. Next opportunity early/mid June. If normal crop prices tend to fall into harvest. | Next Seasonal sale indicator is early to mid June. | Seasonal low is usually hit in September or early October |
| Price/Time Targets | Split the range, ie: start marketing at \$4.40 (double first sale) incrementally market to \$4.75 until 75% of crop is marketed. Can fine tune selling with technical indicators (moving ave., etc) | Continue scale up sales if market is trending up. Sell at least 50% by mid June time frame on down trends and remainder of pre harvest sales on downtrend in July to August. | Sell remainder at harvest across the scales unless you have tax concerns but to evaluate storage costs carefully before holding grain. |
| Marketing Tools to be Used | Forward contract at least first half if not all of pre plant sales. If you decide to use options consider collar, window or FC - Bull call spread to limit cost. Consider basis contracts on un-priced production up to 75% of total because of inc. supplies. | Options due to market volatility and likelihood of major up and down trends developing. If forward cash sales, hedges or options depending on your risk tolerance. <i>If you are pricing the last 25% of production definitely use options/option strategies such as a collar, window or bear put spread.</i> | Cash Sales. Call options strategies, such as bull call spread can be used to re-own grain if desired. |
| Marketing Strategies | Use scale up sales based on seasonal price tendencies with moving averages and other trend indicators as marketing triggers. I want to be at least 25% sold pre-plant if at profitable levels. Lock in 50% of NG (up to August) and all fertilizer. - NOW | Continue scale up sales based on seasonal tendencies and price trend indicators as sales triggers. Need to be at least 50% marketed by the middle of June with a goal of being 100% <i>if the weather appears normal</i> and at profitable levels before harvest. | If prices appear likely to move higher after harvest, sell grain and buy calls. |
| What Did I Do & Why? | | | |

Collar or Three-Way

Action: Buy a put at the money,
sell out-up

The money put and call

Example: 2010 Dec. Corn

| | |
|----------------|------------------|
| Buy 4.00 put | 43 $\frac{3}{8}$ |
| Sell 3.50 put | 20 $\frac{3}{4}$ |
| Sell 5.00 call | 20 $\frac{1}{2}$ |

Out-of-Pocket Cost

| | |
|--------------|-------------------|
| 4.00 Put(B) | 43 $\frac{3}{8}$ |
| 3.50 Put(S) | -20 $\frac{3}{4}$ |
| 5.00 Call(S) | -20 $\frac{1}{2}$ |
| Commission | <u>+2</u> |
| Net Cost | 4 $\frac{1}{8}$ |

Assume an 0 Basis

Collar or Three-Way (Continued)

Advantages:

- Limited up front required
- Can negate the time value of options
- Provides limited downside price protection

Disadvantages:

- Caps upside price potential
- Limits downside price protection
- Possible margin calls if price rises

When to use:

- Uncertain production
- Options premiums are high
- A good idea of potential price range
- Market is at a profitable level or downside risk

Problems:

- Limited volume in options market

Collar or Three-Way (Continued)

1. What is the first price you are protected at on the downside?
2. 2. If the price falls lower than the put that you sold, what is the maximum you could collect?
3. 3. What is the maximum price you can receive?
4. 4. If the Dec. price ends up between \$3.50 -\$5.00, but then what is your expected price range you will receive?

Table 4.A Estimated costs and returns per Acre
Bt Corn for Grain, Sprinkler Irrigated, (NG)
2010 Projected Costs and Returns per Acre

| ITEM | UNIT | PRICE | QUANTITY | AMOUNT | YOUR FARM |
|---|-------|-------------------|----------------------------|-------------------|--------------------------|
| | | dollars | | dollars | |
| INCOME | | | | | |
| corn | bu. | 4.30 | 225.0000 215 | 967.50 | |
| TOTAL INCOME | | | | 967.50 | |
| DIRECT EXPENSES | | | | | |
| SEED | | | | | |
| seed - Bt corngr. | bags | 255.00 | 0.3500 | 89.25 | |
| INSECTICIDE | | | | | |
| miticide | acre | 20.00 | 1.0000 | 20.00 | 6.67 |
| HERBICIDE | | | | | |
| herb - corn pre | acre | 19.60 | 1.0000 | 19.60 | |
| herb -corn post | acre | 27.80 | 1.0000 | 27.80 | |
| FERTILIZER | | | | | |
| fert(N) - ANH3 | lb. | 0.22 | 126.0000 | 27.72 | |
| fert(P) - liquid | lb. | 0.51 | 60.0000 | 30.60 | |
| fert(N) - liquid | lb. | 0.32 | 78.0000 | 24.96 | |
| CUSTOM | | | | | |
| fert appl - ANH3 | acre | 11.00 | 1.0000 | 11.00 | 8.00 |
| crop consultant | acre | 7.25 | 1.0000 | 7.25 | |
| harv & haul - corn | bu. | 0.39 | 225.0000 | 87.75 | 75.25 |
| CROP INSURANCE | | 0.35 | 215 | | 25.00 |
| corn - irrigated | acre | 19.30 | 1.0000 | 19.30 | |
| OPERATOR LABOR | | | | | |
| Implements | hour | 10.80 | 0.2925 | 3.15 | |
| Tractors | hour | 10.80 | 0.3965 | 4.28 | |
| HAND LABOR | | | | | |
| Implements | hour | 10.80 | 0.1527 | 1.64 | |
| IRRIGATION LABOR | | | | | |
| Center Pivot | hour | 10.80 | 1.4080 | 15.20 | |
| DIESEL FUEL | | | | | |
| Tractors | gal | 2.05 | 2.1861 | 4.48 | |
| GASOLINE | | | | | |
| Self-Propelled Eq. | gal | 2.36 | 2.0100 | 4.74 | |
| NATURAL GAS | | 6.00 | | | 132.00 |
| Center Pivot | ac-in | 6.75 | 22.0000 | 148.50 | |
| REPAIR & MAINTENANCE | | | | | |
| Implements | Acre | 5.61 | 1.0000 | 5.61 | |
| Tractors | Acre | 4.80 | 1.0000 | 4.80 | |
| Self-Propelled Eq. | Acre | 0.16 | 1.0000 | 0.16 | |
| Center Pivot | ac-in | 2.03 | 22.0000 | 44.66 | |
| INTEREST ON OP. CAP. | Acre | 10.88 | 1.0000 | 10.88 | |
| TOTAL DIRECT EXPENSES | | | | 613.37 | 577.49 + 100 CASH & RENT |
| RETURNS ABOVE DIRECT EXPENSES | | | | 354.12 | 677.49 (VC) |
| FIXED EXPENSES | | | | | |
| Implements | Acre | 8.73 | 1.0000 | 8.73 | |
| Tractors | Acre | 6.89 | 1.0000 | 6.89 | |
| Self-Propelled Eq. | Acre | 0.24 | 1.0000 | 0.24 | |
| Center Pivot | Acre | 33.60 | 1.0000 | 33.60 | |
| TOTAL FIXED EXPENSES | | | | 49.48 | |
| TOTAL SPECIFIED EXPENSES | | | | 662.86 | 726.97 (TC) |
| RETURNS ABOVE TOTAL SPECIFIED EXPENSES | | | | 304.63 | |
| ALLOCATED COST ITEMS | | 100.00 | | | |
| cash rent - corn | acre | 110.00 | 1.0000 | 110.00 | |
| RESIDUAL RETURNS | | | | 194.63 | |
| Projections for Planning Purposes Only. | | | 726.97 @ 8% | = | 58.16 |
| 1 ac-in = 1 Mcf | | | | | |
| TOTAL | | | | | 785.13 |



2.

**Feedgrain
Fundamentals**

Grain Market Fundamentals

Supply and Demand Analysis

Mark Welch—Grain Marketing Economist



January 19, 2010







Pumping ethanol from corn in 1933

- “Without the runaway demand growth of ethanol, many of the recent stories need to be rewritten in short order.”

• --Michael Swanson,
Economics Department,
Wells Fargo


United States Department of Agriculture
National Agricultural Statistics Service


The first census of agriculture was taken in 1840

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| January | February | March |
| April | May | June |
| July | August | September |
| October | November | December |




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Welcome to the Foreign Agricultural Service's Production, Supply and Distribution (PSD) online database. This database contains current and historical official USDA data on production, supply and distribution of agricultural commodities for the United States and key producing and consuming countries.

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Get the complete PSD data release schedule for the current calendar year. PSD data will next be released on: **Friday, February 08, 2008**

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- Software Tools
- Decisive Marketing
- Crop Report Commentary
- Market Plans


Recent Work:

January 10, 2008
[The Energy Independence and Security Act of 2007: Preliminary Evaluation of Selected Provisions \(28 pages, 372 kb\)](#)
FAPRI-MU Report #01-08 The "Energy Independence and Security Act (EISA) of 2007" was signed into law in December 2007. This report provides a snapshot of estimated impacts of selected provisions of EISA on biofuel and agricultural markets.


November 29, 2007
[Crop Production Cost and Outlook](#)
FAPRI-MU Report #15-07 This report explains how the general trend of production input price inflation will continue during the 2008 crop year. It provides price increase information on seeds, fertilizer, building materials and more.

November 15, 2007
[Impact of a Lock Failure on Commodity Transportation on the Mississippi or Illinois Waterway \(20 pages, 1.05 mb\)](#)
FAPRI-MU Report #30-07 This in-depth study for the Illinois Chamber of Commerce determines the economic impact of lock failures on the Illinois and Upper Mississippi Rivers.

November 07, 2007
[Impacts of Selected Title I Provisions of the Senate Committee Farm Bill \(20 pages, 304 kb\)](#)
FAPRI-MU Report #14-07 This report examines selected provisions of Title I of the "Food and Energy Security Act of 2007," as approved by the Senate Committee on Agriculture, Nutrition and Forestry.



National Weather Service
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www.nws.noaa.gov



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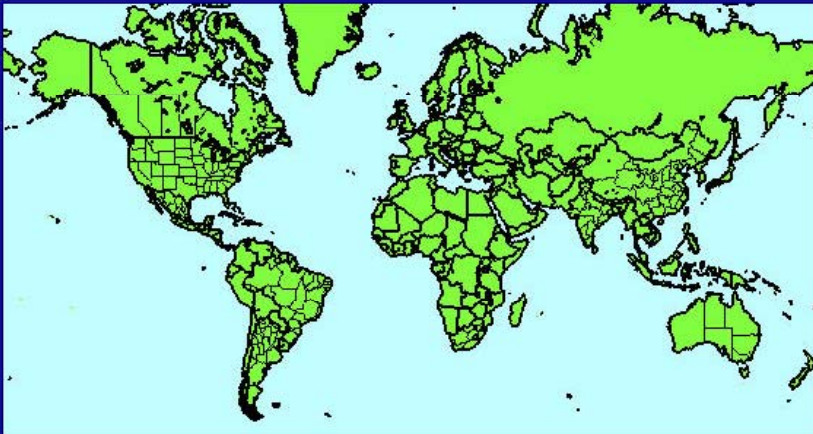
Regional Climate Maps

The **Monthly** regional analyses products are usually updated around the middle of each month.

The **3-Month** regional analyses products are usually updated around the middle of each month.

Note: These analyses are based on preliminary and unchecked data.

Use the mouse to click on a country/region or choose the desired area from the list below:



http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/regional_monitoring/index.shtml




National Oceanic & Atmospheric Administration

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Wed January 23 2008
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U.S. Seasonal Drought Outlook



Drought Information Center

The NOAA Drought Information Center is a portal for NOAA drought and climate conditions. Some external links are included for your convenience.

Current Information

- ▶ [NOAA Drought Assessment](#) — includes the latest graphics
- ▶ [U.S. Drought Monitor](#) — assessment of recent conditions and drought status. (A joint effort between federal and academic partners.)
[Click here](#) for more about this product.
- ▶ [NOAA Animated Indicator Maps for U.S. Drought Monitor](#) — includes six-week and 12-week animations
- ▶ [Seasonal Drought Outlook from NOAA's Climate Prediction Center](#) — (updated monthly)
- ▶ [Hazards Assessment](#) — extreme weather conditions with graphics
- ▶ [NOAA Animated Indicator Maps for U.S. Drought Monitor](#) — includes six-week and 12-week animations
- ▶ [Drought Calculator](#) — NOAA calculates amount of rainfall needed to end droughts around the country.
- ▶ [Current Monthly State of the Climate Report](#)
- ▶ [U.S. Soil Moisture Monitoring](#)
- ▶ [U.S. Statewide/Regional Moisture Status](#)
- ▶ [Monthly Standardized Precipitation Index](#)
- ▶ [NOAA Drought Monitoring](#)
- ▶ [Palmer Drought Severity Index](#) — graphic updated weekly
- ▶ [All About the Palmer Index](#)
- ▶ [Palmer Drought Information by Region](#)
- ▶ [Monthly Palmer Drought Index](#) — includes animations
- ▶ [Crop Moisture Index](#) — (graphic updated weekly)

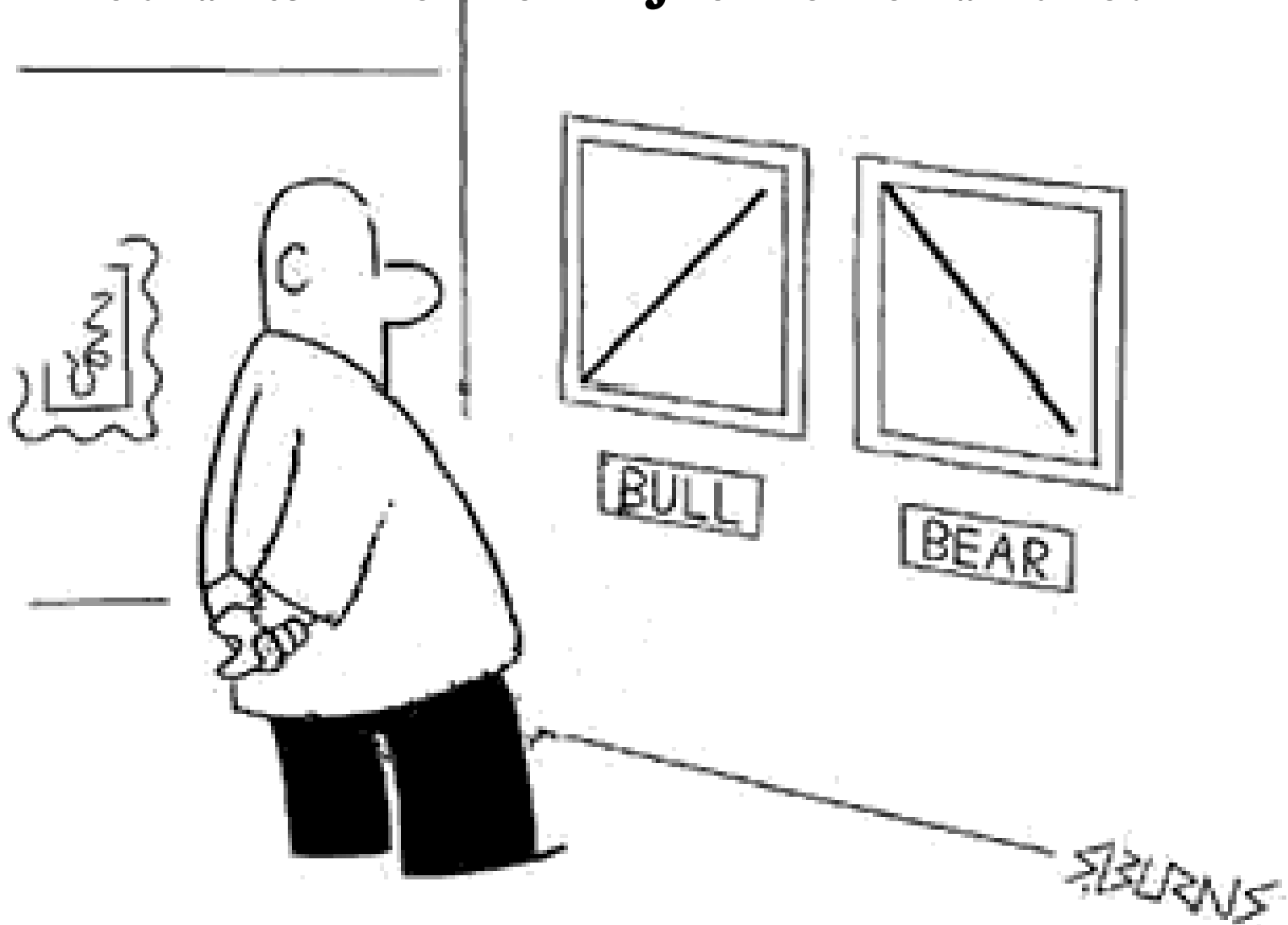
<http://www.drought.noaa.gov/index.html>

The 10 Commandments



Of Successful Commodity Trading

IV. Thou shalt not let thy emotions rule.

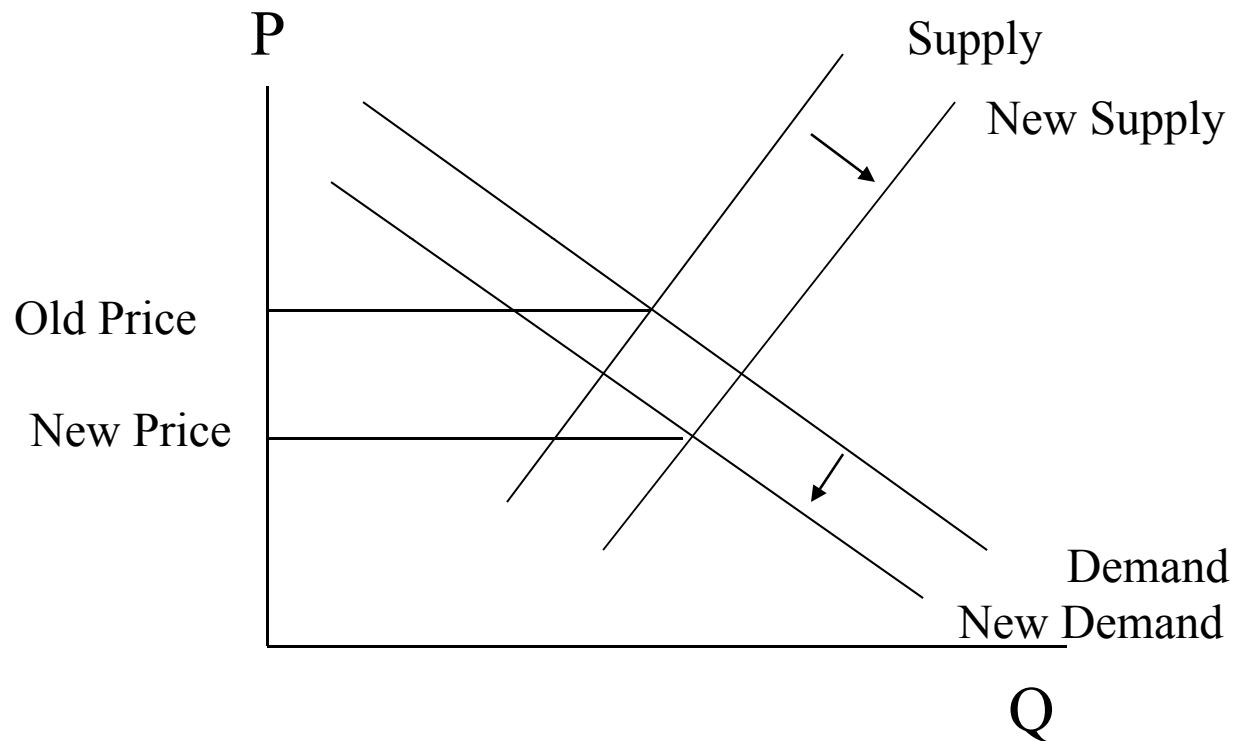


Separate what you think from what you want.

Fundamental Analysis

- The use of information regarding the factors of supply and demand for a given commodity to formulate a price estimate.

Price Estimation using Demand and Supply

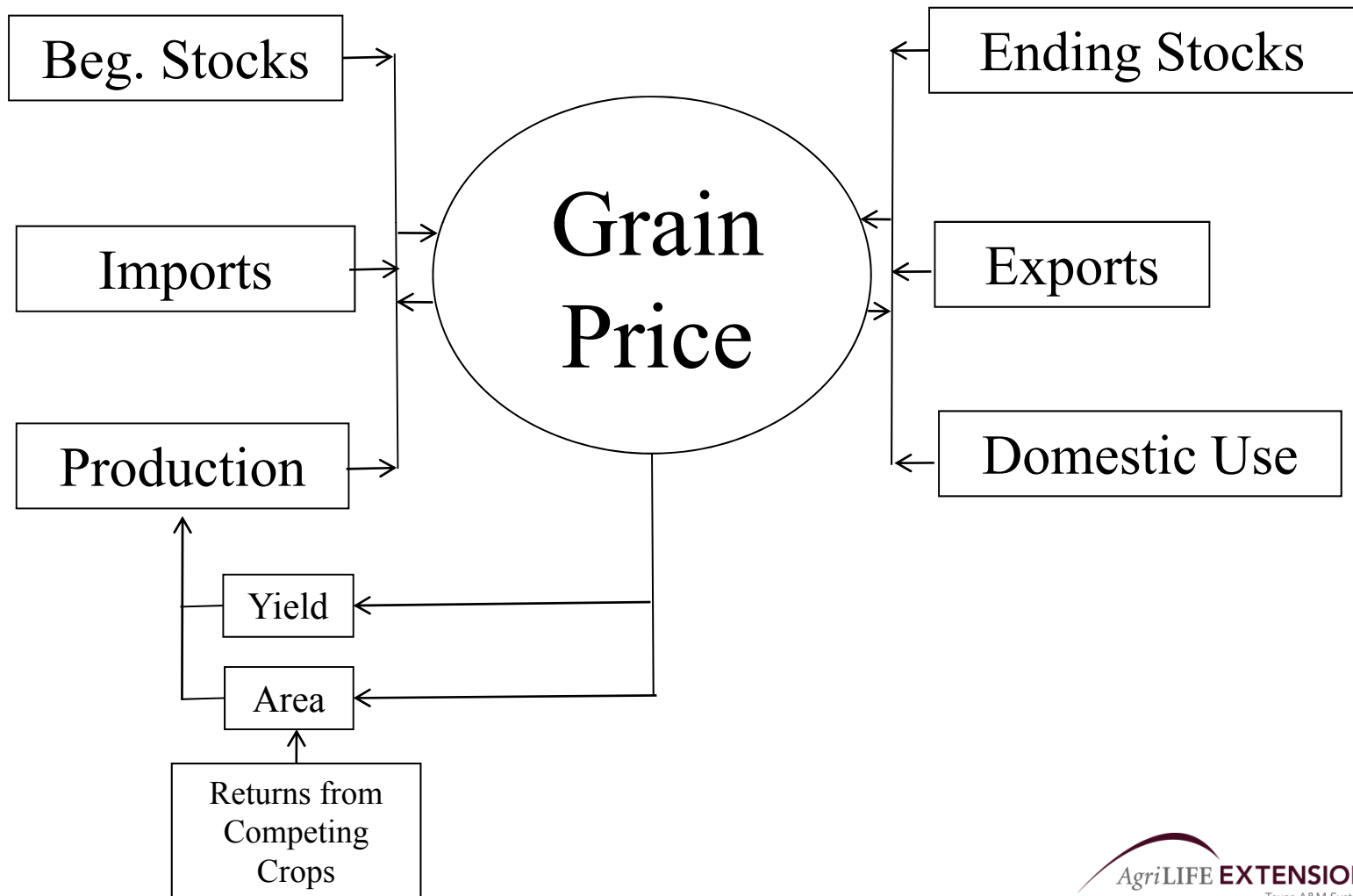


Why does this matter?

- Price changes due to changes in demand are usually sustained for longer periods of time
- Price changes due to changes in supply are usually short lived

Schematic Representation of the U.S. Grain Market

Factors of Supply = Factors of Demand



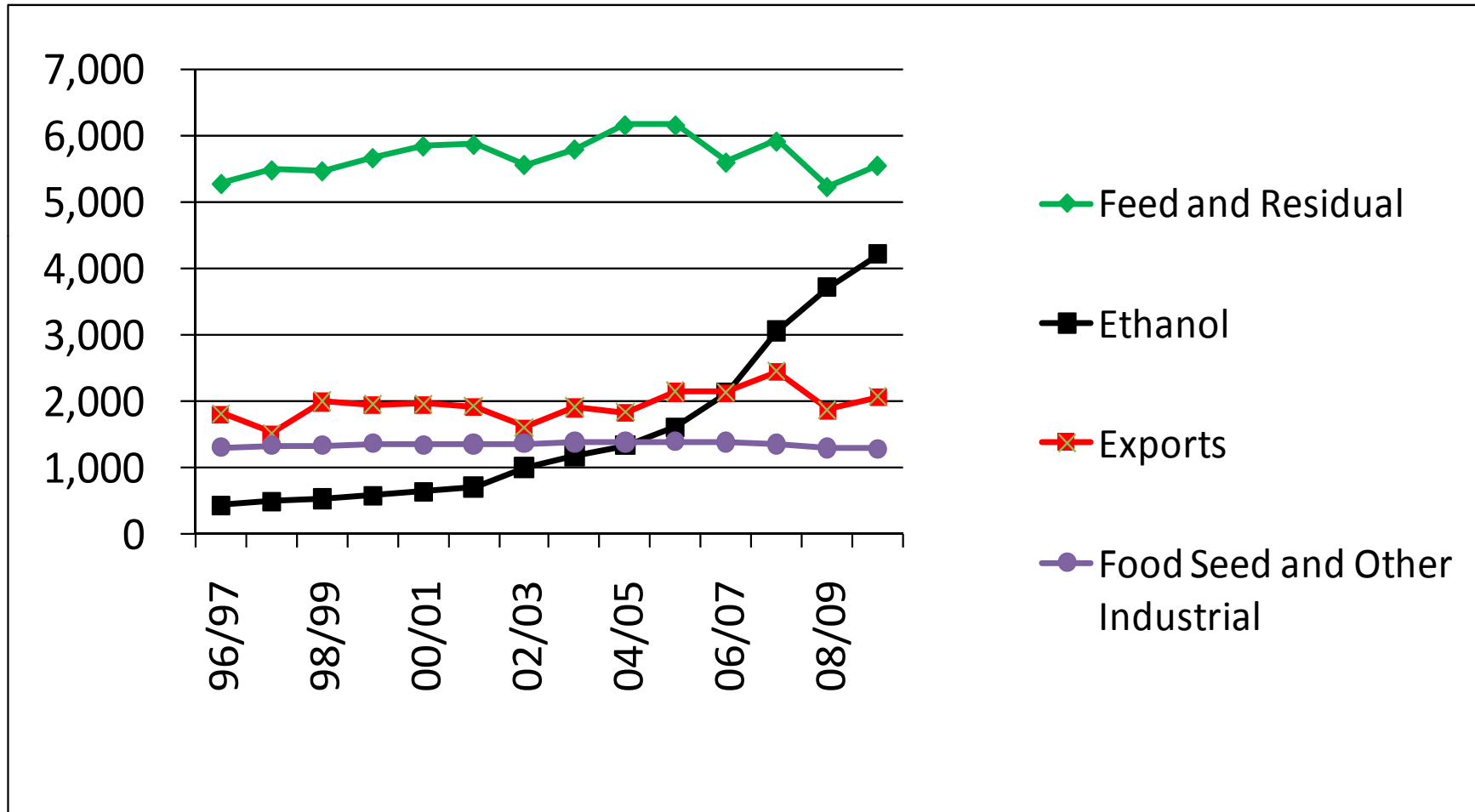
Corn U.S. Supply/Demand (million bushels)

| | <u>2005/06</u> | <u>2006/07</u> | <u>2007/08</u> | <u>2008/09</u> | <u>2009/10</u> |
|----------------------|----------------|----------------|----------------|----------------|----------------|
| <u>Supply</u> | | | | | |
| Beginning Stks | 2,114 | 1,967 | 1,304 | 1,624 | 1,673 |
| Production | <u>11,114</u> | <u>10,531</u> | <u>13,038</u> | <u>12,101</u> | <u>13,151</u> |
| Total Supply | 13,237 | 12,510 | 14,362 | 13,739 | 14,834 |
| <u>Disappearance</u> | | | | | |
| Domestic Use | 9,136 | 9,081 | 10,300 | 10,207 | 11,020 |
| Exports | <u>2,134</u> | <u>2,125</u> | <u>2,437</u> | <u>1,858</u> | <u>2,050</u> |
| Total Use | 11,270 | 11,207 | 12,737 | 12,065 | 13,070 |
| Ending Stks | 1,967 | 1,304 | 1,624 | 1,674 | 1,764 |
| Carryover/Use (%) | 17.45 | 11.64 | 12.75 | 13.87 | 13.50 |
| Avg. Farm Price | 2.00 | 3.04 | 4.20 | 4.06 | 3.70 |

1/12/10

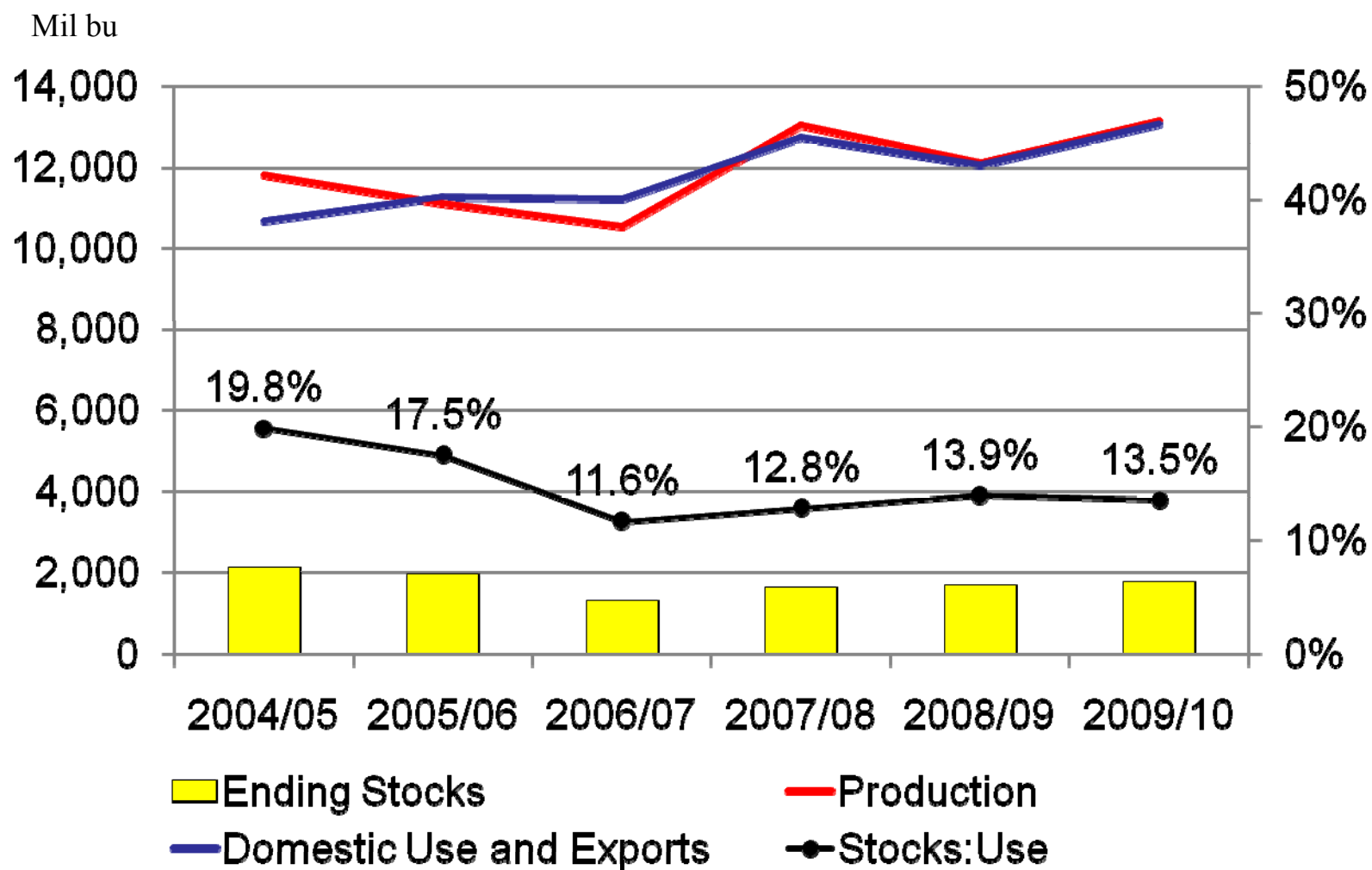
U.S. Corn Use

Million bushels



Source: USDA, revised 1/12/10

U.S. Corn Supply and Demand



1/12/10

Stock to Use Ratio

- The stock to use ratio is a convenient measure of supply and demand interrelationships of commodities.
- The stocks to use ratio indicates the level of carryover stock for a given commodity as a percentage of the total demand or use.

