5.

Contract Seasonality

The Importance of Incorporating Contract Seasonal Pricing into a Marketing Plan

Presented By:

Dr. Steve Amosson

Regents Fellow

Professor and Extension Economist

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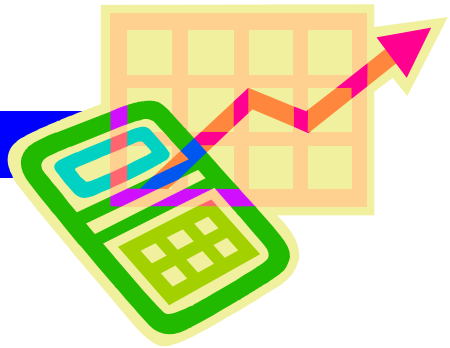
Seasonal Price Patterns



- Cash Seasonals
  - Supply and demand based
    - Cash – Weaning, grazing
    - Crops - Harvest
  - Most modify production plans to take advantage
- Contract Seasonals
  - Eventually tied to cash market
  - Tied to events that may affect supply and demand
  - Expands marketing opportunities
- Seasonal Price Patterns
  - Outputs
  - Inputs

Agricultural Marketing

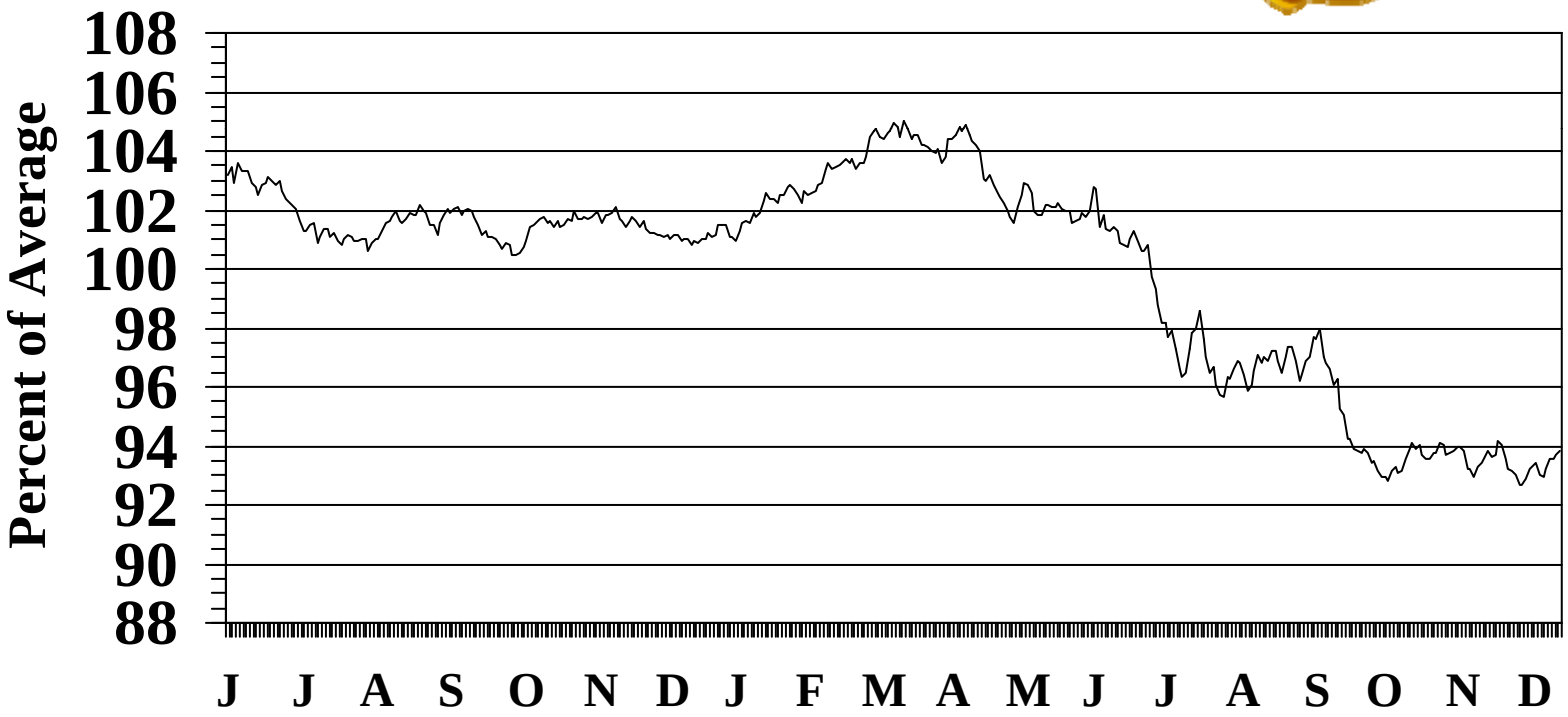
Breaking it Down

- Fundamental Analysis
- Technical Analysis
- Price Seasonality of Market
- Cycles, Syndromes or Anomaly

Definitions by Steve

- Seasonality
  - Price variation caused by market uncertainty associated with “normal” physiological or fundamental effects such as planting, planting intentions, tasseling, supply and demand conditions, and holidays.
- Syndrome or Anomaly
  - Price variation caused by market uncertainty associated with an “unusual” event such as a short crop, BSE, etc.

Seasonal Index for December Corn Futures 1991 - 2005



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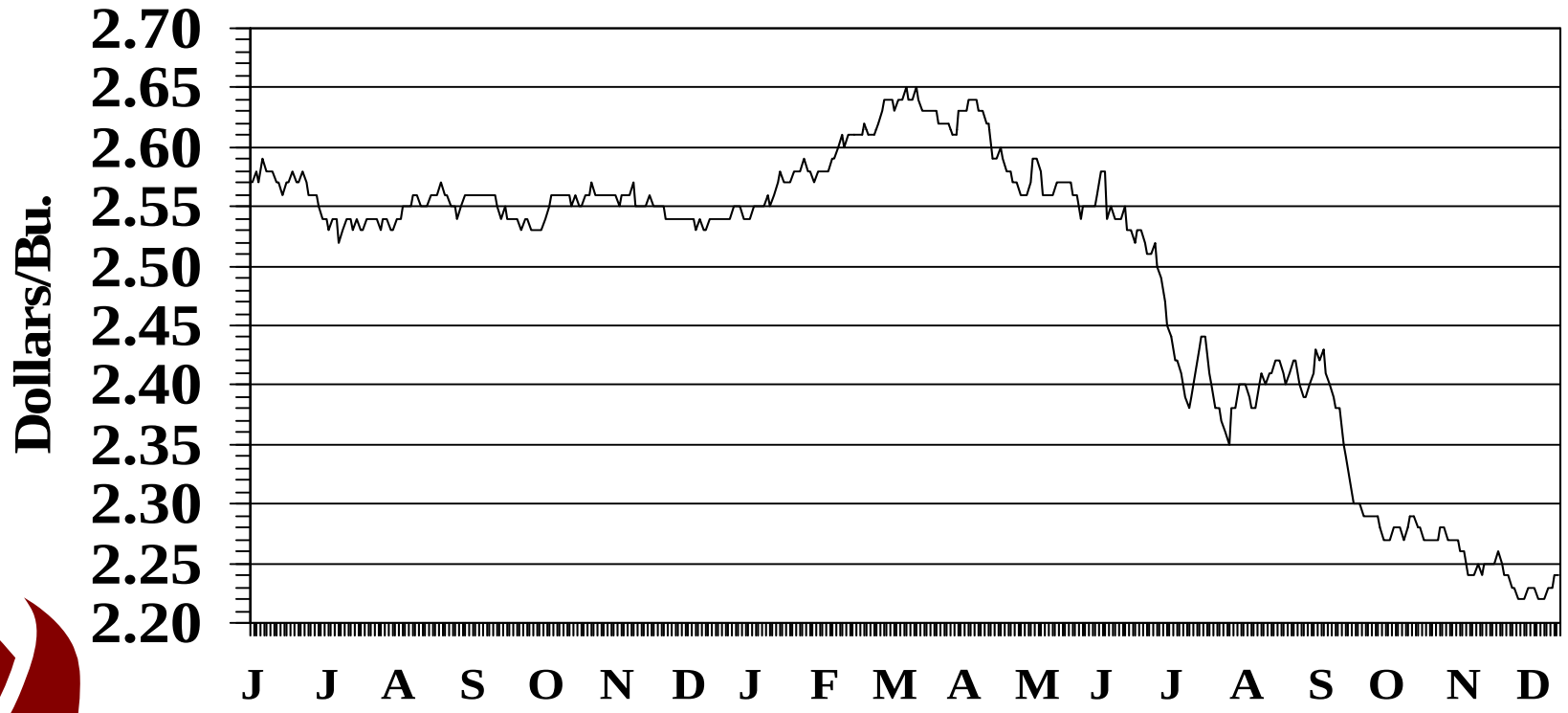
CBOT Corn December Futures Average Settlement Price, 1991 – 2005, (excluding 1993 and 1995)



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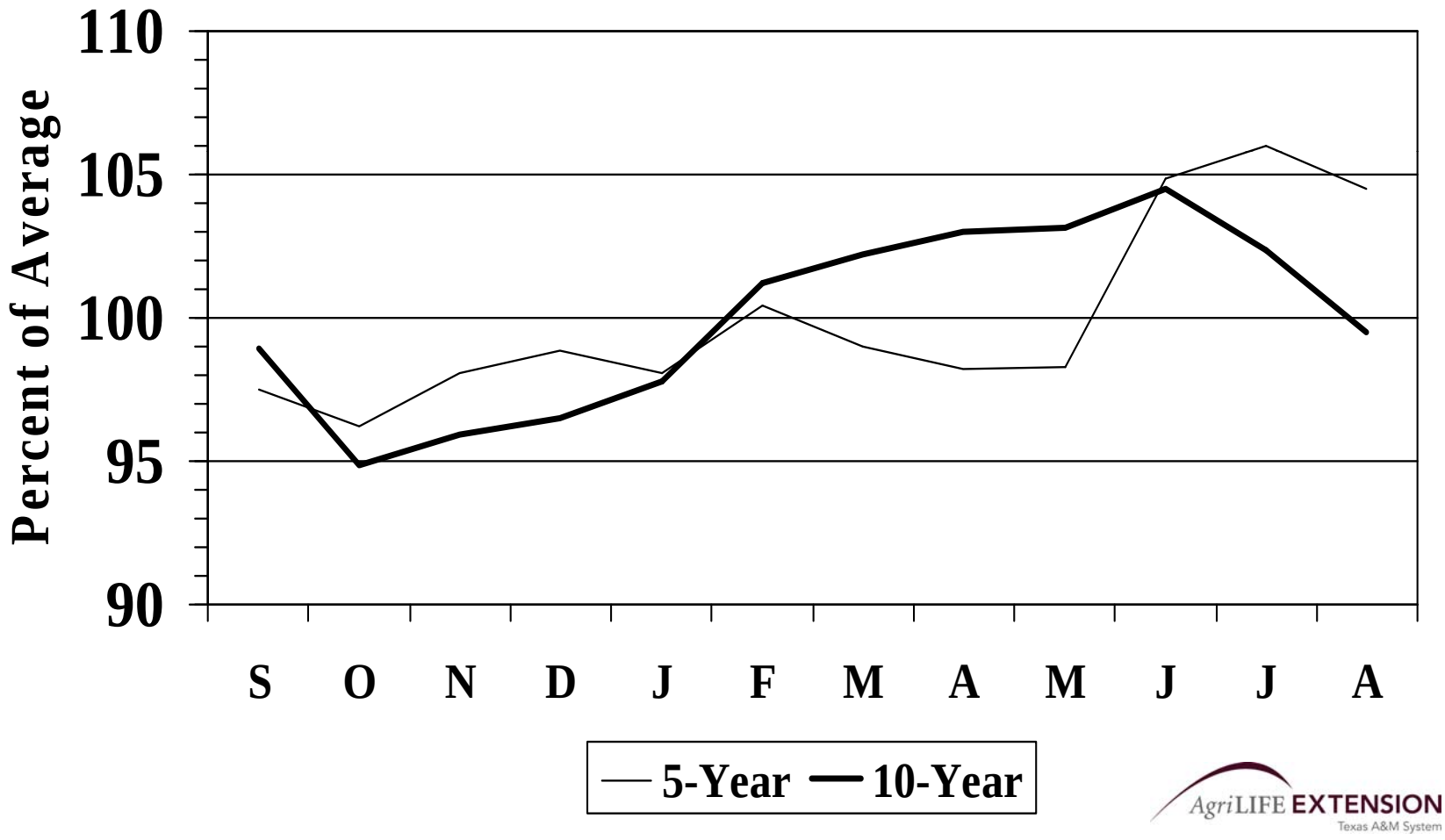
Seasonal Cash Price Index for U.S. Sorghum
September 1995 – August 2005



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Moore Research Center - Seasonal Price Index

- Calculate range over contract life
  - Example:

Contract low	**$4.00**
Contract high	**$6.00**
Range	**$2.00**

- Determine daily index (0-1)
  - Example: Price on specific day $4.40, then the index is: *(4.40-4.00)/2=.40/2.00=.20*
- Average daily indices over years
  - Example: Day 1 *Year 1 = .20 Year 2 = .25 Year 3 = .15*
    Then, the day 1 average = *.20+.25+.15/3=.20*
    NOTE: Most indices will range from .35 to .65
- Expand range to fit 0–1 scale
  - Example: If .65 was the highest daily average index value, then it becomes 1. If .30 was the lowest index value, then it becomes 0.

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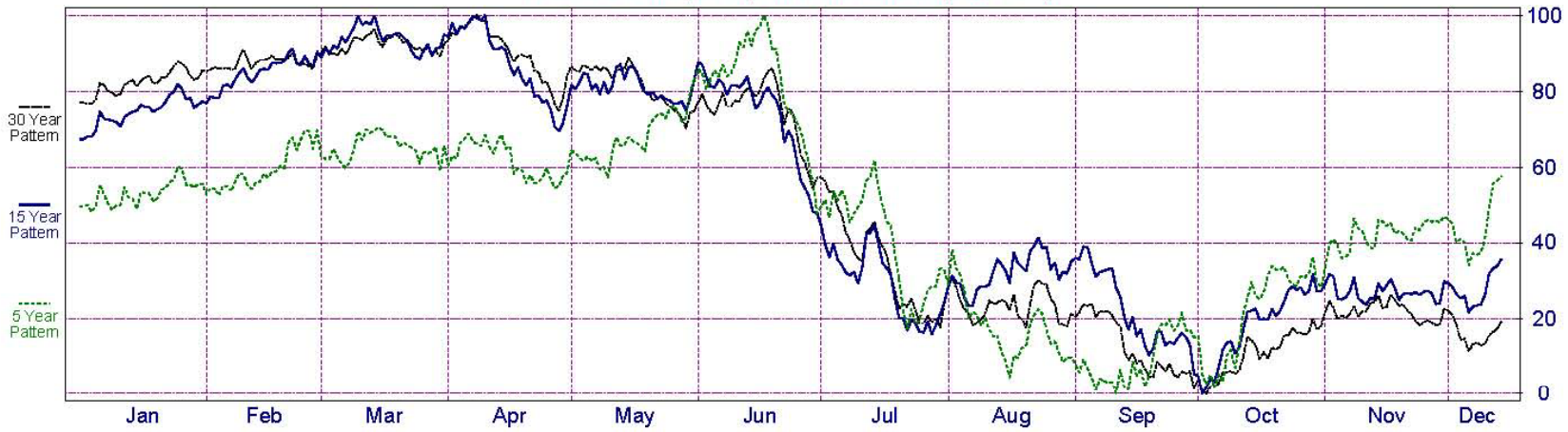
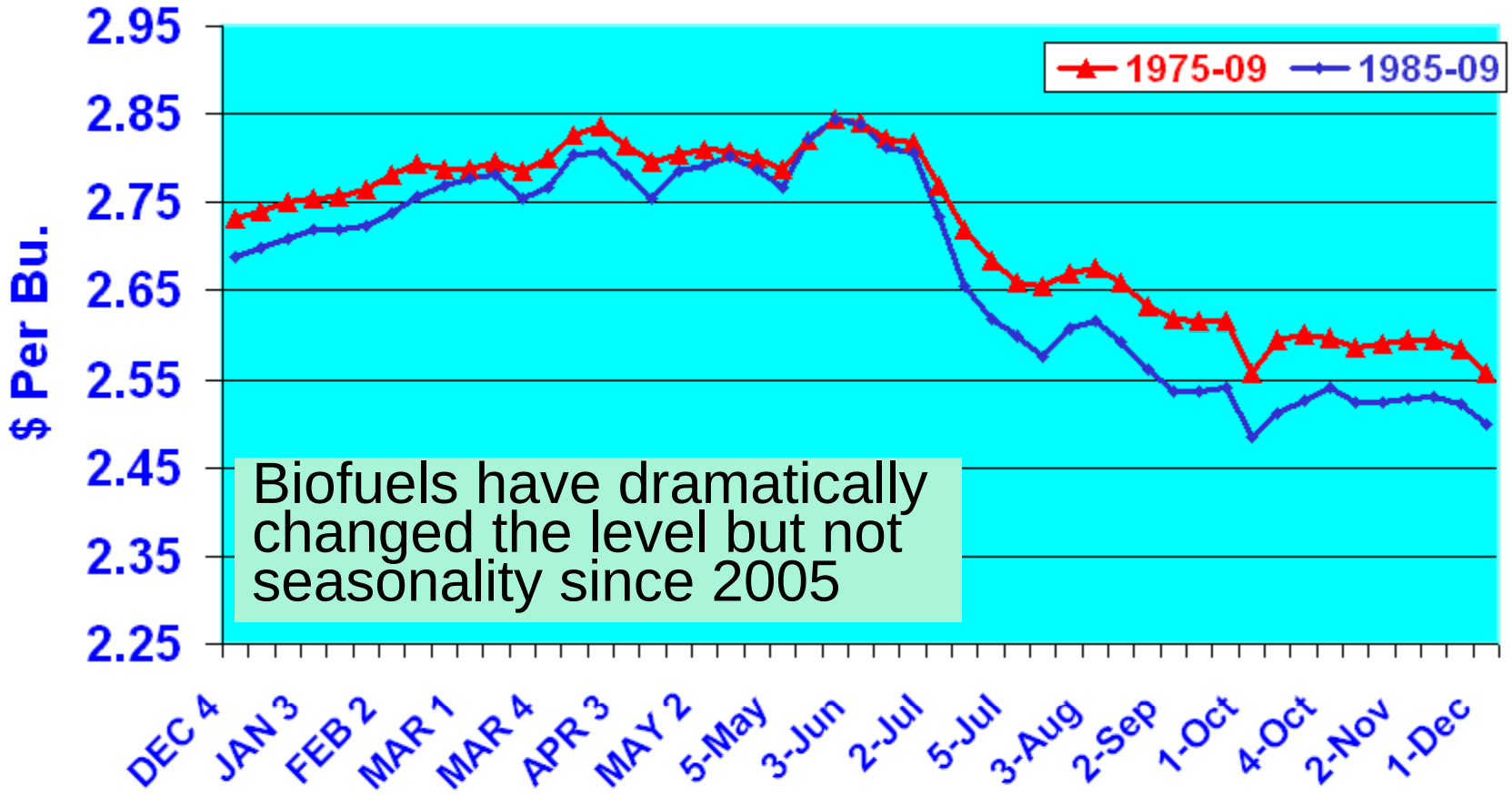
Corn

December Corn(CBOT) Seasonal Patterns(1980-2009)



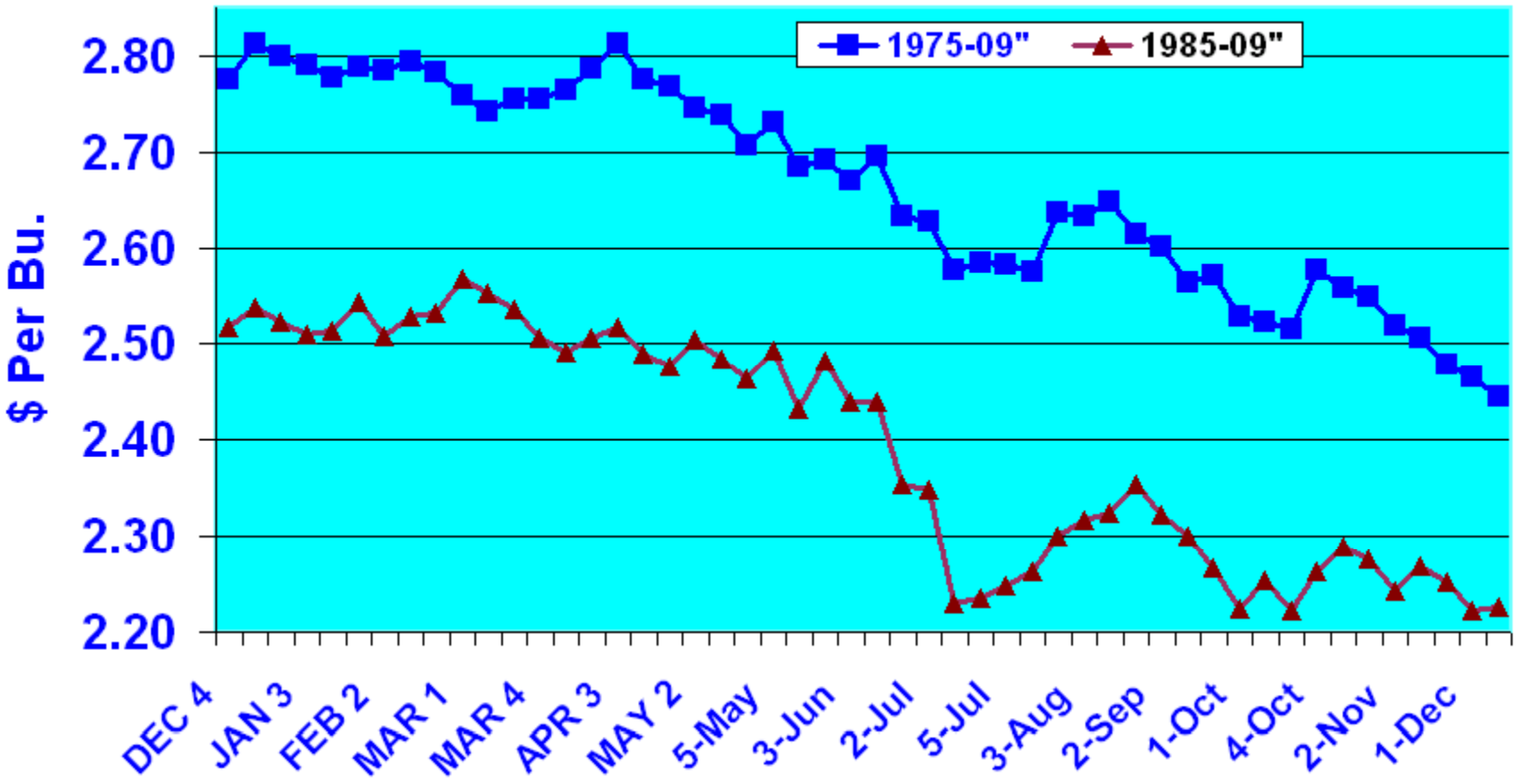
Corn: No 2 yellow Cent-Ill Seasonal Patterns(1980-2009)