Stocks to Use Ratio

Mathematical formula for this relationship:

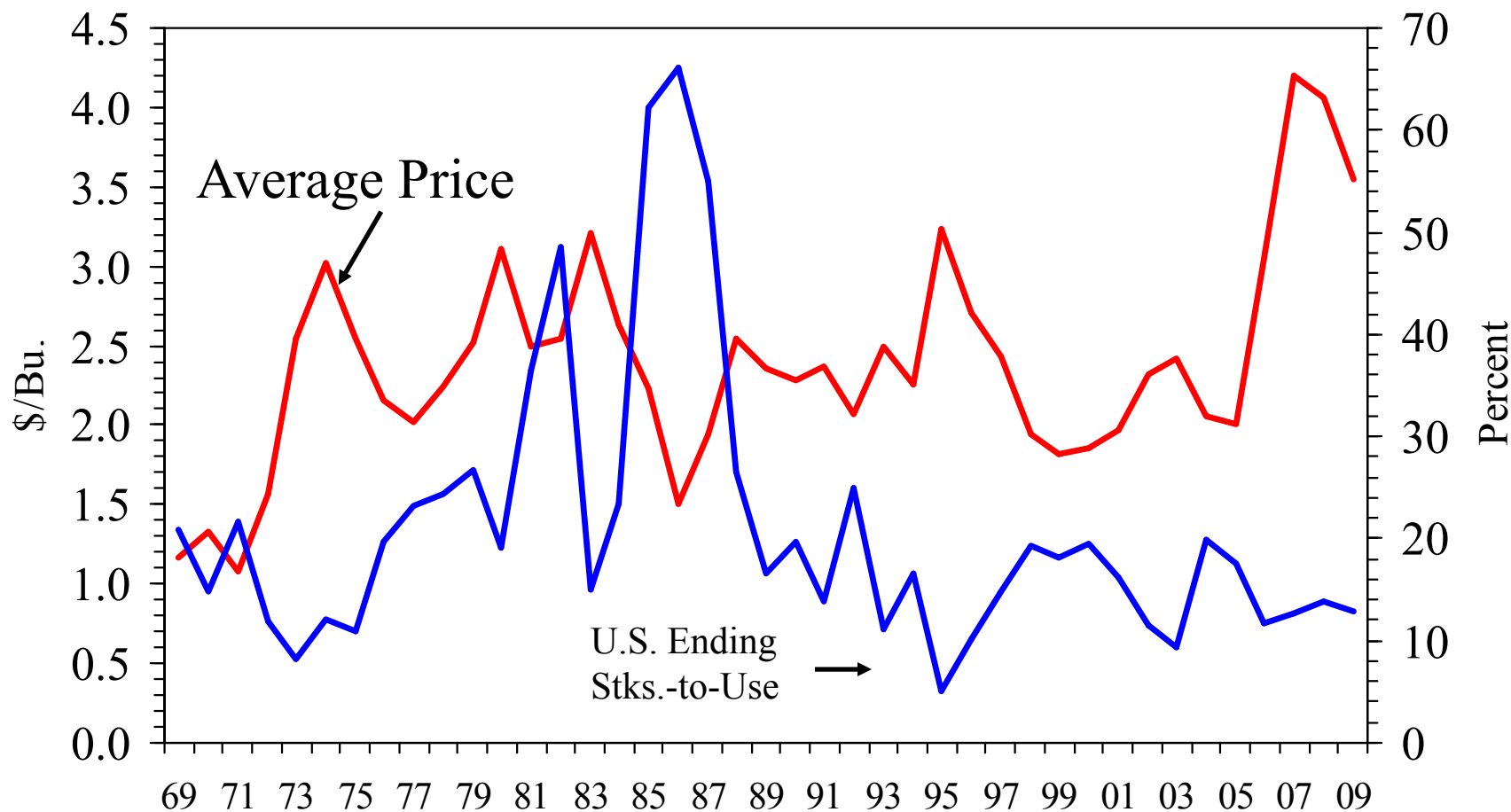
$$\text{Ending Stocks} = \text{Beg. Stocks} + \text{Production} + \text{Imports} - \text{Domestic Use} - \text{Exports}$$

$$\text{Total Use} = \text{Domestic Use} + \text{Exports}$$

$$\text{Stocks to Use} = \text{Ending Stocks} \div \text{Total Use}$$

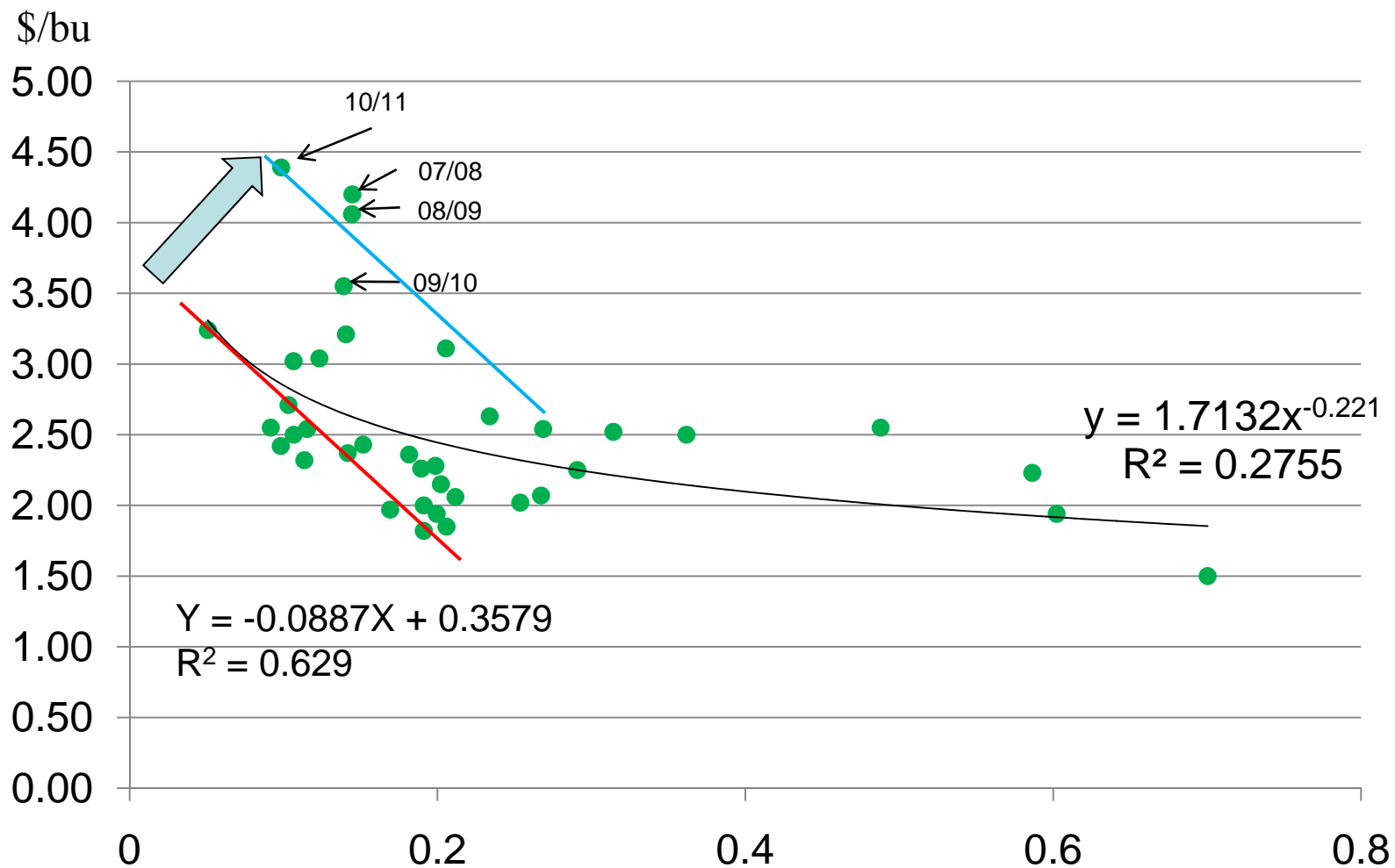
Multiply by 100 to express as a percentage

Season Average Corn Price vs. U.S. Ending Stocks-to-Use 1969/80 – 2009/10

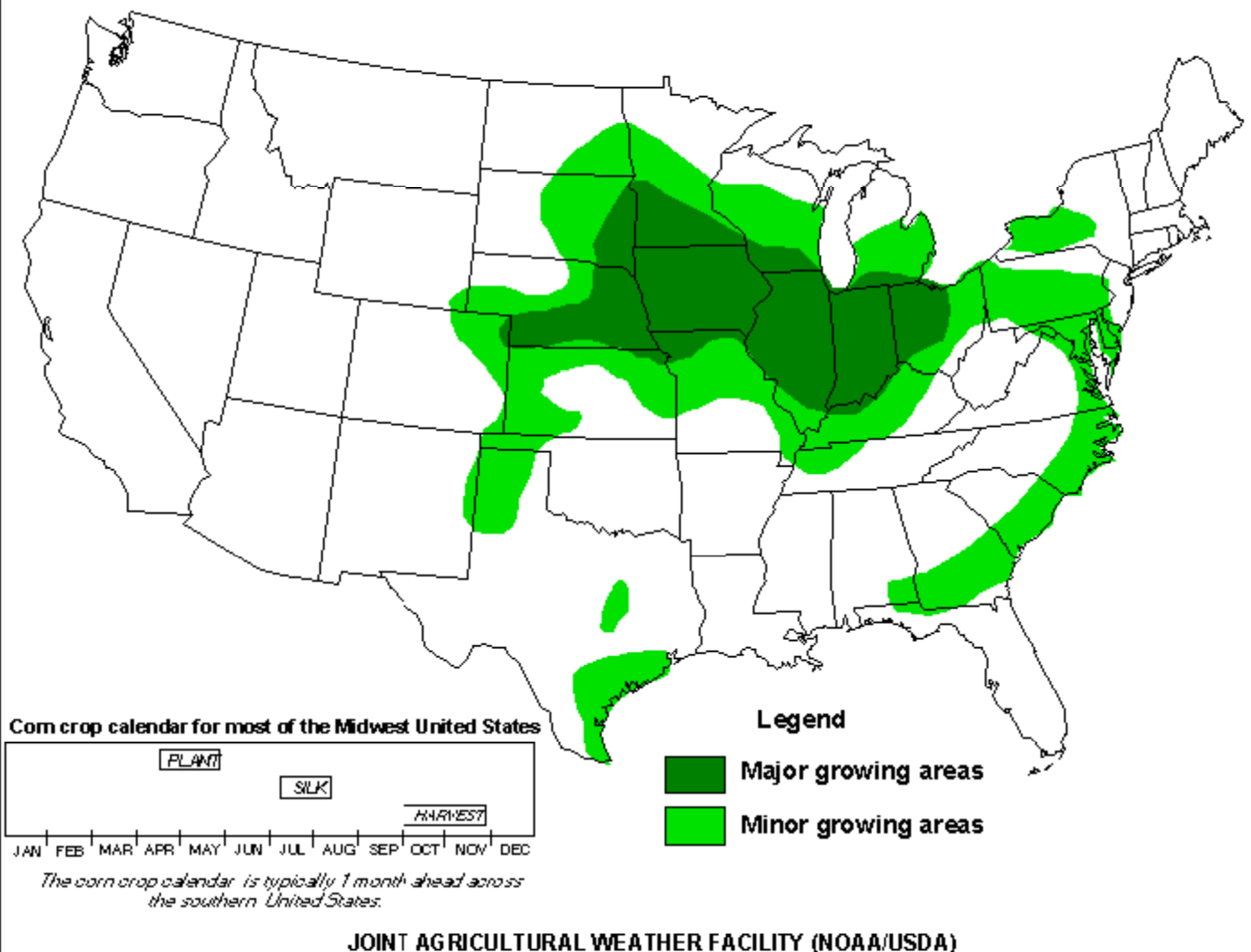


12/10/09

SAFP to 5-yr avg Stocks to Use Ratio



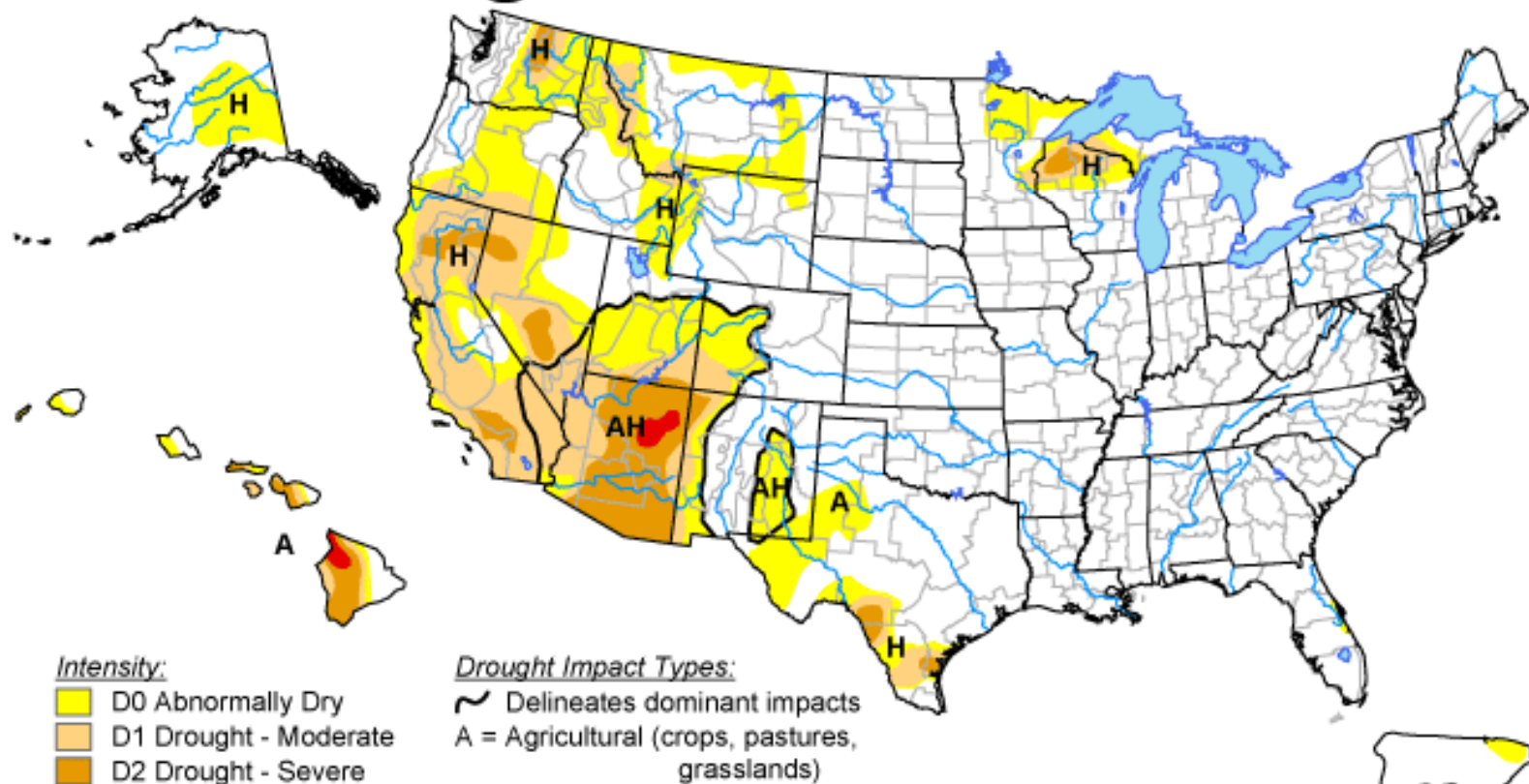
United States: Corn



U.S. Drought Monitor

January 5, 2010

Valid 7 a.m. EST



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

Drought Impact Types:

- Delineates dominant impacts
- A = Agricultural (crops, pastures, grasslands)
- H = Hydrological (water)

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

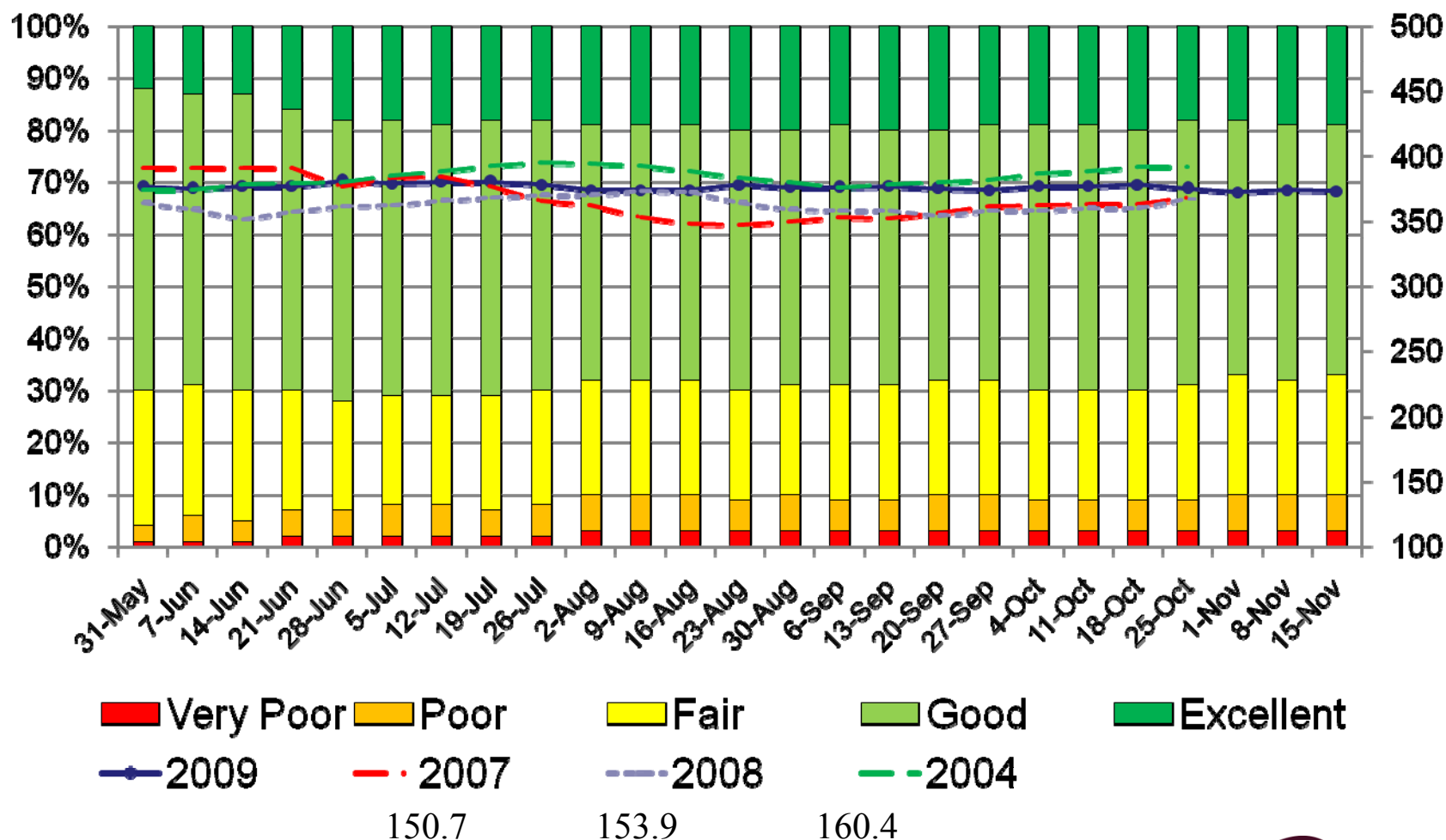
<http://drought.unl.edu/dm>



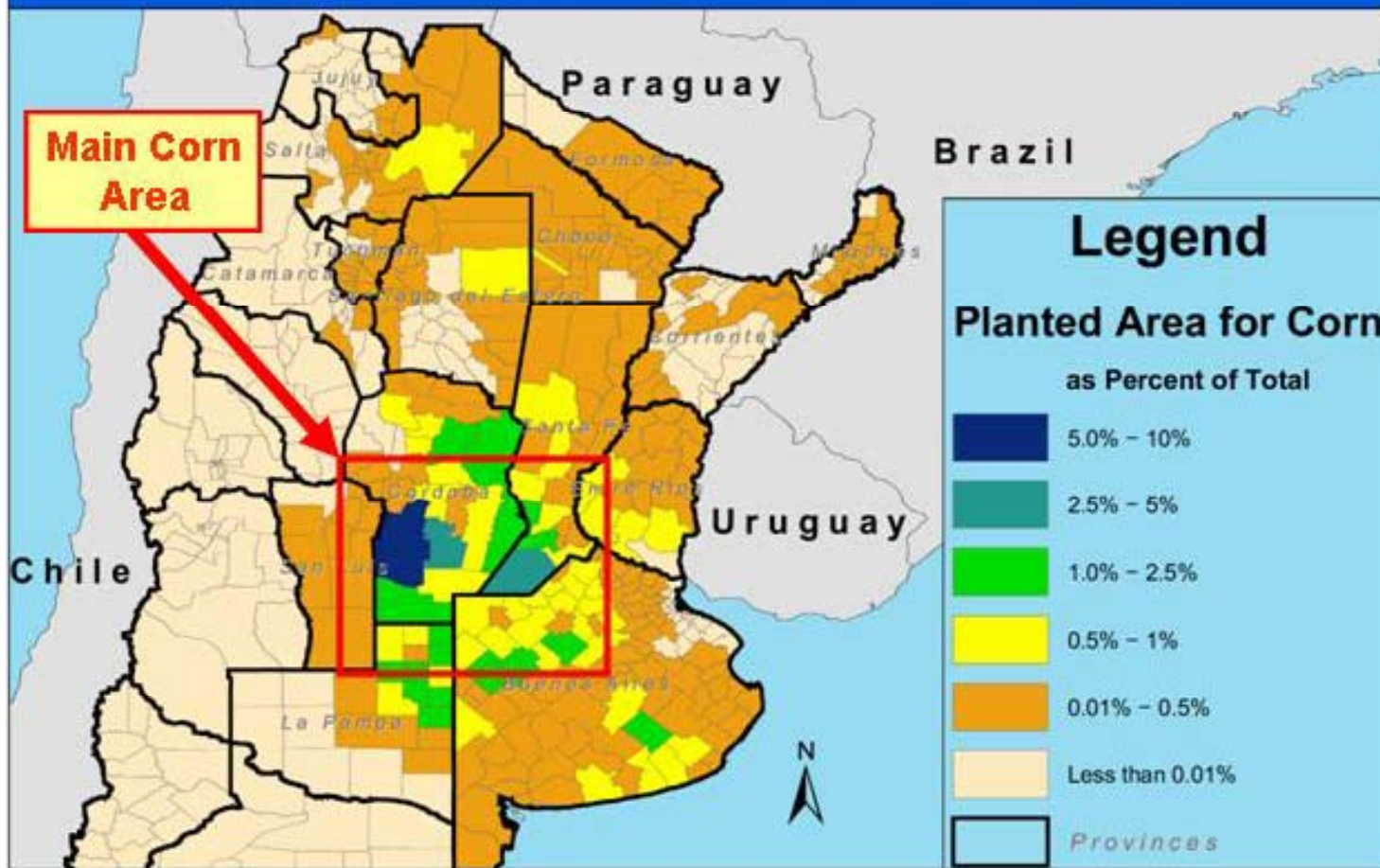
Released Thursday, January 7, 2010

Author: Mark Svoboda, National Drought Mitigation Center

U.S. Corn Crop Condition



Argentine Corn Planted Area

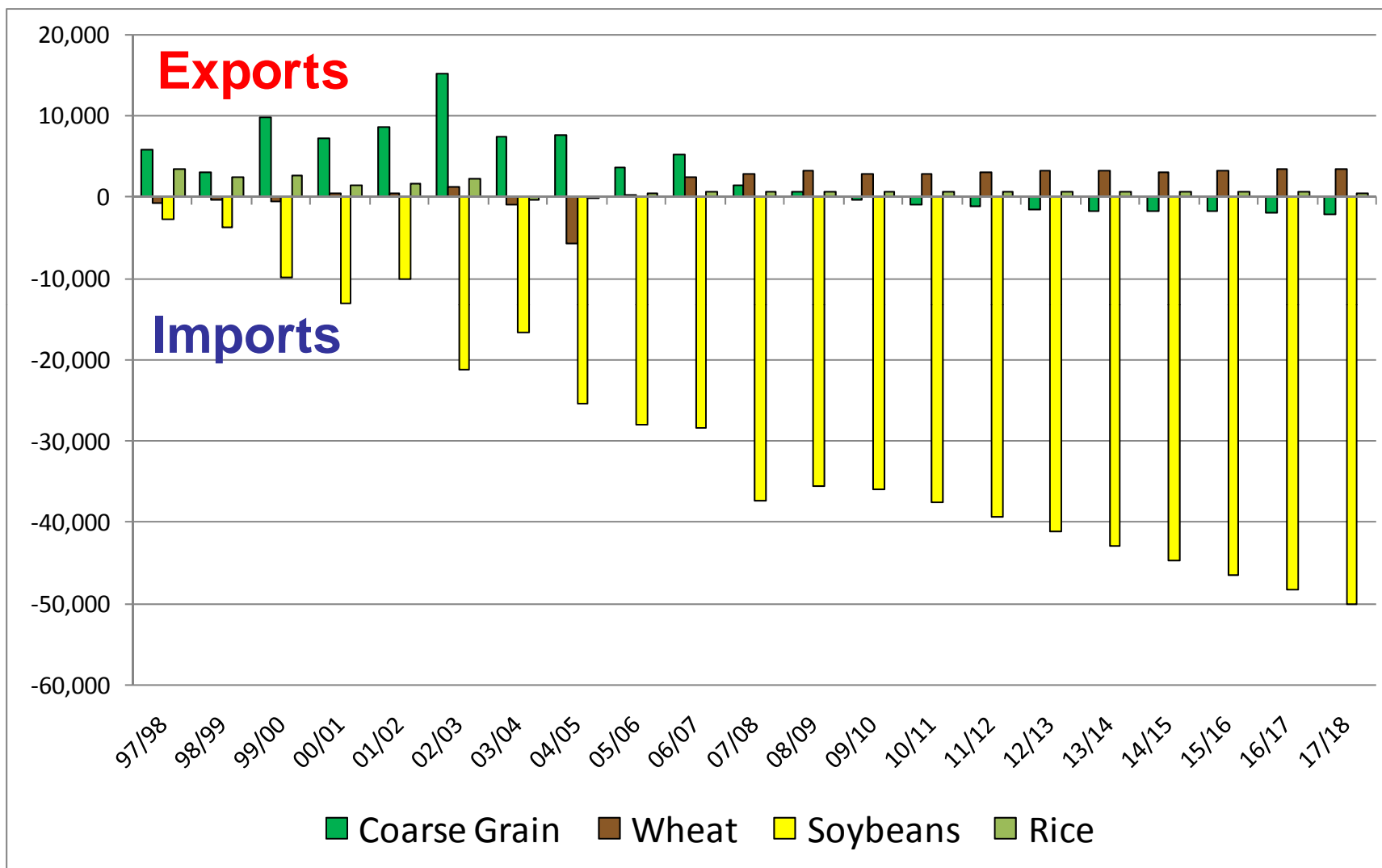


U.S. Department of Agriculture
Foreign Agricultural Service
Production Estimates and Crop Assessment Division
<http://www.fas.usda.gov/pecad/>
Robert.tetrault@usda.gov

Data Source:
Argentine Agricultural Secretariat (SAGPyA)
Department-level statistics for the five-year average of
planted area for corn (1997/98 to 2001/02)
<http://www.sagpya.mecon.gov.ar/>