Weekly Average December Corn Futures, All Years, 1975 Through 2009 & 1985-2009--All Years



Biofuels have dramatically changed the level but not seasonality since 2005

Weekly Average December Corn Futures, After Short Crops, 1975 Through 2009 & 1985-2009



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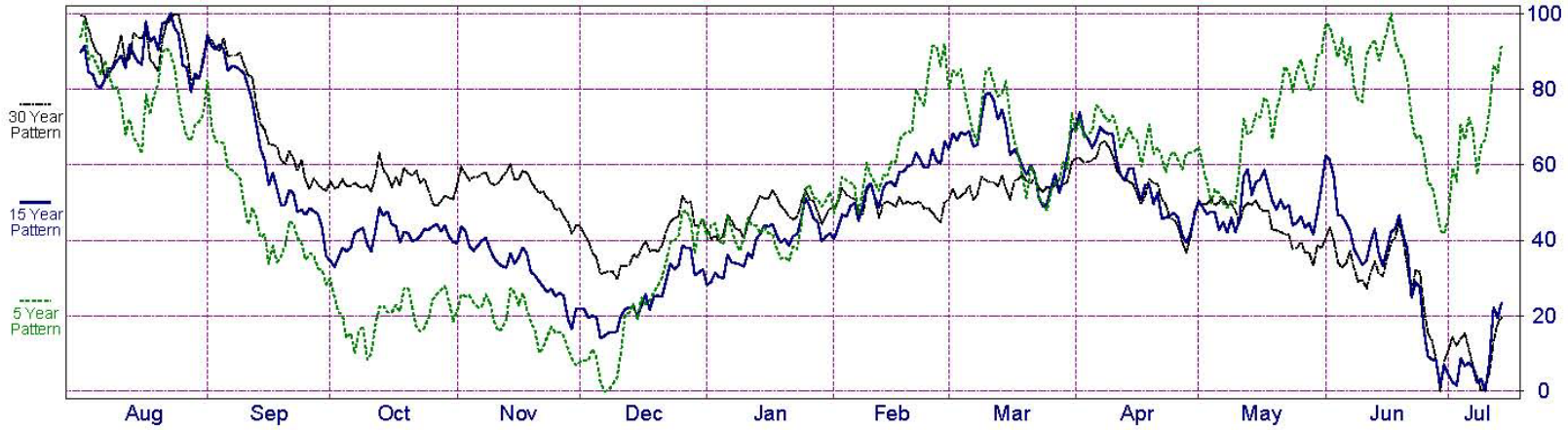
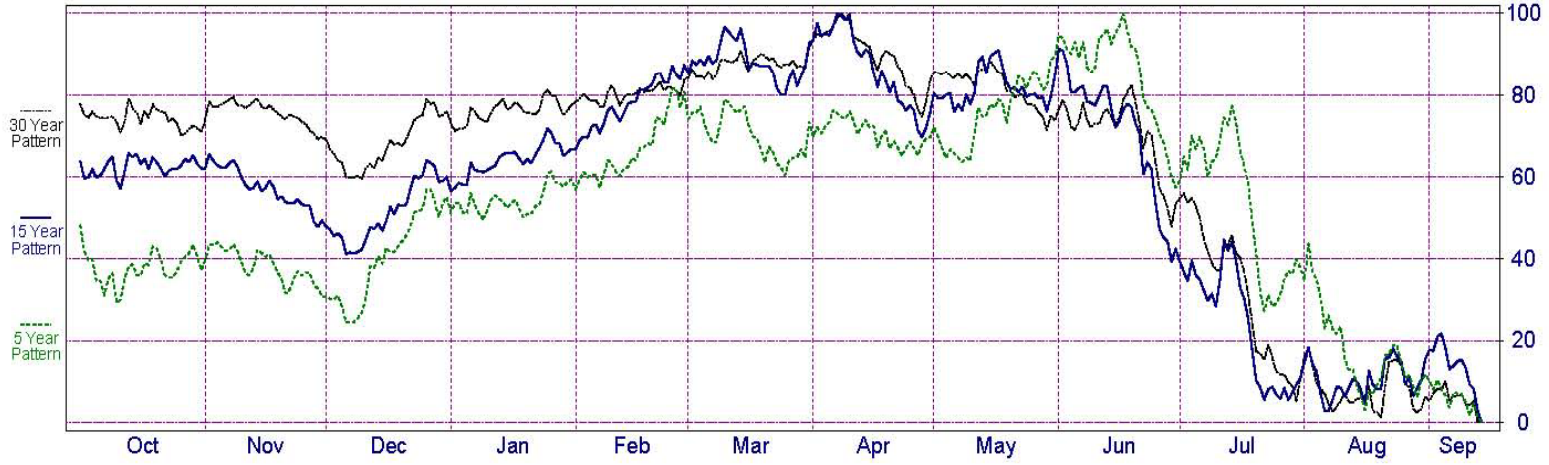
Corn

July Corn(CBOT) Seasonal Patterns(1980-2009)



September Corn(CBOT) Seasonal Patterns(1980-2009)



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Corn

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Natural Gas

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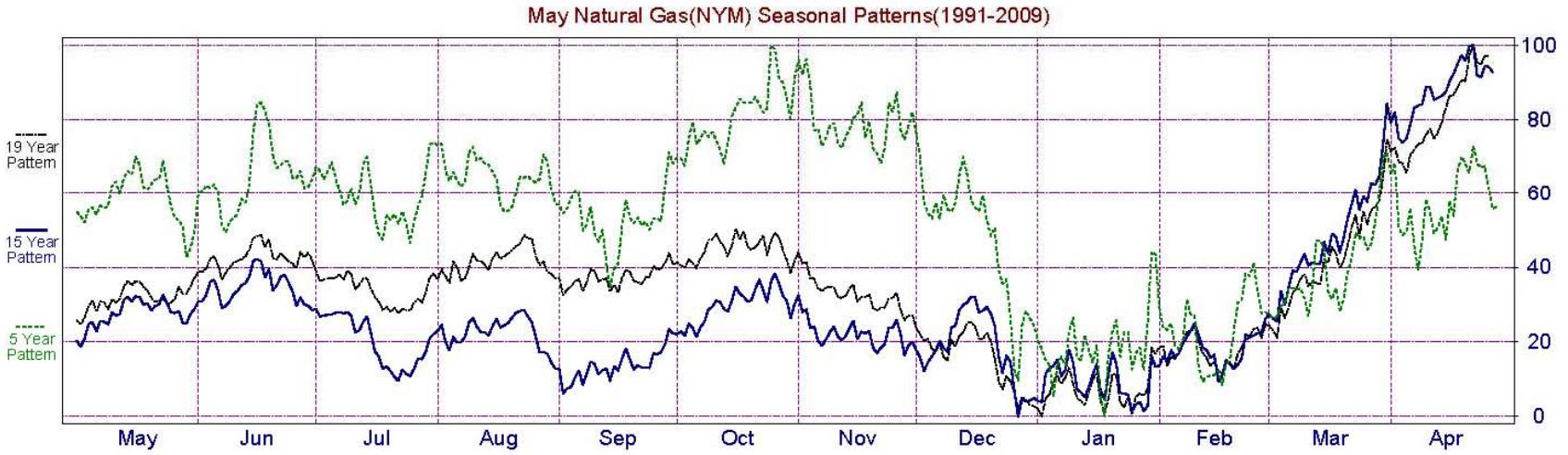

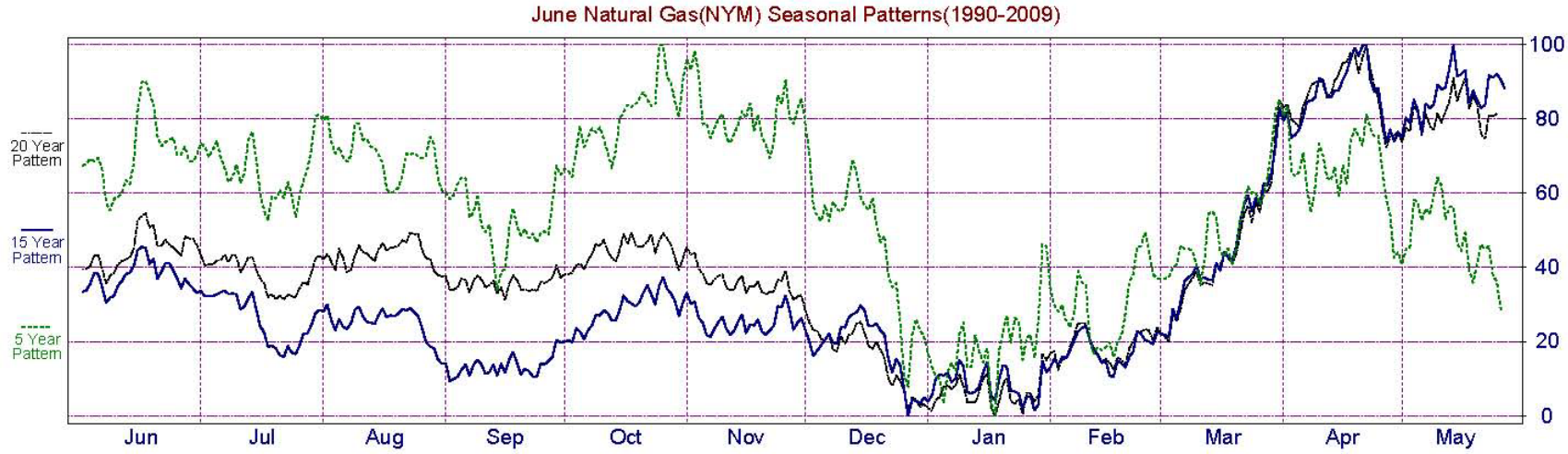

Natural Gas

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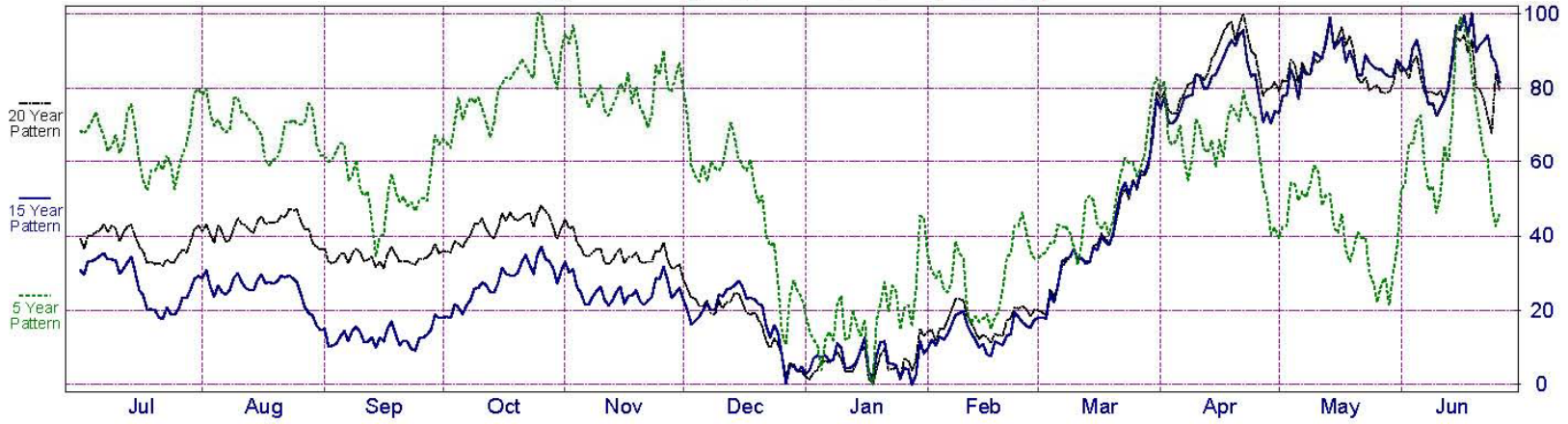
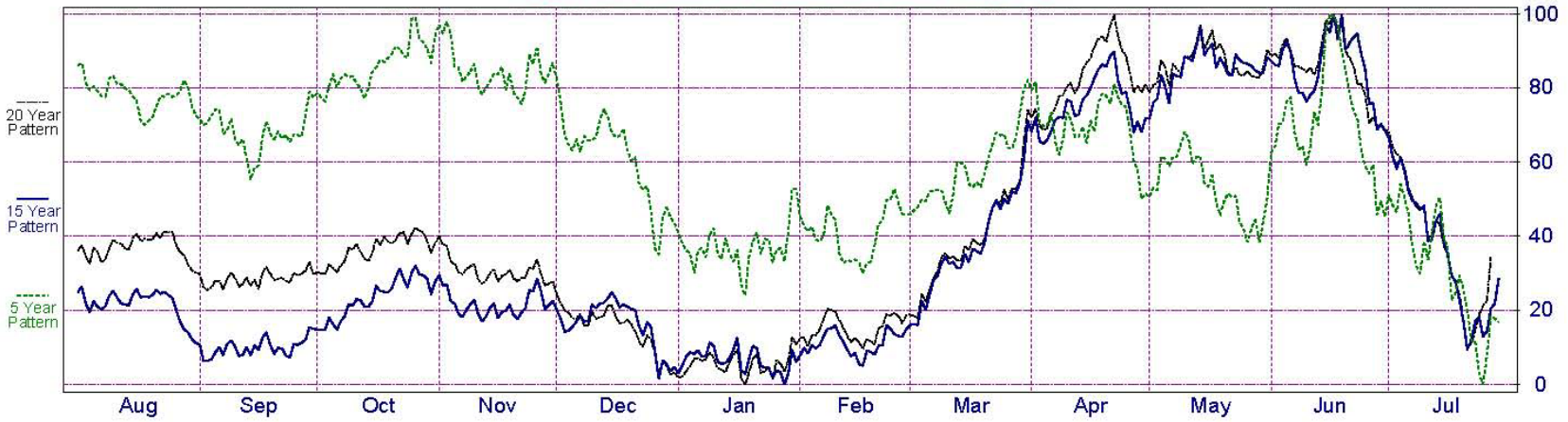
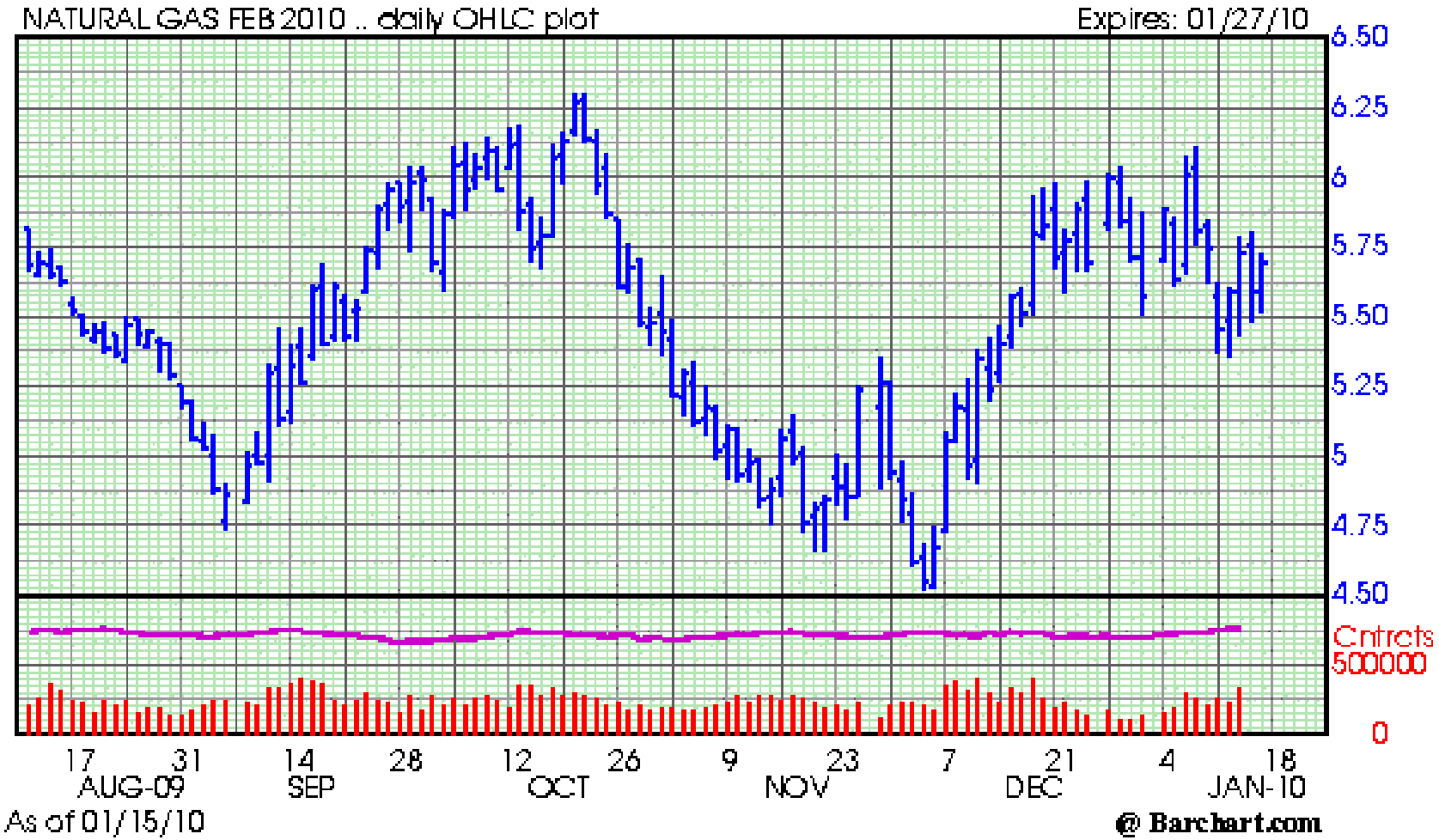
July Natural Gas(NYM) Seasonal Patterns(1990-2009)



August Natural Gas(NYM) Seasonal Patterns(1990-2009)



Natural Gas


NATURAL GAS FEB 2010 .. daily OHLC plot
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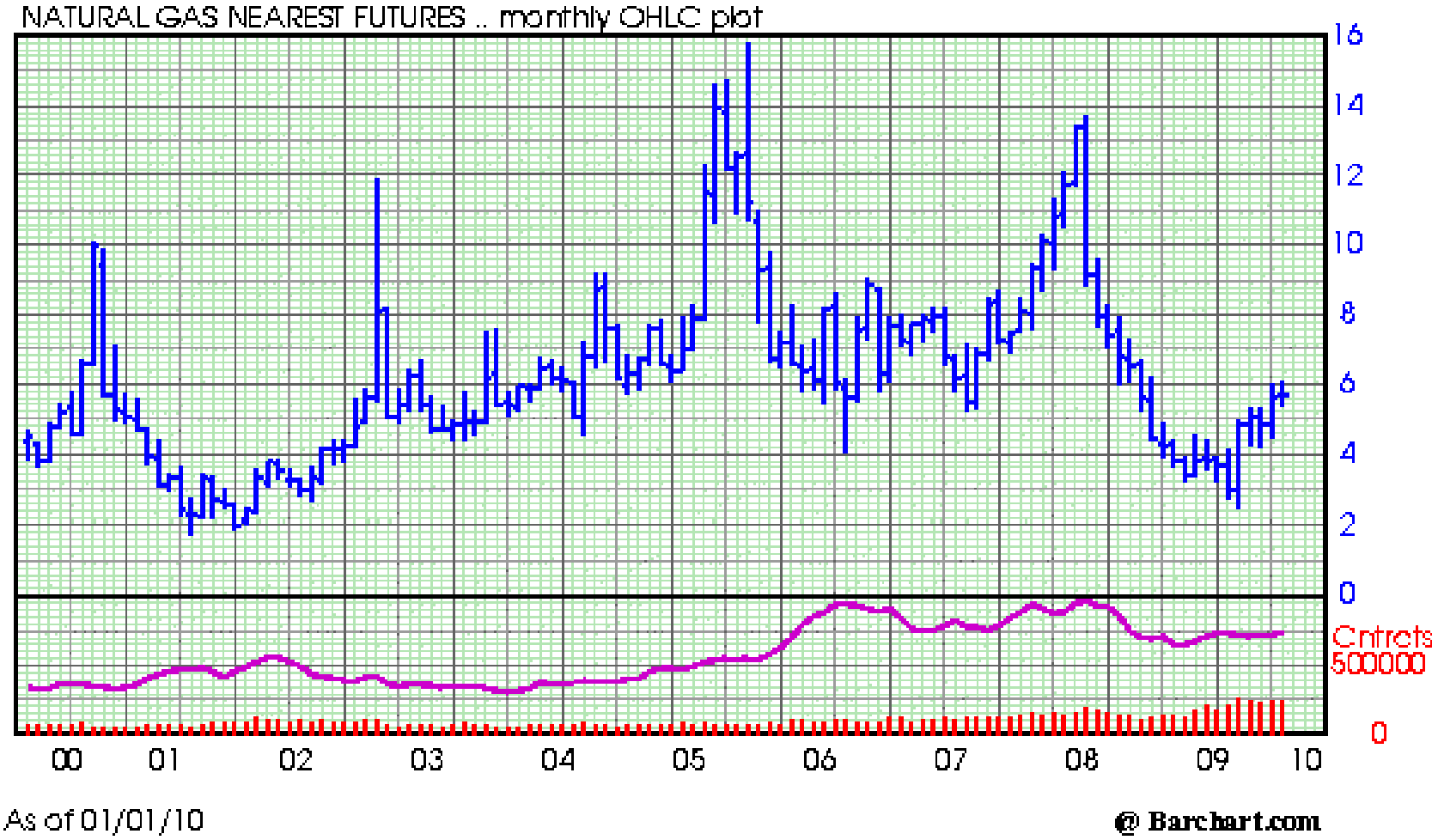
Natural Gas