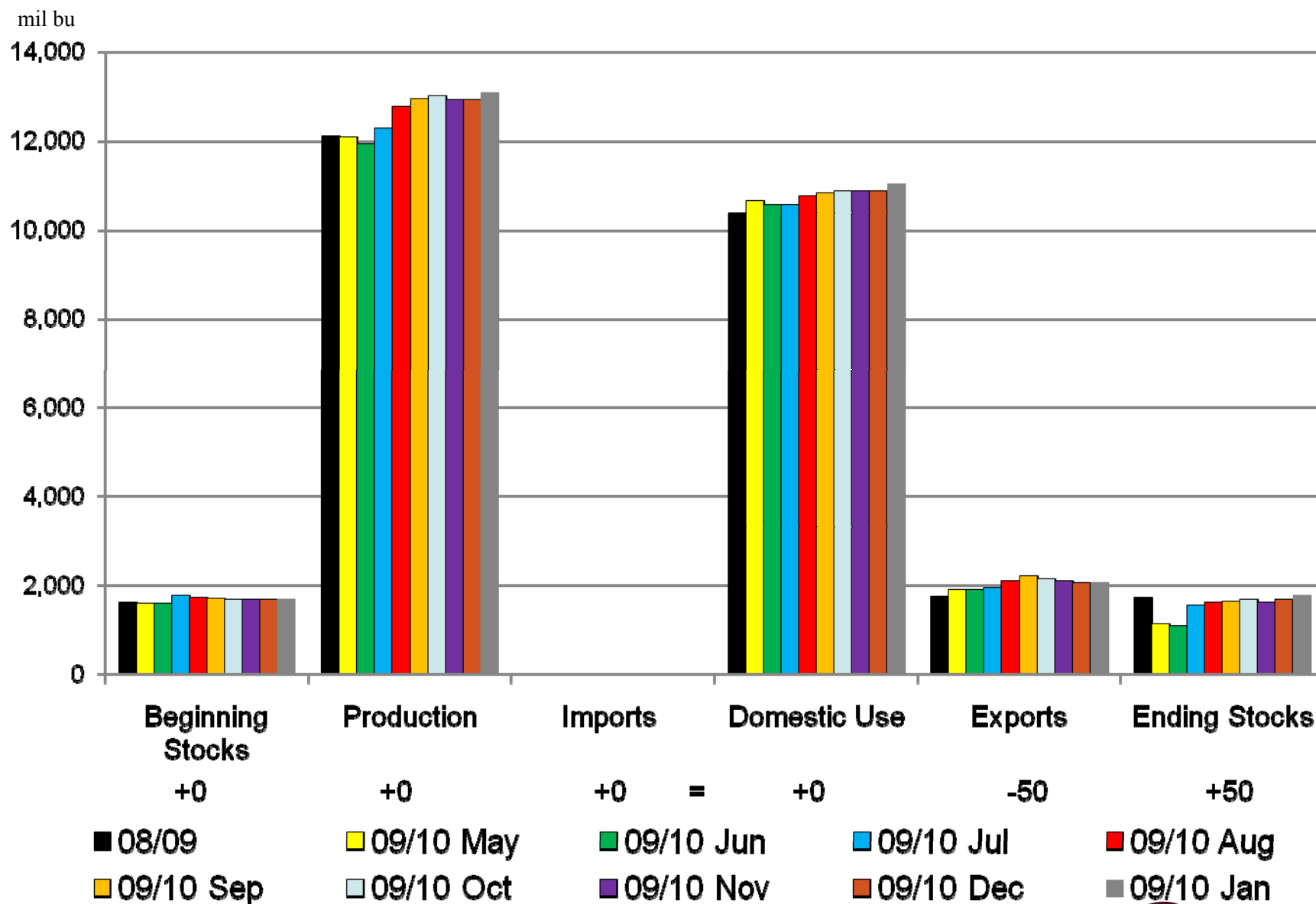
China Net Trade

000 MT

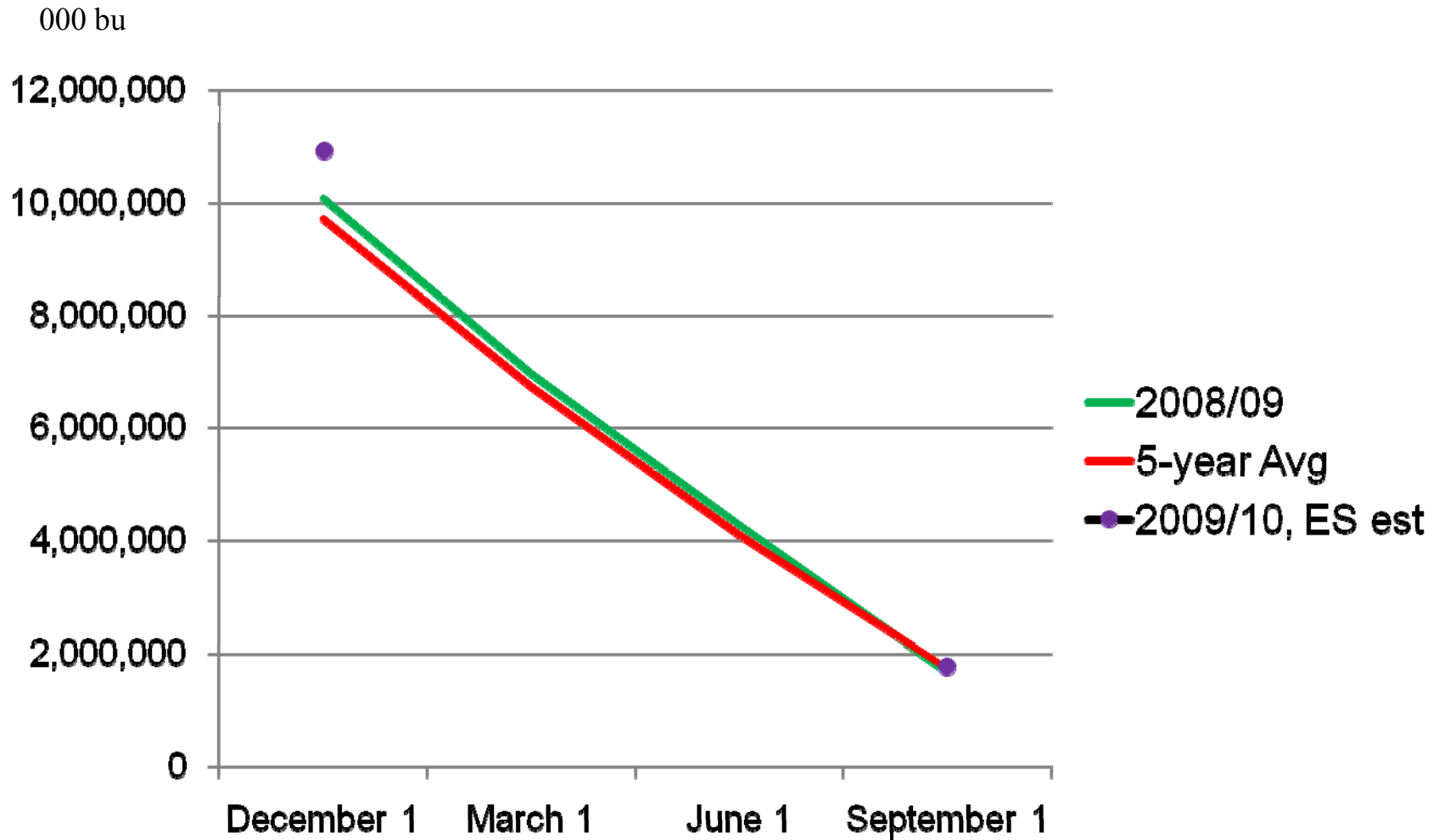


Source: USDA and FAPRI

U.S. Corn Supply and Demand, 1/12/10

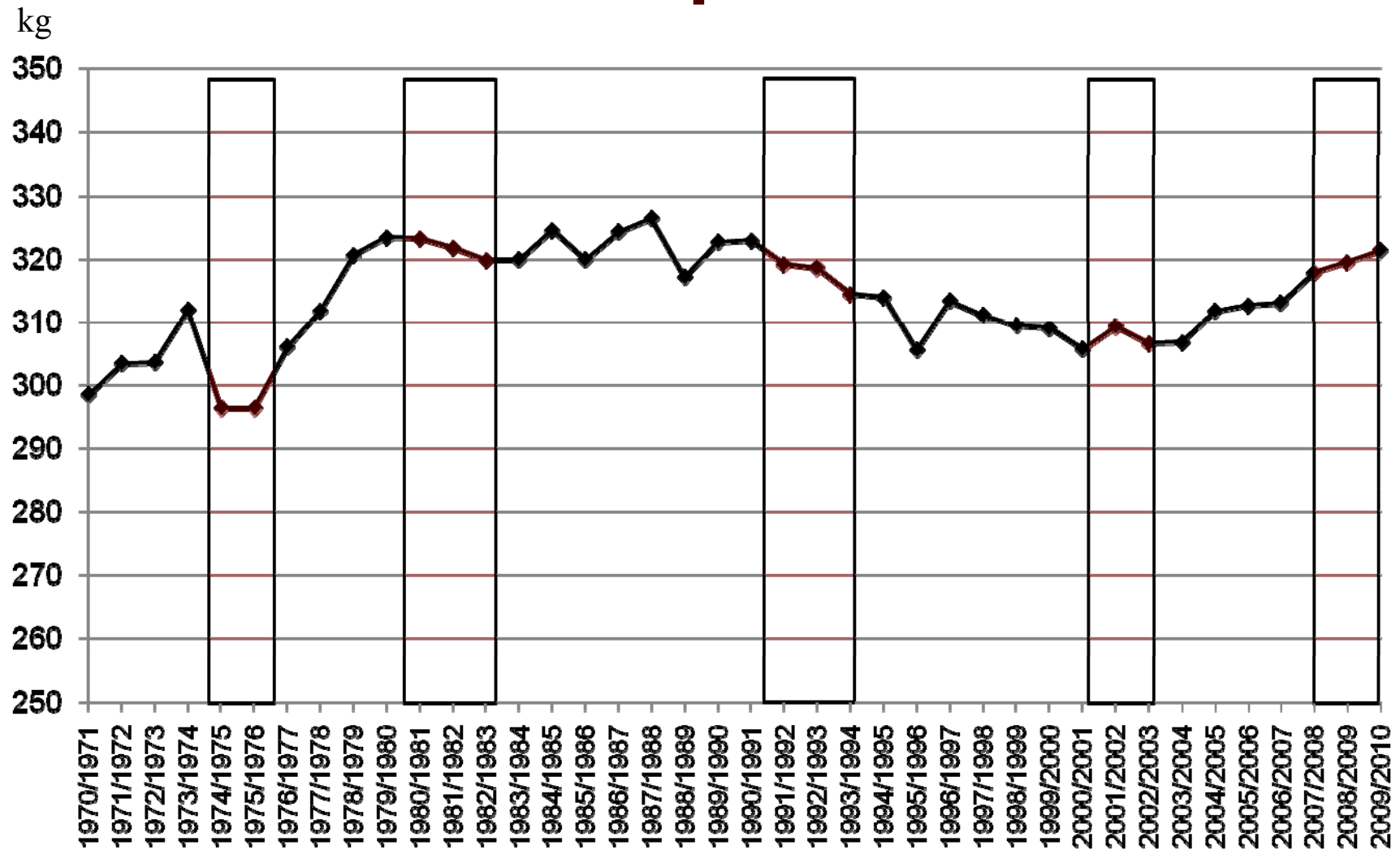


U.S. Corn Stocks, All Positions



NASS, report date 1/12/10

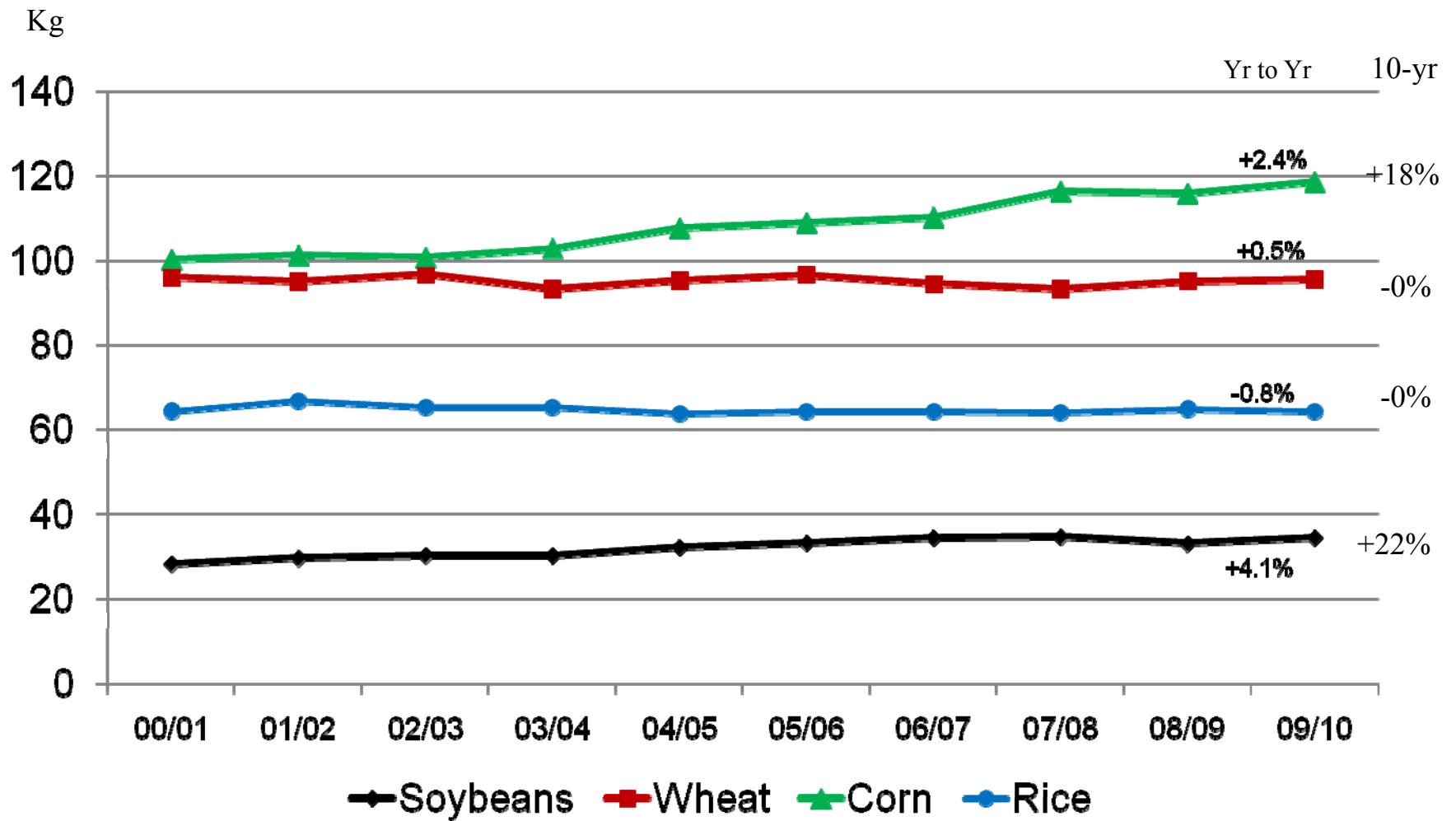
World Per Capita Grain Use



corn, barley, sorghum, rye, oats, millet, mixed grains, wheat, rice

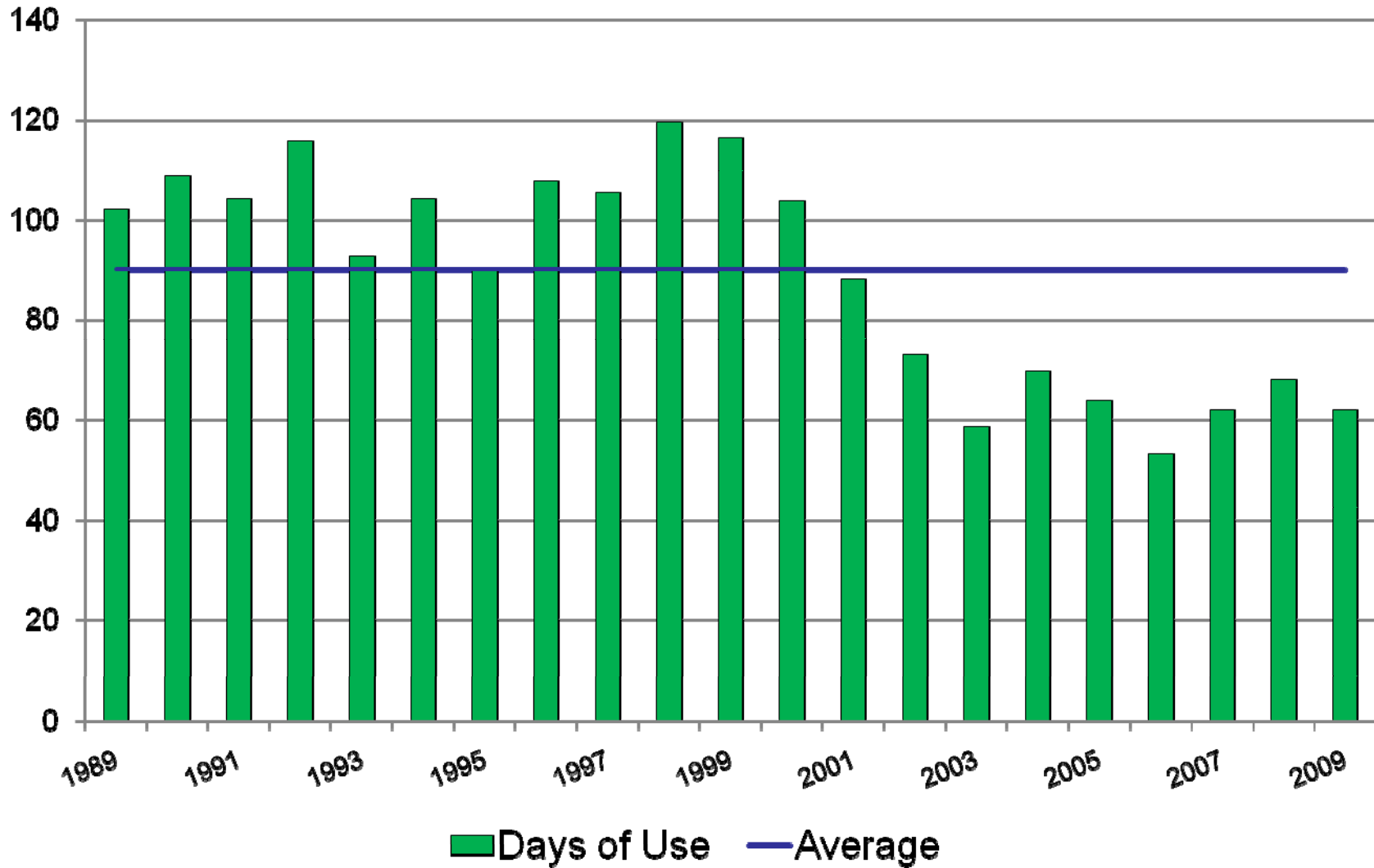
12/10/09

World Per Capita Consumption



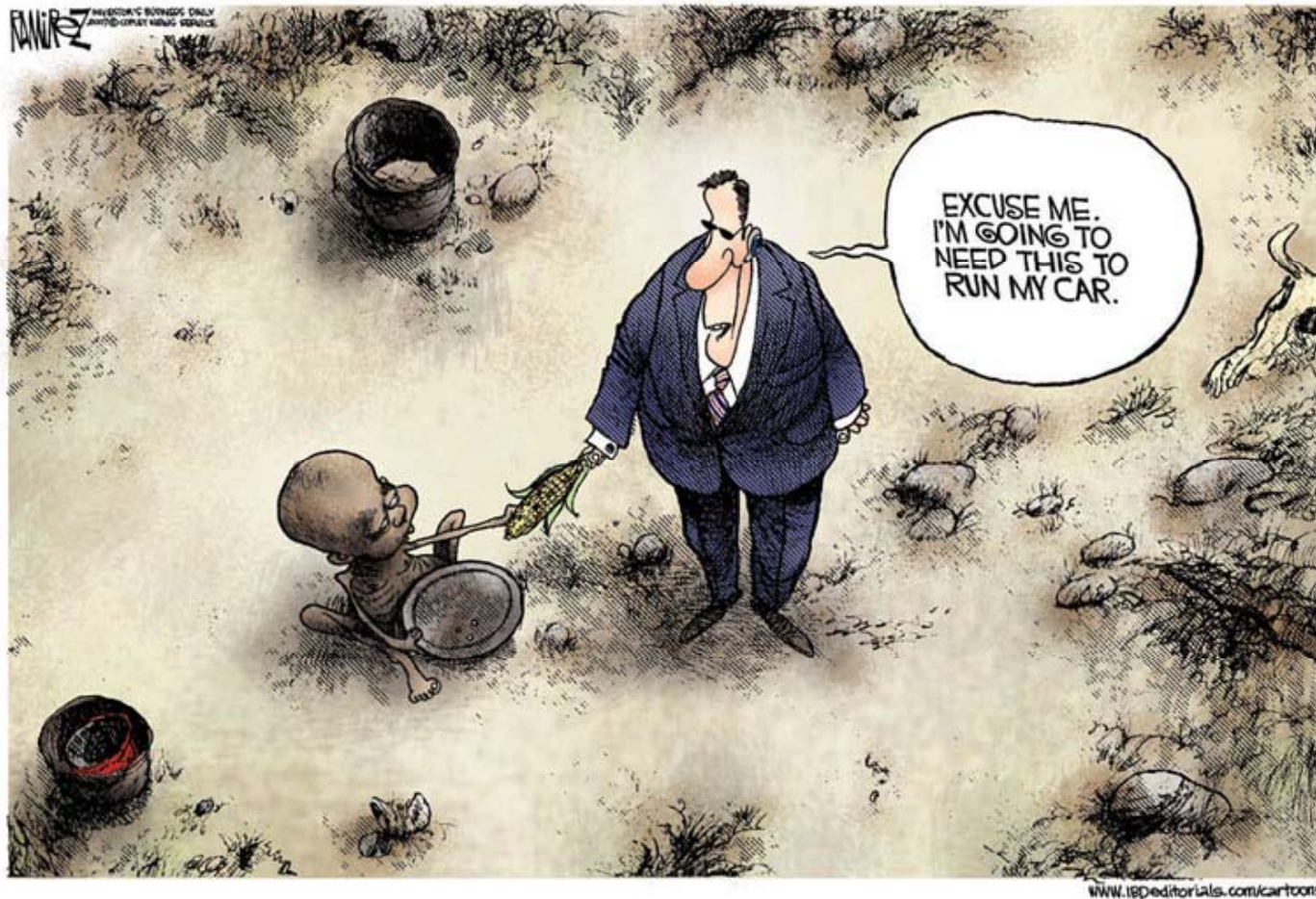
Updated 12/10/09

World Corn: Days of Use on Hand

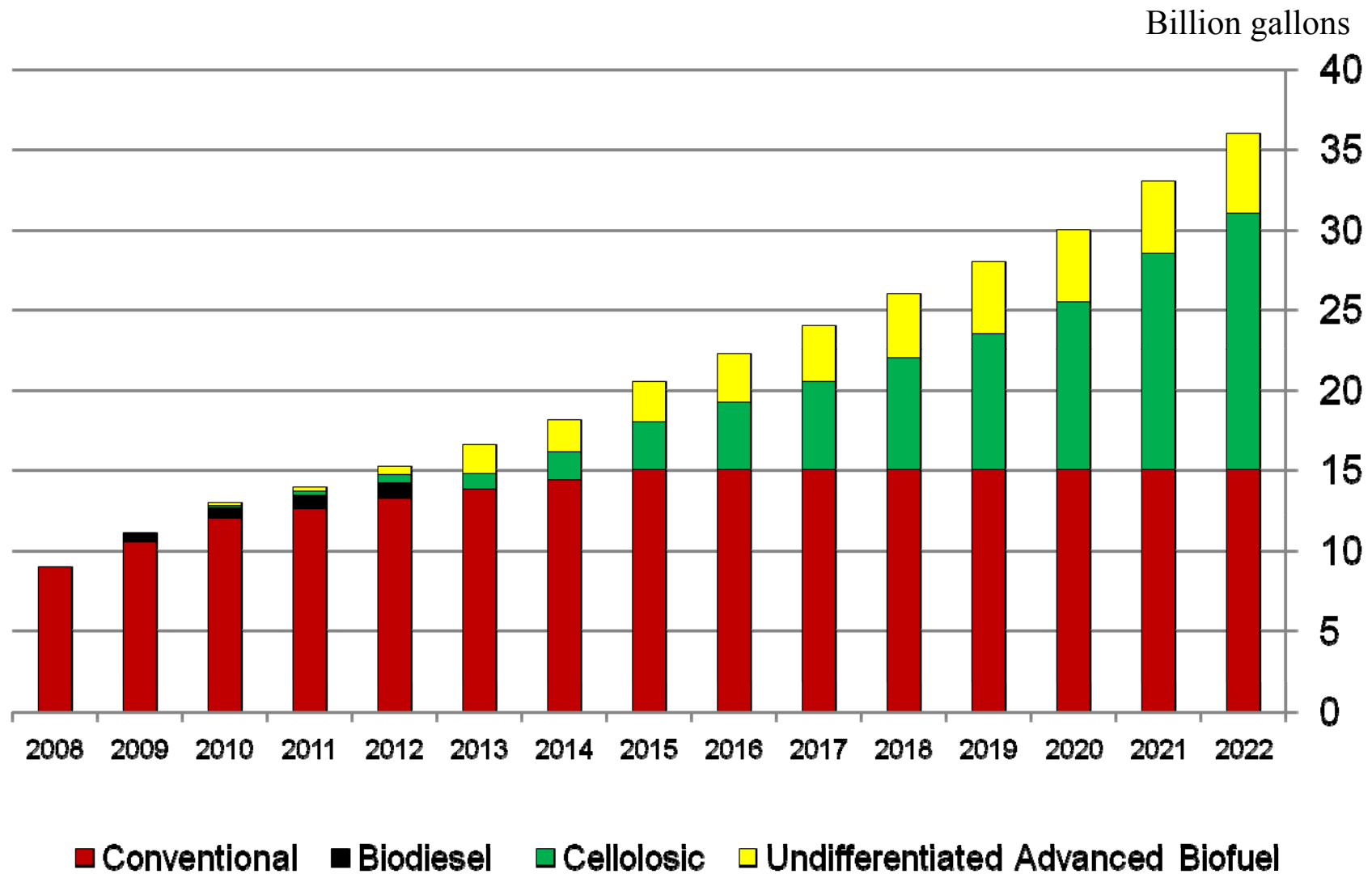


1/12/10

Food versus Fuel

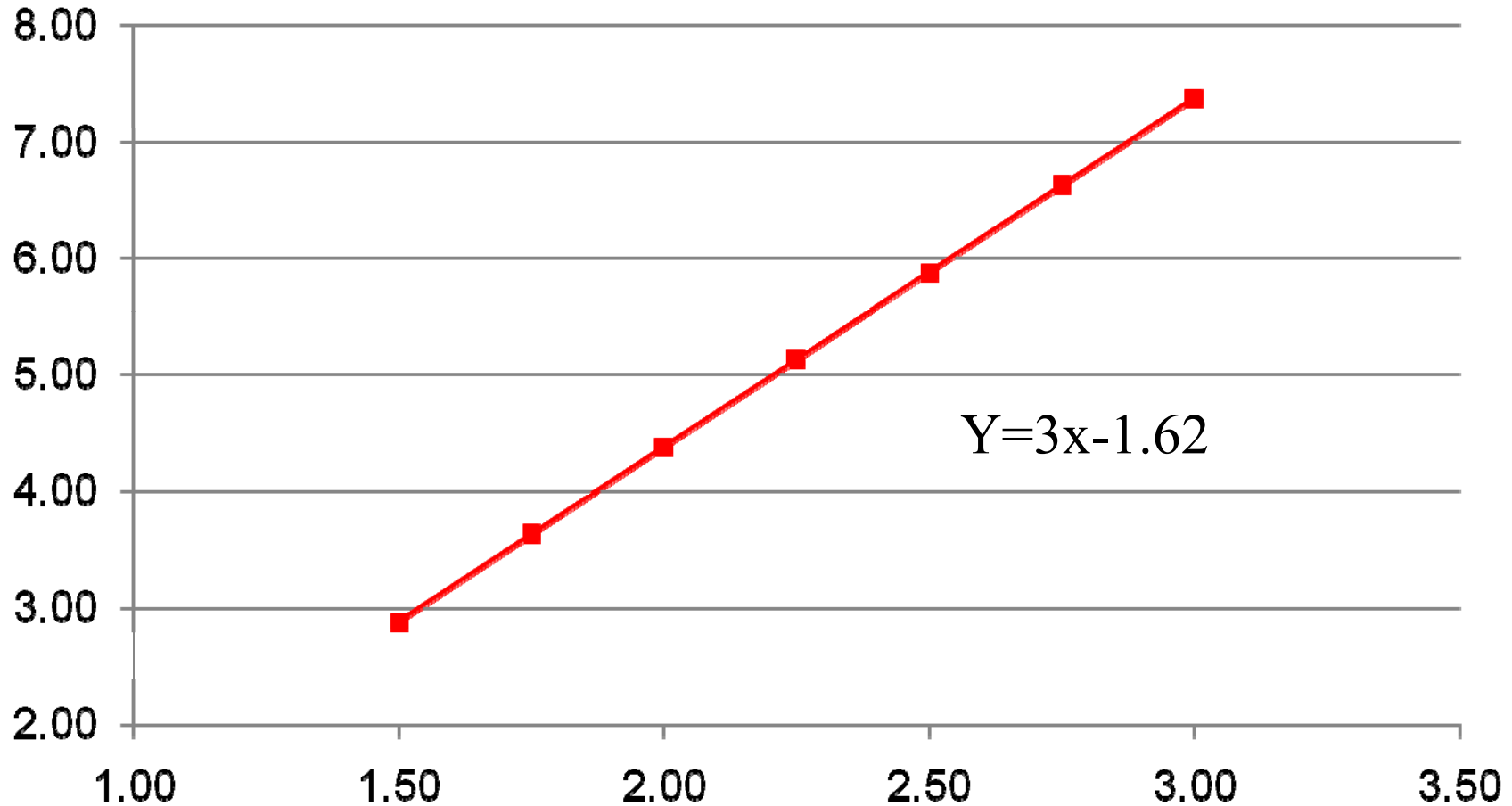


2007 U.S. Biofuel Mandates



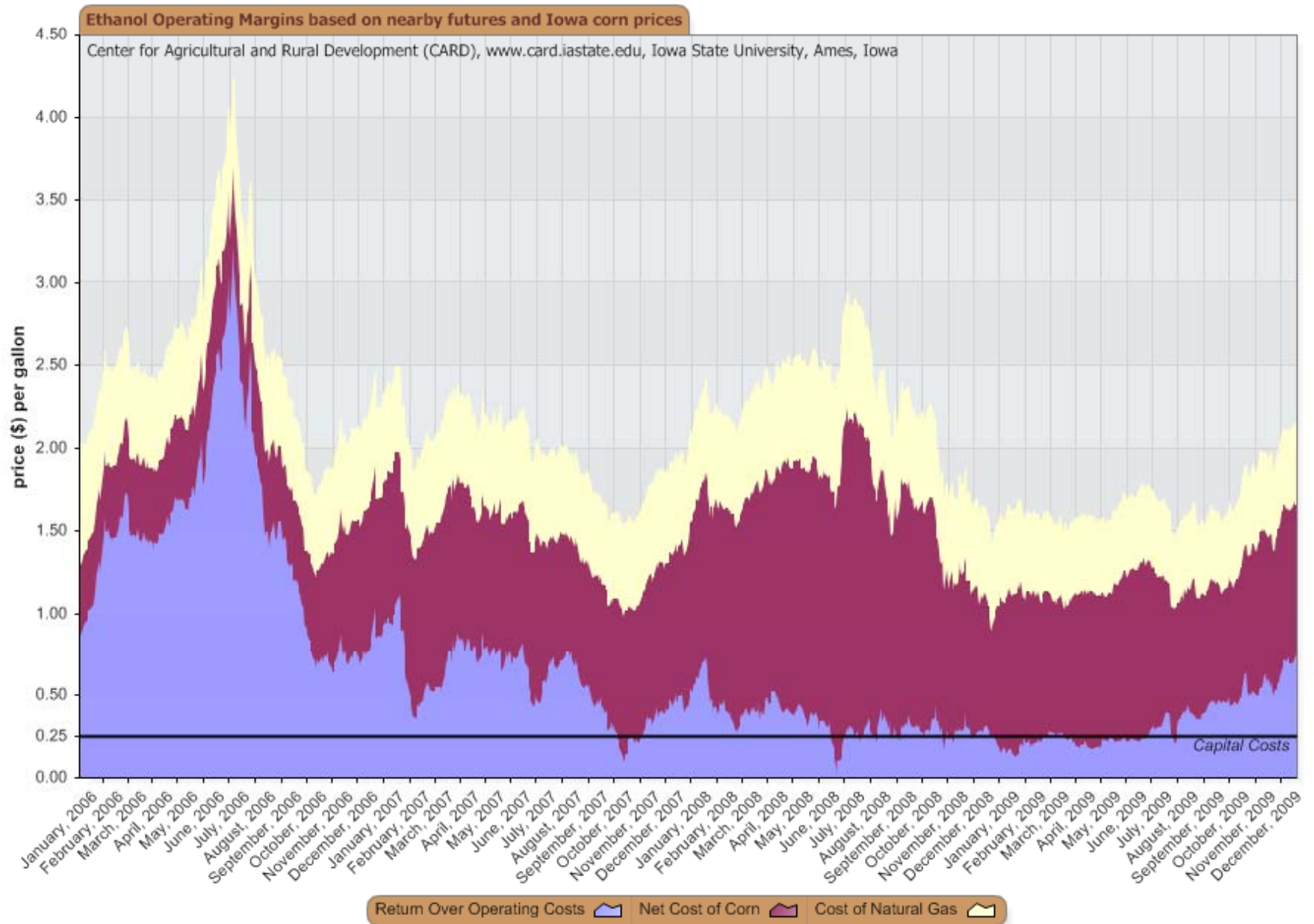
Source: FAPRI and RFA

Break even price of Corn for Ethanol



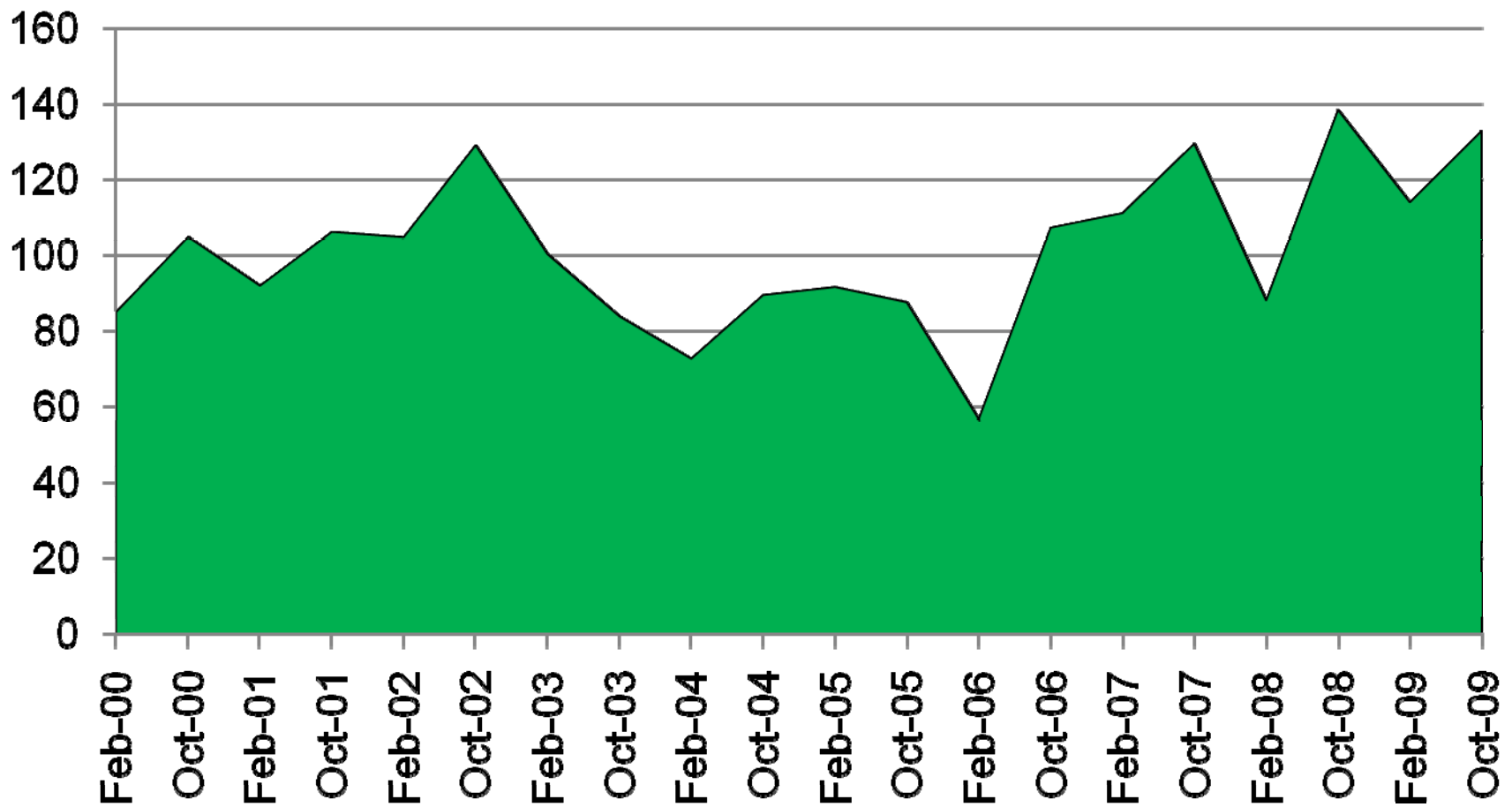
Long-Run Impact of Corn-Based Ethanol on the Grain, Oilseed, and Livestock Sectors: A Preliminary Assessment, The
Amani Elobeid, Simla Tokgoz, Dermot J. Hayes, Bruce A. Babcock, Chad E. Hart
[06-BP 49]

Ethanol Returns



Cattle Crush

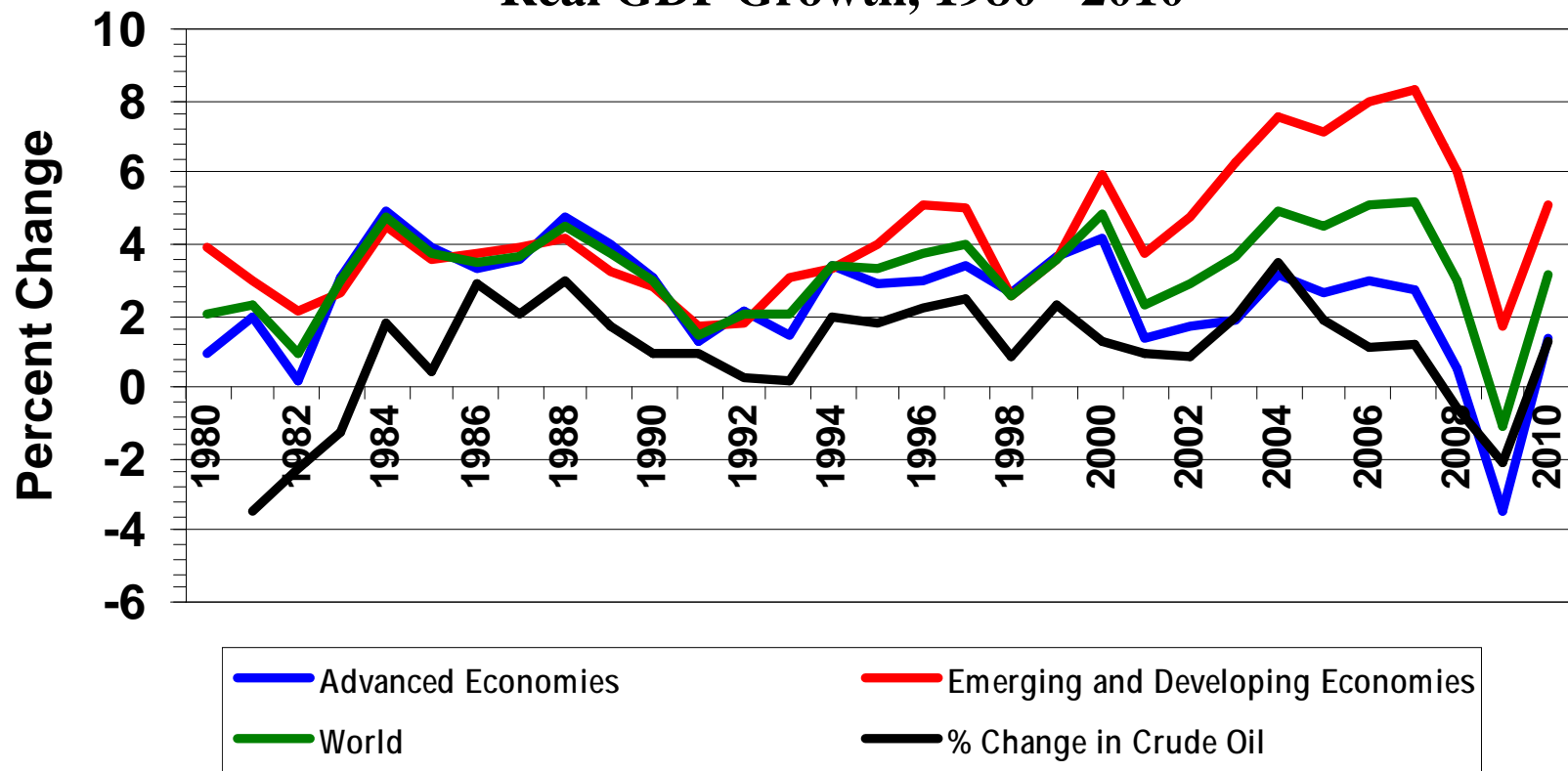
\$/head



Global Economic Growth

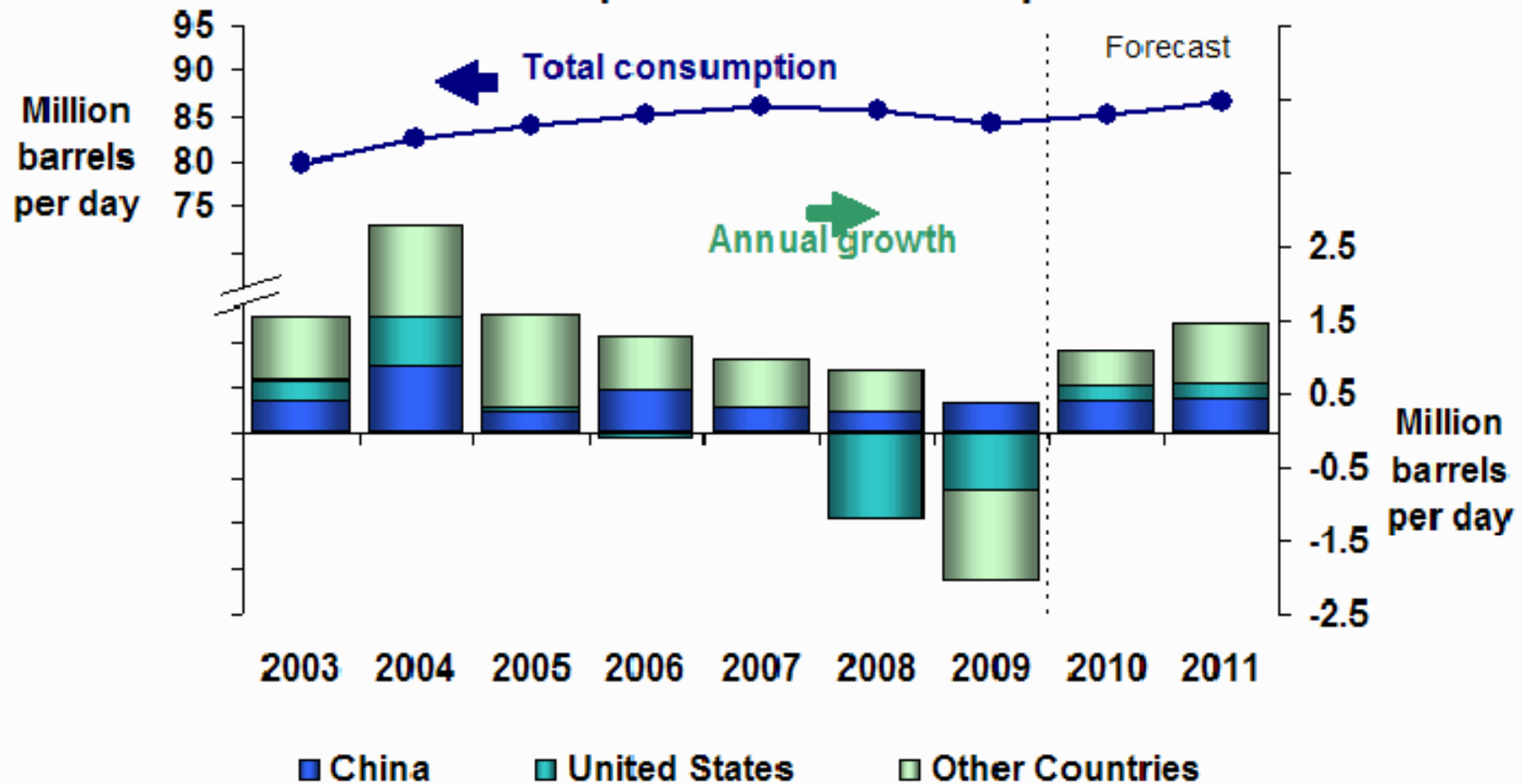
Global economic growth is being driven by developing nations.

Real GDP Growth, 1980 - 2010



Source: <http://www.imf.org/external/datamapper/index.php>

World Liquid Fuels Consumption

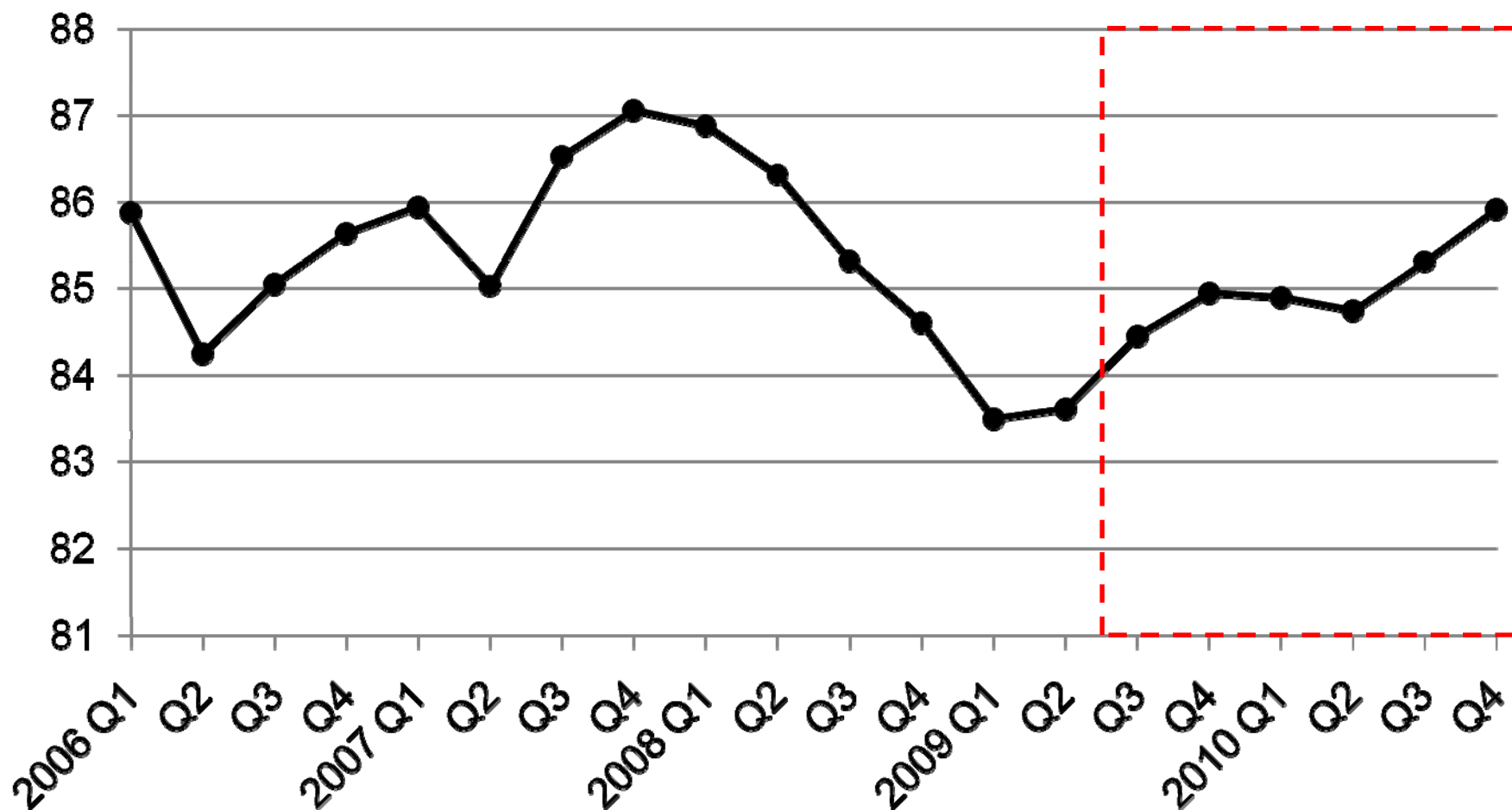


Short-Term Energy Outlook, January 2010



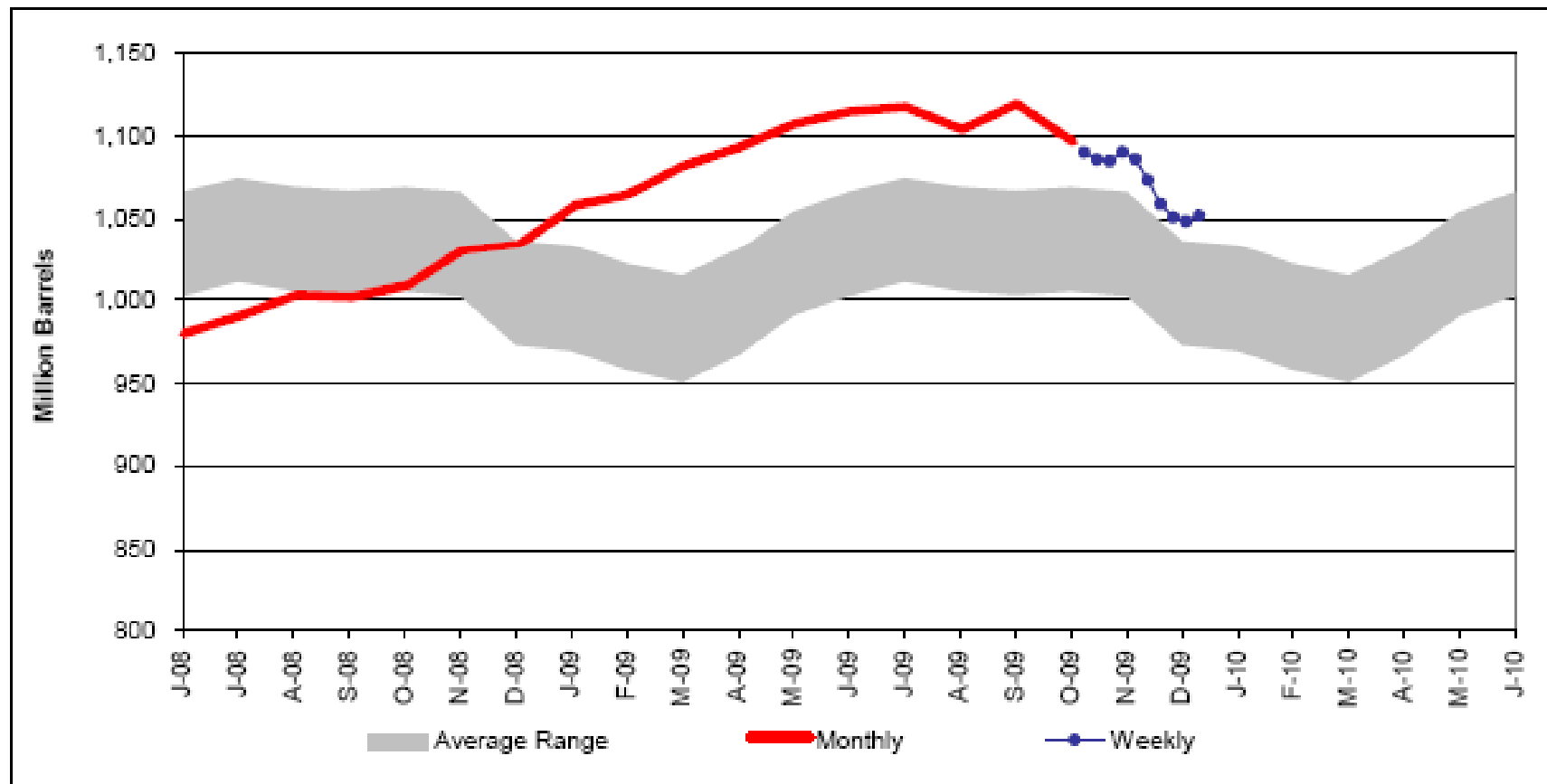
World Liquid Fuel Consumption

Million barrels per day

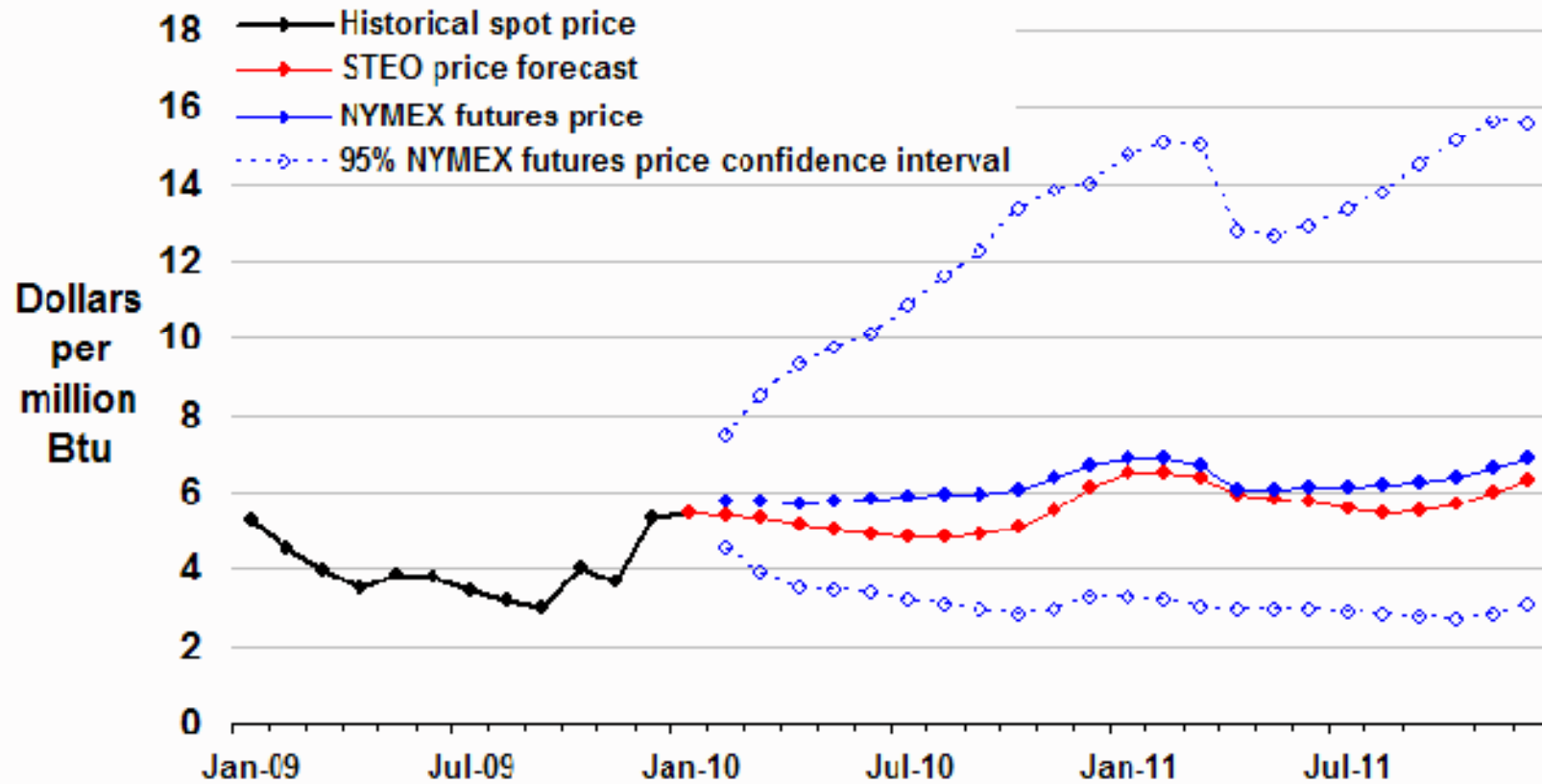


U.S. Stocks of Crude Oil and Petroleum Products

Figure 2. U.S. Stocks of Crude Oil and Petroleum Products, June 2008 to Present



Henry Hub Natural Gas Price

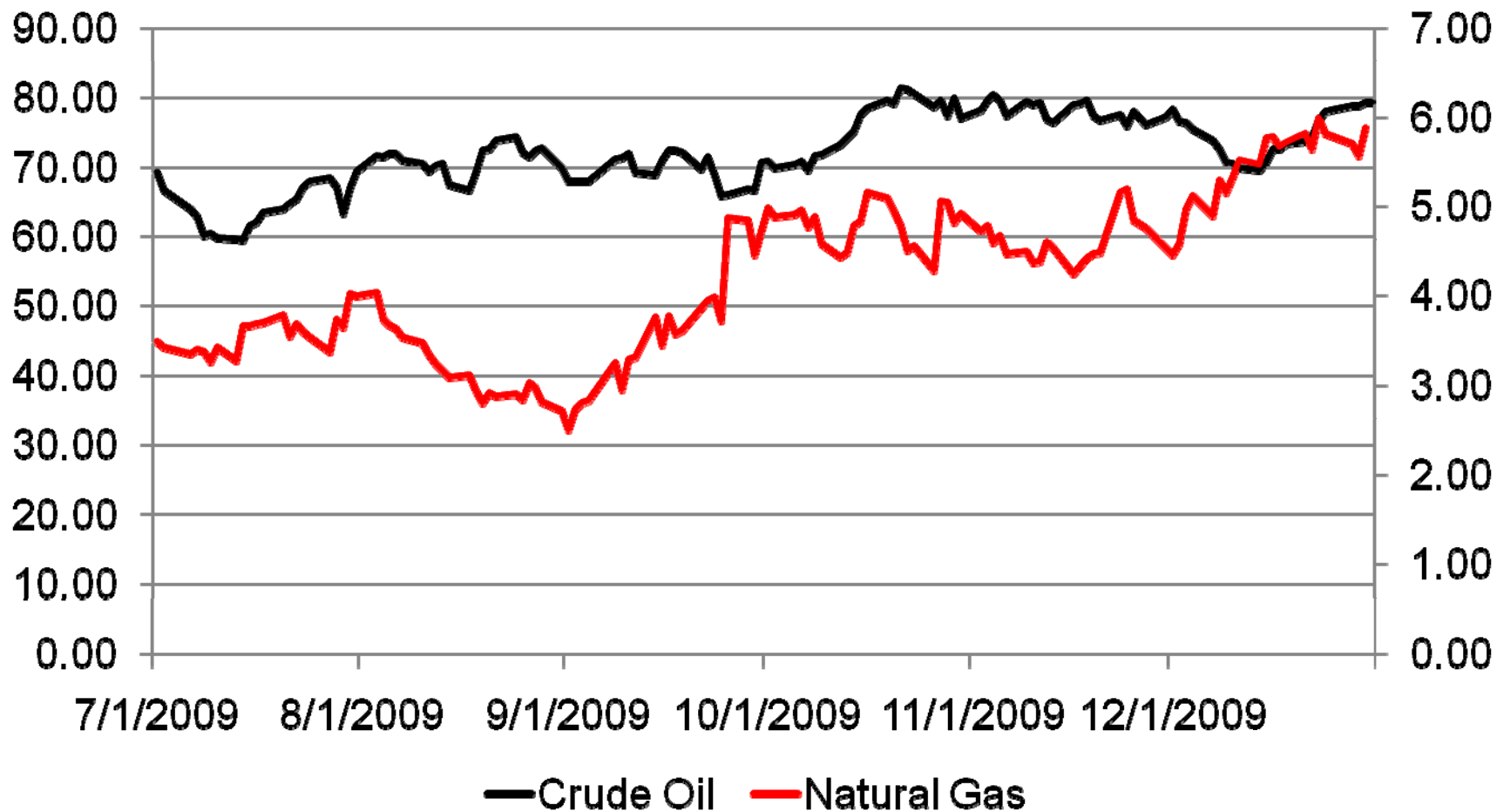


Note: Confidence interval derived from options market information on January 1, 2010