NATURAL GAS NEAREST FUTURES .. monthly OHLC plot
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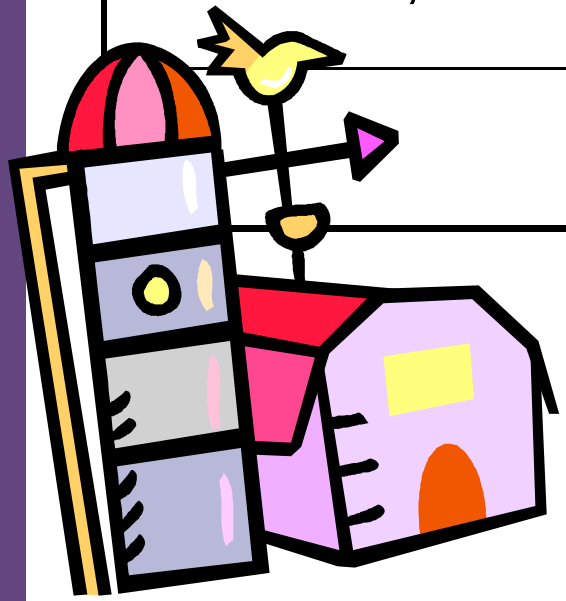
Two Sections Irrigated Corn

- Natural Gas Use
  - 1040 acres x 22 ACIN = 22,880 M
- Corn Production
  - 1040 acres x 210 bu = 218,400 bu

- *What if all the NG is contracted and half the grain is sold based on seasonals?*

Harvest vs. ½ Seasonal Sales
+
Contracting all NG

	Increase in Returns ($)
NG: 22,880 Mcf X $2.00/Mcf =	$45,760
Corn: 218,400 X .5 X .25/bu =	$27,300
Total	**$73,060**



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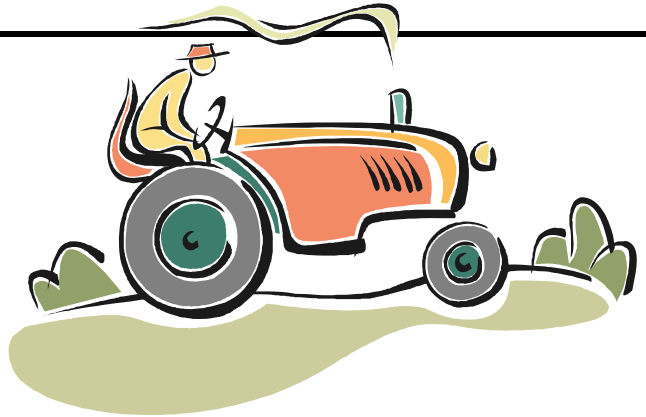
Potential Advantage of **Seasonal Pricing Per Acre**

Reduced NG Cost	$44.00
Income – ½ Harvest and ½ Seasonal	$26.25
$ Change Per Acre	**+ $70.25**



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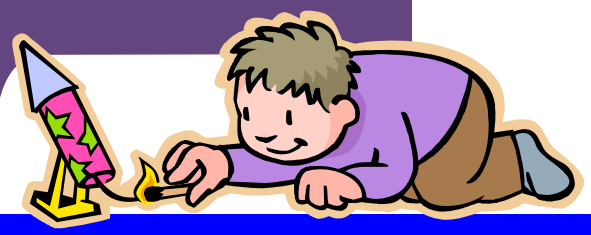
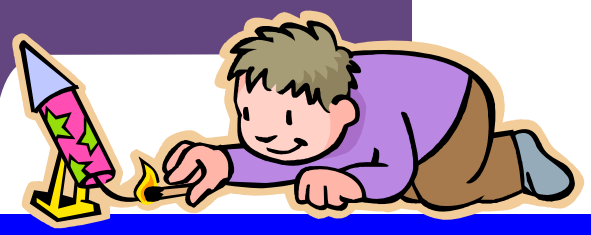


Price Seasonality
Think About It

- Corn and natural gas contracts exhibit distinct price seasonality patterns.
- The advent of biofuels production has distorted somewhat but not eliminated seasonality patterns
- Always remember patterns are averages and will not occur every year!
- You need to track prices to see if seasonal patterns are occurring as well as factor in current fundamentals in incorporating seasonal pricing.



Price Seasonality
Closing Comments

- Virtually every commodity is subject to cash and futures contract price seasonality.
- Cash seasonal variation is generally 3%-10% depending on the commodity.
- Futures seasonal price variation is often double cash volatility.
- Understanding the “events” can magnify seasonal pricing opportunities.
- Incorporating seasonal pricing into a marketing plan is not “Rocket Science” and can add 3 - 5% to a producer’s gross and ??? to his net income.

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6.

Technical Analysis

Futures Markets—Technical Analysis Continued

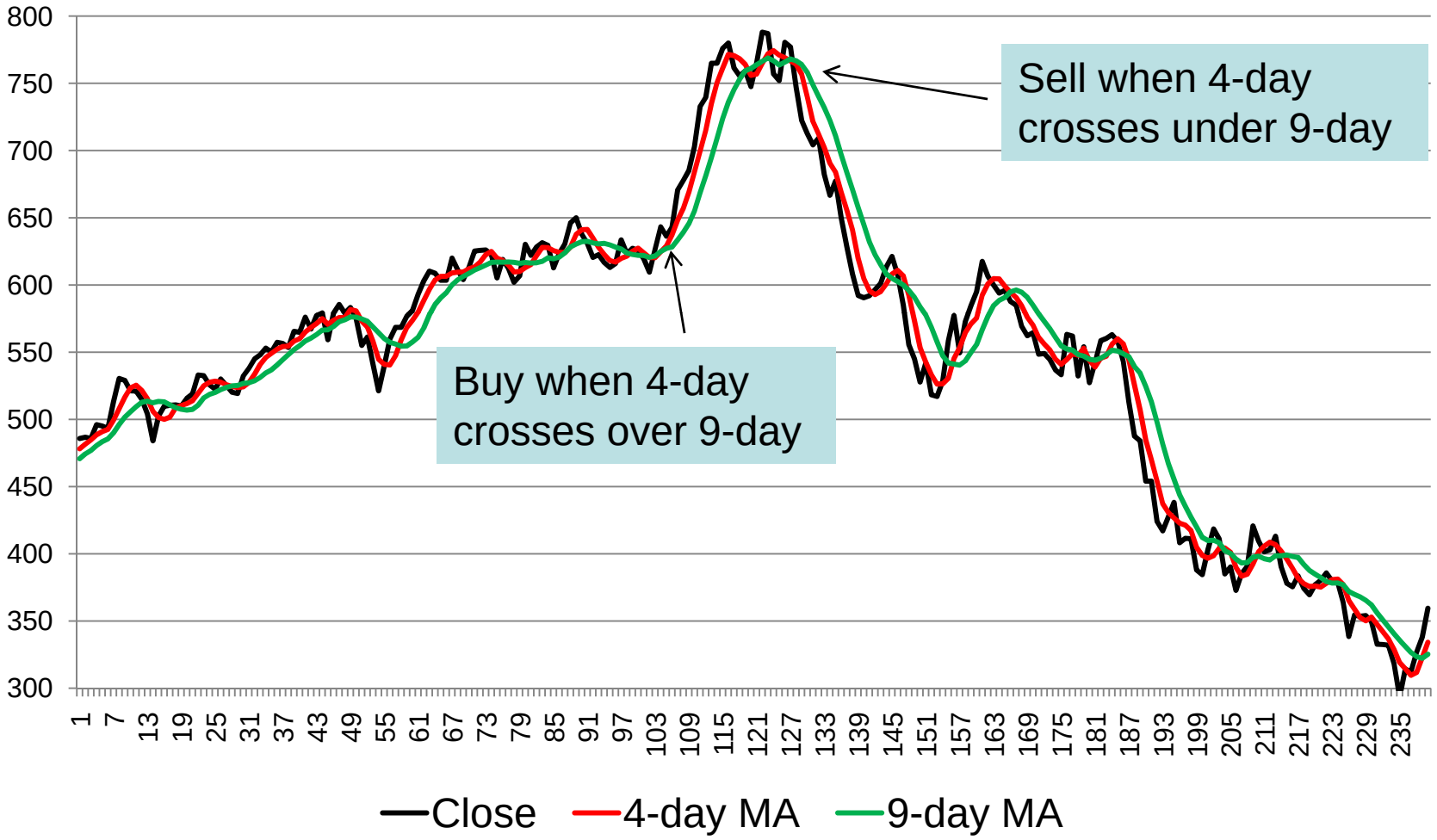
January 20, 2010

Mark Welch
Grain Marketing Economist
Texas AgriLife Extension Service

Moving Averages

- Used to monitor market trends
- A useful complement to the price chart
- For example, a 3-day moving average is the average of the last 3 daily closing prices. A 10-day is the average of the last 10 closes
- Moving average combinations are often used to identify trends with the shorter moving average leading the longer average. When the market turns, the shorter average turns more quickly and crosses the longer and slower average. This crossover action generates buy and sell signals.

Moving Averages



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Strengths and Weaknesses of using Moving Averages

Strengths

- Means to objectively identify trends; work best in major, sustained price trends
- Never without a position in the market in the event of a major price move
- Adds discipline to marketing (removes emotion)

Weaknesses

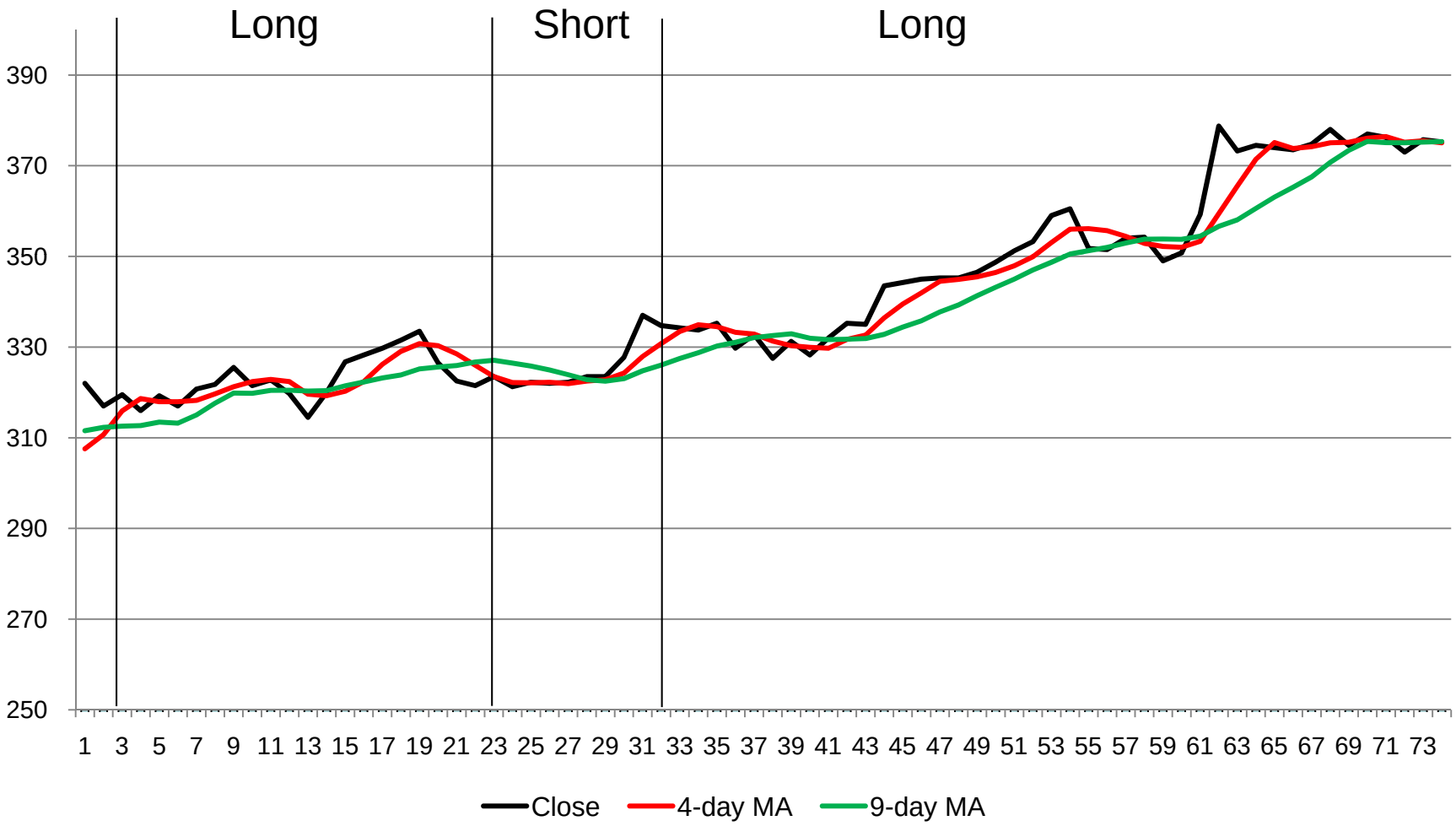
- Do not work well in choppy markets (the trader is whipsawed)
- Lags price action so that market positions are taken after the major move may be over; large percentage of profit may be lost

Modified Moving Averages

- Experiment with different lengths of averages (these vary with commodity) or add another average for confirmation
- Add a penetration rule: the trade signal is only accepted if the market moves a specified minimum amount beyond a given reference level (amount or percentage)

Modified Moving Average:

Moving average difference must be at least 1% of price or signal is ignored



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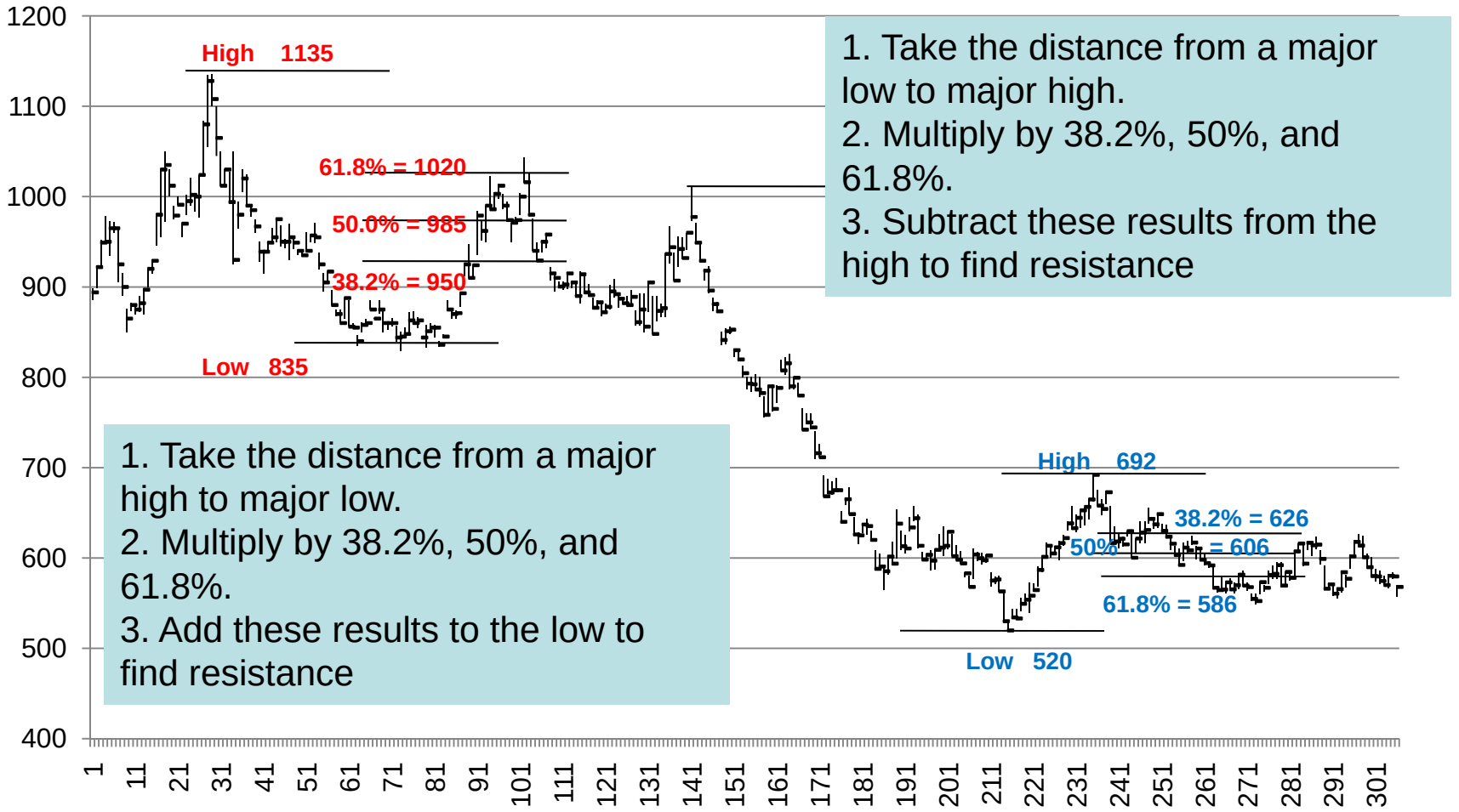
Retracements

- Markets appear to have a natural tendency to partially retrace prior price swings
- Expect price support (resistance) around these retracement levels
- Common expected retracements occur at 38.2%, 50%, and 61.8% of the recent high or low

Retracements



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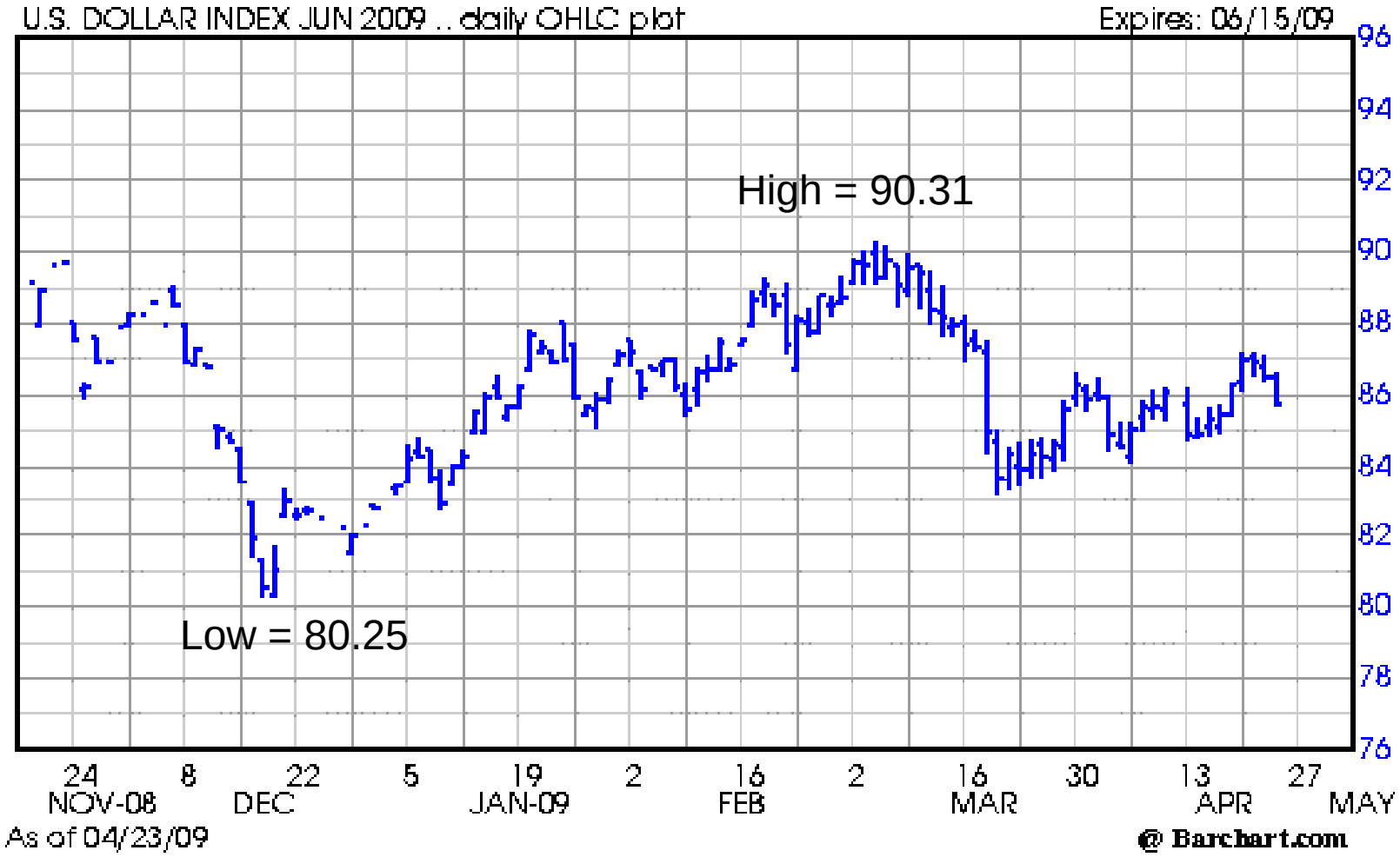
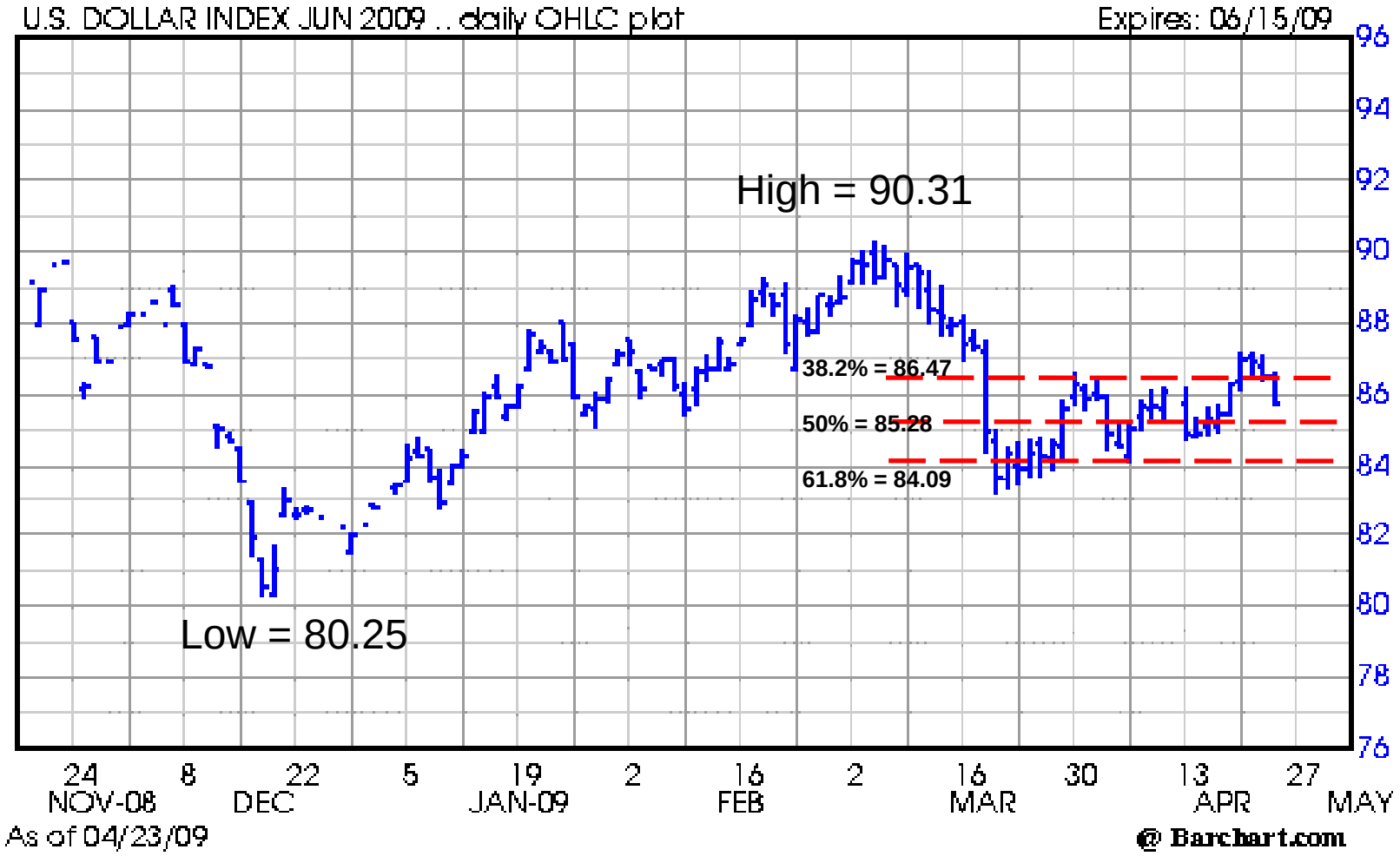
Retracements



Retracements



Parabolics

- A stop and reverse system (SAR) that is always in the market, either long or short
- The SAR point is the price when touched that triggers closing a short position and going long or closing a long position and going short

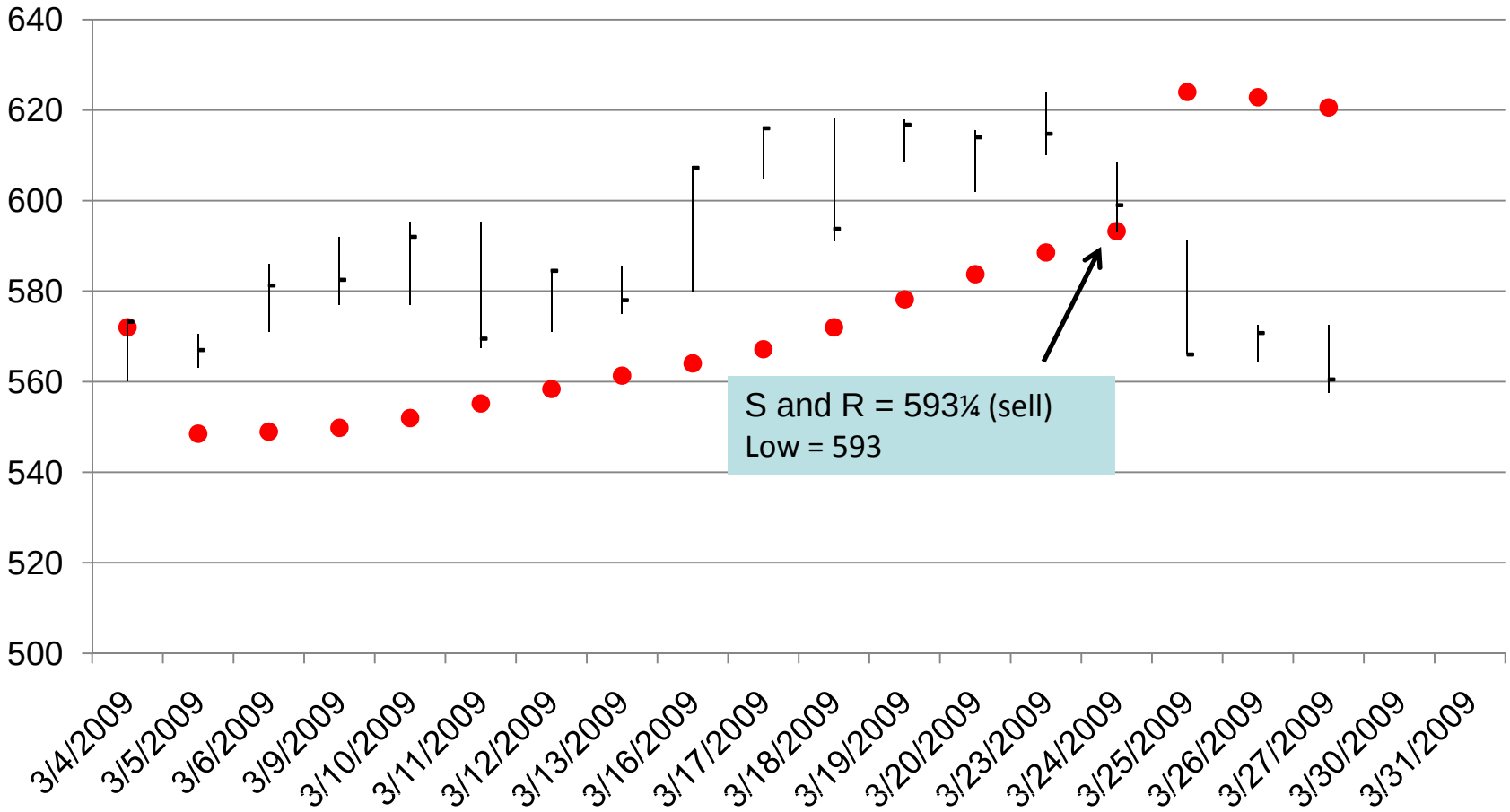
Parabolics

- Initial stops are automatically placed at the last extreme high or low
- Stops follow the market up or down using an acceleration factor, default is .02
- The basic principle is that the longer you are in a move, the more likely it is that it is over

Parabolics

- If a price is in an uptrend, the SAR moves below the price and moves upwards towards it at an increasing pace. In a downtrend, the SAR is above the price moves downwards in the same fashion
- The SAR is calculated in advance of the next day's trade so a SAR price trigger is in place ahead of trading

July Kansas City Wheat and Parabolic Stop and Reverse Prices



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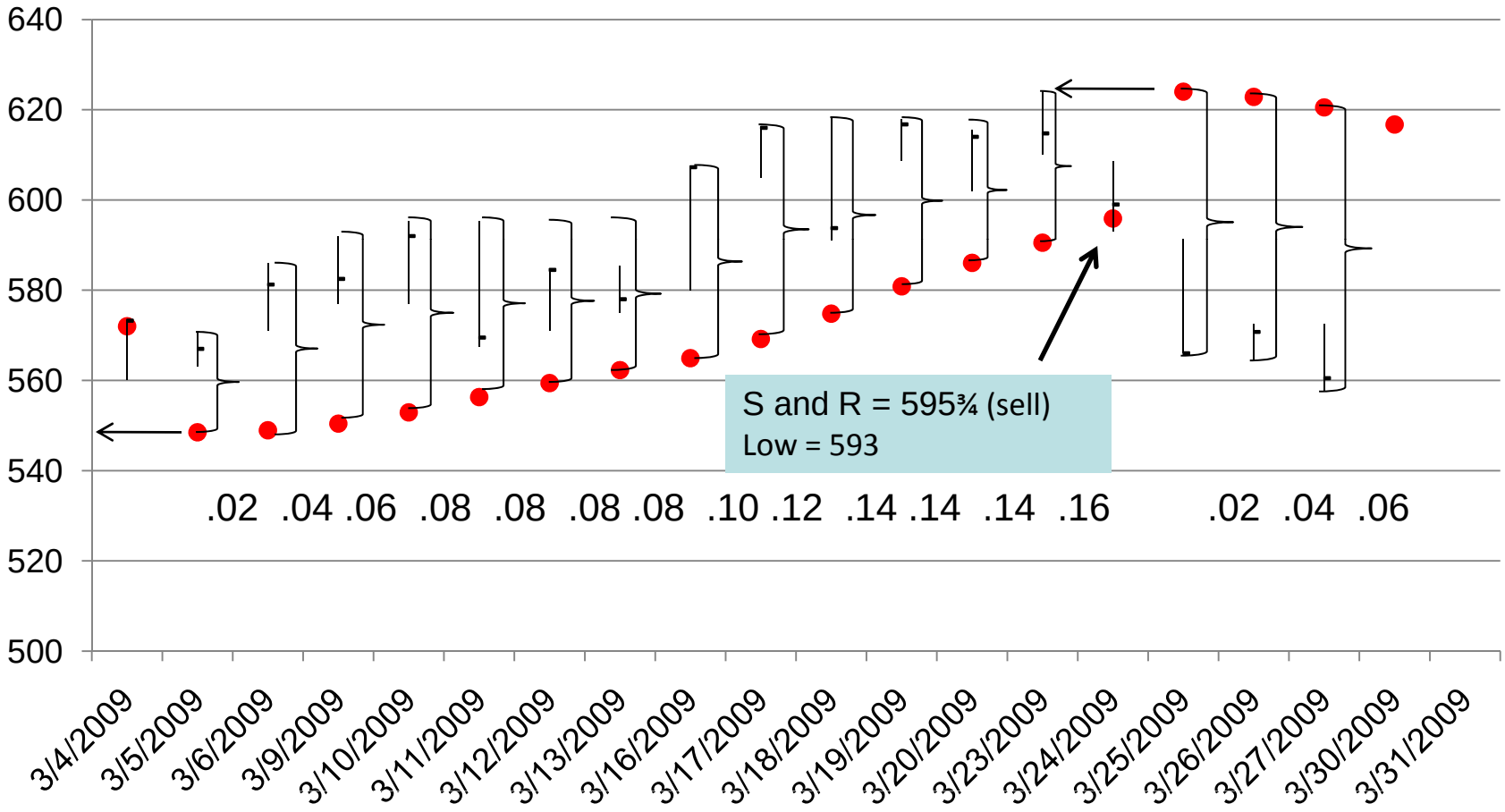
Parabolics

- Initial SAR = high or low extreme price of last trend
- SAR tomorrow = [Extreme price of current trend (high or low) minus the SAR today] times .02
- Acceleration factor increases in increments of 0.02 (up to max of 0.20) each time a new extreme point is recorded

July Kansas City Wheat and Parabolic Stop and Reverse Prices



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Parabolics

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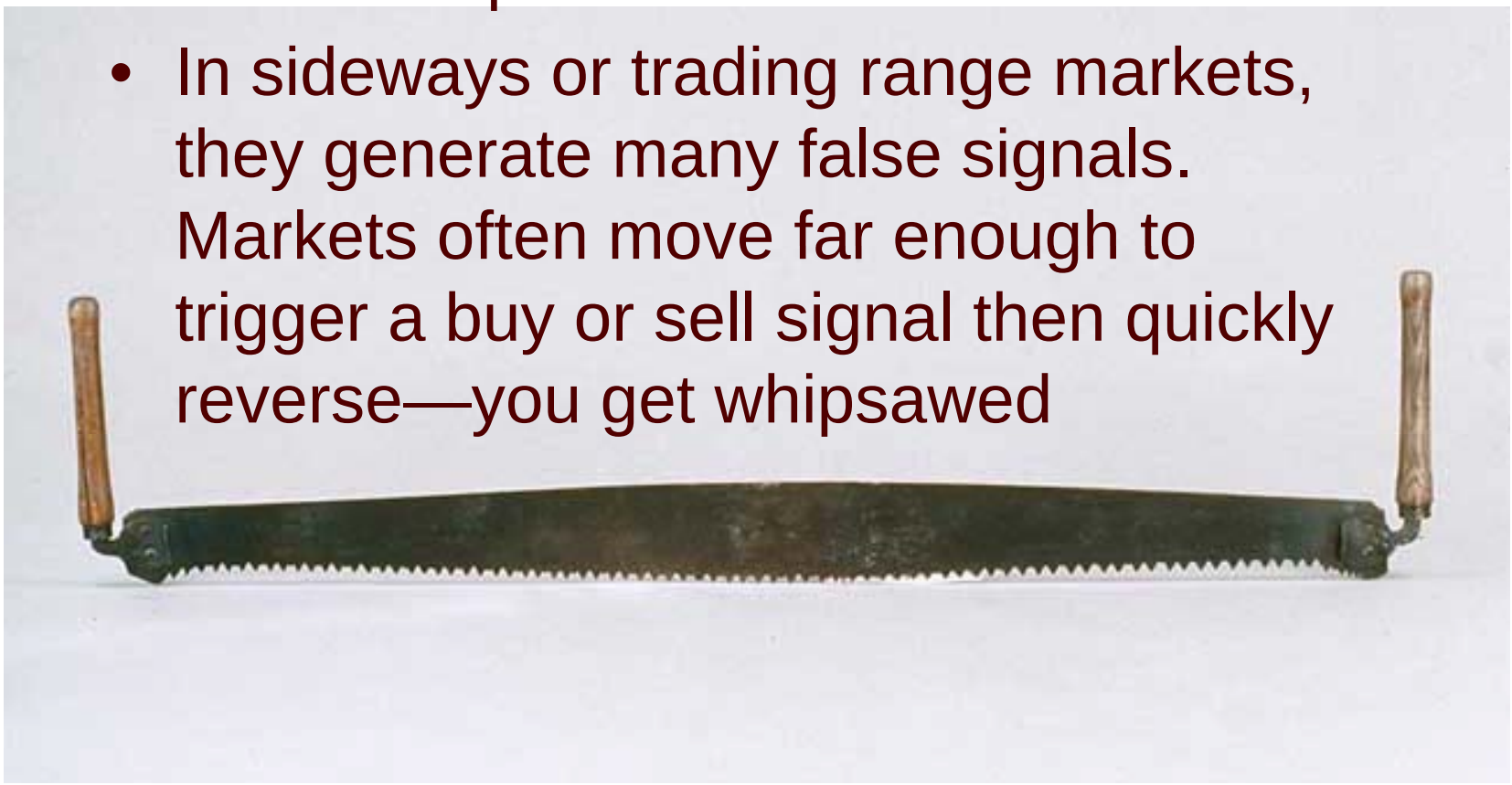
Trends

- Moving averages and parabolics work best in major trends with long sustained price moves
- In sideways or trading range markets, they generate many false signals. Markets often move far enough to trigger a buy or sell signal then quickly reverse—you get whipsawed



Oscillators

- A class of technical indicators the measure market momentum—the rate at which prices are changing
- Measures imbalance in the market, conditions referred to as ‘overbought’ or oversold’
- Based on 2 basic principles
  - Users believe a price rise or price decline can become overextended if it gains too much velocity (moves too far too fast)
  - A price trend can disintegrate due to a loss of momentum; everyone who wants to trade the trend has done so

Oscillators—Relative Strength Index (RSI)

- RSI = weighted average of daily price increases during past 14 days ÷ weighted average of price changes up and down during past 14 days
- Most charting services include the option of adding RSI to any commodity chart
- Range is 0 to 100; levels of 30 and 70 are often used as thresholds to identify overbought and oversold conditions
  - At 70, the market is moving to a level where everyone who wants to buy the market is in--overbought
  - At 30, the pool of sellers is exhausted--oversold

Calculating RSI

1. Record last 14 day to day price changes
2. Sum the absolute value of the negative and positive changes and divide each sum by 14 to create a down average (D) and an up average (U)
3. % RSI = (U)/(U+D) ×100

RSI

RSI is best used in conjunction with other technical indicators rather than just going short every time RSI is overbought or going long every time RSI is oversold. Watch for divergence between price trends and RSI trends.

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Oscillators--Stochastics

- A momentum indicator that shows the location of the current close relative to the high/low range over a set number of trading days.
- Closing levels that are consistently near the top of the range indicate accumulation (buying pressure) and closing levels consistently near the bottom of the range indicate distribution (selling pressure)

Stochastic Calculations

%K =	100 x (	$\frac{\text{Recent Close} - \text{Lowest Low (n)}}{\text{Highest High(n)} - \text{Lowest Low(n)}}$	)
%D =	3-period moving average of %K		
(n)=	Number of periods used in calculation		

Periods	High	Low	Close
1	119.50	116.00	119.13
2	119.94	116.00	116.75
3	118.44	111.63	113.50
4	114.19	110.06	111.56
5	112.81	109.63	112.25
6	113.44	109.13	110.00
7	115.81	110.38	113.50
8	117.50	114.06	117.13
9	118.44	114.81	115.63
10	116.88	113.13	114.13
11	119.00	116.19	118.81
12	119.75	117.00	117.38
13	119.13	116.88	119.13
14	119.44	114.56	115.38

%K =	100 x (	$\frac{115.38 - 109.13}{119.94 - 109.13}$	)	= 57.81

The close of 115.38 is near the midpoint of the recent range (57th percentile)

- 14 is a common number of days to use for this calculation. Periods from 5 to 20 are not uncommon.
- Since %K is a percentage or ratio, it will fall between 0 and 100.
- %D is a simple moving average of %K plotted alongside %K and acts as a trigger line as before.
- Values above 80 are considered overbought and below 20 is oversold.

Fast, Slow, and Full Stochastics

- The previous example calculated a ‘fast’ stochastic: direct calculation of %K and 3-day moving average of %K for %D.

(14,3) Fast Stochastic

- Slow Stochastic uses a 3-day MA of %K (same as %D in the fast version) for %K and %D is a 3-day moving average of that.

(14,3) Slow Stochastic

- Full Stochastic is more flexible; it allows for a different moving average to be applied to the initial %K calculation as well as to the %D calculation. For example, if you used a 14-day trading range, a 3-day moving average of %K for %K slow and a 2-day moving average of the %K moving average to figure %D, it would be a (14,3,2) full stochastic.

(14,1,3) Full = (14,3) Fast

Slow Stochastic (14,3,3)

14 day trading range, %K slow = 3-day moving average of %K raw, %D = 3-day moving average of %K slow.

Watch for divergence, not just lines crossing in critical areas. Some believe best signals are when the oscillator moves from overbought back below 80 and from oversold back above 20.