Short-Term Energy Outlook, January 2010

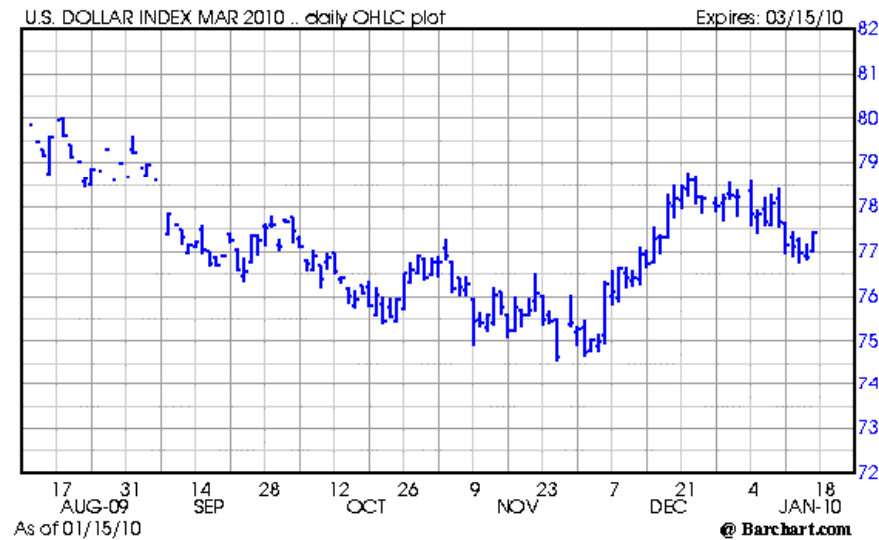


Crude Oil and Natural Gas Nearby Futures Prices

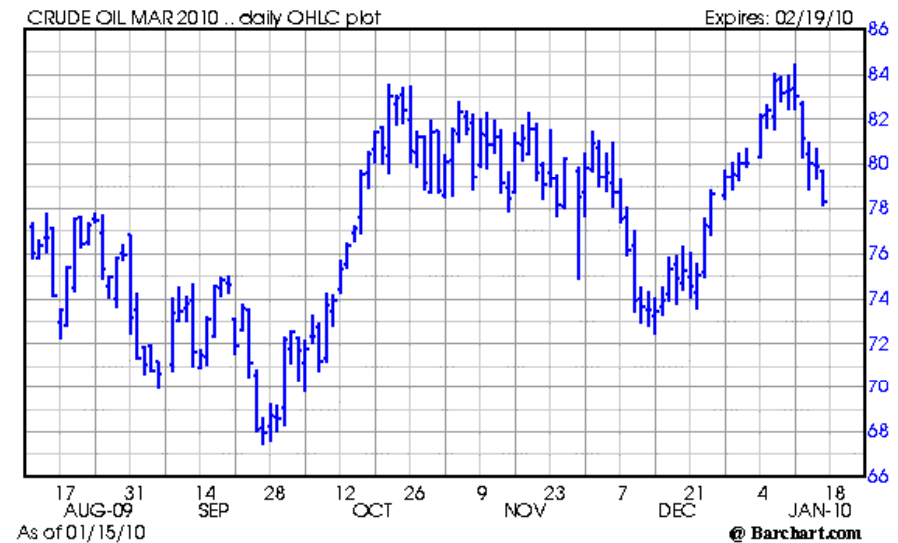


Outside Markets

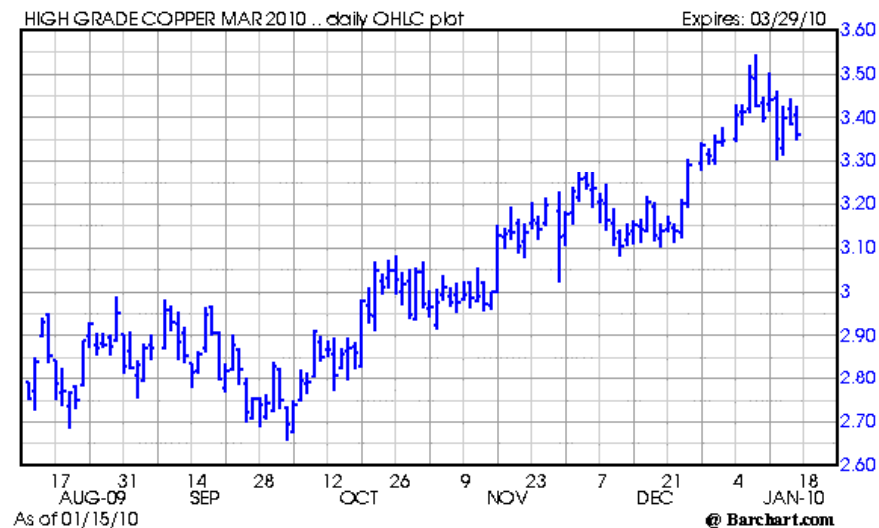
Dollar



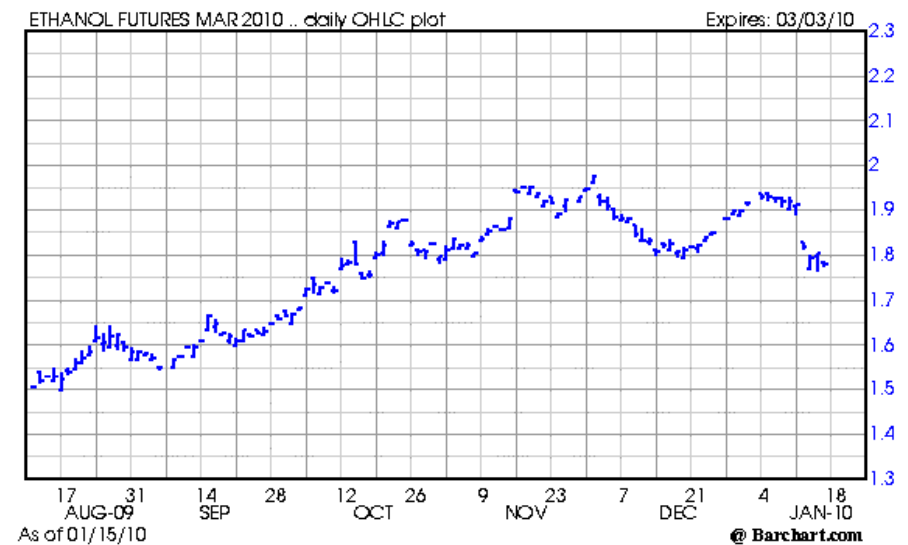
Crude Oil



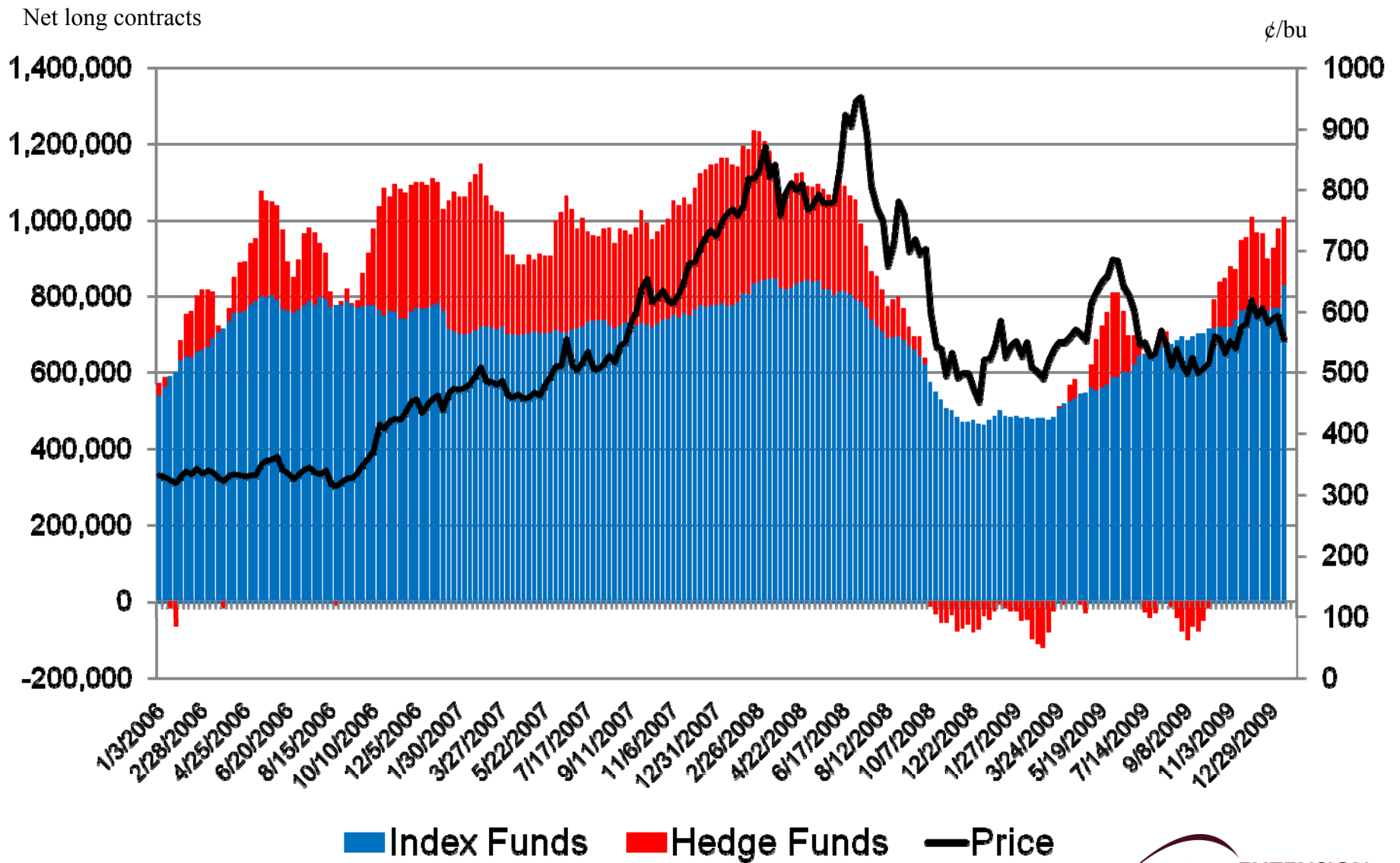
Conner



Ethanol



Wheat, Corn, and Soybeans Speculative Investment

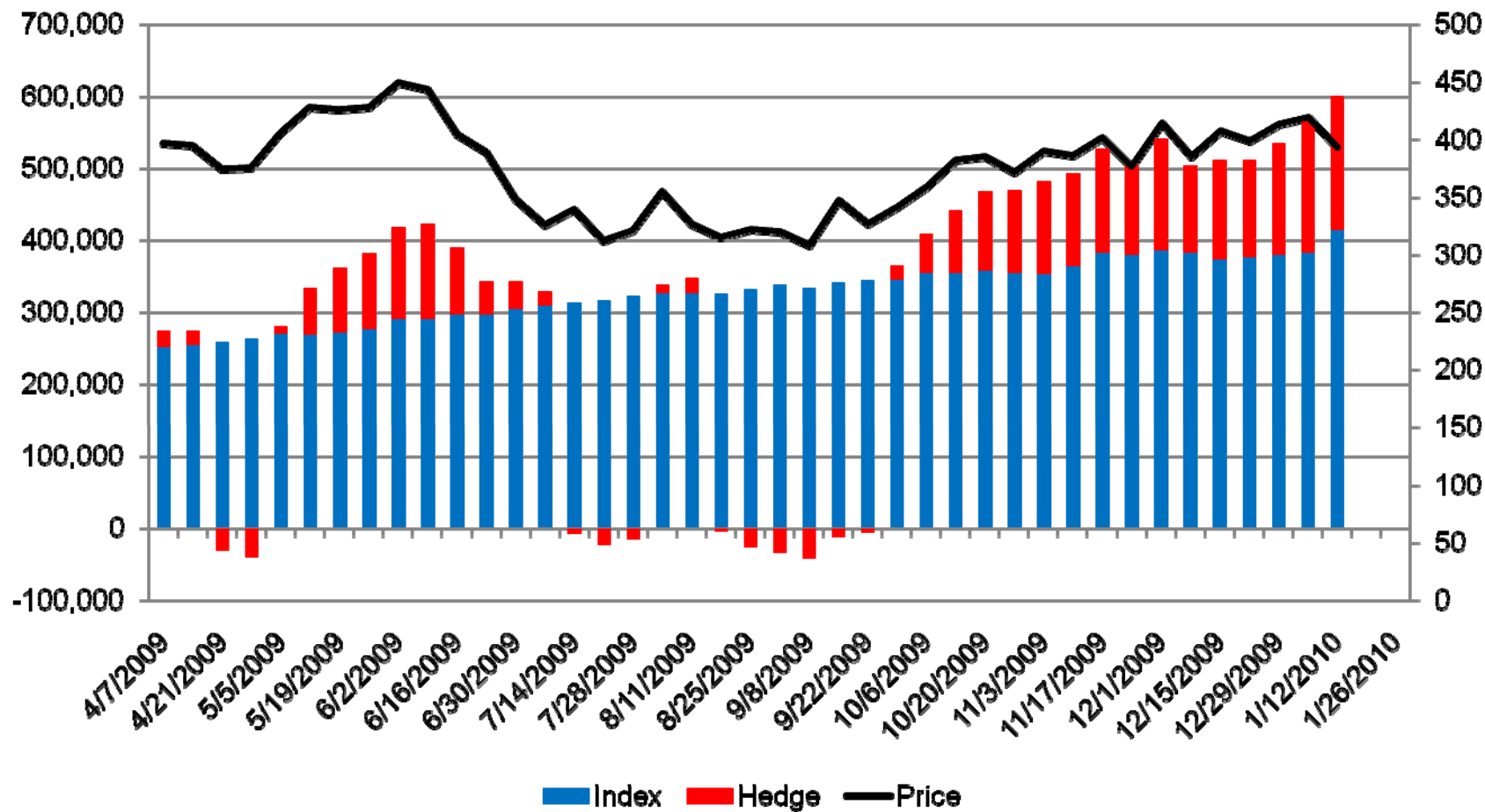


Source: CFTC, released 1/12/10

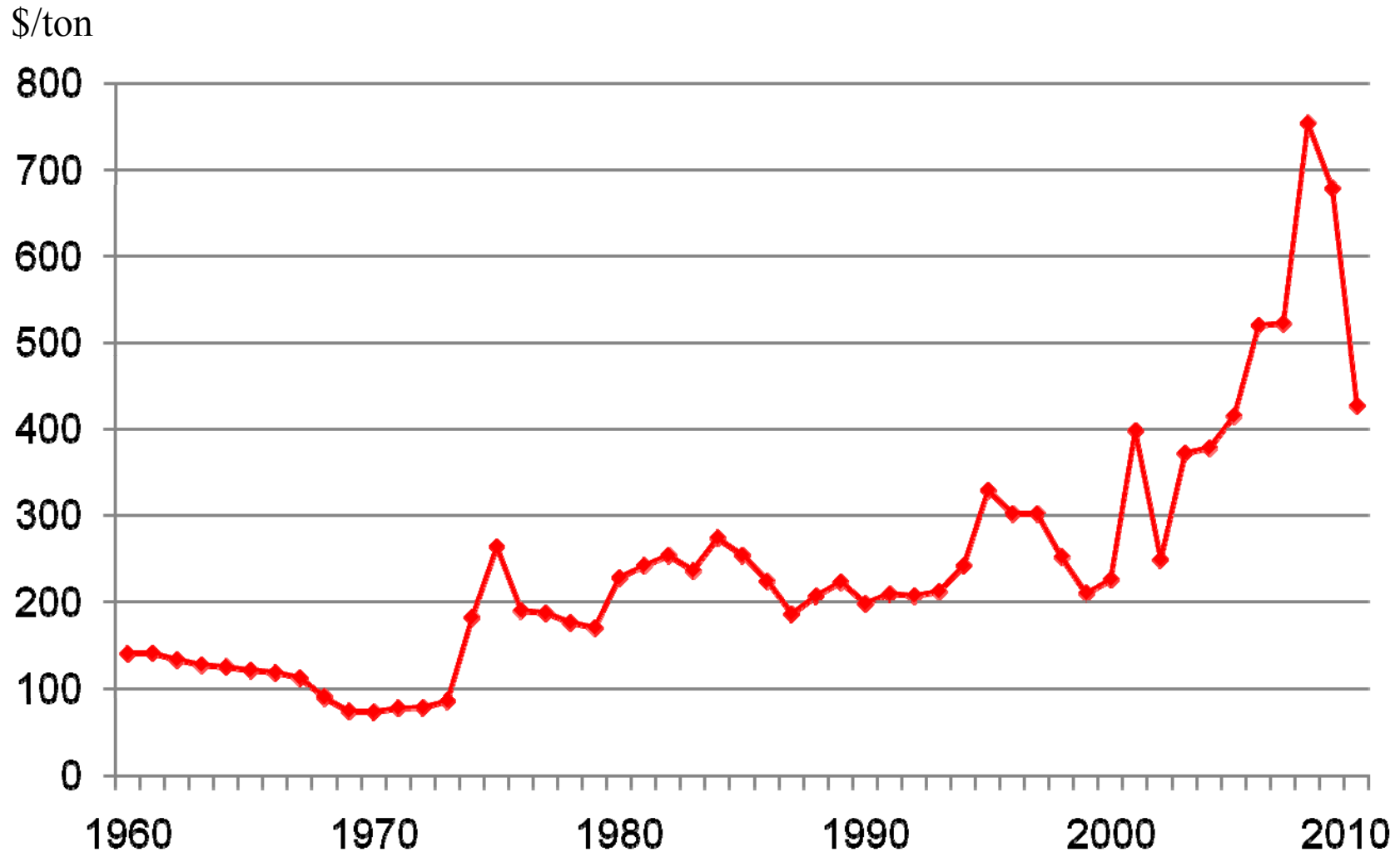
Corn Speculative Investment

Net Long Contracts

¢/bu

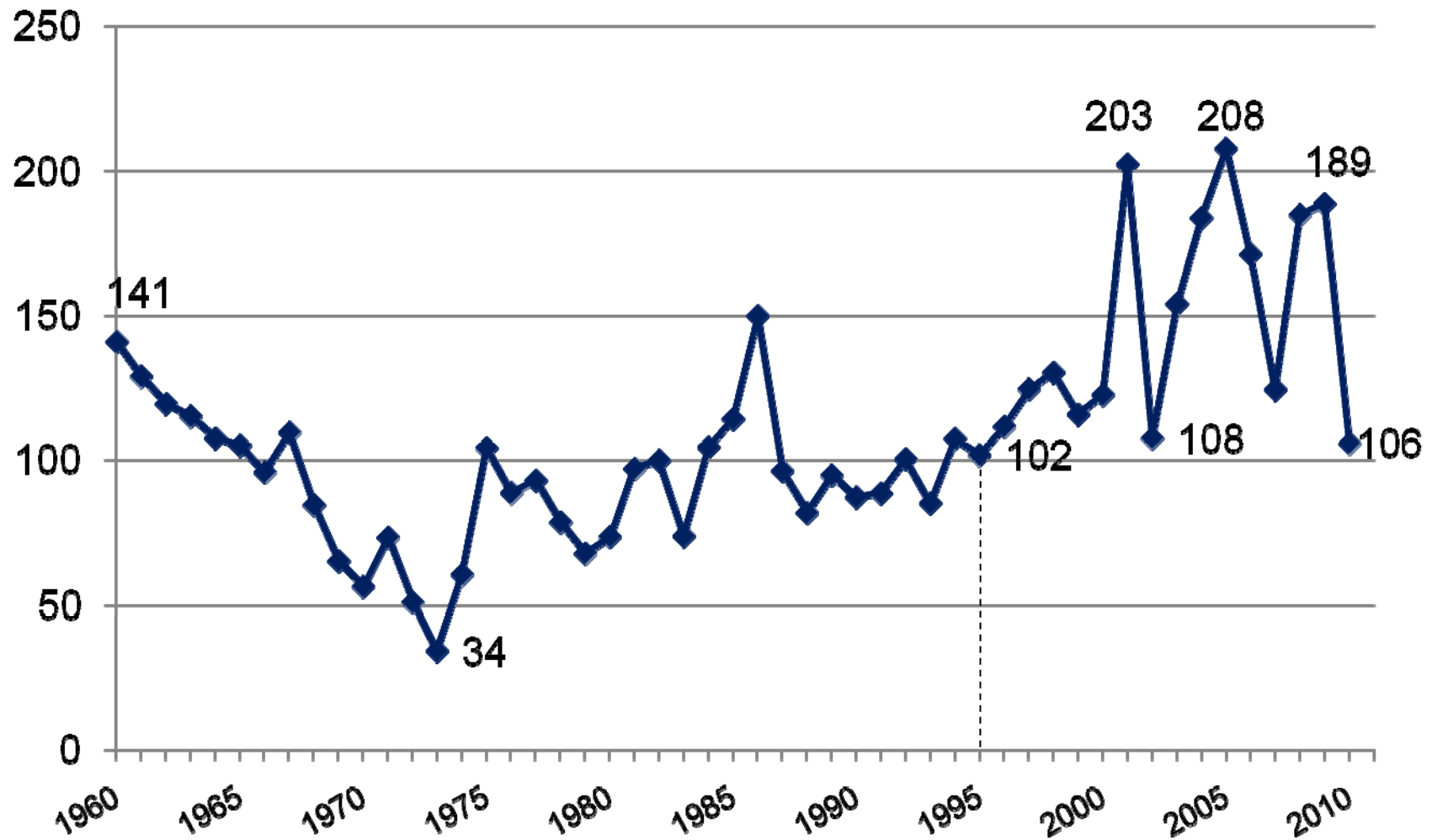


Anhydrous Ammonia Prices



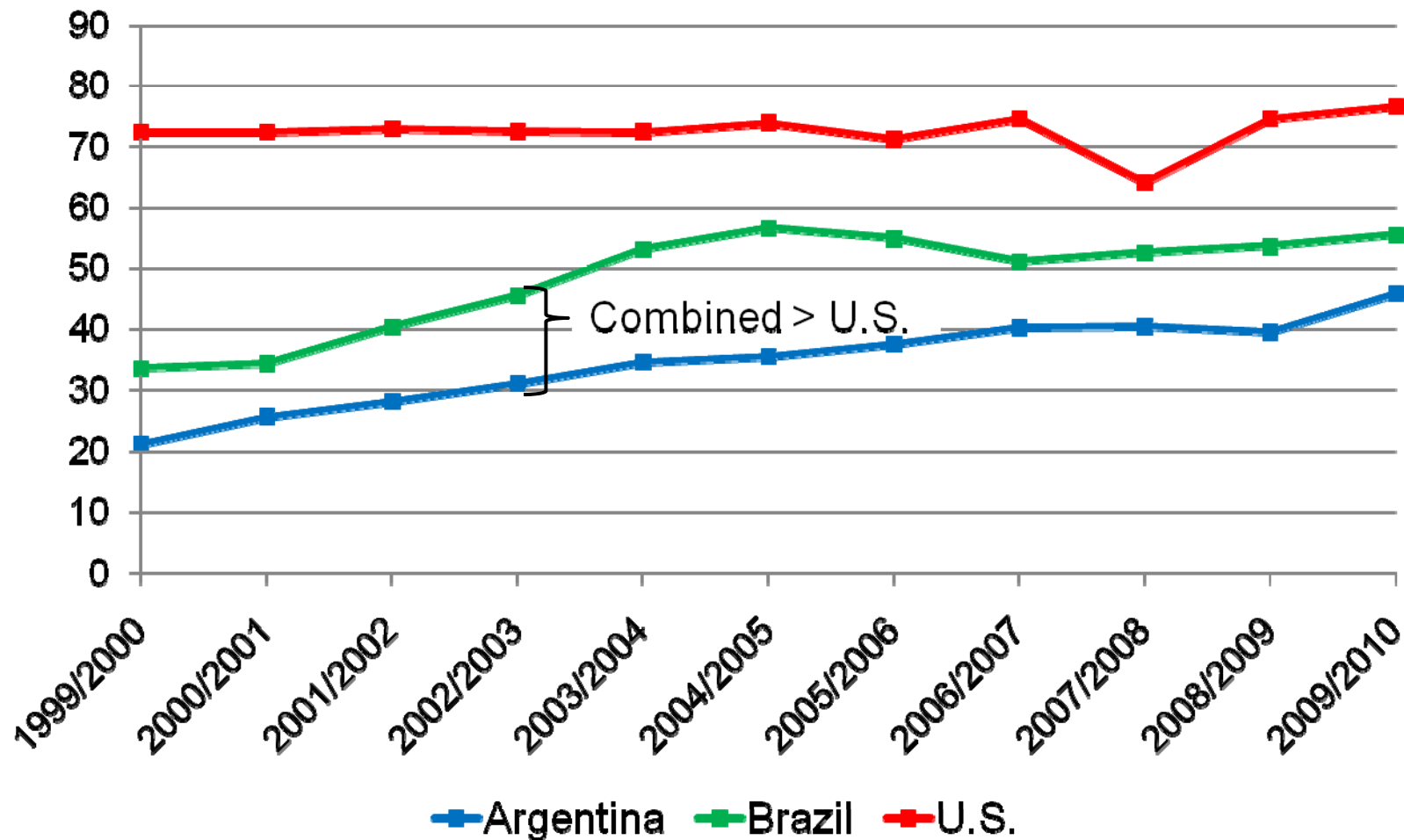
April Prices, USDA

Bushels of Corn to buy 1 ton of Anhydrous Ammonia



Soybean Harvested Acres

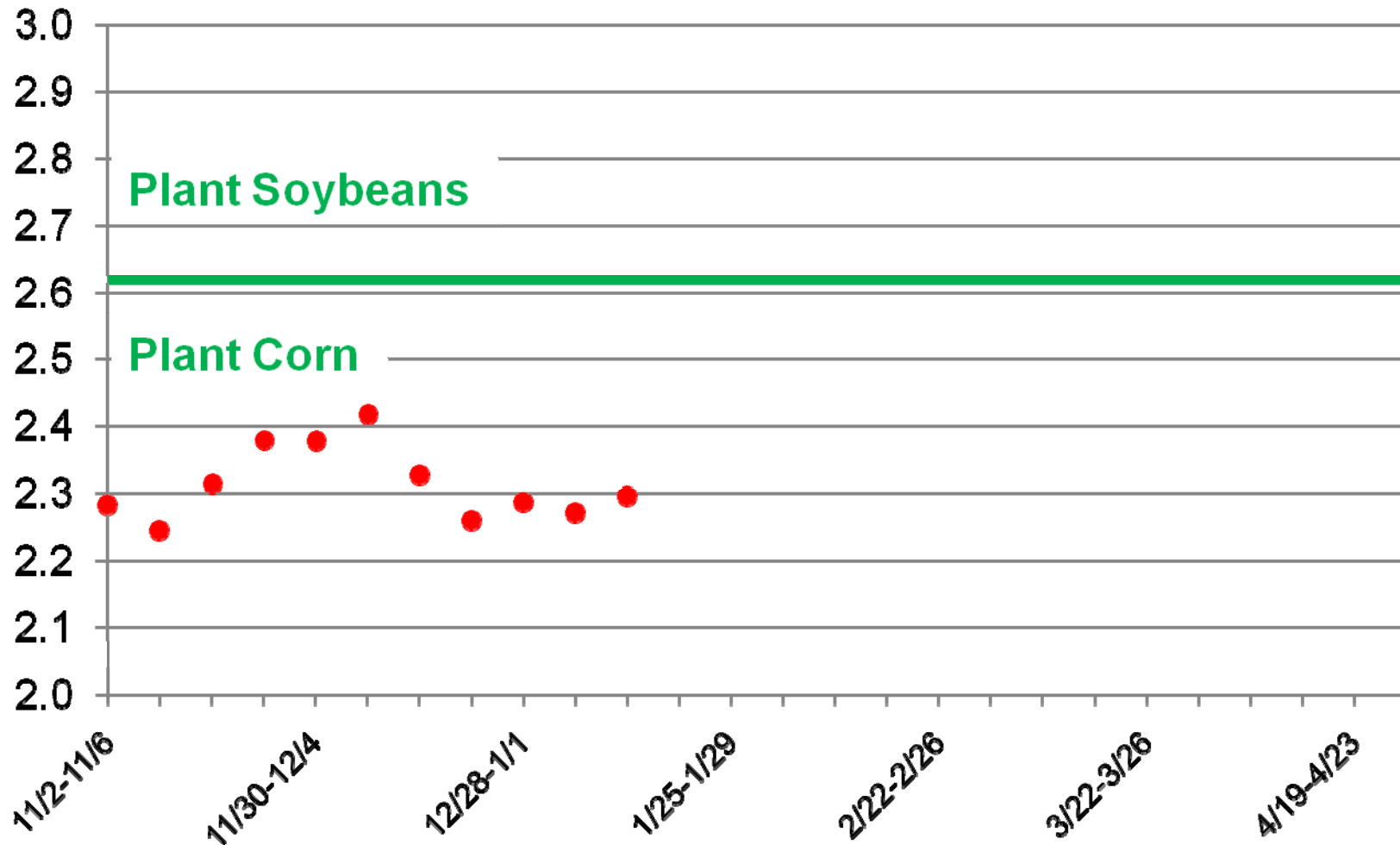
million acres



Yield per acre is very similar ≈ 42 bushels

2010 Soybean:Corn Price Ratio

(weekly average closing prices)



U.S. Corn

S&D

January 12, 2010

| | 08/09 | 09/10 | 10/11 |
|-------------------------------|-----------------------------|--------|--------|
| Planted Acreage (Mil. Acs.) | 86.0 | 86.5 | 90.0 |
| Harvested Acreage (Mil. Acs.) | 78.6 | 79.6 | 81.6 |
| Yield (Bushels) | 153.9 | 165.2 | 157.5 |
| Supply | - - - Million Bushels - - - | | |
| Beginning Stocks | 1,624 | 1,673 | 1,764 |
| Production | 12,092 | 13,151 | 12,855 |
| Imports | 14 | 10 | 10 |
| Total Supply | 13,729 | 14,834 | 14,619 |
| Disappearance | | | |
| Feed and Residual | 5,246 | 5,550 | 5,600 |
| Food, Seed & Industrial | 4,953 | 5,470 | 5,725 |
| Exports | 1,858 | 2,050 | 2,100 |
| Total Use | 12,056 | 13,070 | 13,425 |
| Ending Stocks | 1,673 | 1,764 | 1,194 |
| Carryover/Use (%) | 13.9 | 13.5 | 8.9 |
| Average Farm Price (\$/Bu.) | 4.06 | 3.70 | 4.44 |
| Closing Price, Dec Futures | 3.60 | 3.92 | 4.44 |

Marketing Philosophies



The man who insists on seeing with perfect clearness before he decides, never decides.

Henri-Frédéric Amiel

- Ready, Aim, Aim, Aim, Aim, Aim, Aim,
- Ready, Fire, Aim!

3.

The Ethanol Industry

The Future of the Ethanol Industry

Presented By:

Dr. Steve Amosson

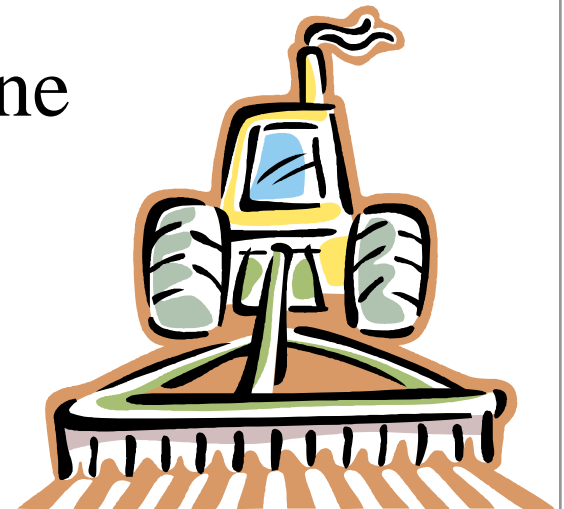
Regents Fellow

Professor and Extension Economist



Presentation Outline

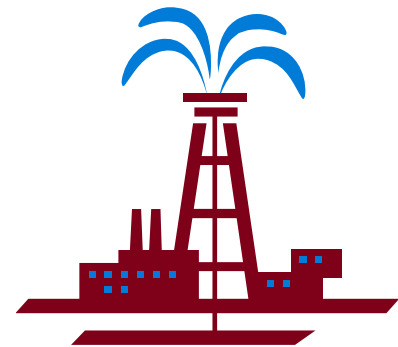
- ✦ How We Got Where We Are
- ✦ Current Status of Ethanol
- ✦ Cost and Returns of Ethanol
- ✦ Ethanol in the High Plains
- ✦ Cellulosic Ethanol Time Line
- ✦ Summary and Conclusions



Complex Economic Relationships

✦ Bioenergy Success or Failure Depends on:

- Oil prices
- Processing costs/technology
- Relative feedstock costs
- Demand for the biofuels
- Technology improvements
- Government Policy



Ethanol

✦ E85

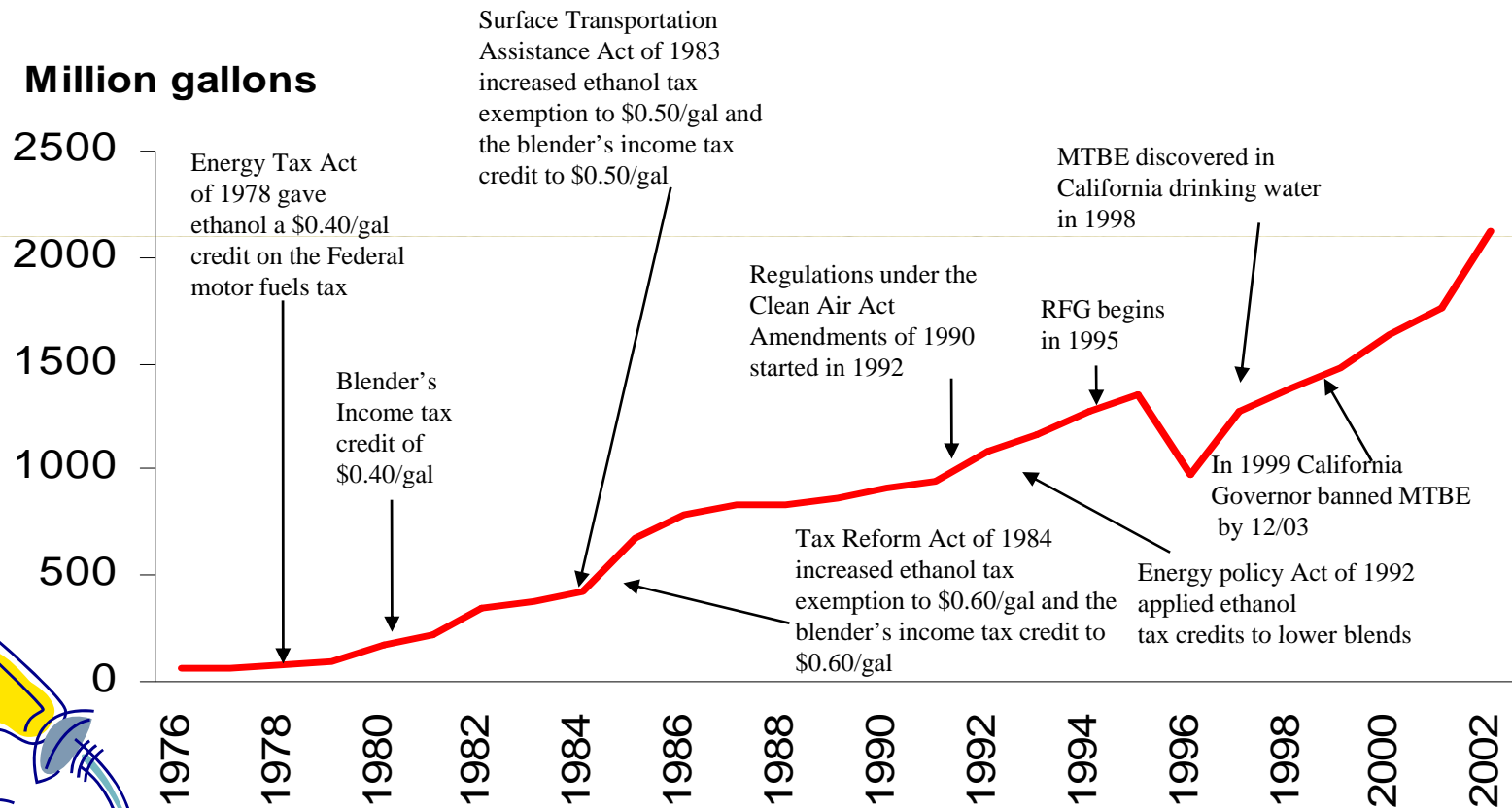
- Motor fuel blend of 85% ethanol and 15% gasoline

✦ E10

- Motor fuel blend of 10% ethanol and 90% gasoline
- ✦ Currently, primarily comes from corn, but any grain crop will work



Largely due to Government policies, ethanol production grew from about 62 million gallons in 1976 to over 2 billion gallons in 2002



Source: U.S. Energy Information Administration and USDA, ERS

Ethanol

Basic Facts

- ✦ Currently one bushel of corn produces 2.8 gallons of ethanol, overall 2.75
- ✦ By Products
 - 17.75 lbs. of distillers dried grain
 - CO₂

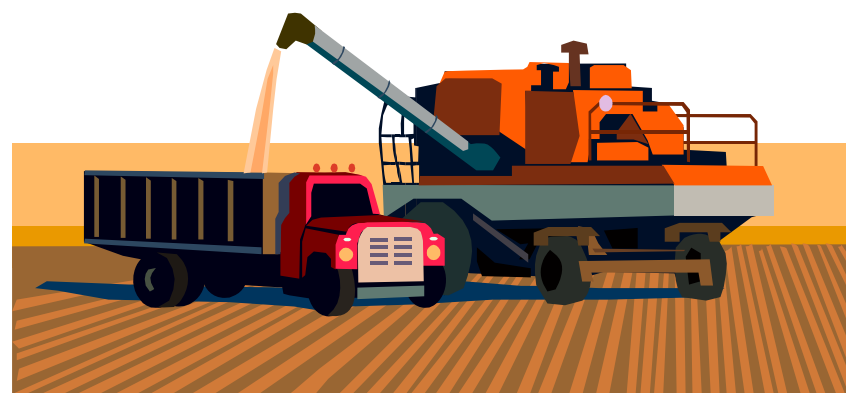
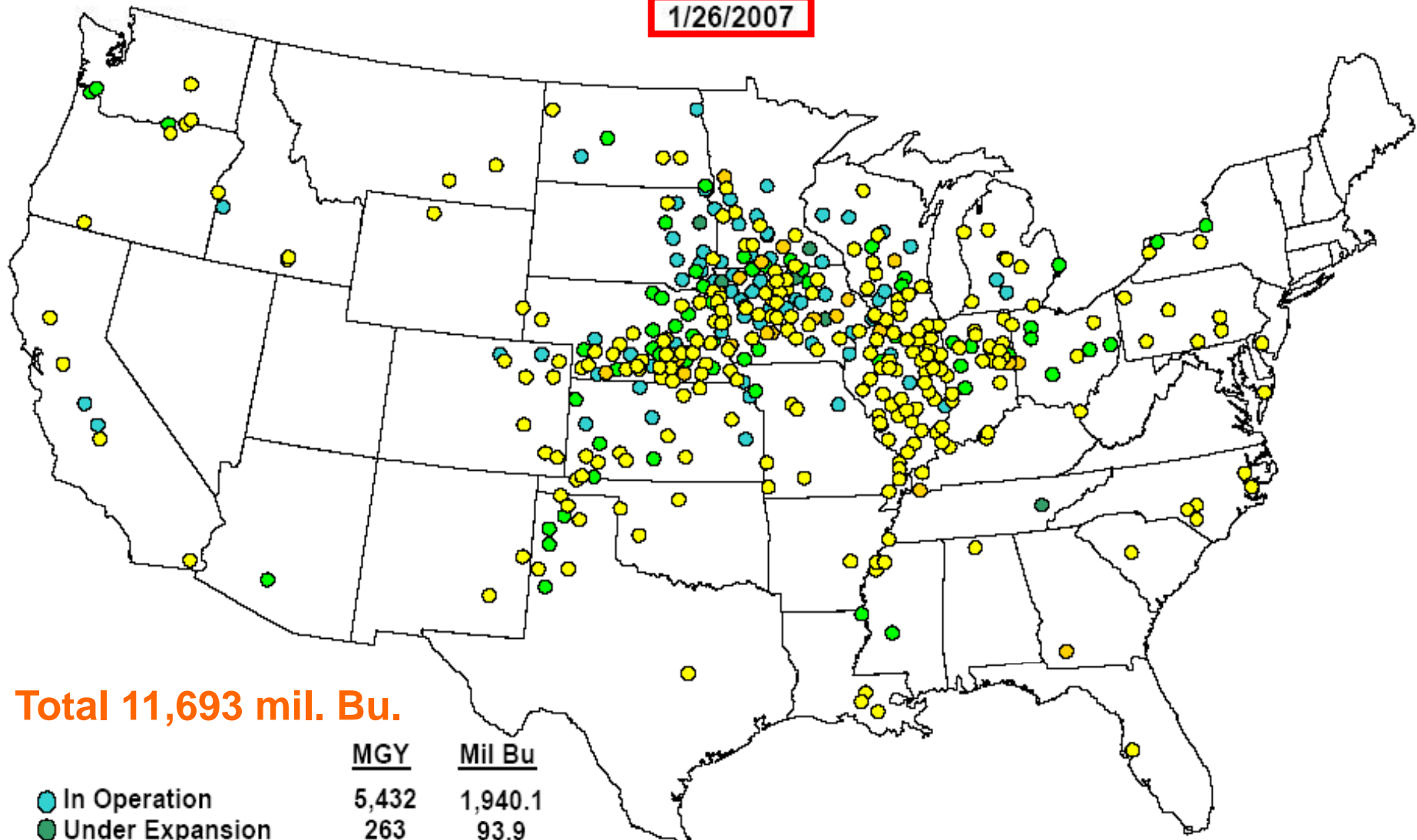


Figure 3. US Ethanol Plants



1/26/2007

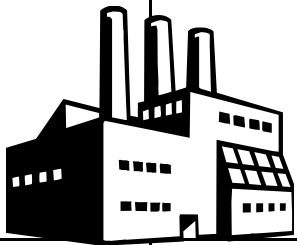



Total 11,693 mil. Bu.

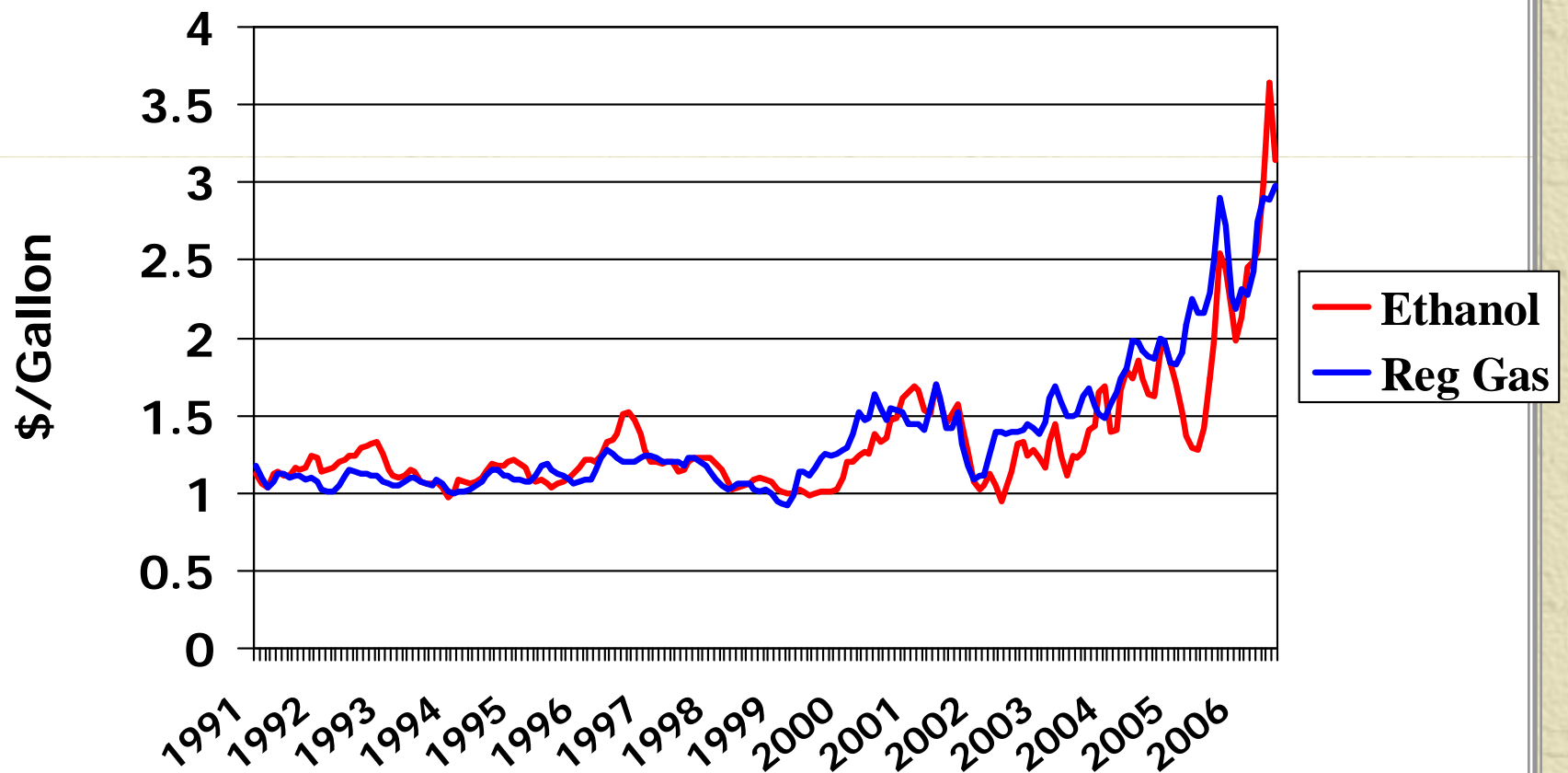
| | <u>MGY</u> | <u>Mil Bu</u> |
|----------------------|------------|---------------|
| ● In Operation | 5,432 | 1,940.1 |
| ● Under Expansion | 263 | 93.9 |
| ● Under Construction | 4,872 | 1,740.0 |
| ● Ground Broken | 2,463 | 879.6 |
| ● Planned | 19,710 | 7,039.3 |

Plants "Under Construction" have broken ground and have poured concrete. Plants that have "broken ground" have begun site work but no actual construction. Plants that are "planned" have been talked about or announced in the news.