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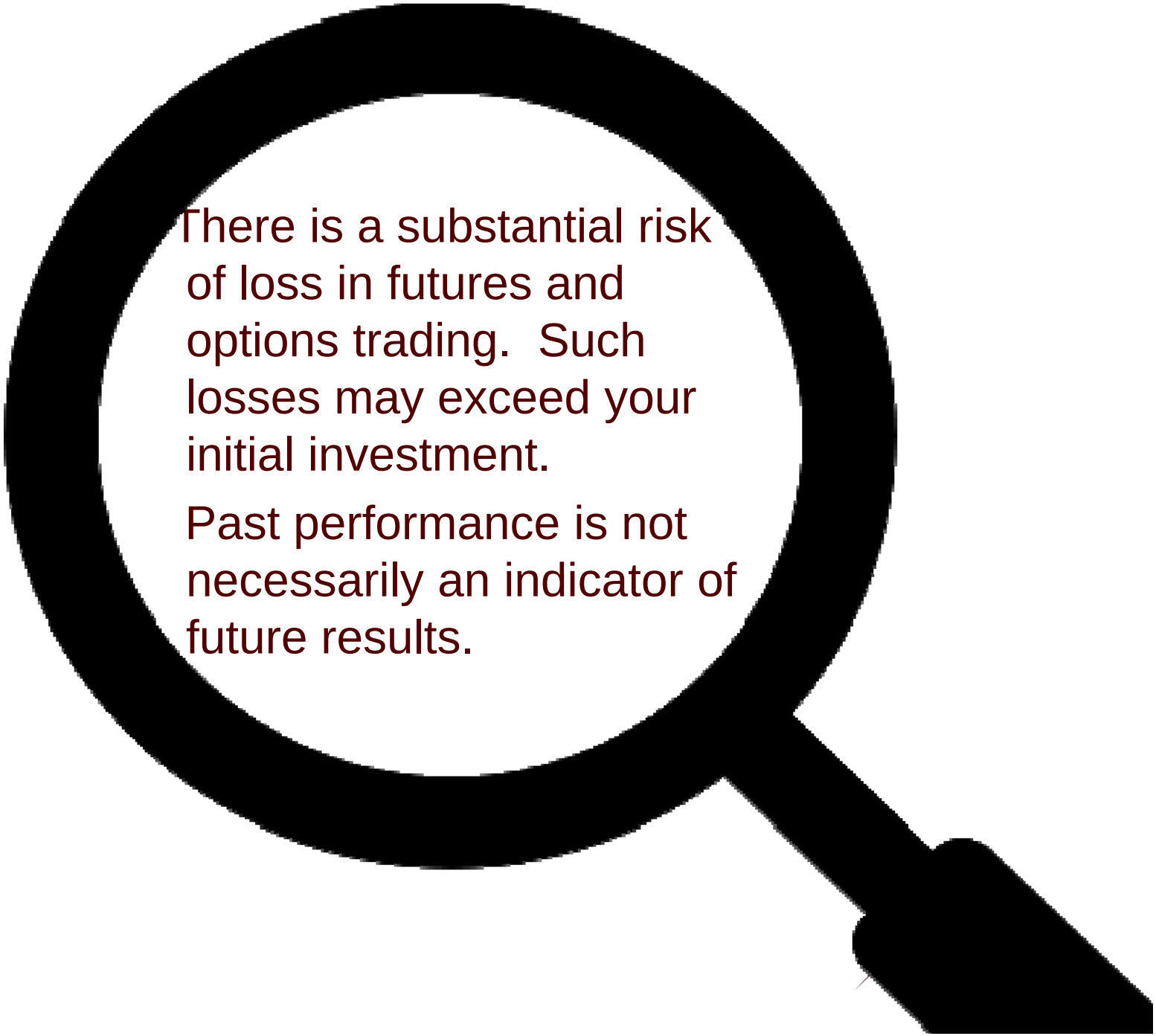
Conclusion

- Technical analysis is key to the correct timing of buy and sell decisions
- Technical dimensions do not dominate fundamentals. No sustained technical pattern will develop that is contrary to underlying supply demand balance
- *Ex post* observation makes it all look easy
- Failed chart signals are perhaps the most important chart signals
- They're 'futures' markets, not 'past' markets

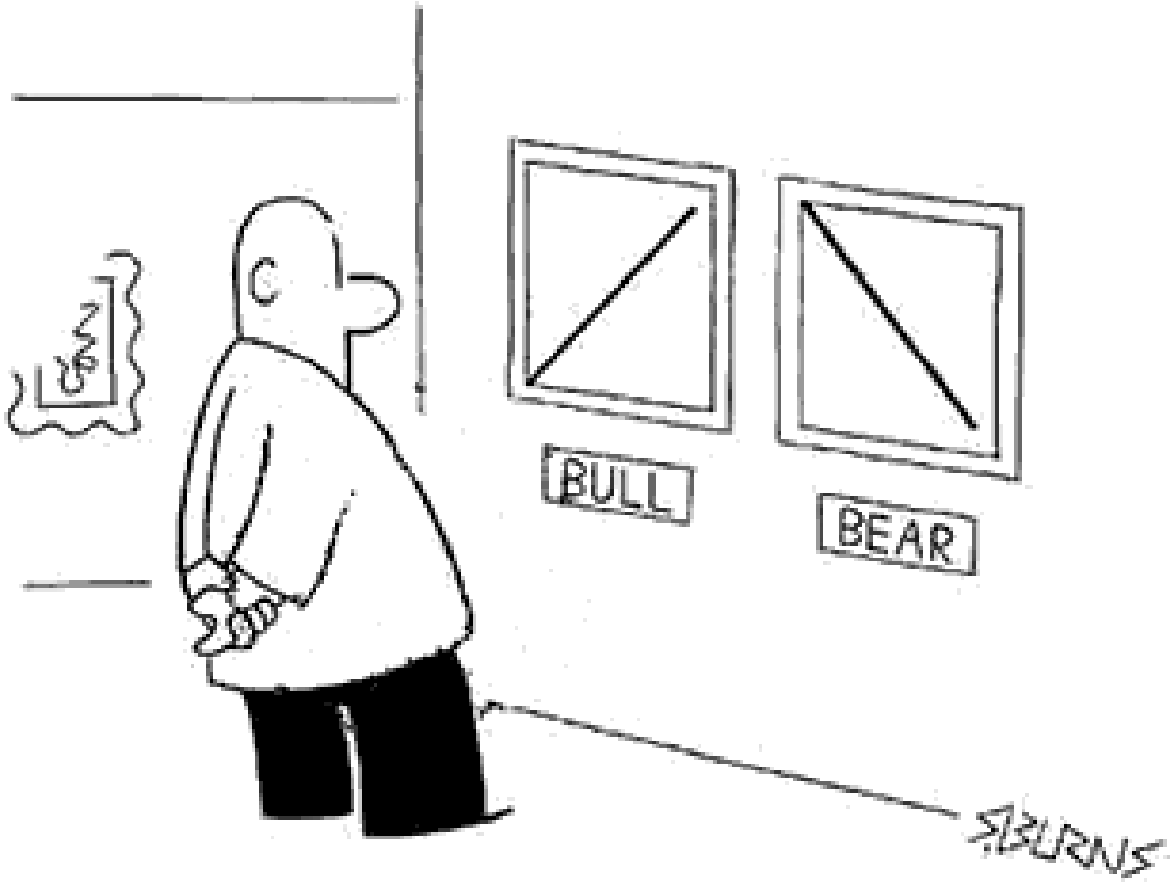
FINE PRINT


There is a substantial risk of loss in futures and options trading. Such losses may exceed your initial investment.
Past performance is not necessarily an indicator of future results.

Futures Markets—Technical Analysis

January 20, 2010

Mark Welch—Grain Marketing Economist, Texas AgriLife Extension Service



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THE WALL STREET JOURNAL.

In Both Natural Gas and Grains, Weather Is Off Traders' Screens

Thursday, June 25, 2009

"The corn and soybeans markets typically are all about weather, but weather has taken a back seat to the demand in China and elsewhere," said Charlie Notis, a founder of Freese-Notis Weather, a forecasting service.

…so-called market signals, such as investment funds' buying and implied volatility, are having a larger impact. Analysts at Société Générale give a **40% weighting to market signals**, with the remaining **60% driven by fundamentals**, including weather. In early 2008, market signals were given a 15% weighting."

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Technical Analysis

- …is the study of historical prices, usually in chart form, in order to predict future price behavior.
- Psychology > Economics
- Technical analysis is an important and complimentary approach to fundamental analysis in the study of market behavior

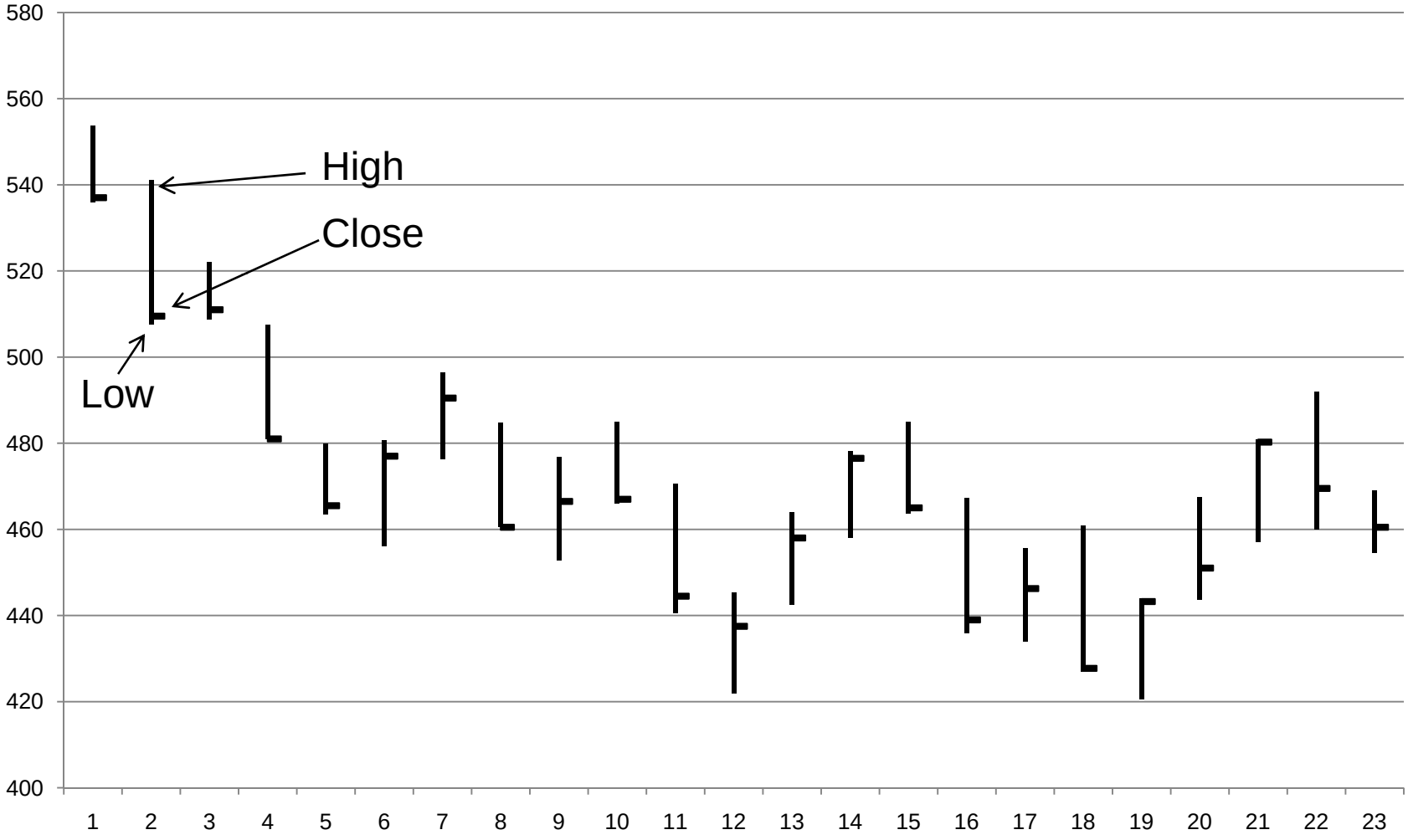
Technical Analysis

- It is the fundamental approach that establishes the probable direction of price trends and the general price range with which the markets are expected to trade.
- It is the technical dimension that guides the timing of pricing decisions within that range.

Price Information

DAY	OPEN	HIGH	LOW	CLOSE
1	543.5	553.75	536	537
2	537	541	507.5	509.5
3	509.25	522	508.75	511
4	507.5	507.5	481	481
5	469	480	463.5	465.5
6	465.5	480.75	456	477
7	488	496.5	476.25	490.5
8	484.75	484.75	460.5	460.5
9	455	476.75	452.75	466.5
10	474	485	466	467
11	466.25	470.5	440.5	444.5
12	442.25	445.25	422	437.5
13	443.5	464	442.5	458
14	458	478	458	476.5
15	478	485	463.75	465
16	465.25	467.25	436	439
17	439.75	455.5	434	446.25
18	450.75	460.75	427	427.75
19	433	444	420.5	443.25
20	444	467.5	443.75	451
21	460.75	481	457	480.25
22	479.5	492	460	469.5
23	468.5	469	454.5	460.5
24	543.5	553.75	536	537

Price Charts—the Bar Chart



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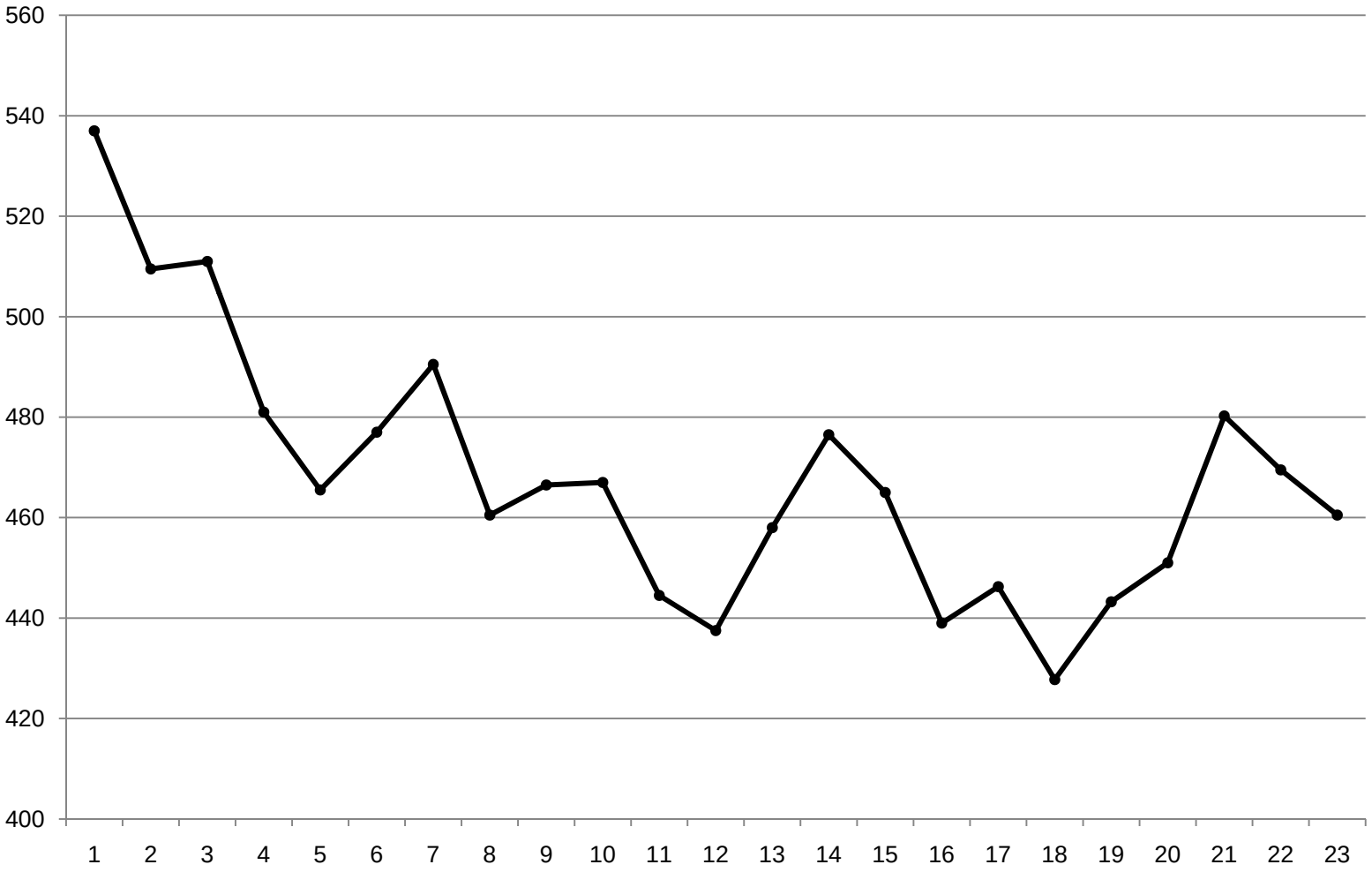
Price Charts—Close Only



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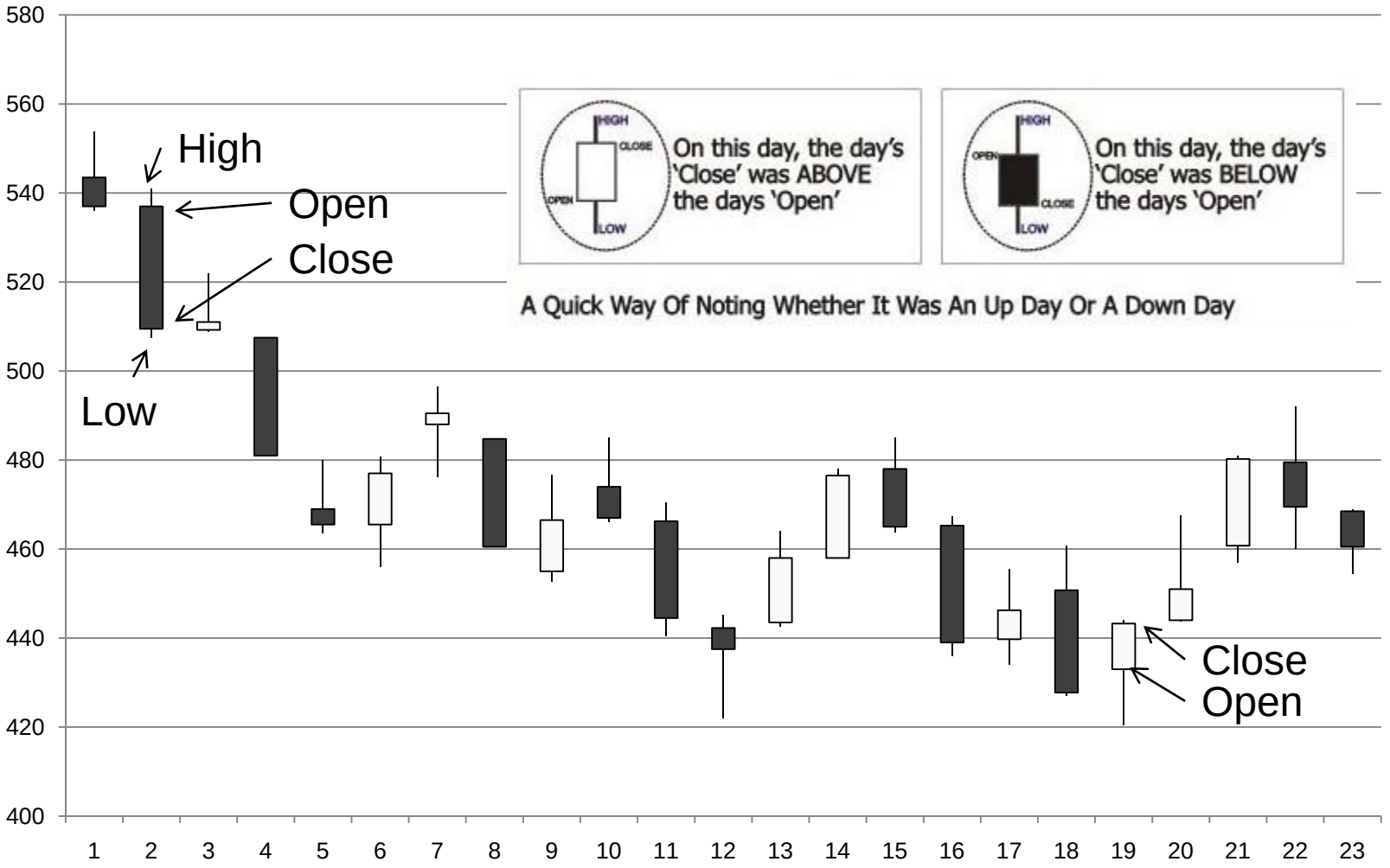
Price Charts--Candlestick



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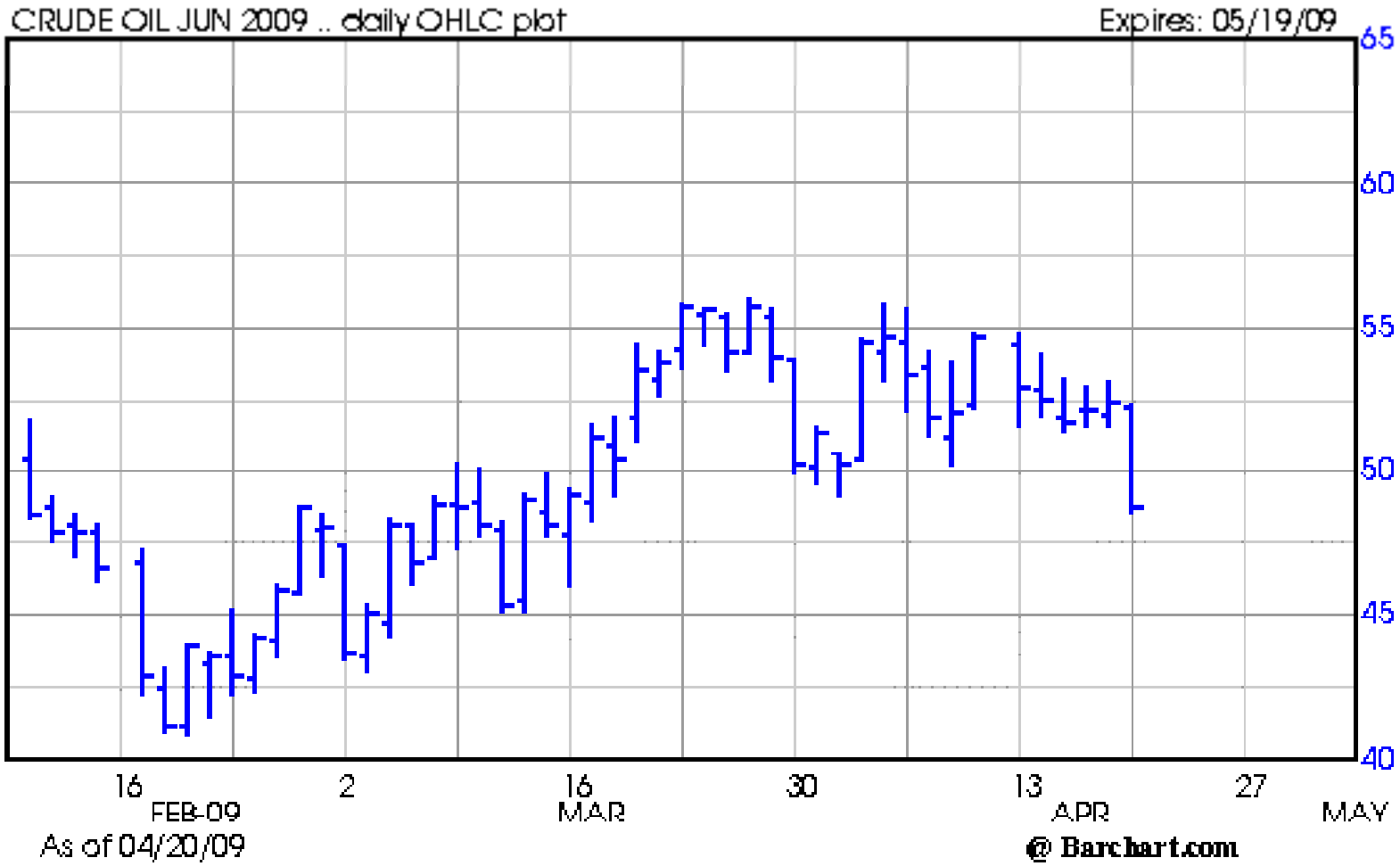
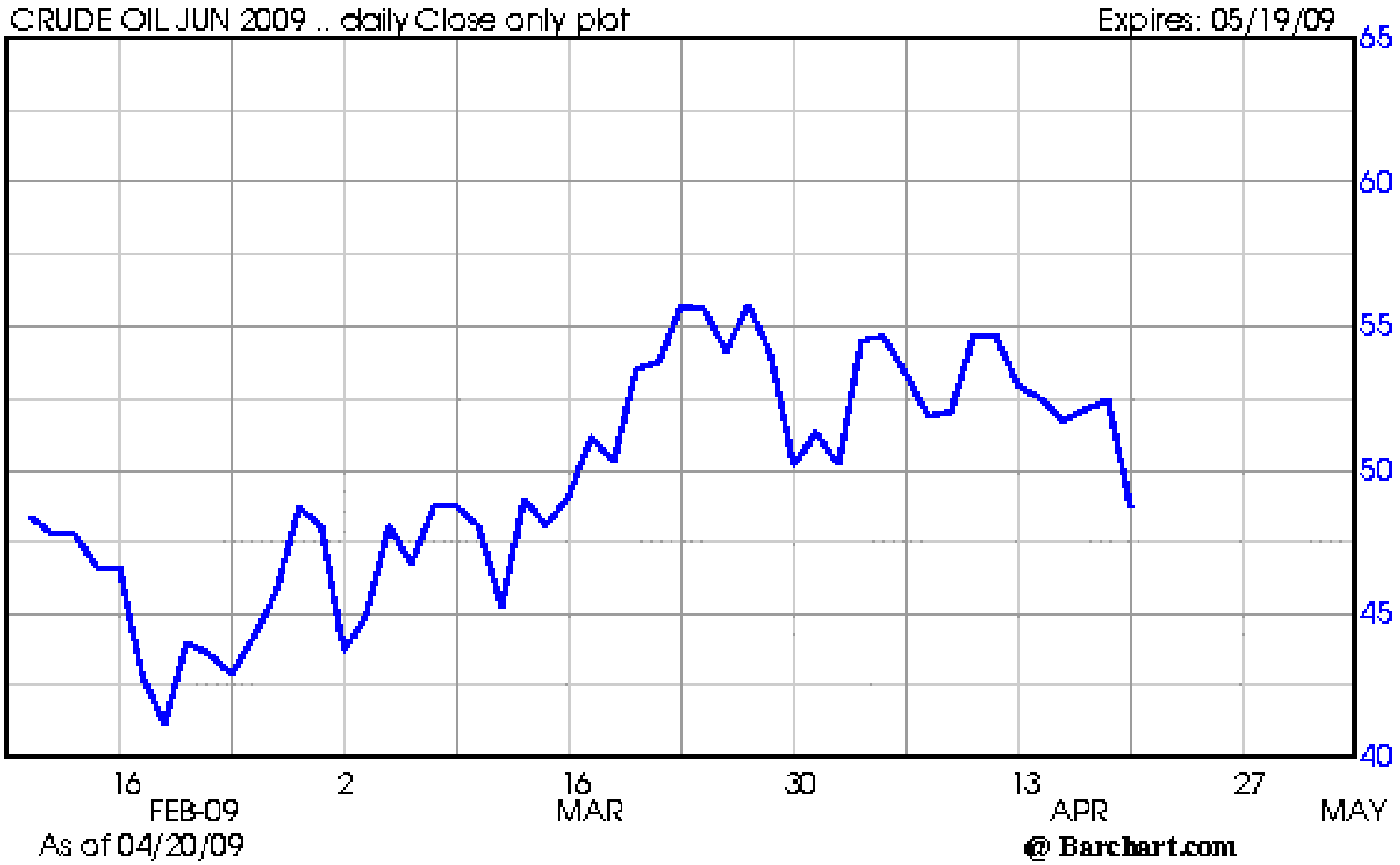
Bar Chart—Open, High, Low, Close



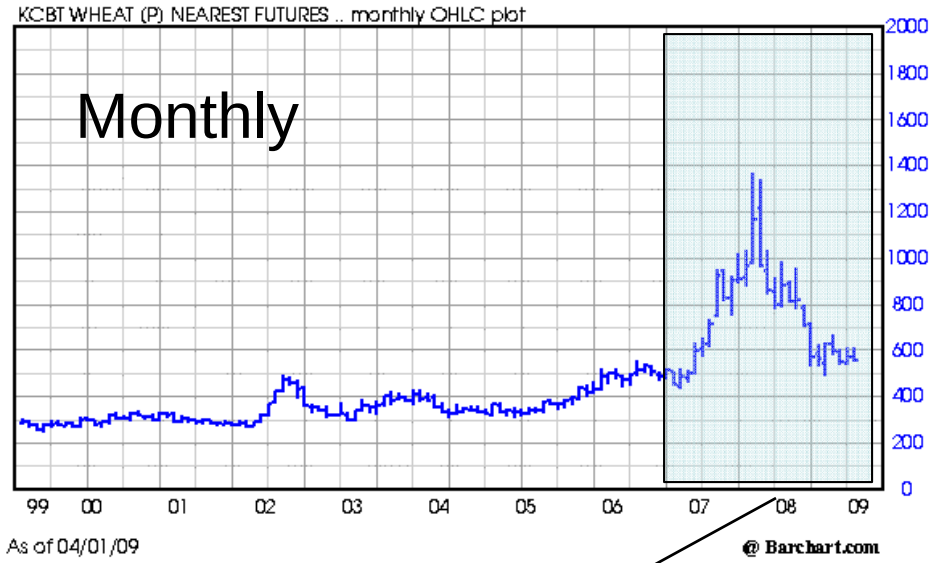
Close Only

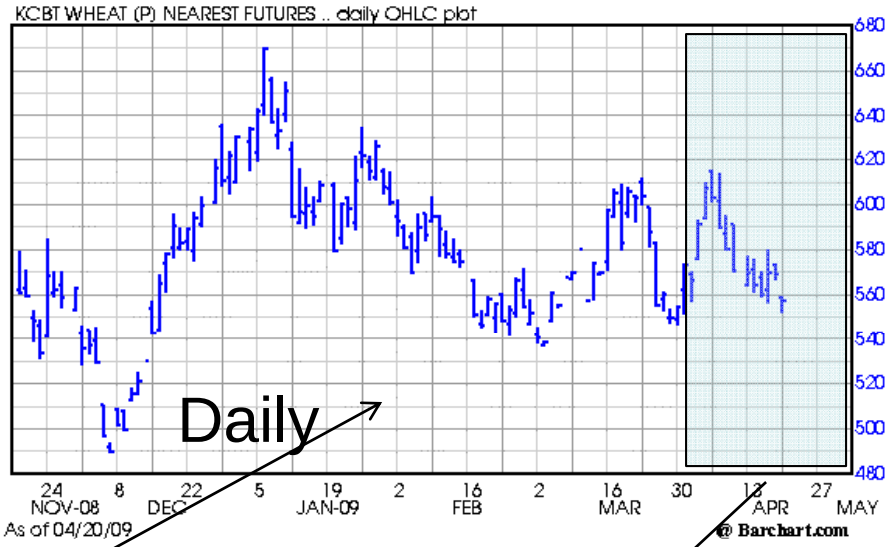


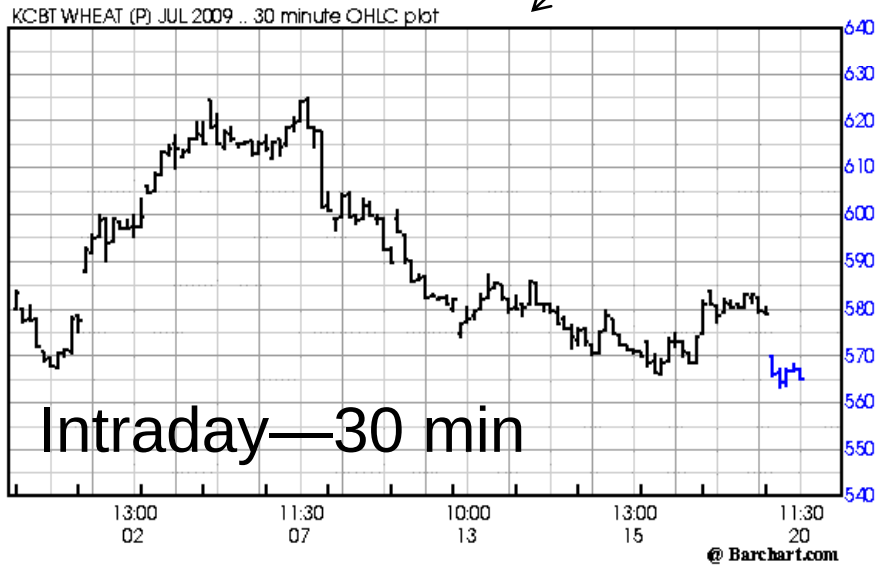
Candlestick

Charts can be created for multiple time frames

- Yearly
- Monthly
- Weekly
- Daily
- Intraday
  - Hourly
  - 30 minute
  - 15 minute
  - 5 minute







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Trend Lines

- The single most important tool in technical analysis
- Connect two or more lows in an uptrending market; two or more highs in a downtrend (preferably 10 or more days apart and not too steep)
- Close below (above) the trendline signals a change in price direction; estimated reliability ≈ 70 to 80%

Trend Lines

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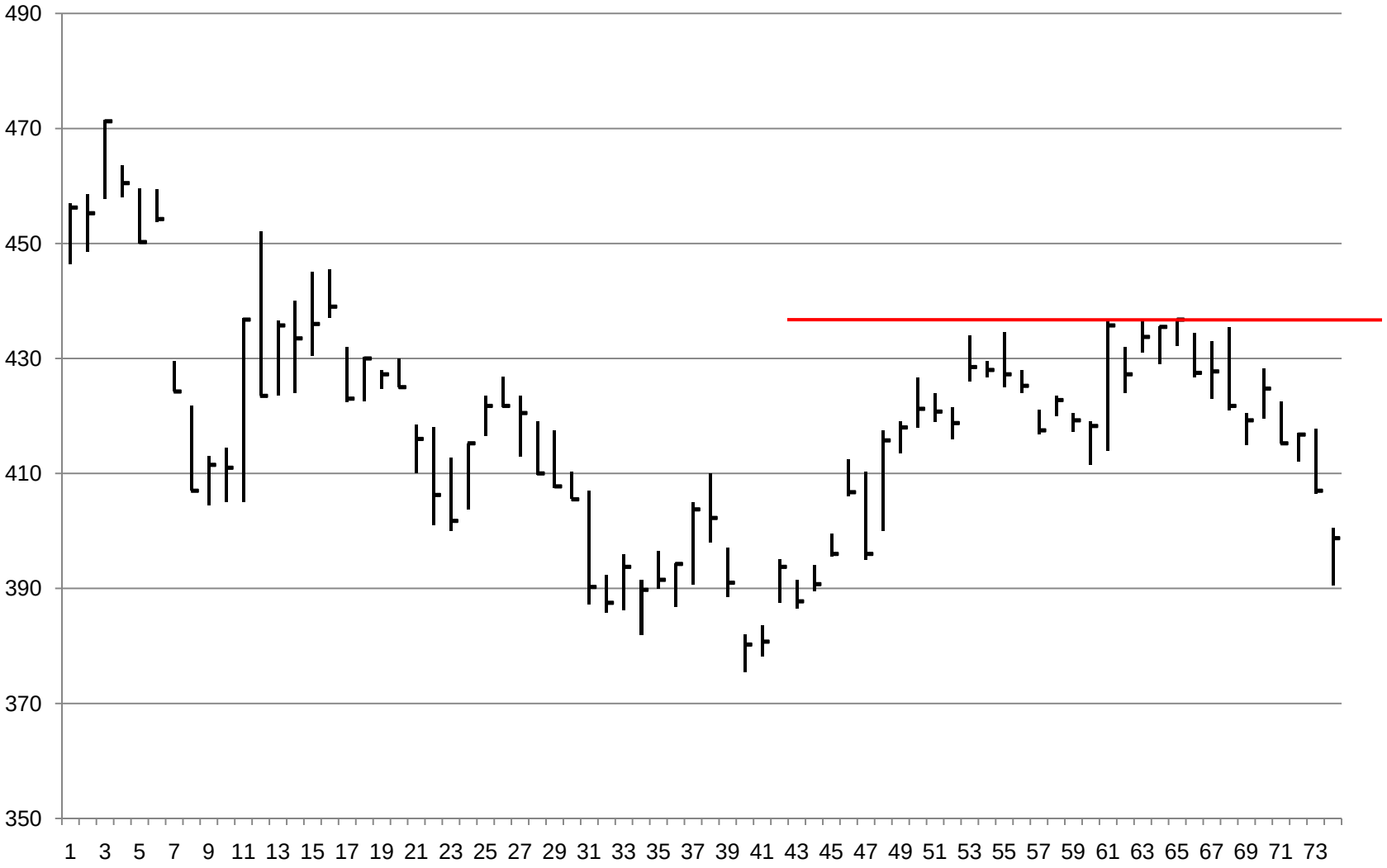
Support and Resistance Planes

- As the market rallies back toward the existing contract high (or falls to its low), it will take a significant change in consensus of the underlying supply balance to generate new contract highs (lows)
- Support—a price where the market found enough buying interest to turn prices higher
- Resistance—a price where the market found enough sellers to cause the market to decline
- You can also run out of sellers (support) or buyers (resistance)

Support and Resistance Planes



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Double Tops, Bottoms

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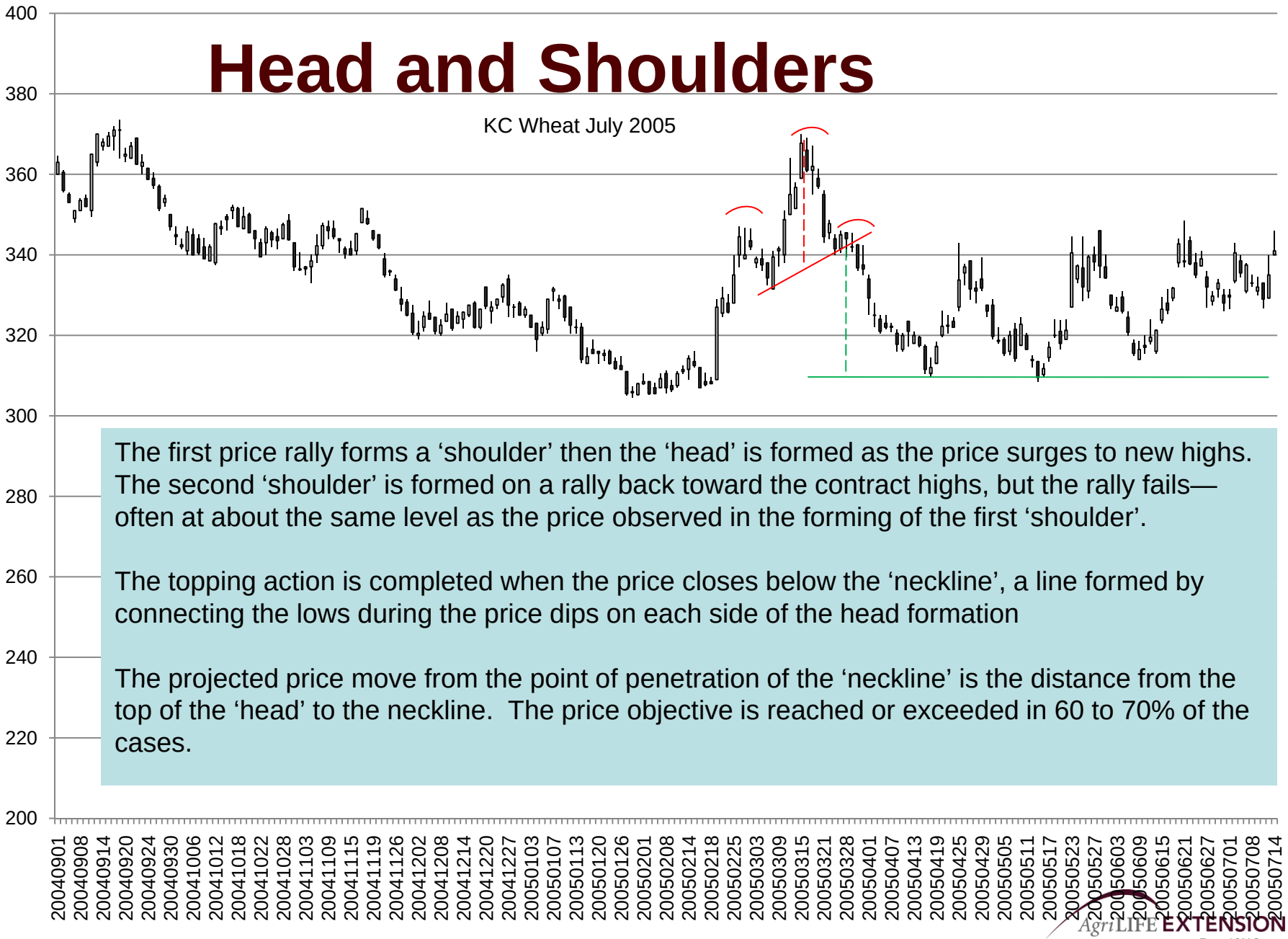
Head and Shoulders

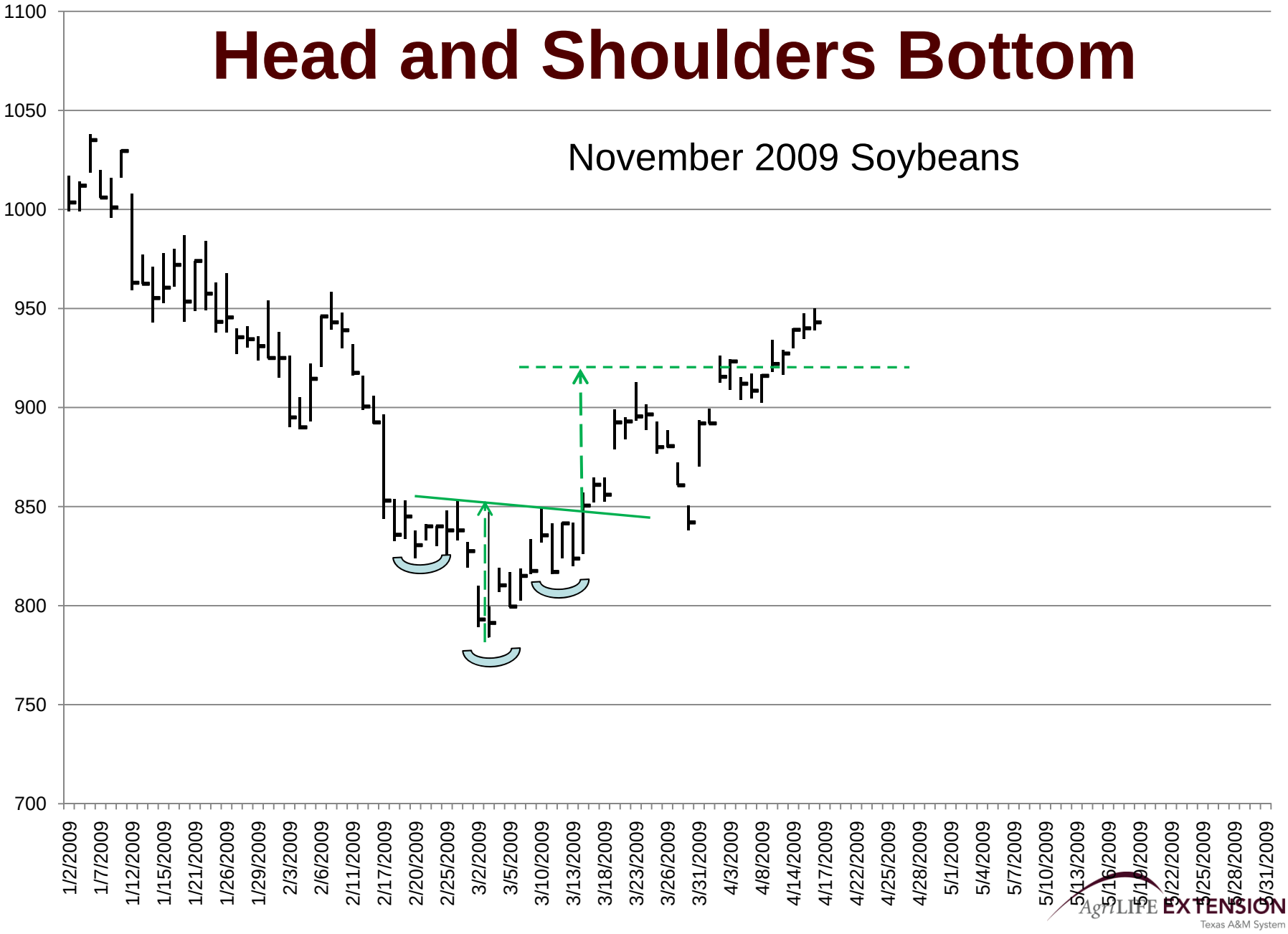


The first price rally forms a ‘shoulder’ then the ‘head’ is formed as the price surges to new highs. The second ‘shoulder’ is formed on a rally back toward the contract highs, but the rally fails—often at about the same level as the price observed in the forming of the first ‘shoulder’.