Ethanol Production—January 2009 Est.

| Status  | Plants | Capacity (Billions of Gallons) |
|--|--------------------------------|---|
| Operating | 193 | 12.74 |
| Under Construction  | <div> 20 <hr/> 213 </div> | <div> 2.04 <hr/> 14.78 </div> |

U.S. Average Regular Gas and Ethanol Prices, Monthly, 1991 – 2006.



Source: Renewable Fuels Association



Ethanol Prices Relative to Unleaded Gas

| Time | Price Relationship |
|-------------|---------------------------|
| '82 – '05 | Premium Basis |
| 2006 | +\$.64 |
| Aug. '07 | +\$.10 |
| Oct. '07 | -\$.45 |
| Jan. '09 | +\$.54 |

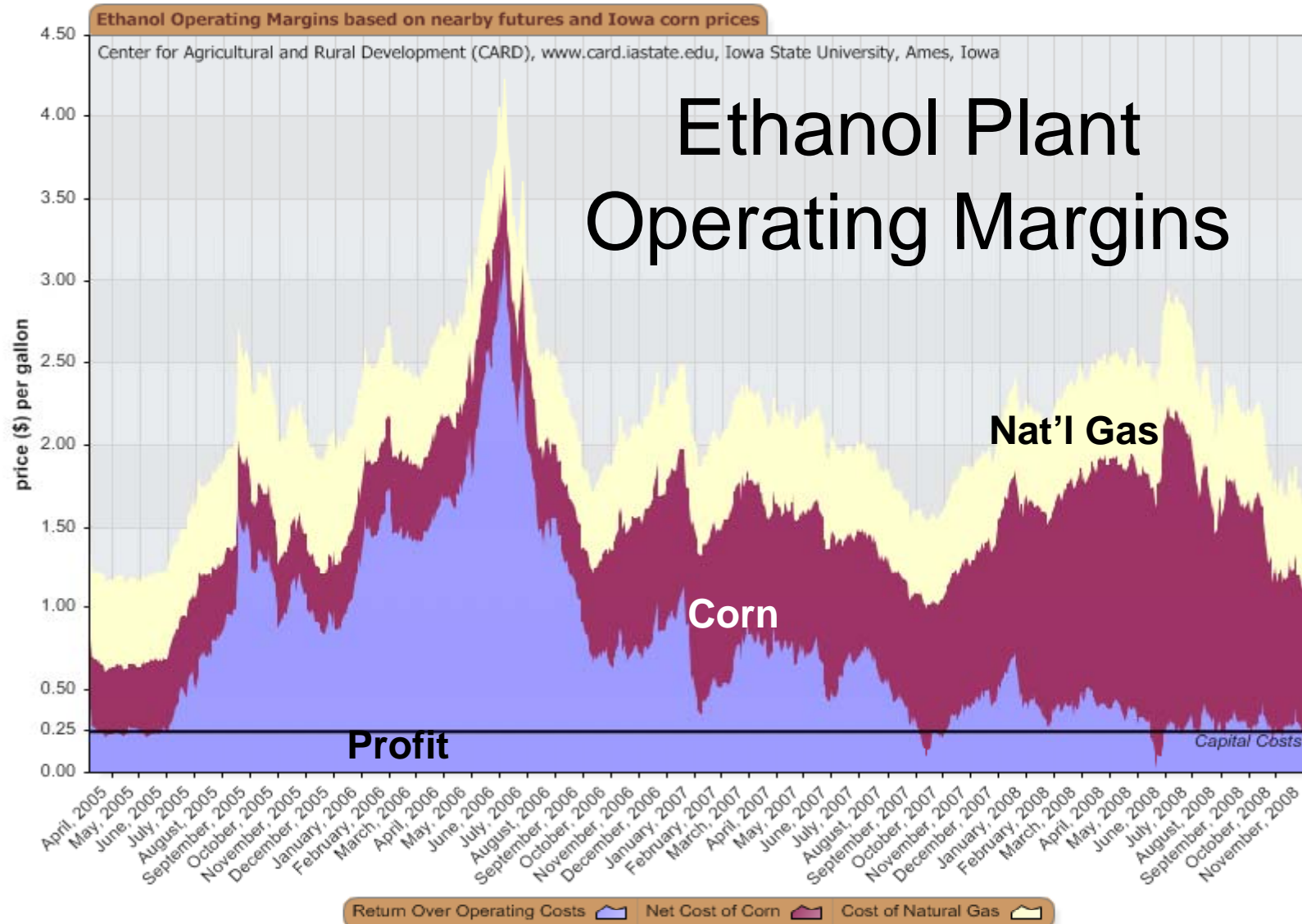
| Fuel | Btu per gallon (low heating value) | Btu per gallon (high heating value) | Gallons of gasoline equivalent (high heating value) |
|--------------------------------|---------------------------------------|--|---|
| Conventional Gasoline | 115,500 | 125,071 | 1.00 |
| Fuel ethanol (E100) | 76,000 | 84,262 | 0.67 |
| E85 (74% blend on average) | -- | 94,872 | 0.76 |
| Distillate fuel oil (diesel) | 128,500 | 138,690 | 1.11 |
| <i>Biodiesel (B100)</i> | 118,296 | 128,520 | 1.03 |



U.S. Ethanol Situation-Spring '09

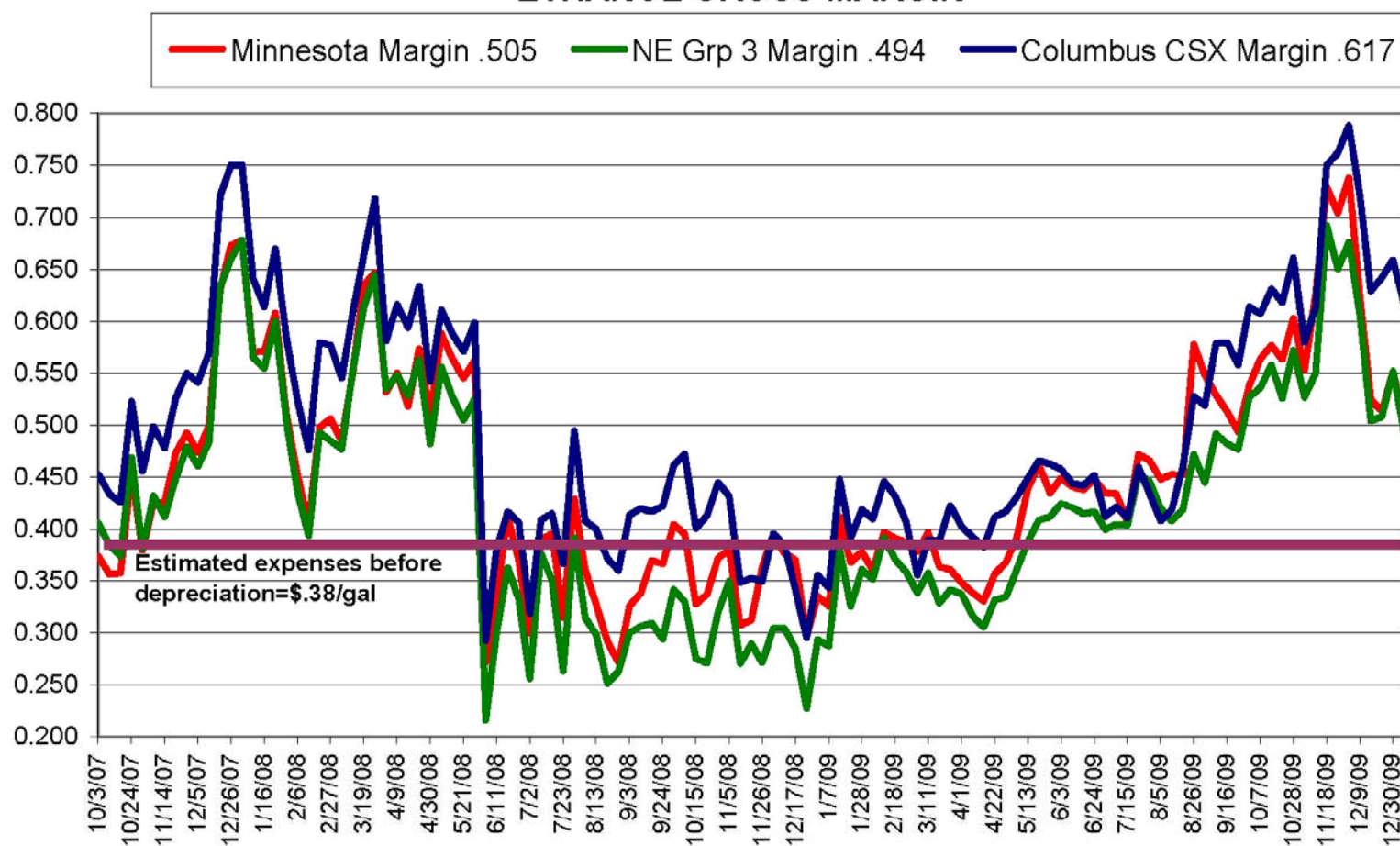
- ✦ **2nd. Largest firm in bankruptcy**
- ✦ **5-8 more in bankruptcy**
- ✦ **24-28 formerly operating plants idled**
- ✦ **Several completed or nearly complete plants delay opening**
- ✦ **Returns: near break-even**
- ✦ **Severe loss in asset values**
- ✦ **Govt. Mandates support corn processing demand near current level -- “blending wall” issue**
- ✦ **Idle operating capacity: 13.5-15.0 mil. tons corn**
- ✦ **Idle plants =14%-18% of capacity**

Ethanol Plant Operating Margins



I don't particularly see anyone outside the ethanol industry trying to get into the industry now. That would be like running into a burning barn.—Sander Cohen, industry analyst

ETHANOL GROSS MARGIN*

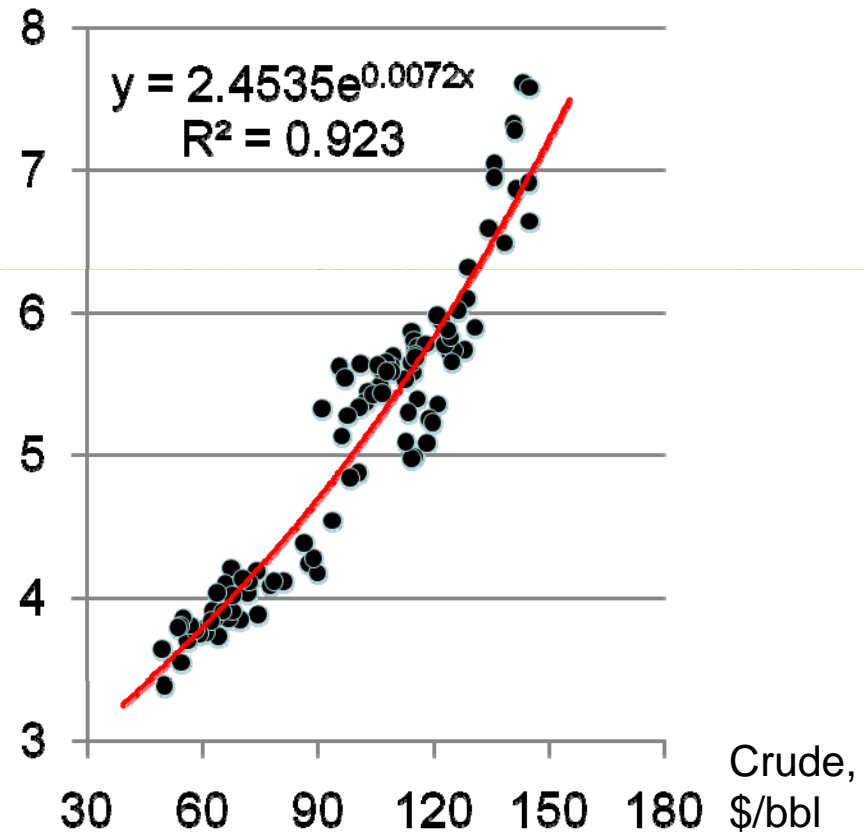


***Gross Margin:** Inputs: nearby corn futures/basis and nearby natural gas futures + 45 Outputs: DDGS (75% of cash corn) and ethanol nearby swaps with the western corn belt @ 12 under Chicago and eastern corn belt @ Chicago price.

Bellwether Market?

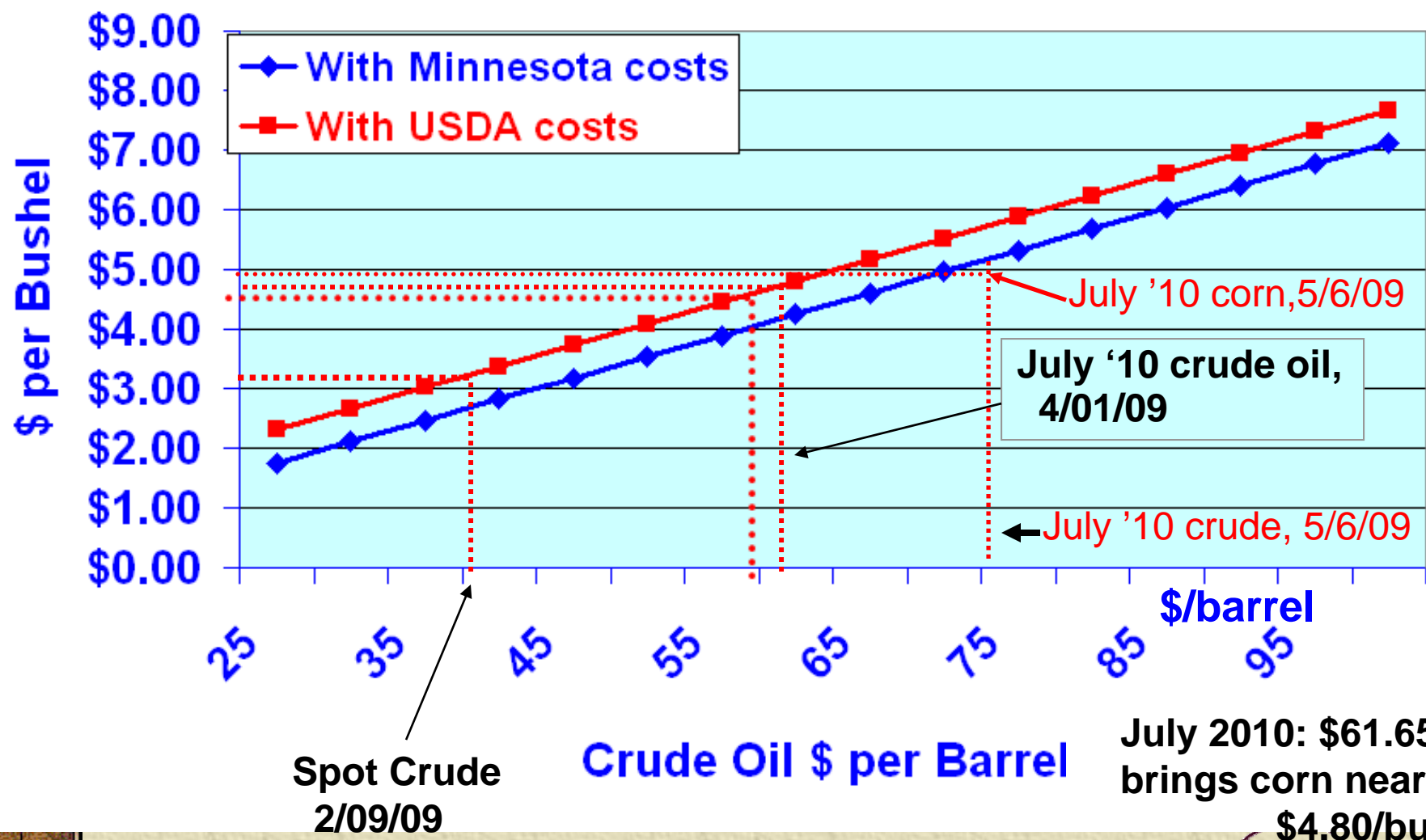


Corn,
\$/bu



Statistician: A man who believes figures don't lie, but admits that under analysis some of them won't stand up either. – Evan Esar

Approximate Maximum Price Ethanol Plants to Pay for Corn with Varying Crude Oil Prices



Proposed & Initiated Ethanol Plants and Their Grain Requirement

| Location | Company | Ethanol Capacity Million gal/yr | Corn Required Million bushels* | Corn Acres Required** |
|-----------|---------------------|---------------------------------------|--------------------------------------|--------------------------|
| Levelland | Levelland/Hockey | 40 | 14.8 | 76,365 |
| Muleshoe | Panda Energy | 100 | 37.0 | 190,913 |
| Plainview | White Energy | 100 | 37.0 | 190,913 |
| Hereford | Panda Energy | 100 | 37.0 | 190,913 |
| Hereford | White Energy | 100 | 37.0 | 190,913 |
| Dumas | Pan. Ener. of Dumas | 30 | 11.1 | 57,274 |
| Stratford | Panda Energy | 100 | 37.0 | 190,913 |
| Total | | 570 | 211.1 | 1,088,202 |

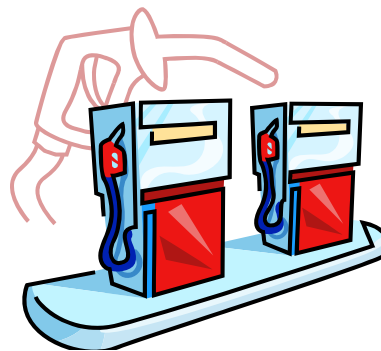
***2.7 gallons of ethanol produced from a bushel of corn**

****194 bu/acre base on TASS 2005**



Energy Bill

- ✦ Signed into law 12/19/07
- ✦ Requires 36 billion gallons of ethanol use by 2022
- ✦ Mandates that 21 of the 36 billion gallons come from feedstocks other than corn



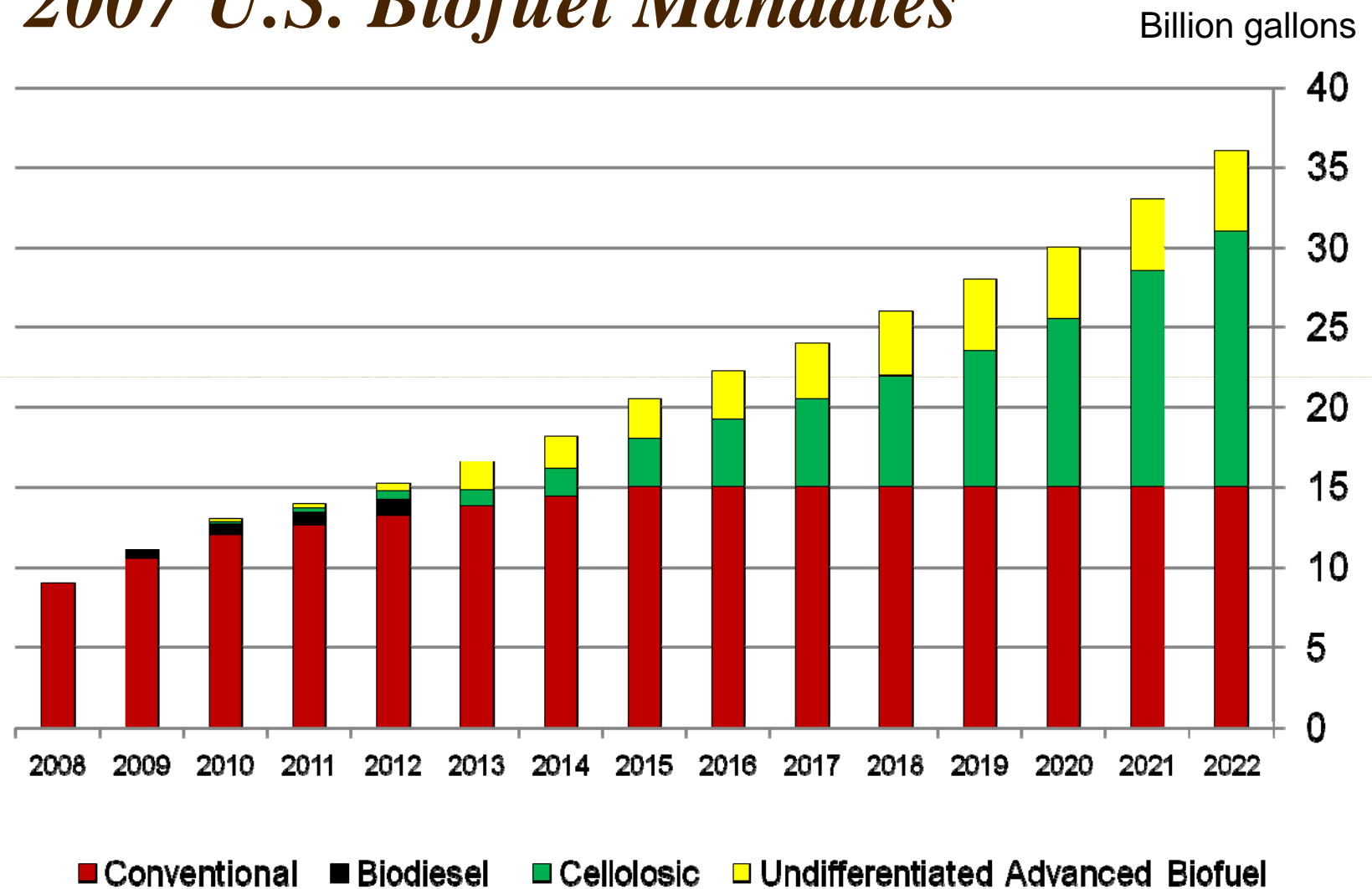
Renewable Fuels Standard Mandate

- ✦ Enacted under the Clean Air Act – Applies to blenders.
- ✦ EPA is the Enforcement Agency
- ✦ Standard calculated for the year in November based on previous 12 months gas use
 - Calculated on a national basis
 - 11.1 billion gallons of ethanol
 - 2009 – 10.21% must be R.F.
- ✦ The larger volume blenders would be impacted less

RFS Mandate Penalties

- ✦ Return ill begotten gains
- ✦ Plus \$25,000 fine per day or \$9,125,000/yr
- ✦ Technically-If out of compliance for a day could be considered out of compliance for the year-EPA's discretion

2007 U.S. Biofuel Mandates



Source: FAPRI and RFA



| Calendar Year | Applicable volume of renewable fuel (in billions of gallons): |
|----------------------|---|
| 2006 | 4.0 |
| 2007 | 4.7 |
| 2008 | 9.0 |
| 2009 | 11.1 |
| 2010 | 12.95 |
| 2011 | 13.95 |
| 2012 | 15.2 |
| 2013 | 16.55 |
| 2014 | 18.15 |
| 2015 | 20.5 |
| 2016 | 22.25 |
| 2017 | 24.0 |
| 2018 | 26.0 |
| 2019 | 28.0 |
| 2020 | 30.0 |
| 2021 | 33.0 |
| 2022 | 36.0 |

Source: High Plains Journal, 01/07/08

Renewable Fuel Standards Ethanol-Corn Use

| Year | Renewable Fuel Billing of Gallons | Corn Req. Billing of Bushels | Net Even Req. Billing of bushels |
|------|--------------------------------------|---------------------------------|-------------------------------------|
| 2008 | 9.0 | 3.21 | 2.20 |
| 2009 | 11.1 | 3.96 | 2.71 |
| 2010 | 12.95 | 4.63 | 3.16 |
| 2011 | 13.95 | 4.98 | 3.40 |
| 2012 | 15.2 | 5.43 | 3.71 |

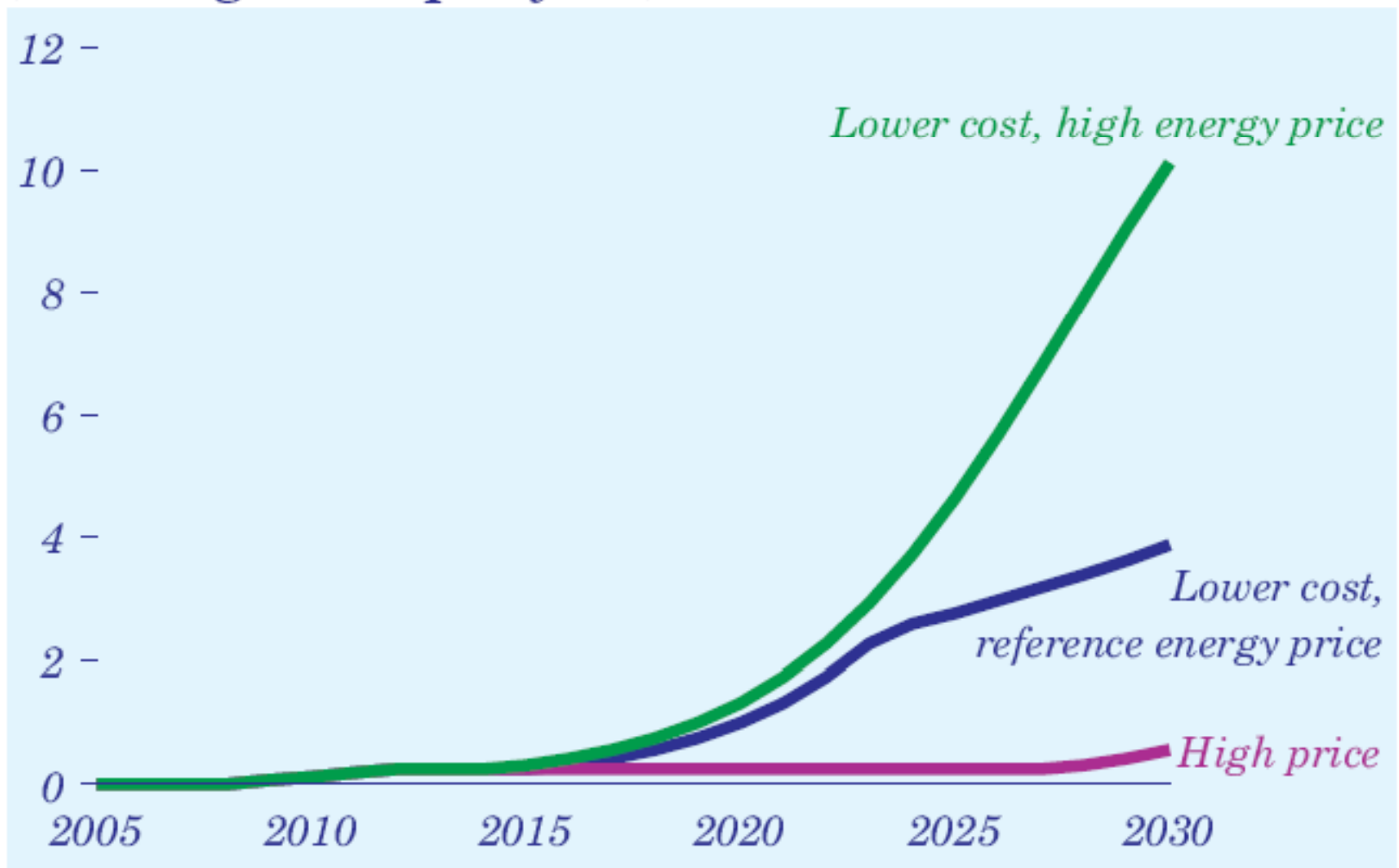
Assumes 2.8 gal/bushel and 17.75 lbs of DG's produced.

Distiller's Grain

| | 2009 | 2010 |
|--------------------------|------------------|------------------|
| Corn for Ethanol (bu) | 3,964,000 | 4,625,000 |
| Distillers Grain (bu) | 1,257,000 | 1,466,000 |
| Net Corn Use (bu) | 2,707,000 | 3,159,000 |

Problem

**Figure 85. Cellulose ethanol production, 2005-2030
(billion gallons per year)**



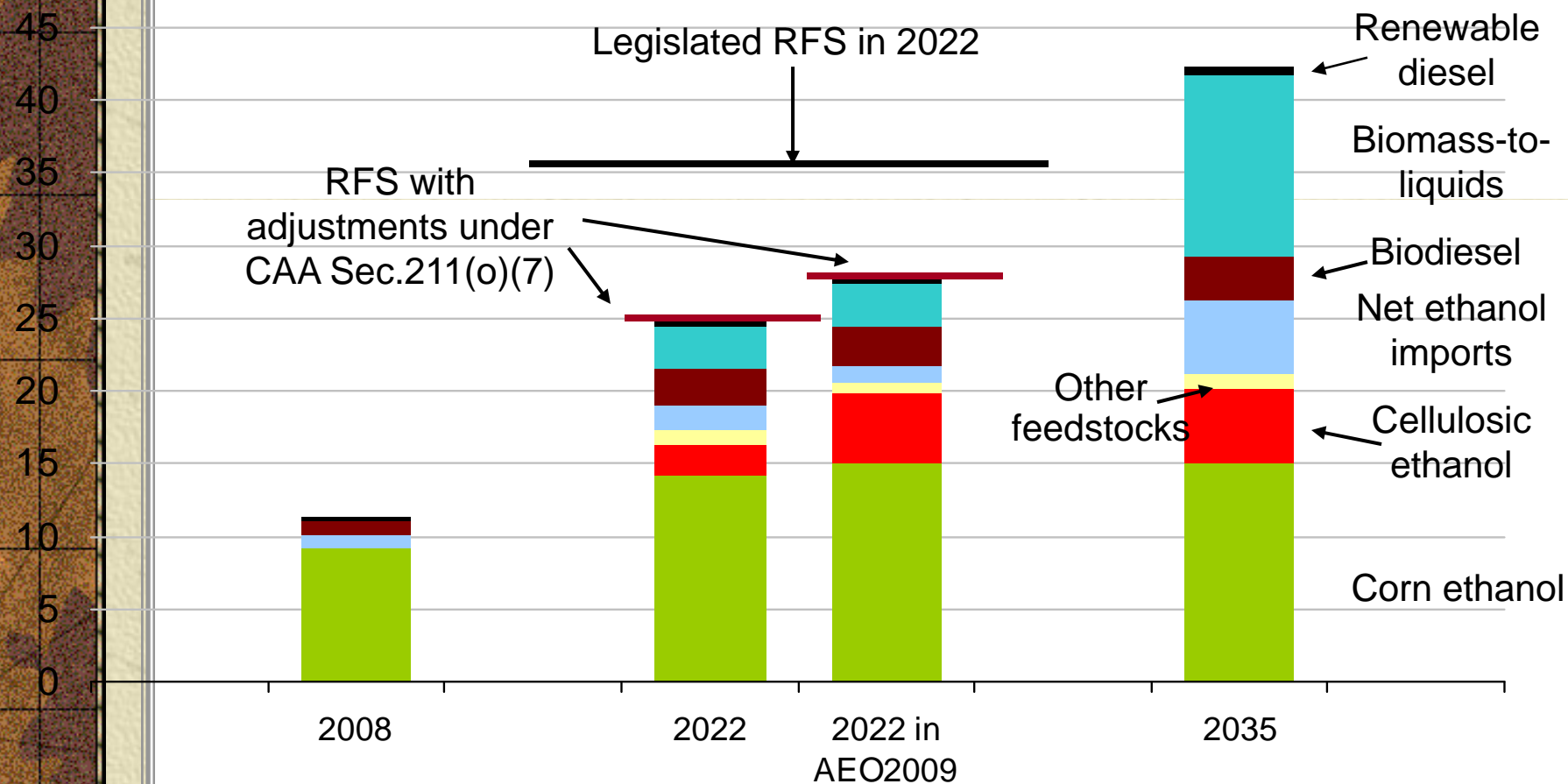
Bigger Problem





“I have established a goal to have 60 billion gallons of our fuel come from sustainable, affordable biofuels in 2022...”

Biofuels grow, but fall short of the 36 billion gallon RFS target in 2022, exceed it in 2035

billion gallon-equivalents





✦ The announcement was made on Dec. 1, which was the deadline for EPA to respond to a request from ethanol producers who want the blend limit raised from the current 10% to 15%.

Blending Wall for Ethanol

- ✦ Federal standards set the maximum of ethanol blending at 10% of the total gas supply - - Additional to E85
- ✦ Concerns over vehicle ability to use it, mileage, and transportation infrastructure
- ✦ Current annual fuel consumption in the U.S. about 130 – 140 billion gallons
- ✦ Currently, blending wall is estimated at 12 – 13 billion gallons of ethanol

Blending Wall - Observations

- ✦ Brazil has been using higher blend rates (E20 – E30) without any problems
- ✦ Long term - - need to modify production processes or product (butanol)
- ✦ Short term solution - - Raise blending limit to E12 or E15 or E20
- ✦ Long term problem - - increased pressure on ethanol prices due to added production (cellulosic)

Steve's Crystal Ball



What's coming in the future?

- Wind/Solar Storage
- Improved Electric Cars
- Algae Oil
- H-H-O
- The Amosson Mobile



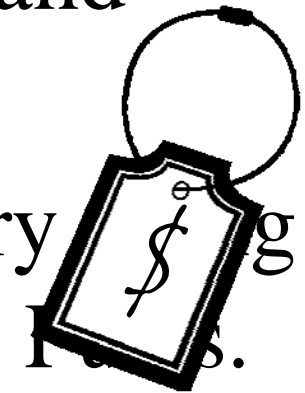
Summary and Conclusions

Short Run

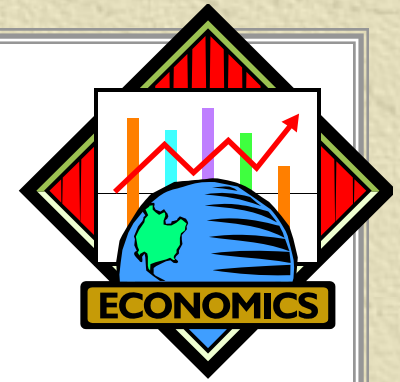
✦ Expanded ethanol production is probably a given; however, the pace is expected to slow due to capacity and policy.