The topping action is completed when the price closes below the ‘neckline’, a line formed by connecting the lows during the price dips on each side of the head formation

The projected price move from the point of penetration of the ‘neckline’ is the distance from the top of the ‘head’ to the neckline. The price objective is reached or exceeded in 60 to 70% of the cases.

Head and Shoulders Bottom



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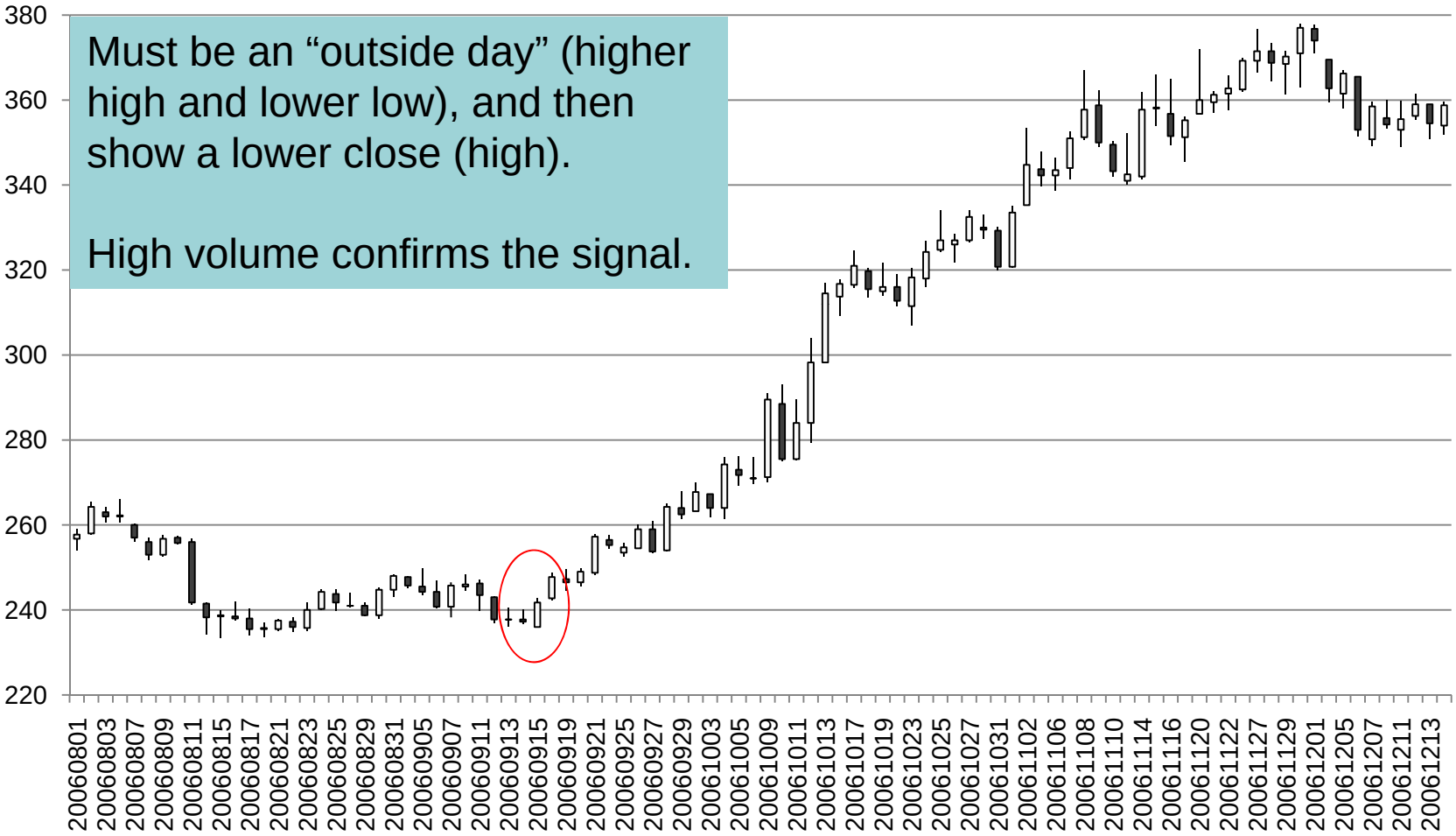
Key Reversal



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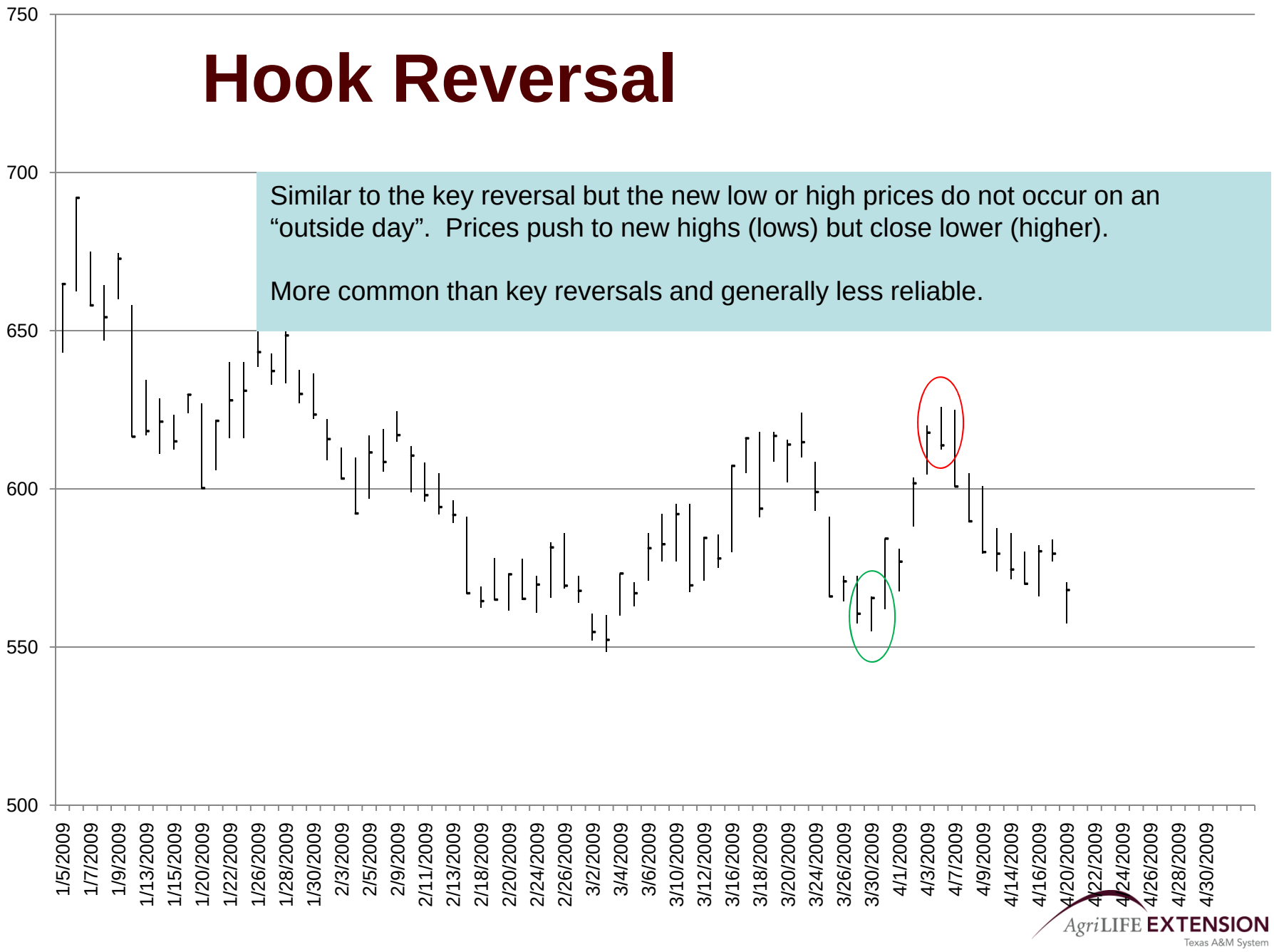
Hook Reversal



Similar to the key reversal but the new low or high prices do not occur on an "outside day". Prices push to new highs (lows) but close lower (higher).

More common than key reversals and generally less reliable.

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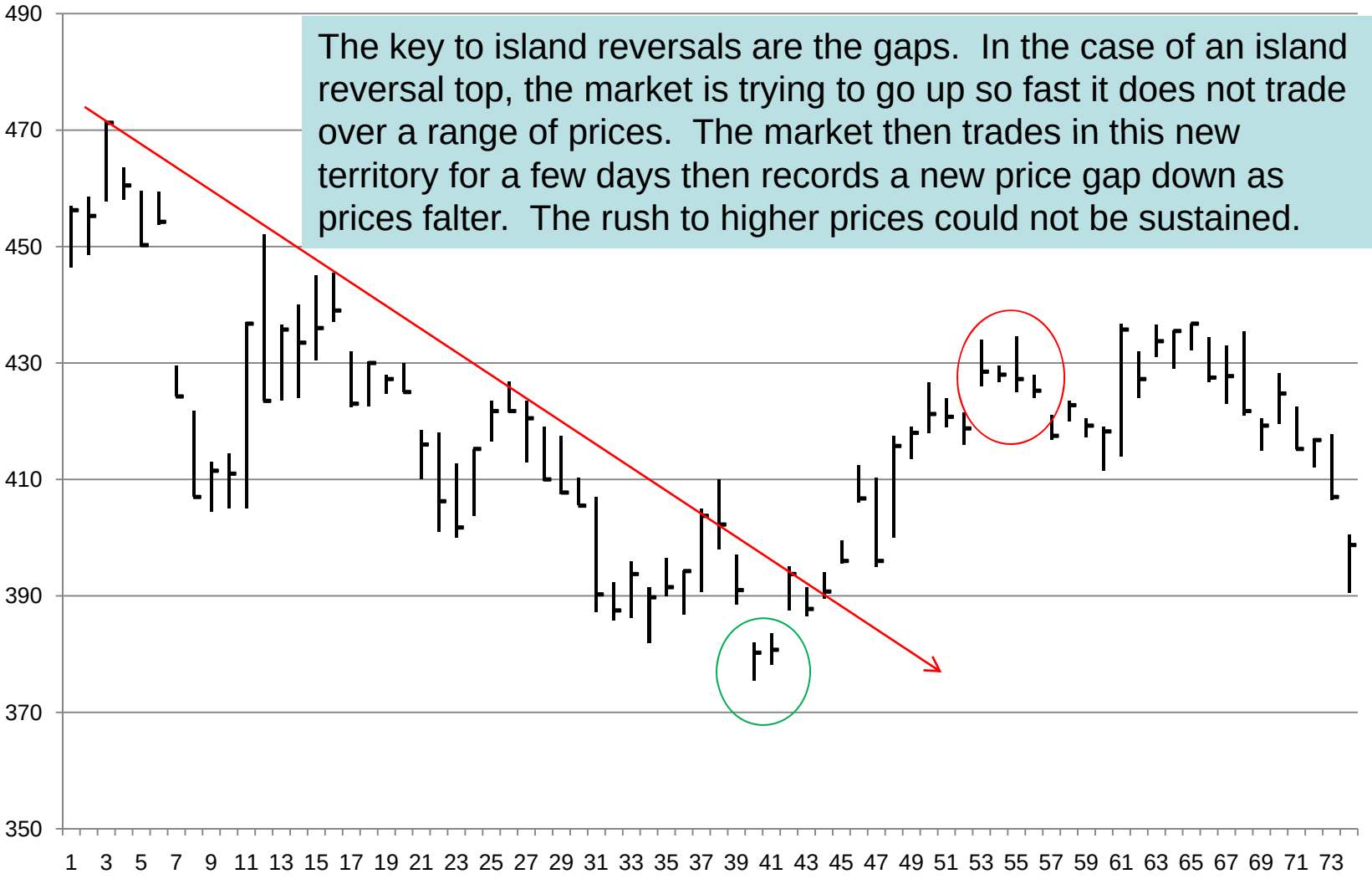
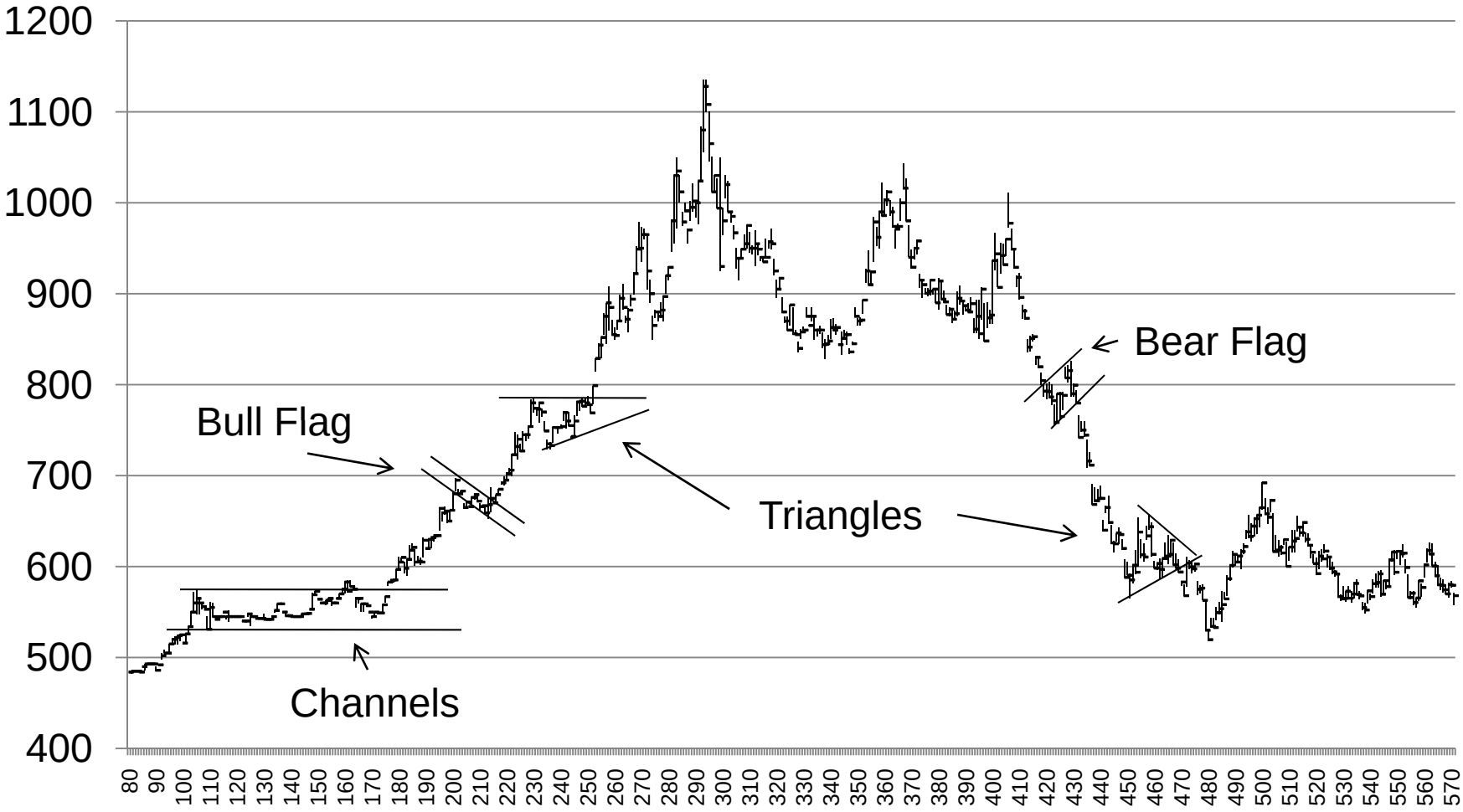
Island Reversal



The key to island reversals are the gaps. In the case of an island reversal top, the market is trying to go up so fast it does not trade over a range of prices. The market then trades in this new territory for a few days then records a new price gap down as prices falter. The rush to higher prices could not be sustained.