✦ The President Elect and Secretary are big supporters of Renewable Fuels.

✦ Current Ethanol Margins have turned positive



Summary and Conclusions



- ✦ Ethanol Production is and will suffer from growing pains
 - Demand & Supply
- ✦ DDG prices will be falling (relatively) making them attractive for livestock rations
- ✦ The limit on corn based ethanol and the growth in yields will eventually cap corn prices in the LR.
- ✦ Blending wall and cellulosic production will become a problem in the future for corn based ethanol



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4.

**Corn & Sorghum Basis
Information**

Basis

Marketing Plan Seminar

Mark Welch—Grain Marketing Economist

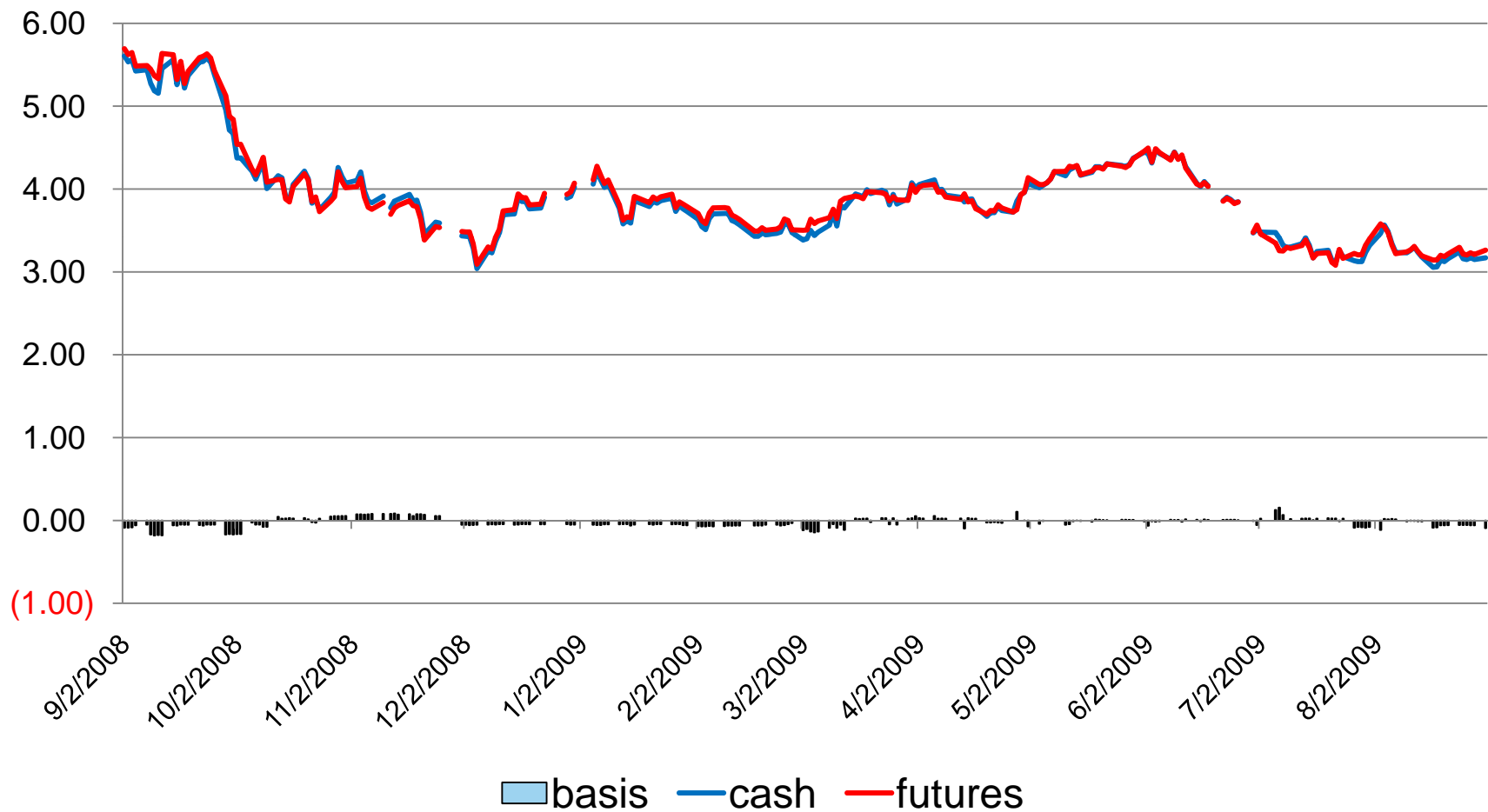
January 20, 2010

Basis

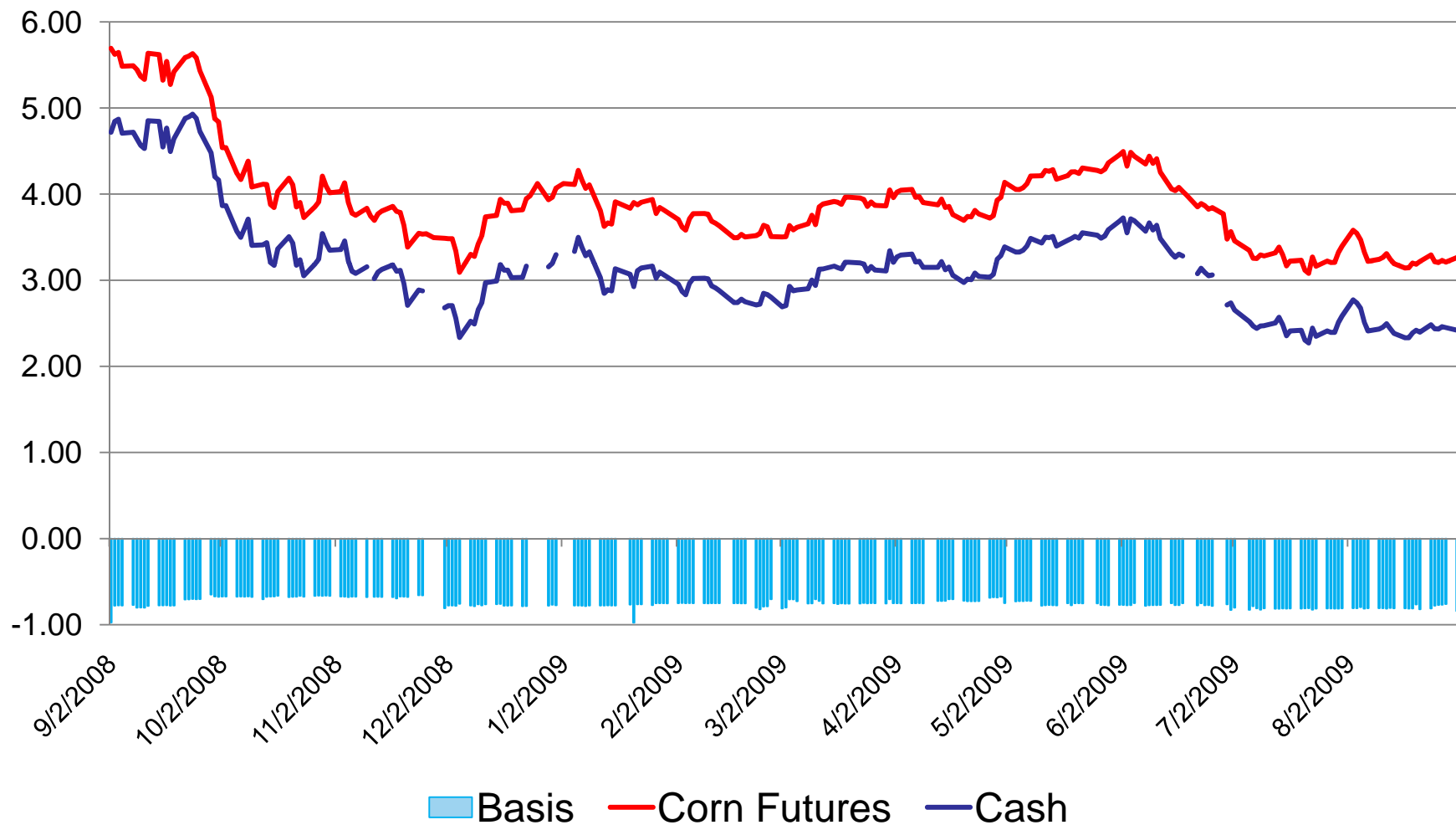
- The amount that the local cash price of a commodity is above or below the futures price for a particular month
- Impacted by transportation costs, storage and handling, interest charges, supply and demand fundamentals

(basis = cash - futures)

Corn Prices in the Triangle Area: Futures, Cash, Basis



Sorghum Prices North of the Canadian: Corn Futures, Cash, Basis



Basis

- Basis exists mainly because of carrying charge, arbitrage between futures and cash markets, and transportation costs.
 - The carrying charge exists because stored commodities are harvested and stored one time each year. There are financing, storage and management cost associated with carrying charge.
 - Because of carrying charge, it is likely that the deferred futures price will be higher than cash price or basis with a negative sign will exist during harvest.

Basis

- Transportation costs also affect the local basis. The grain handler receives a bid from buyer, determines the transportation cost to deliver the grain and subtract that cost from the price bid to determine the local price paid to the farmer.

Basis

- Basis may also serve as a barometer of market strength or weakness
- Improving basis is a sign of underlying strength in market demand
- Declining basis is a sign of weak demand

Basis

- There are times when the formula generates a basis with a positive sign
- This denotes that the cash price is higher than futures price or cash price is selling at a premium to the futures
- This occurs because supply/demand relationships in the local cash market is different from futures market. The local supply of grain in the market may be limited relative to demand or demand may be relatively higher than supply in the local market

Basis

- The observed basis is termed as strong when the present basis is more positive or less negative than the historic average basis.
 - For example: assume that the average basis for a hypothetical market is -\$0.35 per bushel. The present basis is -\$0.10.
 - Therefore, present basis is strong relative to the historic average.

Basis

- Similarly, the observed basis is termed as weak when the present basis is less positive or more negative than the historic average.
 - For example: assume that the average basis for a hypothetical market is -\$0.35 per bushel. The present basis is -\$0.45.
 - Therefore, present basis is weak relative to the historic average.

Basis

Cash Price – Futures Price = Basis

- Is the relationship between a local cash market and the futures market.
- Can be negative or positive.
- Is more stable than cash or futures prices.

Basis Components

- Storage (insurance and interest)
- Transportation
- Local supply and demand

The Role of Basis in Hedging

Basis describes the price relationship between cash market prices and futures market prices at a particular time and location. Basis is the number of cents (dollars) per unit that the local cash price of a commodity is above or below the current price for a particular futures contract delivery month, on a given day. Thus, basis is the *cash market price minus the futures market price* at a specific time.

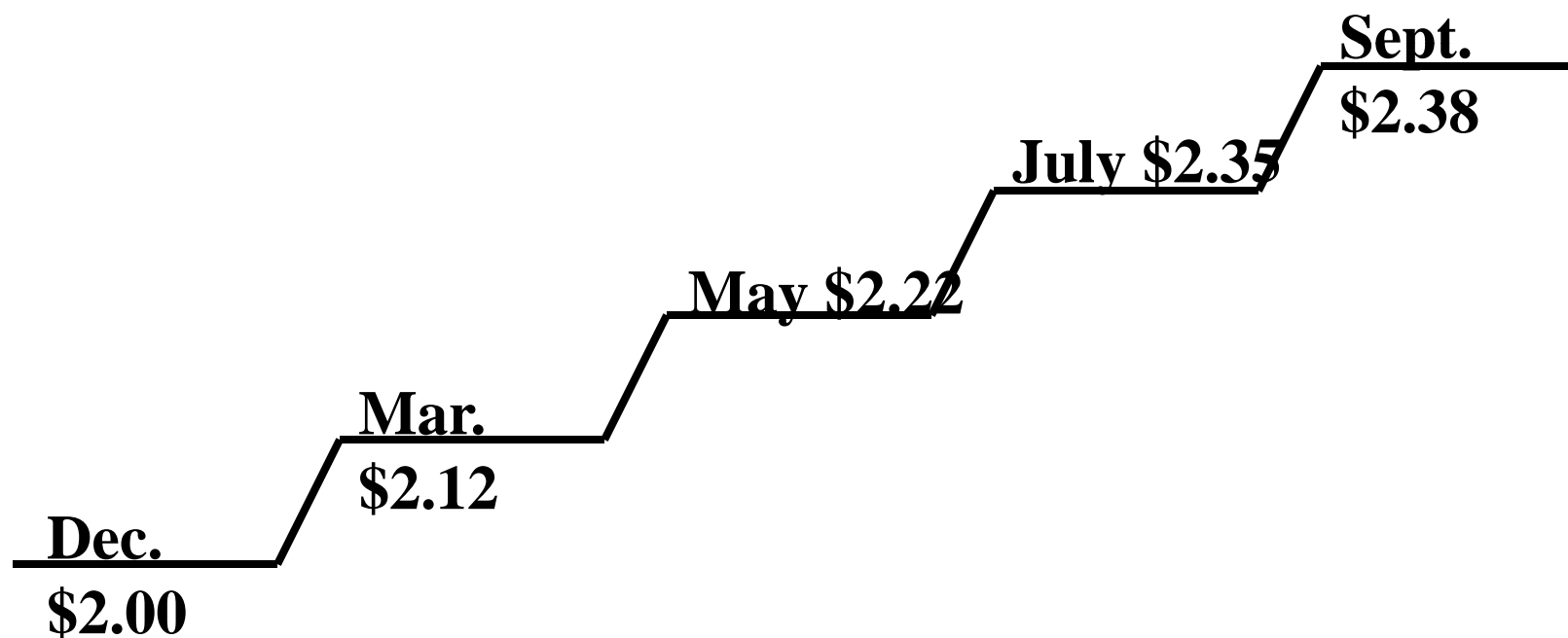
Basis is important, yet often the least understood, concept in hedging agricultural commodities. An understanding and an accurate estimate of basis is needed by farmers and rancher who want to include hedging as part of their pricing strategy.

Basis is important because approximately 97 percent of all agricultural commodities traded in the futures market are offset before delivery. Therefore, because the actual physical commodity is mostly sold on the cash market, the hedged futures price will not be the realized price for the commodity. An estimate of that price can be calculated using the basis.

A knowledge of the local basis is necessary to translate a given futures price into probable effective price for local delivery. The futures price plus the expected basis (with appropriate arithmetic sign) is an estimate of the price the futures market is offering for the commodity delivered to the local market during a particular month. Remember, the basis is cash minus futures. Therefore, when the basis is negative, the futures price is reduced by the amount of the basis. When the basis is positive, the futures price is increased by the basis value.

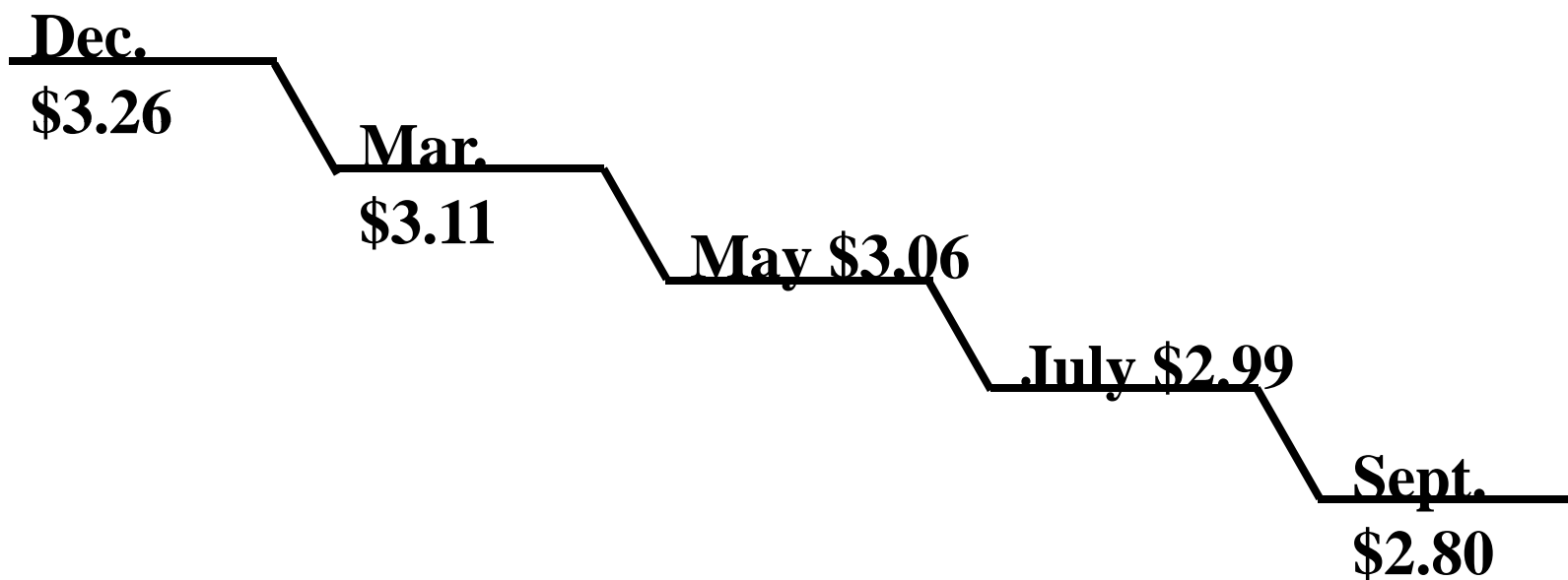
Market Carry

Normal Market



Market Carry

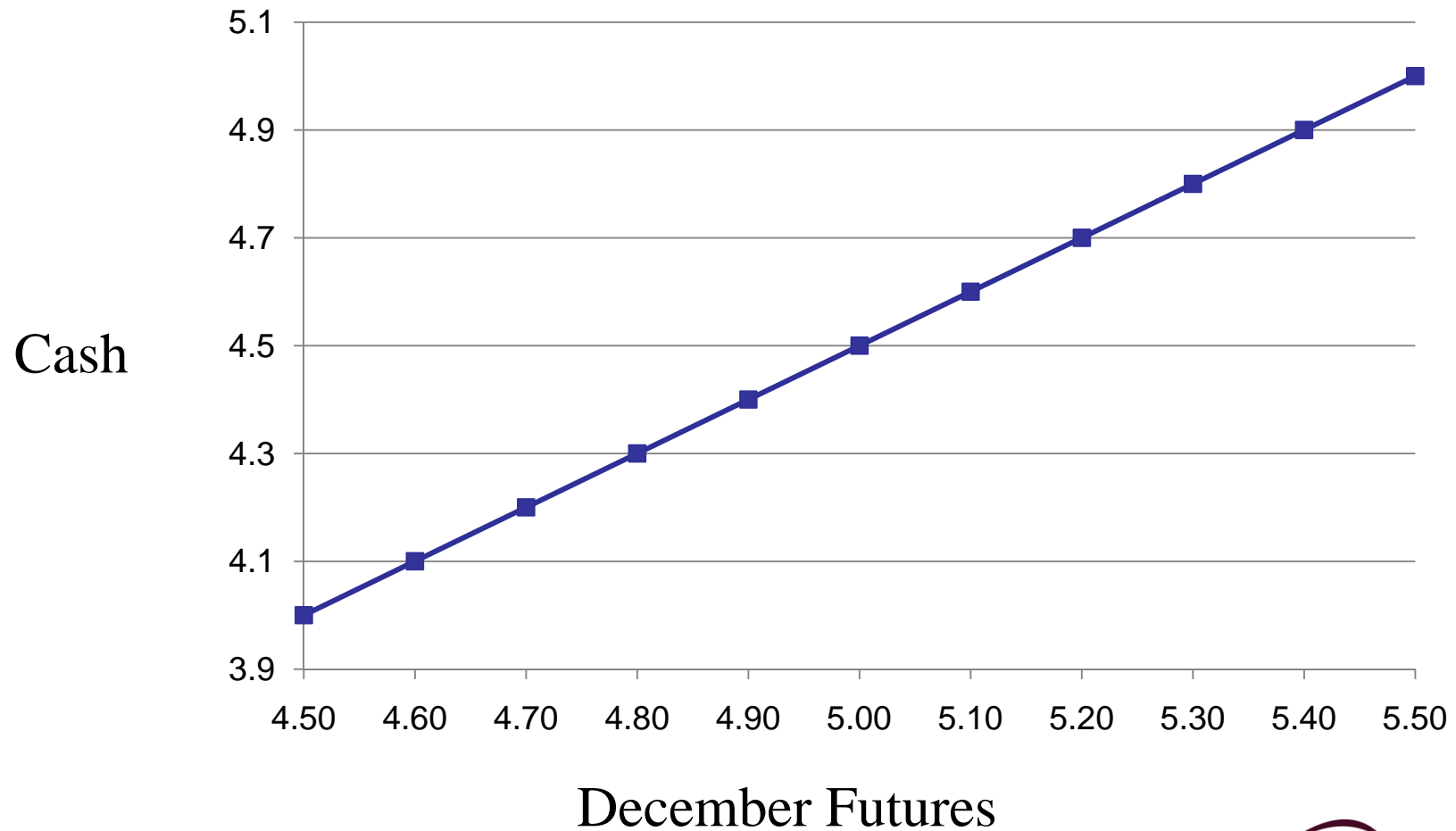
Inverted Market



Basis and Expected Price

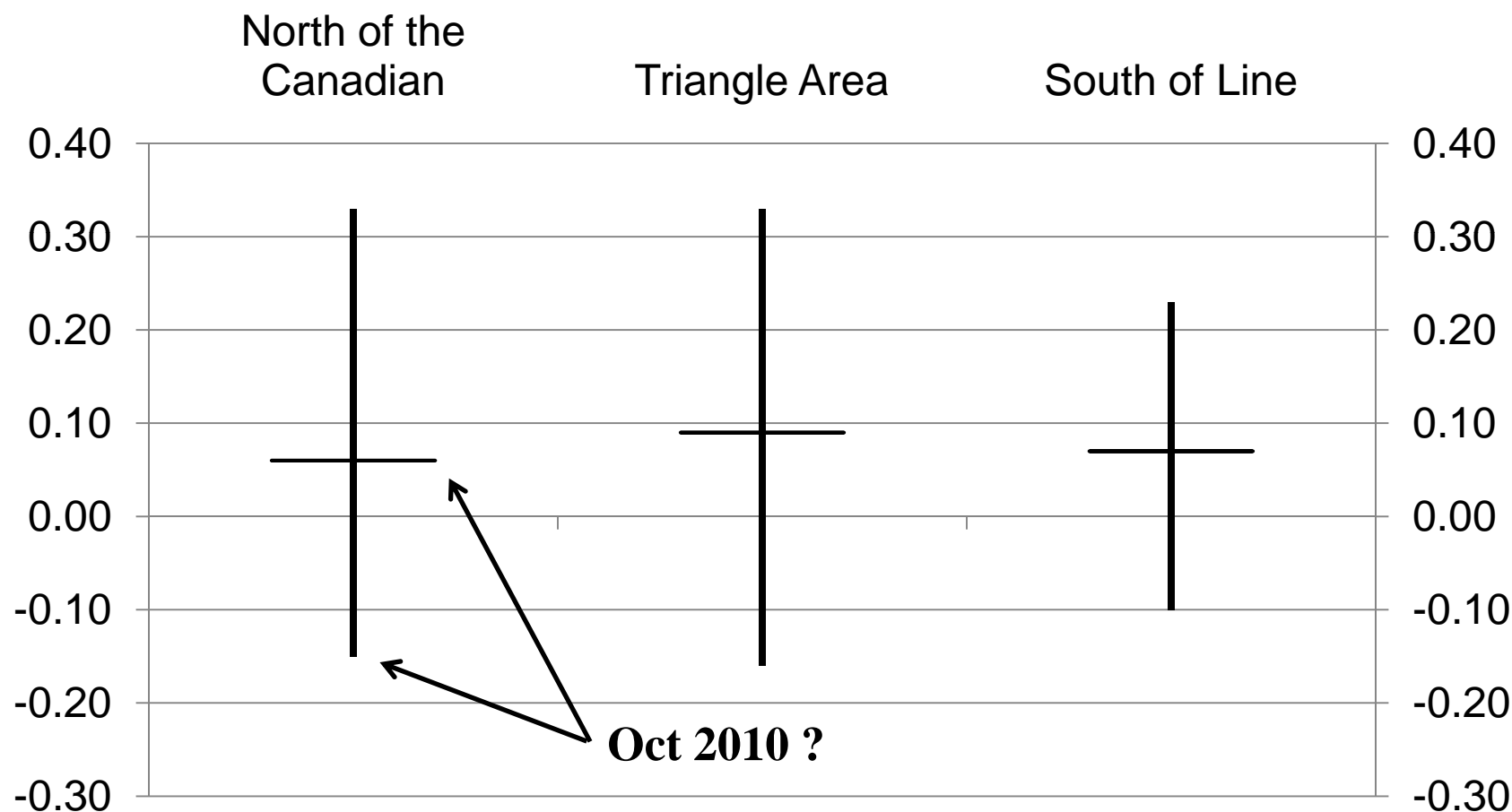
- Knowledge of local basis is necessary to translate a given futures price into a probable price for local delivery
- The futures price adjusted for basis is the price the market is offering for your grain delivered at a local elevator during a particular month
(expected price = futures + basis)

Expected Price, -\$0.50 basis



Texas Corn Basis in Oct vs. Dec Contract

High, Low, Average (2005-09)



Source: <http://mastermarketer.tamu.edu/>

Basis Tracking Form

Basis Table

Commodity _____

Location _____

| Nearby Futures Contract | | | | |
|-------------------------|------------|------------------------|------------------------|-------|
| Date | Cash Price | Futures Contract Month | Futures Contract Price | Basis |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| Harvest Delivery | | | |
|-----------------------------|--------------------------------|---------------|----------------------|
| Forward Cash Contract Offer | Harvest Contract Futures Price | Implied Basis | Basis Contract Offer |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

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Department of Agricultural Economics



January 12, 2007

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2007 Lubbock Master Marketer Schedule

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Master Marketer-Lubbock Session II January 17-18

Master Marketer-Lubbock Session III January 31-February 1

Master Marketer-Lubbock Session IV February 14-15

[ATS 2006-2007 Brochure!](#)

Basis Project

Welcome to the Basis Project! To view our basis data, click on the first link below.


- [View Corn and Wheat Basis Information](#)
- Grant Funding Provided by:
 - [Texas Wheat Producers Board](#)
 - [Texas Corn Producers Board](#)



- [About the Cash and Futures Prices](#)
- What is Basis?
 - [Link to Grain Basis publication](#)
 - [Link to Livestock Basis publication](#)
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- [Corn Storage Decision Model-Downloadable Excel File](#)

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Select a Commodity: Corn

Select a Market:

- ☒ District 1 - **Corn North of the Canadian** (Counties: Dallam, Hansford, Hartley, Hemphill, Hutchinson, Lipscomb, Moore, Ochiltree, Roberts, Sherman) [View Map](#)
- ☐ District 1 - **Corn at Amarillo Terminals** (Counties: Potter, Randall) [View Map](#)
- ☐ District 1 - **Corn in the Eastern Panhandle** (Counties: Armstrong, Carson, Gray, Hansford, Hemphill, Hutchins, Lipscomb, Ochiltree, Roberts, Wheeler) [View Map](#)
- ☐ District 1 - **Corn in the Northwest Quadrant** (Counties: Dallam, Hartley, Moore, Sherman) [View Map](#)
- ☐ District 1 - **Corn in the Southwest Quadrant** (Counties: Deaf Smith, Oldham, Parmer, Potter, Randall, Swisher) [View Map](#)
- ☐ District 2 - **Corn South of the Line** (Counties: Bailey, Floyd, Hale, Hockley, Lamb, Lubbock) [View Map](#)
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- ☐ District 4 - **Fort Worth Corn** [View Map](#)
- ☐ District 4 - **North Texas Corn** [View Map](#)
- ☐ District 6 - **West Texas Corn** [View Map](#)
- ☐ District 8 - **Corn in Central Texas**
- ☐ District 8 - **Corn in Central Texas - North** (Counties: Ellis, Hill and Navarro) [View Map](#)
- ☐ District 8 - **Corn in Central Texas - South** (Counties: Bell, McLennan and Williamson) [View Map](#)
- ☐ District 10 - **Corn in Southwest Texas-West** (Counties: Medina, Uvalde) [View Map](#)

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Select a Commodity: Corn

Select a Market: Corn North of the Canadian

Select Output Type: (Select the **button** to choose graphs; click on the **text** for an example.)

Graphs:

☐ [Graph 1. Weekly Cash Price](#)

☐ [Graph 2. Weekly Basis](#)

☒ [Graph 3. Nearby Basis](#)

Tables:

☐ [Table 1. Average Monthly Basis for Selected Year](#)

☐ [Table 2. Average Monthly Cash and Futures Prices for Selected Year](#)

☐ [Table 3. Statistical Summary of Basis Values for Selected Years](#)

☐ [Table 4. Average Monthly Nearby Basis for the Nearby Futures Contract Over Time](#)

☐ [Table 5. Weekly Cash Price, Futures Contract Prices and Basis](#)

☐ [Table 6. Weekly Forward Contract Price, Futures Contract Price and Implied Basis](#)

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Select a Commodity: Corn

Select a Market: Corn North of the Canadian

Select Output Type: Graph 3. Nearby Basis

Select Year: (You can select multiple years for this output type. Use the shift key to select a contiguous range.)