Consolidation Patterns (resting places)



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Gaps

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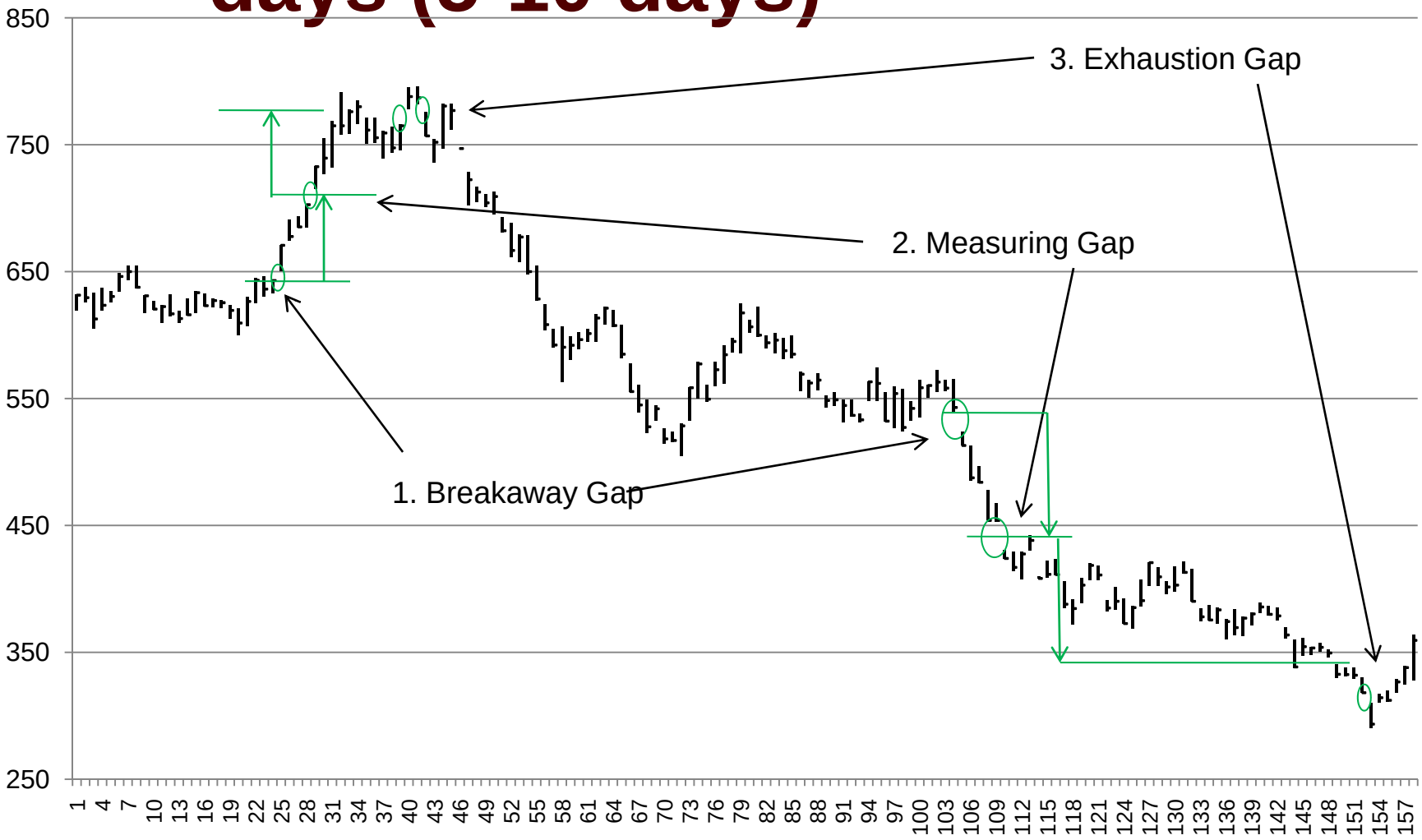
Gaps not filled within a few days (5-10 days)



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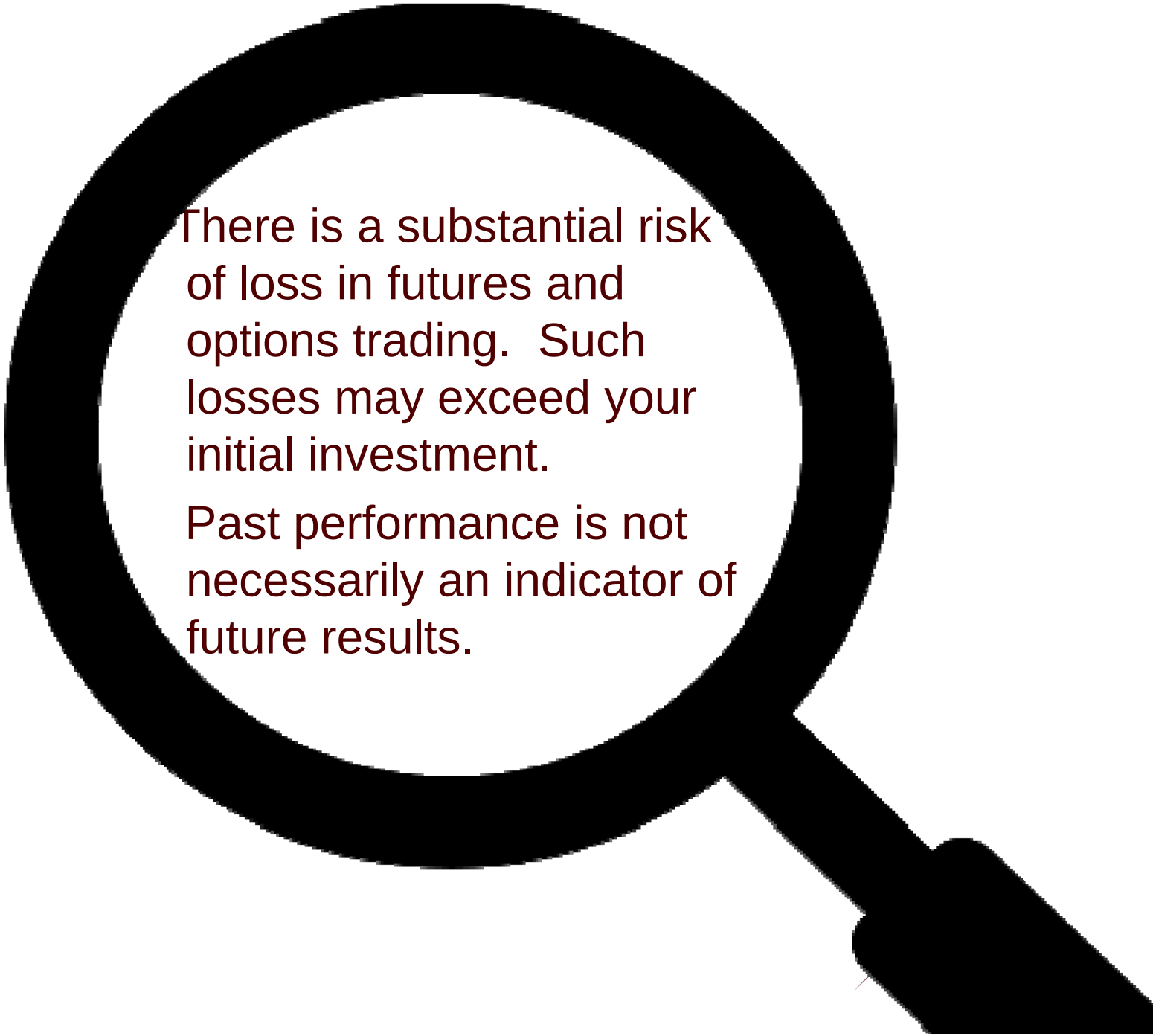
Conclusion

- *Ex post* (after the fact) observation makes it all look easy

- If it was as simple as having a degree in economics or knowing the implication of every known chart formation, there would be a lot more millionaire traders out there.

FINE PRINT


There is a substantial risk of loss in futures and options trading. Such losses may exceed your initial investment.
Past performance is not necessarily an indicator of future results.

7.

Marketing Tools & Strategies

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Marketing Tools and Strategies

Marketing Plan Seminar

Mark Welch—Grain Marketing Economist

January 20, 2010

Improving Lives. Improving Texas.

Objective

To give agricultural producers a working knowledge of basic marketing strategies that can help manage some of the price risk associated with agricultural production.

Pricing before harvest reduces price uncertainty and may improve returns

- What tools are available to manage market risk?
- How do these tools protect me as prices change?

Basics of Marketing

- Self-appraisal
  - Goals
  - Attitudes towards risk
  - Financial Resources
- Develop a Plan
- Gauge the Results

Importance of Price Risk Management

- The individual producer is a price taker with no power to influence the price on any given day
- Can control when to establish a price—select when the market price is “good enough”
- Manage market opportunities

Marketing Strategies

1. Do Nothing
   - Cash sales at harvest
2. Fix Price Now
   - Cash forward contract
   - Hedge
3. Set a Price Floor
   - Options

1. Do Nothing

- If you do no pre-harvest pricing you are a speculator in the cash market
- You accept all the price risk between now and whenever you decide to sell

2. Fix Price Now—Cash Contract

- Private negotiation in which the farmer and the merchant agree now upon a price of a commodity to be delivered in the future
- Advantages
  - Farmer and merchant lock in a price ahead of time
  - Helps eliminate the uncertainty caused by price fluctuations

2. Fix Price Now—Cash Contract

- Disadvantages
  - It didn't eliminate the risk that the merchant might default on the agreement.
  - Similarly, farmers could default in the delivery if prices had gone up substantially.
  - It didn't solve all the unforeseen price changes related to product delivery (such as quality, measurement, and timing, etc.)
  - Locked in to a set delivery point

2. Fix Price Now—Futures Contract

- A standardized agreement (legally binding) to buy or sell a commodity specifying quantity, quality, maturity date, and delivery (place and time)
- The only non-established variable is price

Which Marketing Strategy is Best?

Cash

- Advantages
  - No margin calls
  - Locks in the basis
- Disadvantages
  - Must deliver physical commodity
  - Must deliver to a specific location

Futures

- Advantages
  - Not forced to deliver physical commodity
  - Not tied to a specific delivery location
- Disadvantages
  - Margin calls
  - Still have basis risk

Problem 1

- You are a corn producer. It is May 1 and your crop is up and doing good. You think current high prices will not last and will decline before harvest.
- December corn futures are trading at $4.23. You can forward contract at your local elevator for $4.38. The local basis for harvest is usually +$0.20.
- Should you forward contract or hedge?
- What will be your expected price?

Problem 1

- Because basis is weak, you decide to hedge (0.15<0.20)
- Sell in the futures market the number of contracts equal to the amount of corn you want to hedge
- Lock in a price of $4.43 if the basis is normal

Expected Price = Futures plus Basis

Expected Price = $4.23 + $0.20 = $4.43

Problem 1: Price Declines

	Cash Market	Futures Market	Basis
May 1	Harvest bid of $4.38	Sell Dec Corn at $4.23	+0.15
November	Sell cash corn at $3.75	Buy Dec Corn at $3.55	+0.20
Change	$0.63/bu loss	$0.68/bu gain	+0.05
Cash price when corn is sold	$3.75		
Gain on futures position	$0.68		
Net sales price	$4.43		

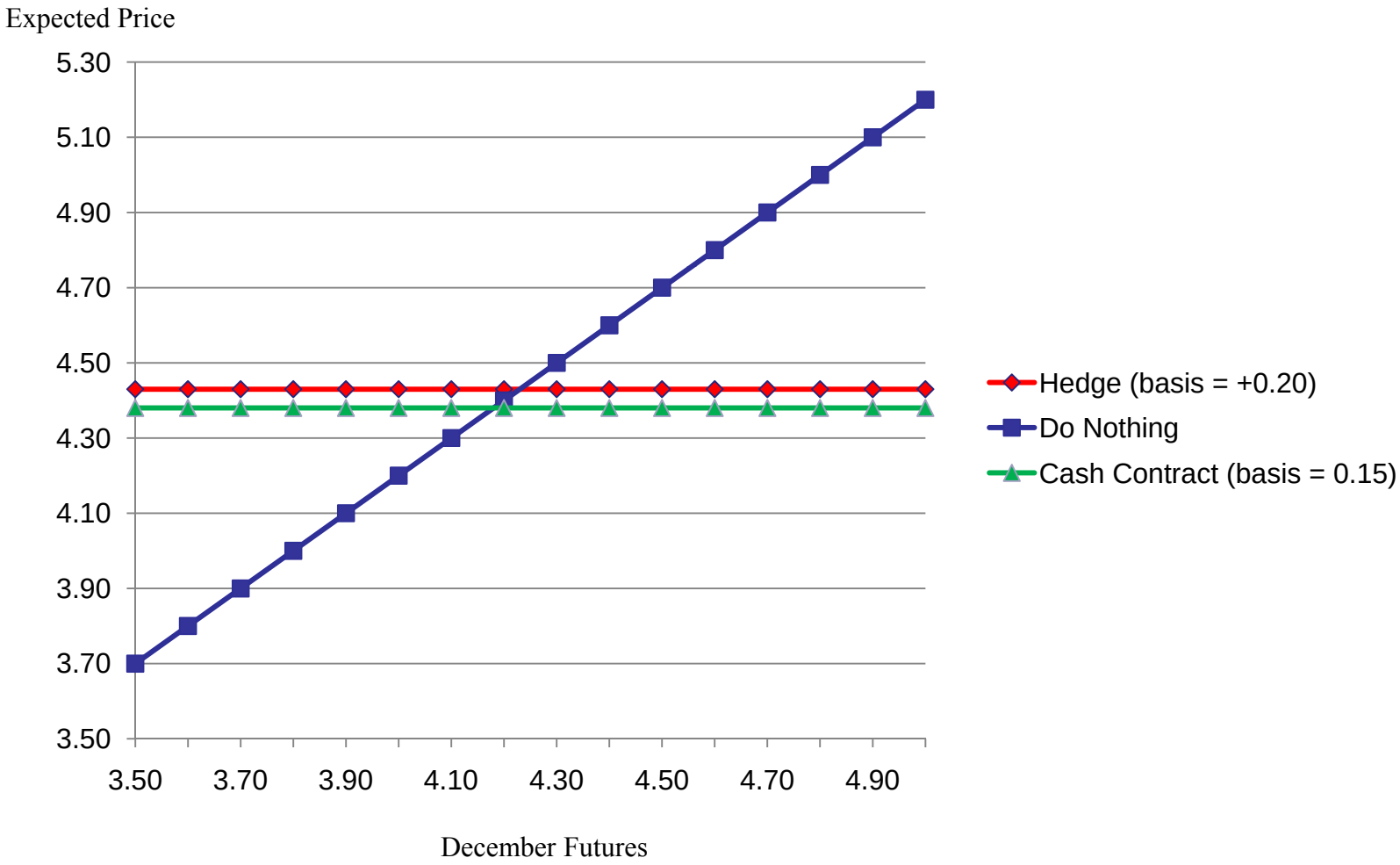
Problem 1: Price Goes Up

	Cash Market	Futures Market	Basis
May 1	Harvest bid of $4.38	Sell Dec Corn at $4.23	+0.15
November	Sell cash corn at $4.70	Buy Dec Corn at $4.50	+0.20
Change	$0.32/bu gain	$0.27/bu loss	+0.05
Cash price when corn is sold	$4.70		
Loss on futures position	$0.27		
Net sales price	$4.43		

Problem 1: Price Declines, Basis Weakens

	Cash Market	Futures Market	Basis
May 1	Harvest bid of $4.38	Sell Dec Corn at $4.23	+0.15
November	Sell cash corn at $3.65	Buy Dec Corn at $3.55	+0.10
Change	$0.73/bu loss	$0.68/bu gain	-0.05
Cash price when corn is sold	$3.65		
Gain on futures position	$0.68		
Net sales price	$4.33		

Problem 1



Trading Strategies Involving Options

Factors to be Considered when Buying Options

- Buyer must decide strike price/premium
- Buyer must decide whether or not to exercise

Sorghum Example

- Situation:
  - You are a sorghum producer who wants protection in case prices fall by harvest
- Strategy:
  - Buy a December put option

Determine Expected Selling Price; December Corn is trading at $4.17 per bushel

Strike Prices	Put Premiums
4.20	0.60
4.10	0.50
4.00	0.44
3.90	0.41
3.80	0.33
3.70	0.28

Determine Expected Selling Price

Select Appropriate Futures Contract Month	December		
Select Appropriate type of Option	Buy Put (right to sell)		
Calculate Minimum Selling Price			
Strike price	4.20	4.00	3.80
Subtract premium	- 0.60	- 0.44	- 0.33
Adjust for basis	- 0.60	- 0.60	- 0.60
Minimum price	3.00	2.96	2.87

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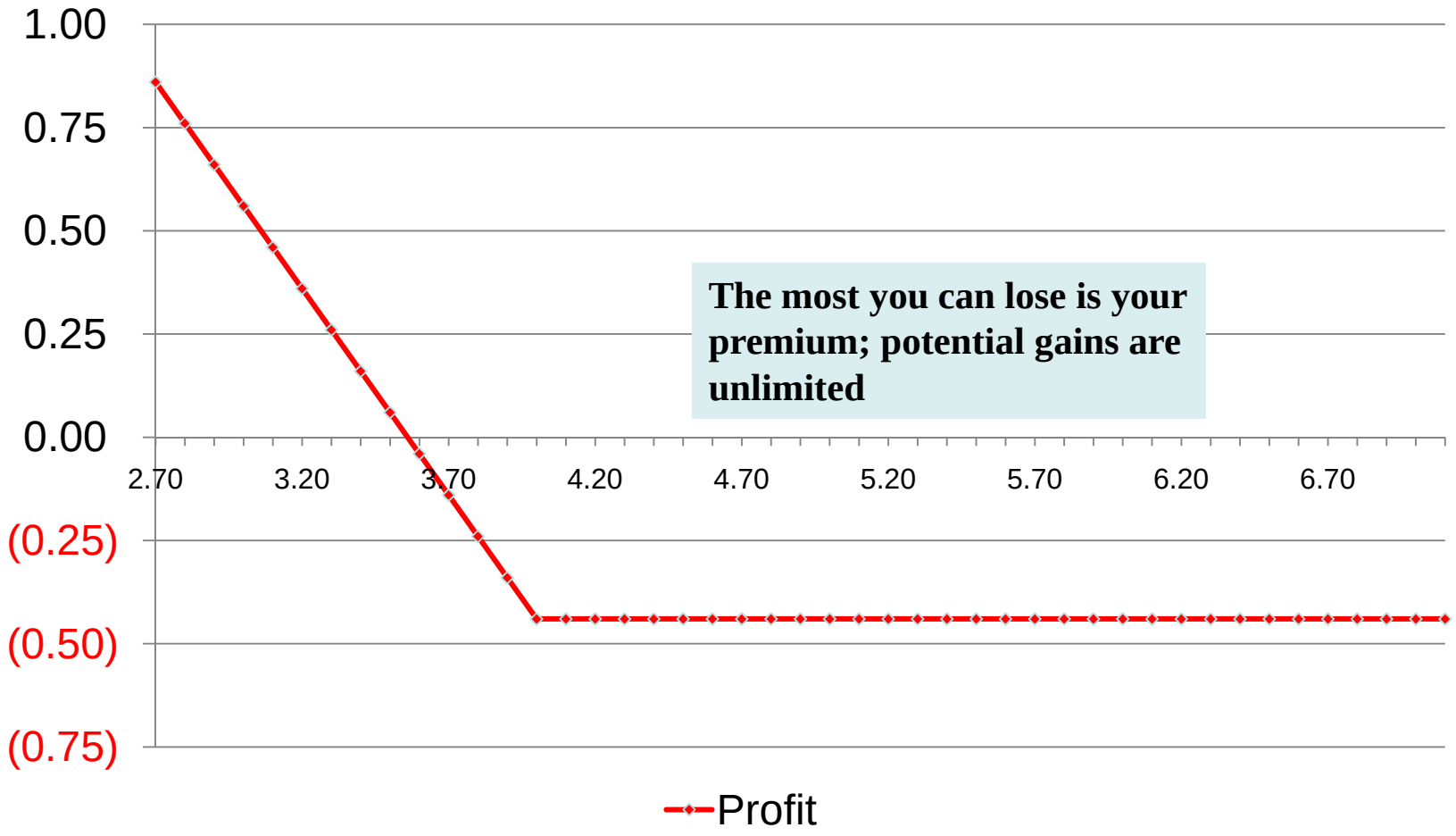
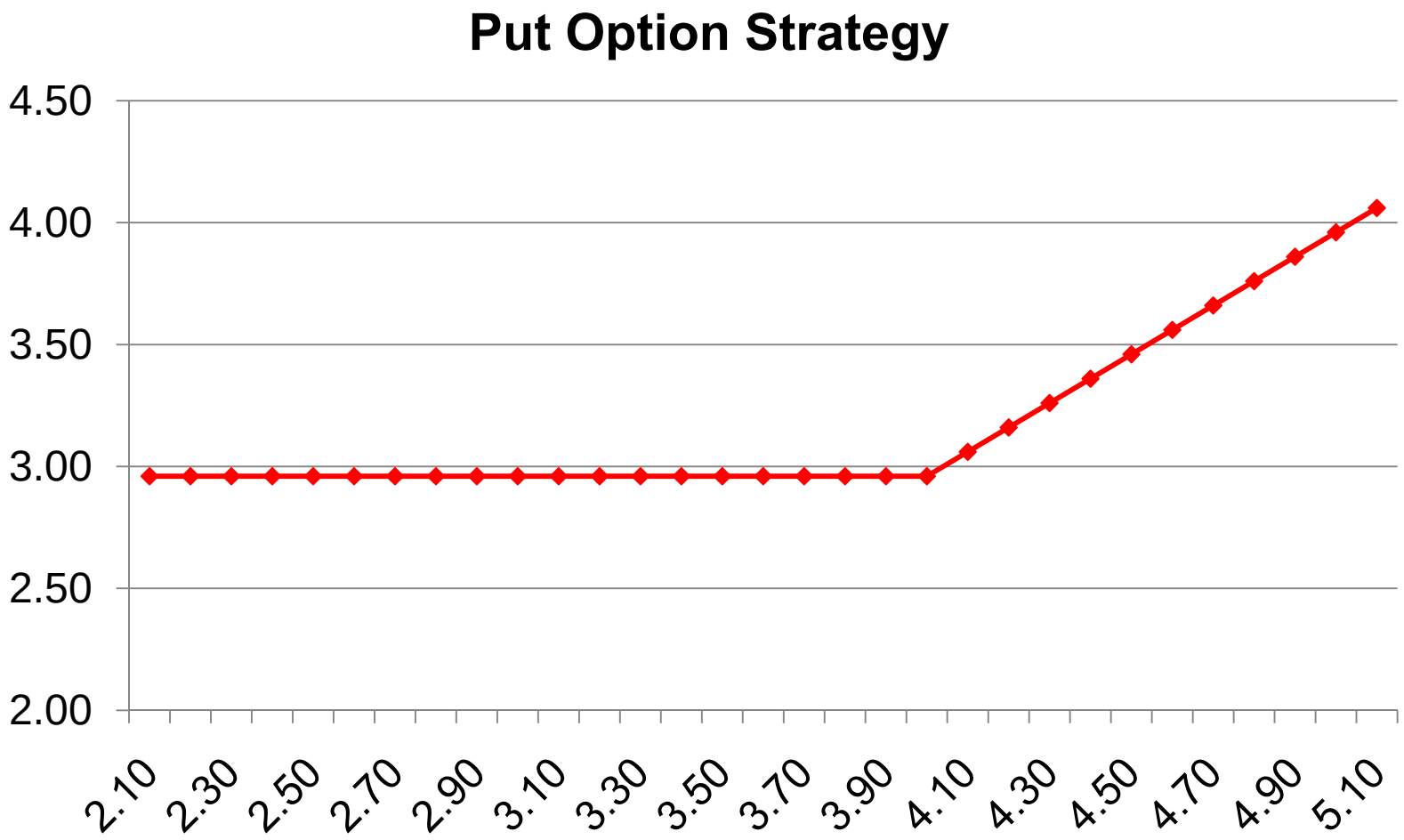
Profit and Loss from Buying a $4.00 put @ $0.44



If Strike Price > Futures Price, Profit/Loss = Strike – Futures – Premium

If Futures ≥ Strike Price, Loss = Premium Paid (Do not exercise option)

Buy $4.00 put at $0.44 sets floor price at $2.96 (basis = -$0.60)



If Strike > Futures, Expected Price = Strike – Premium + Basis
If Strike ≤ Futures, Expected Price = Futures – Premium + Basis

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