2007 ▲
2006
2005
2004
2003 ▼

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Table 4. Average Monthly Nearby Basis for the Nearby Futures Contract Over Time

Cash Market = Corn North of the Canadian

Futures Market = Corn at Chicago

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|-----|----------------------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|
| | (Dollars Per Bushel) | | | | | | | | | | | | |
| Jan | 0.09 | 0.15 | -0.04 | -0.05 | -0.07 | -0.16 | -0.02 | 0.10 | 0.18 | 0.14 | 0.11 | 0.12 | 0.24 |
| Feb | 0.08 | 0.20 | -0.07 | -0.03 | -0.05 | -0.13 | 0.02 | 0.11 | 0.19 | 0.17 | 0.14 | 0.12 | |
| Mar | 0.02 | 0.24 | -0.15 | -0.07 | -0.12 | -0.18 | 0.01 | 0.06 | 0.18 | 0.11 | 0.07 | 0.06 | |
| Apr | 0.02 | 0.19 | -0.13 | -0.00 | -0.14 | -0.14 | 0.04 | 0.09 | 0.19 | 0.11 | 0.09 | 0.13 | |
| May | 0.03 | 0.24 | -0.02 | 0.00 | -0.19 | -0.18 | 0.01 | 0.06 | 0.22 | 0.11 | 0.05 | 0.13 | |
| Jun | 0.13 | -0.15 | 0.10 | 0.07 | -0.17 | -0.07 | 0.08 | 0.11 | 0.23 | 0.15 | 0.08 | 0.13 | |
| Jul | 0.07 | 0.45 | 0.20 | 0.05 | -0.09 | -0.01 | 0.05 | 0.11 | 0.28 | 0.17 | 0.02 | 0.16 | |
| Aug | 0.07 | 0.99 | 0.15 | 0.00 | -0.09 | -0.01 | 0.09 | 0.13 | 0.29 | 0.24 | 0.07 | 0.19 | |
| Sep | 0.06 | 0.35 | 0.02 | -0.14 | -0.18 | -0.08 | 0.10 | 0.15 | 0.18 | 0.15 | 0.15 | 0.25 | |
| Oct | 0.07 | -0.00 | -0.04 | -0.08 | -0.15 | -0.00 | 0.14 | 0.15 | 0.18 | 0.15 | 0.17 | 0.29 | |
| Nov | 0.11 | -0.03 | -0.03 | 0.00 | -0.11 | 0.05 | 0.16 | 0.18 | 0.18 | 0.16 | 0.18 | 0.28 | |
| Dec | 0.10 | -0.05 | -0.08 | -0.08 | -0.18 | -0.04 | 0.07 | 0.16 | 0.16 | 0.04 | 0.09 | 0.23 | |

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Note: Rollover to the next futures contract occurs at the beginning of the delivery month, i.e. for corn the May futures contract becomes the nearby on March 1

Table 5. Weekly Cash Price, Futures Contract Prices and Basis for 2006

Cash Market = Corn North of the Canadian, Futures Market = Corn at Chicago

| Week | Date | Cash (\$/Bu) | Futures Contract (Dollars Per Bushel) | | | | | | Basis (Dollars Per Bushel) | | | | | |
|------|--------|-----------------|--|------|------|------|------|------|-------------------------------|-------|-------|-------|-------|-------|
| | | | Mar | May | Jul | Sep | Dec | Mar | Mar | May | Jul | Sep | Dec | Mar |
| 1 | Jan 05 | 2.24 | 2.16 | 2.25 | 2.33 | 2.39 | 2.49 | 2.56 | 0.08 | -0.01 | -0.09 | -0.15 | -0.25 | -0.32 |
| 2 | Jan 12 | 2.26 | 2.13 | 2.22 | 2.31 | 2.38 | 2.48 | 2.55 | 0.13 | 0.04 | -0.05 | -0.12 | -0.22 | -0.29 |
| 3 | Jan 19 | 2.18 | 2.05 | 2.15 | 2.24 | 2.32 | 2.42 | 2.50 | 0.13 | 0.03 | -0.06 | -0.14 | -0.24 | -0.32 |
| 4 | Jan 26 | 2.30 | 2.17 | 2.27 | 2.36 | 2.43 | 2.53 | 2.59 | 0.13 | 0.03 | -0.06 | -0.13 | -0.23 | -0.29 |
| 5 | Feb 02 | 2.33 | 2.21 | 2.30 | 2.39 | 2.47 | 2.57 | 2.63 | 0.12 | 0.03 | -0.06 | -0.14 | -0.24 | -0.30 |
| 6 | Feb 09 | 2.38 | 2.26 | 2.36 | 2.45 | 2.51 | 2.61 | 2.66 | 0.12 | 0.02 | -0.07 | -0.13 | -0.23 | -0.28 |
| 7 | Feb 16 | 2.36 | 2.24 | 2.34 | 2.44 | 2.50 | 2.60 | 2.66 | 0.12 | 0.02 | -0.08 | -0.14 | -0.24 | -0.30 |
| 8 | Feb 23 | 2.37 | 2.23 | 2.34 | 2.43 | 2.50 | 2.60 | 2.66 | 0.14 | 0.03 | -0.06 | -0.13 | -0.23 | -0.29 |
| 9 | Mar 02 | 2.43 | 2.29 | 2.39 | 2.49 | 2.56 | 2.65 | 2.71 | 0.14 | 0.04 | -0.06 | -0.13 | -0.22 | -0.28 |
| 10 | Mar 09 | 2.38 | 2.23 | 2.32 | 2.42 | 2.51 | 2.61 | 2.68 | 0.15 | 0.06 | -0.04 | -0.13 | -0.23 | -0.30 |
| 11 | Mar 16 | 2.30 | | 2.25 | 2.35 | 2.44 | 2.56 | 2.63 | | 0.05 | -0.05 | -0.14 | -0.26 | -0.33 |
| 12 | Mar 23 | 2.24 | | 2.19 | 2.30 | 2.40 | 2.51 | 2.60 | | 0.05 | -0.06 | -0.16 | -0.27 | -0.36 |
| 13 | Mar 30 | 2.38 | | 2.28 | 2.39 | 2.48 | 2.60 | 2.69 | | 0.10 | -0.01 | -0.10 | -0.22 | -0.31 |
| 14 | Apr 06 | 2.52 | | 2.42 | 2.53 | 2.62 | 2.73 | 2.81 | | 0.10 | -0.01 | -0.10 | -0.21 | -0.29 |
| 15 | Apr 13 | 2.46 | | 2.36 | 2.49 | 2.58 | 2.69 | 2.77 | | 0.10 | -0.03 | -0.12 | -0.23 | -0.31 |
| 16 | Apr 20 | 2.49 | | 2.36 | 2.48 | 2.58 | 2.70 | 2.78 | | 0.13 | 0.01 | -0.09 | -0.21 | -0.29 |
| 17 | Apr 27 | 2.48 | | 2.31 | 2.43 | 2.53 | 2.66 | 2.76 | | 0.17 | 0.05 | -0.05 | -0.18 | -0.28 |
| 18 | May 04 | 2.49 | | 2.30 | 2.39 | 2.50 | 2.63 | 2.73 | | 0.19 | 0.10 | -0.01 | -0.14 | -0.24 |
| 19 | May 11 | 2.60 | | 2.38 | 2.47 | 2.58 | 2.71 | 2.82 | | 0.22 | 0.13 | 0.02 | -0.11 | -0.22 |
| 20 | May 18 | 2.75 | | | 2.60 | 2.71 | 2.85 | 2.94 | | | 0.15 | 0.04 | -0.10 | -0.19 |
| 21 | May 25 | 2.68 | | | 2.53 | 2.64 | 2.78 | 2.88 | | | 0.15 | 0.04 | -0.10 | -0.20 |
| 22 | Jun 01 | 2.69 | | | 2.55 | 2.66 | 2.81 | 2.91 | | | 0.14 | 0.03 | -0.12 | -0.22 |
| 23 | Jun 08 | 2.60 | | | 2.46 | 2.58 | 2.71 | 2.82 | | | 0.14 | 0.02 | -0.11 | -0.22 |
| 24 | Jun 15 | 2.46 | | | 2.33 | 2.45 | 2.59 | 2.69 | | | 0.13 | 0.01 | -0.13 | -0.23 |
| 25 | Jun 22 | 2.43 | | | 2.31 | 2.42 | 2.57 | 2.69 | | | 0.12 | 0.01 | -0.14 | -0.26 |
| 26 | Jun 29 | 2.43 | | | 2.29 | 2.40 | 2.55 | 2.66 | | | 0.14 | 0.03 | -0.12 | -0.23 |
| 27 | Jul 06 | 2.70 | | | 2.45 | 2.55 | 2.70 | 2.82 | | | 0.25 | 0.15 | 0.00 | -0.12 |
| 28 | Jul 13 | 2.75 | | | 2.53 | 2.60 | 2.76 | 2.87 | | | 0.22 | 0.15 | -0.01 | -0.12 |
| 29 | Jul 20 | 2.61 | | | | 2.43 | 2.59 | 2.72 | | | | 0.18 | 0.02 | -0.11 |
| 30 | Jul 27 | 2.53 | | | | 2.38 | 2.54 | 2.68 | | | | 0.15 | -0.01 | -0.15 |
| 31 | Aug 03 | 2.60 | | | | 2.45 | 2.62 | 2.76 | | | | 0.15 | -0.02 | -0.16 |
| 32 | Aug 10 | 2.54 | | | | 2.39 | 2.56 | 2.70 | | | | 0.15 | -0.02 | -0.16 |
| 33 | Aug 17 | 2.34 | | | | 2.19 | 2.36 | 2.50 | | | | 0.15 | -0.02 | -0.16 |
| 34 | Aug 24 | 2.42 | | | | 2.28 | 2.44 | 2.59 | | | | 0.14 | -0.02 | -0.17 |
| 35 | Aug 31 | 2.69 | | | | 2.32 | 2.48 | 2.63 | | | | 0.37 | 0.21 | 0.06 |
| 36 | Sep 07 | 2.69 | | | | 2.31 | 2.46 | 2.60 | | | | 0.38 | 0.23 | 0.09 |
| 37 | Sep 14 | 2.60 | | | | 2.23 | 2.37 | 2.51 | | | | 0.37 | 0.23 | 0.09 |
| 38 | Sep 21 | 2.82 | | | | | 2.57 | 2.70 | | | | | 0.25 | 0.12 |
| 39 | Sep 28 | 2.91 | | | | | 2.64 | 2.78 | | | | | 0.27 | 0.13 |
| 40 | Oct 05 | 3.00 | | | | | 2.72 | 2.83 | | | | | 0.28 | 0.17 |
| 41 | Oct 12 | 3.26 | | | | | 2.98 | 3.08 | | | | | 0.28 | 0.18 |
| 42 | Oct 19 | 3.49 | | | | | 3.16 | 3.27 | | | | | 0.33 | 0.22 |
| 43 | Oct 26 | 3.55 | | | | | 3.27 | 3.40 | | | | | 0.28 | 0.15 |
| 44 | Nov 02 | 3.73 | | | | | 3.45 | 3.59 | | | | | 0.28 | 0.14 |
| 45 | Nov 09 | 3.78 | | | | | 3.50 | 3.66 | | | | | 0.28 | 0.12 |
| 46 | Nov 16 | 3.82 | | | | | 3.52 | 3.66 | | | | | 0.30 | 0.16 |
| 47 | Nov 23 | 3.89 | | | | | 3.63 | 3.78 | | | | | 0.26 | 0.11 |
| 48 | Nov 30 | 4.07 | | | | | 3.77 | 3.91 | | | | | 0.30 | 0.16 |

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Table 3. Statistical Summary of Basis Values for Selected Years

Years Used Are: 2002, 2003, 2004, 2005, 2006

Cash Market = Corn North of the Canadian

Futures Market = Corn at Chicago

| | | Mar | May | Jul | Sep | Dec | Mar |
|-----|----------|----------------------|-------|-------|-------|-------|-------|
| | | (Dollars Per Bushel) | | | | | |
| Jan | Average: | 0.13 | 0.07 | 0.02 | -0.00 | -0.05 | -0.11 |
| | Minimum: | 0.06 | -0.01 | -0.09 | -0.15 | -0.25 | -0.32 |
| | Maximum: | 0.19 | 0.16 | 0.14 | 0.17 | 0.20 | 0.19 |
| Feb | Average: | 0.15 | 0.08 | 0.02 | -0.01 | -0.06 | -0.11 |
| | Minimum: | 0.10 | 0.02 | -0.08 | -0.14 | -0.24 | -0.30 |
| | Maximum: | 0.20 | 0.18 | 0.15 | 0.16 | 0.19 | 0.17 |
| Mar | Average: | 0.15 | 0.09 | 0.03 | -0.00 | -0.06 | -0.12 |
| | Minimum: | 0.12 | 0.04 | -0.06 | -0.16 | -0.27 | -0.36 |
| | Maximum: | 0.19 | 0.20 | 0.20 | 0.19 | 0.18 | 0.17 |
| Apr | Average: | | 0.12 | 0.05 | 0.02 | -0.03 | -0.09 |
| | Minimum: | | 0.07 | -0.03 | -0.12 | -0.23 | -0.31 |
| | Maximum: | | 0.23 | 0.23 | 0.24 | 0.24 | 0.18 |
| May | Average: | | 0.15 | 0.11 | 0.07 | 0.01 | -0.06 |
| | Minimum: | | 0.10 | 0.02 | -0.06 | -0.16 | -0.24 |
| | Maximum: | | 0.22 | 0.23 | 0.25 | 0.25 | 0.21 |
| Jun | Average: | | | 0.14 | 0.08 | 0.00 | -0.07 |
| | Minimum: | | | 0.06 | -0.04 | -0.14 | -0.26 |
| | Maximum: | | | 0.24 | 0.29 | 0.29 | 0.23 |
| Jul | Average: | | | 0.17 | 0.16 | 0.06 | -0.02 |
| | Minimum: | | | -0.02 | -0.10 | -0.21 | -0.28 |
| | Maximum: | | | 0.25 | 0.30 | 0.28 | 0.20 |
| Aug | Average: | | | | 0.18 | 0.06 | -0.03 |
| | Minimum: | | | | 0.06 | -0.08 | -0.18 |
| | Maximum: | | | | 0.37 | 0.21 | 0.15 |
| Sep | Average: | | | | 0.27 | 0.17 | 0.07 |
| | Minimum: | | | | 0.17 | 0.03 | -0.09 |
| | Maximum: | | | | 0.38 | 0.27 | 0.16 |
| Oct | Average: | | | | | 0.19 | 0.09 |
| | Minimum: | | | | | 0.15 | 0.04 |
| | Maximum: | | | | | 0.33 | 0.22 |
| Nov | Average: | | | | | 0.20 | 0.10 |
| | Minimum: | | | | | 0.15 | 0.03 |
| | Maximum: | | | | | 0.30 | 0.18 |
| Dec | Average: | | | | | 0.17 | 0.11 |
| | Minimum: | | | | | 0.12 | 0.03 |
| | Maximum: | | | | | 0.24 | 0.23 |

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Table 4. Average Monthly Nearby Basis for the Nearby Futures Contract Over Time

Cash Market = Sorghum North of the Canadian
Futures Market = Corn at Chicago

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|-----|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | (Dollars Per Bushel) | | | | | | | | | | | | |
| Jan | -0.17 | -0.20 | -0.46 | -0.36 | -0.42 | -0.51 | -0.26 | -0.16 | -0.10 | -0.11 | -0.14 | -0.25 | -0.20 |
| Feb | -0.19 | -0.17 | -0.48 | -0.35 | -0.39 | -0.49 | -0.22 | -0.15 | -0.10 | -0.09 | -0.16 | -0.26 | |
| Mar | -0.24 | -0.16 | -0.47 | -0.41 | -0.44 | -0.52 | -0.21 | -0.17 | -0.09 | -0.15 | -0.19 | -0.31 | |
| Apr | -0.24 | -0.22 | -0.47 | -0.33 | -0.44 | -0.51 | -0.19 | -0.17 | -0.09 | -0.16 | -0.19 | -0.25 | |
| May | -0.27 | -0.19 | -0.36 | -0.34 | -0.51 | -0.52 | -0.20 | -0.20 | -0.13 | -0.19 | -0.26 | -0.25 | |
| Jun | -0.15 | -0.24 | -0.30 | -0.30 | -0.50 | -0.39 | -0.12 | -0.18 | -0.12 | -0.18 | -0.23 | -0.25 | |
| Jul | -0.20 | 0.75 | -0.21 | -0.28 | -0.52 | -0.27 | -0.16 | -0.22 | -0.09 | -0.19 | -0.25 | -0.19 | |
| Aug | -0.21 | 0.57 | -0.26 | -0.28 | -0.51 | -0.27 | -0.16 | -0.20 | -0.09 | -0.19 | -0.25 | -0.17 | |
| Sep | -0.22 | -0.14 | -0.34 | -0.45 | -0.57 | -0.33 | -0.25 | -0.22 | -0.21 | -0.22 | -0.22 | -0.19 | |
| Oct | -0.22 | -0.42 | -0.40 | -0.40 | -0.54 | -0.27 | -0.12 | -0.16 | -0.18 | -0.20 | -0.21 | -0.18 | |
| Nov | -0.21 | -0.45 | -0.37 | -0.36 | -0.46 | -0.22 | -0.07 | -0.12 | -0.09 | -0.16 | -0.17 | -0.14 | |
| Dec | -0.10 | -0.45 | -0.41 | -0.43 | -0.53 | -0.29 | -0.19 | -0.11 | -0.05 | -0.24 | -0.29 | -0.21 | |

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Note: Rollover to the next futures contract occurs at the beginning of the delivery month, i.e. for corn the May futures contract becomes the nearby on March 1

Table 3. Statistical Summary of Basis Values for Selected Years

Years Used Are: 2002, 2003, 2004, 2005, 2006

Cash Market = Sorghum North of the Canadian

Futures Market = Corn at Chicago

| | | Mar | May | Jul | Sep | Dec | Mar |
|-----|----------|----------------------|-------|-------|-------|-------|-------|
| | | (Dollars Per Bushel) | | | | | |
| Jan | Average: | -0.15 | -0.21 | -0.26 | -0.28 | -0.33 | -0.39 |
| | Minimum: | -0.27 | -0.37 | -0.46 | -0.53 | -0.63 | -0.69 |
| | Maximum: | -0.07 | -0.10 | -0.12 | -0.08 | -0.05 | -0.06 |
| Feb | Average: | -0.15 | -0.22 | -0.28 | -0.31 | -0.36 | -0.41 |
| | Minimum: | -0.27 | -0.37 | -0.46 | -0.53 | -0.63 | -0.69 |
| | Maximum: | -0.07 | -0.09 | -0.12 | -0.10 | -0.08 | -0.09 |
| Mar | Average: | -0.13 | -0.19 | -0.25 | -0.29 | -0.34 | -0.40 |
| | Minimum: | -0.25 | -0.35 | -0.45 | -0.52 | -0.64 | -0.71 |
| | Maximum: | -0.08 | -0.09 | -0.09 | -0.10 | -0.08 | -0.09 |
| Apr | Average: | | -0.17 | -0.24 | -0.27 | -0.32 | -0.39 |
| | Minimum: | | -0.26 | -0.37 | -0.46 | -0.59 | -0.69 |
| | Maximum: | | -0.07 | -0.07 | -0.07 | -0.08 | -0.13 |
| May | Average: | | -0.16 | -0.20 | -0.24 | -0.31 | -0.38 |
| | Minimum: | | -0.18 | -0.27 | -0.37 | -0.51 | -0.61 |
| | Maximum: | | -0.12 | -0.11 | -0.10 | -0.09 | -0.13 |
| Jun | Average: | | | -0.20 | -0.26 | -0.34 | -0.41 |
| | Minimum: | | | -0.26 | -0.38 | -0.52 | -0.62 |
| | Maximum: | | | -0.12 | -0.07 | -0.07 | -0.13 |
| Jul | Average: | | | -0.16 | -0.18 | -0.27 | -0.36 |
| | Minimum: | | | -0.25 | -0.31 | -0.42 | -0.50 |
| | Maximum: | | | -0.12 | -0.05 | -0.10 | -0.18 |
| Aug | Average: | | | | -0.18 | -0.30 | -0.39 |
| | Minimum: | | | | -0.28 | -0.41 | -0.50 |
| | Maximum: | | | | -0.08 | -0.17 | -0.23 |
| Sep | Average: | | | | -0.13 | -0.21 | -0.31 |
| | Minimum: | | | | -0.23 | -0.37 | -0.49 |
| | Maximum: | | | | 0.00 | -0.13 | -0.22 |
| Oct | Average: | | | | | -0.18 | -0.27 |
| | Minimum: | | | | | -0.21 | -0.34 |
| | Maximum: | | | | | -0.11 | -0.16 |
| Nov | Average: | | | | | -0.14 | -0.23 |
| | Minimum: | | | | | -0.20 | -0.36 |
| | Maximum: | | | | | -0.02 | -0.11 |
| Dec | Average: | | | | | -0.12 | -0.18 |
| | Minimum: | | | | | -0.20 | -0.30 |
| | Maximum: | | | | | -0.06 | 0.02 |

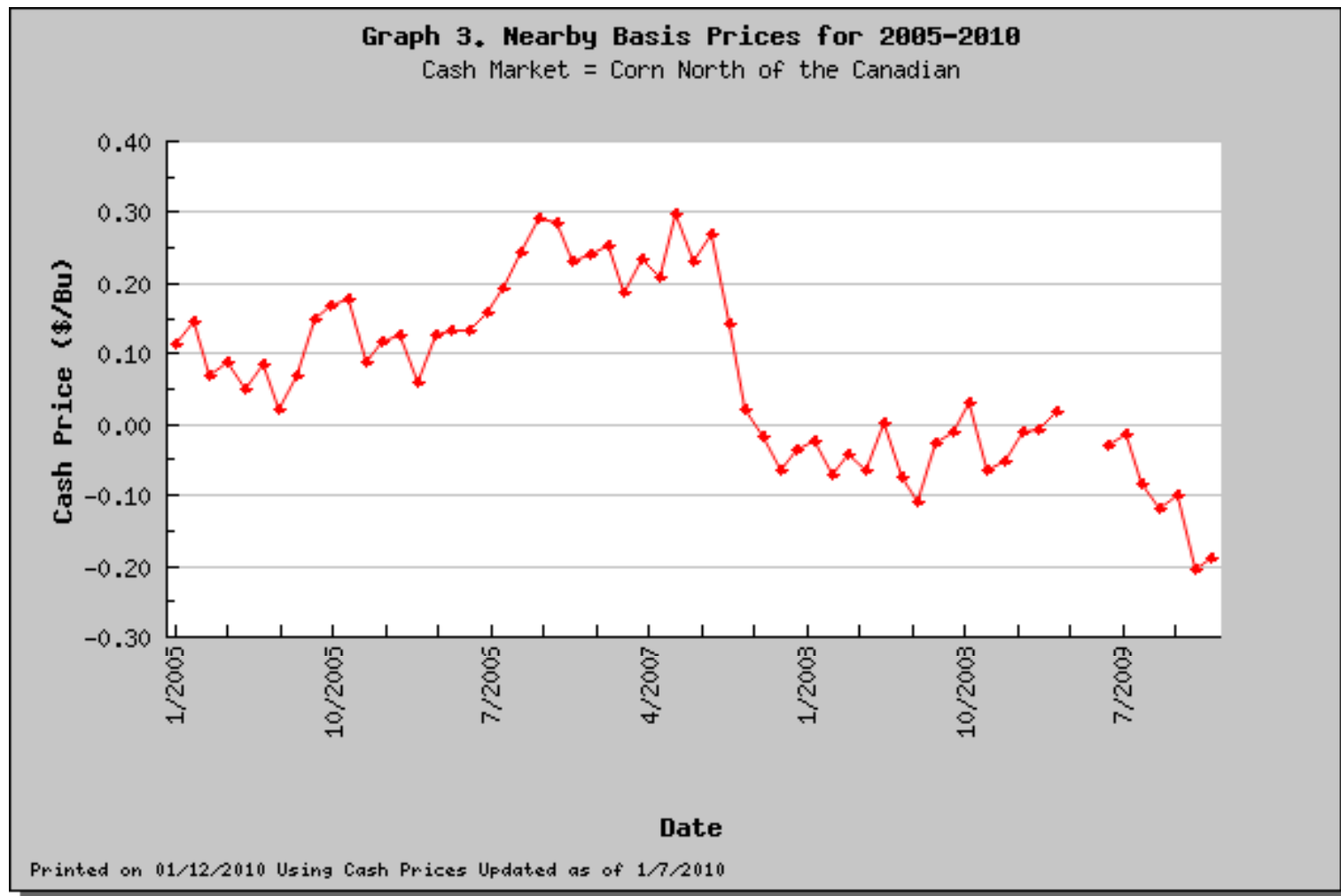
Table 5. Weekly Cash Price, Futures Contract Prices and Basis for 2006

Cash Market = Sorghum North of the Canadian, Futures Market = Corn at Chicago

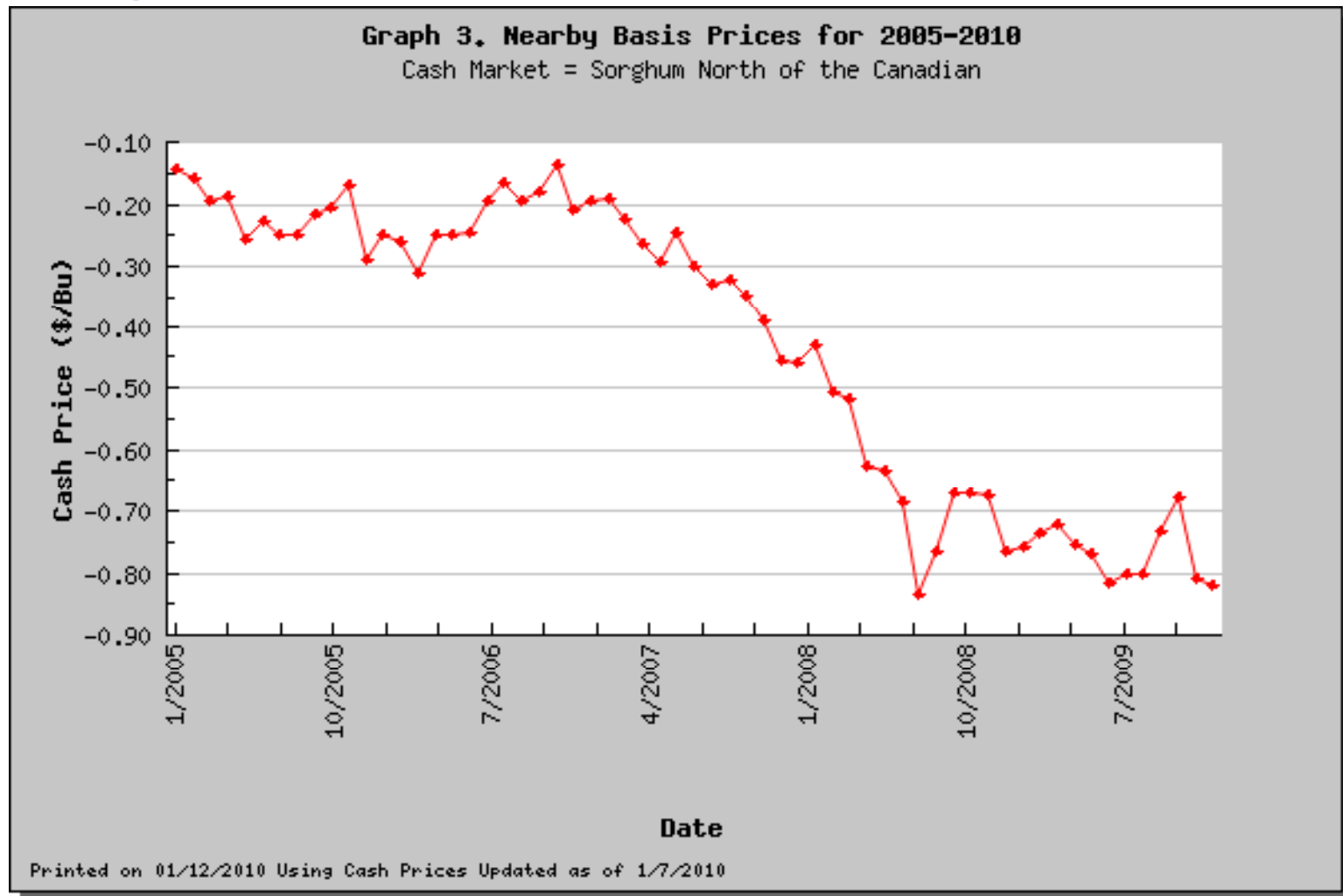
| Week | Date | Cash (\$/Bu) | Futures Contract (Dollars Per Bushel) | | | | | | Basis (Dollars Per Bushel) | | | | | |
|------|--------|-----------------|--|------|------|------|------|------|-------------------------------|-------|-------|-------|-------|-------|
| | | | Mar | May | Jul | Sep | Dec | Mar | Mar | May | Jul | Sep | Dec | Mar |
| | | | | | | | | | | | | | | |
| 1 | Jan 05 | 1.90 | 2.16 | 2.25 | 2.33 | 2.39 | 2.49 | 2.56 | -0.26 | -0.35 | -0.43 | -0.49 | -0.59 | -0.66 |
| 2 | Jan 12 | 1.89 | 2.13 | 2.22 | 2.31 | 2.38 | 2.48 | 2.55 | -0.24 | -0.33 | -0.42 | -0.49 | -0.59 | -0.66 |
| 3 | Jan 19 | 1.81 | 2.05 | 2.15 | 2.24 | 2.32 | 2.42 | 2.50 | -0.24 | -0.34 | -0.43 | -0.51 | -0.61 | -0.69 |
| 4 | Jan 26 | 1.90 | 2.17 | 2.27 | 2.36 | 2.43 | 2.53 | 2.59 | -0.27 | -0.37 | -0.46 | -0.53 | -0.63 | -0.69 |
| 5 | Feb 02 | 1.94 | 2.21 | 2.30 | 2.39 | 2.47 | 2.57 | 2.63 | -0.27 | -0.36 | -0.45 | -0.53 | -0.63 | -0.69 |
| 6 | Feb 09 | 1.99 | 2.26 | 2.36 | 2.45 | 2.51 | 2.61 | 2.66 | -0.27 | -0.37 | -0.46 | -0.52 | -0.62 | -0.67 |
| 7 | Feb 16 | 2.00 | 2.24 | 2.34 | 2.44 | 2.50 | 2.60 | 2.66 | -0.24 | -0.34 | -0.44 | -0.50 | -0.60 | -0.66 |
| 8 | Feb 23 | 1.97 | 2.23 | 2.34 | 2.43 | 2.50 | 2.60 | 2.66 | -0.26 | -0.37 | -0.46 | -0.53 | -0.63 | -0.69 |
| 9 | Mar 02 | 2.04 | 2.29 | 2.39 | 2.49 | 2.56 | 2.65 | 2.71 | -0.25 | -0.35 | -0.45 | -0.52 | -0.61 | -0.67 |
| 10 | Mar 09 | 2.00 | 2.23 | 2.32 | 2.42 | 2.51 | 2.61 | 2.68 | -0.23 | -0.32 | -0.42 | -0.51 | -0.61 | -0.68 |
| 11 | Mar 16 | 1.92 | | 2.25 | 2.35 | 2.44 | 2.56 | 2.63 | | -0.33 | -0.43 | -0.52 | -0.64 | -0.71 |
| 12 | Mar 23 | 1.93 | | 2.19 | 2.30 | 2.40 | 2.51 | 2.60 | | -0.26 | -0.37 | -0.47 | -0.58 | -0.67 |
| 13 | Mar 30 | 1.98 | | 2.28 | 2.39 | 2.48 | 2.60 | 2.69 | | -0.30 | -0.41 | -0.50 | -0.62 | -0.71 |
| 14 | Apr 06 | 2.16 | | 2.42 | 2.53 | 2.62 | 2.73 | 2.81 | | -0.26 | -0.37 | -0.46 | -0.57 | -0.65 |
| 15 | Apr 13 | 2.12 | | 2.36 | 2.49 | 2.58 | 2.69 | 2.77 | | -0.24 | -0.37 | -0.46 | -0.57 | -0.65 |
| 16 | Apr 20 | 2.12 | | 2.36 | 2.48 | 2.58 | 2.70 | 2.78 | | -0.24 | -0.36 | -0.46 | -0.58 | -0.66 |
| 17 | Apr 27 | 2.07 | | 2.31 | 2.43 | 2.53 | 2.66 | 2.76 | | -0.24 | -0.36 | -0.46 | -0.59 | -0.69 |
| 18 | May 04 | 2.13 | | 2.30 | 2.39 | 2.50 | 2.63 | 2.73 | | -0.17 | -0.26 | -0.37 | -0.50 | -0.60 |
| 19 | May 11 | 2.23 | | 2.38 | 2.47 | 2.58 | 2.71 | 2.82 | | -0.15 | -0.24 | -0.35 | -0.48 | -0.59 |
| 20 | May 18 | 2.35 | | | 2.60 | 2.71 | 2.85 | 2.94 | | | -0.25 | -0.36 | -0.50 | -0.59 |
| 21 | May 25 | 2.27 | | | 2.53 | 2.64 | 2.78 | 2.88 | | | -0.26 | -0.37 | -0.51 | -0.61 |
| 22 | Jun 01 | 2.30 | | | 2.55 | 2.66 | 2.81 | 2.91 | | | -0.25 | -0.36 | -0.51 | -0.61 |
| 23 | Jun 08 | 2.21 | | | 2.46 | 2.58 | 2.71 | 2.82 | | | -0.25 | -0.37 | -0.50 | -0.61 |
| 24 | Jun 15 | 2.07 | | | 2.33 | 2.45 | 2.59 | 2.69 | | | -0.26 | -0.38 | -0.52 | -0.62 |
| 25 | Jun 22 | 2.08 | | | 2.31 | 2.42 | 2.57 | 2.69 | | | -0.23 | -0.34 | -0.49 | -0.61 |
| 26 | Jun 29 | 2.06 | | | 2.29 | 2.40 | 2.55 | 2.66 | | | -0.23 | -0.34 | -0.49 | -0.60 |
| 27 | Jul 06 | 2.32 | | | 2.45 | 2.55 | 2.70 | 2.82 | | | -0.13 | -0.23 | -0.38 | -0.50 |
| 28 | Jul 13 | 2.41 | | | 2.53 | 2.60 | 2.76 | 2.87 | | | -0.12 | -0.19 | -0.35 | -0.46 |
| 29 | Jul 20 | 2.27 | | | | 2.43 | 2.59 | 2.72 | | | | -0.16 | -0.32 | -0.45 |
| 30 | Jul 27 | 2.19 | | | | 2.38 | 2.54 | 2.68 | | | | -0.19 | -0.35 | -0.49 |
| 31 | Aug 03 | 2.26 | | | | 2.45 | 2.62 | 2.76 | | | | -0.19 | -0.36 | -0.50 |
| 32 | Aug 10 | 2.21 | | | | 2.39 | 2.56 | 2.70 | | | | -0.18 | -0.35 | -0.49 |
| 33 | Aug 17 | 2.03 | | | | 2.19 | 2.36 | 2.50 | | | | -0.16 | -0.33 | -0.47 |
| 34 | Aug 24 | 2.12 | | | | 2.28 | 2.44 | 2.59 | | | | -0.16 | -0.32 | -0.47 |
| 35 | Aug 31 | 2.18 | | | | 2.32 | 2.48 | 2.63 | | | | -0.14 | -0.30 | -0.45 |
| 36 | Sep 07 | 2.21 | | | | 2.31 | 2.46 | 2.60 | | | | -0.10 | -0.25 | -0.39 |
| 37 | Sep 14 | 2.20 | | | | 2.23 | 2.37 | 2.51 | | | | -0.03 | -0.17 | -0.31 |
| 38 | Sep 21 | 2.39 | | | | | 2.57 | 2.70 | | | | | -0.18 | -0.31 |
| 39 | Sep 28 | 2.46 | | | | | 2.64 | 2.78 | | | | | -0.18 | -0.32 |
| 40 | Oct 05 | 2.55 | | | | | 2.72 | 2.83 | | | | | -0.17 | -0.28 |
| 41 | Oct 12 | 2.79 | | | | | 2.98 | 3.08 | | | | | -0.19 | -0.29 |
| 42 | Oct 19 | 2.98 | | | | | 3.16 | 3.27 | | | | | -0.18 | -0.29 |
| 43 | Oct 26 | 3.08 | | | | | 3.27 | 3.40 | | | | | -0.19 | -0.32 |
| 44 | Nov 02 | 3.26 | | | | | 3.45 | 3.59 | | | | | -0.19 | -0.33 |
| 45 | Nov 09 | 3.30 | | | | | 3.50 | 3.66 | | | | | -0.20 | -0.36 |
| 46 | Nov 16 | 3.39 | | | | | 3.52 | 3.66 | | | | | -0.13 | -0.27 |
| 47 | Nov 23 | 3.49 | | | | | 3.63 | 3.78 | | | | | -0.14 | -0.29 |
| 48 | Nov 30 | 3.75 | | | | | 3.77 | 3.91 | | | | | -0.02 | -0.16 |

Printed on 01/13/2007 Using Cash Prices Updated as of 1/11/2007

Basis: Corn North of the Canadian



Basis: Sorghum North of the Canadian



Basis

- ' Expected Harvest Basis:
- ' Expected Mar. 1 Basis:
- ' Expected May. 1 Basis:
- ' If short crop basis will. . . .
- ' If large crop basis will. . . .
- ' Strategies:
- ' NOTES: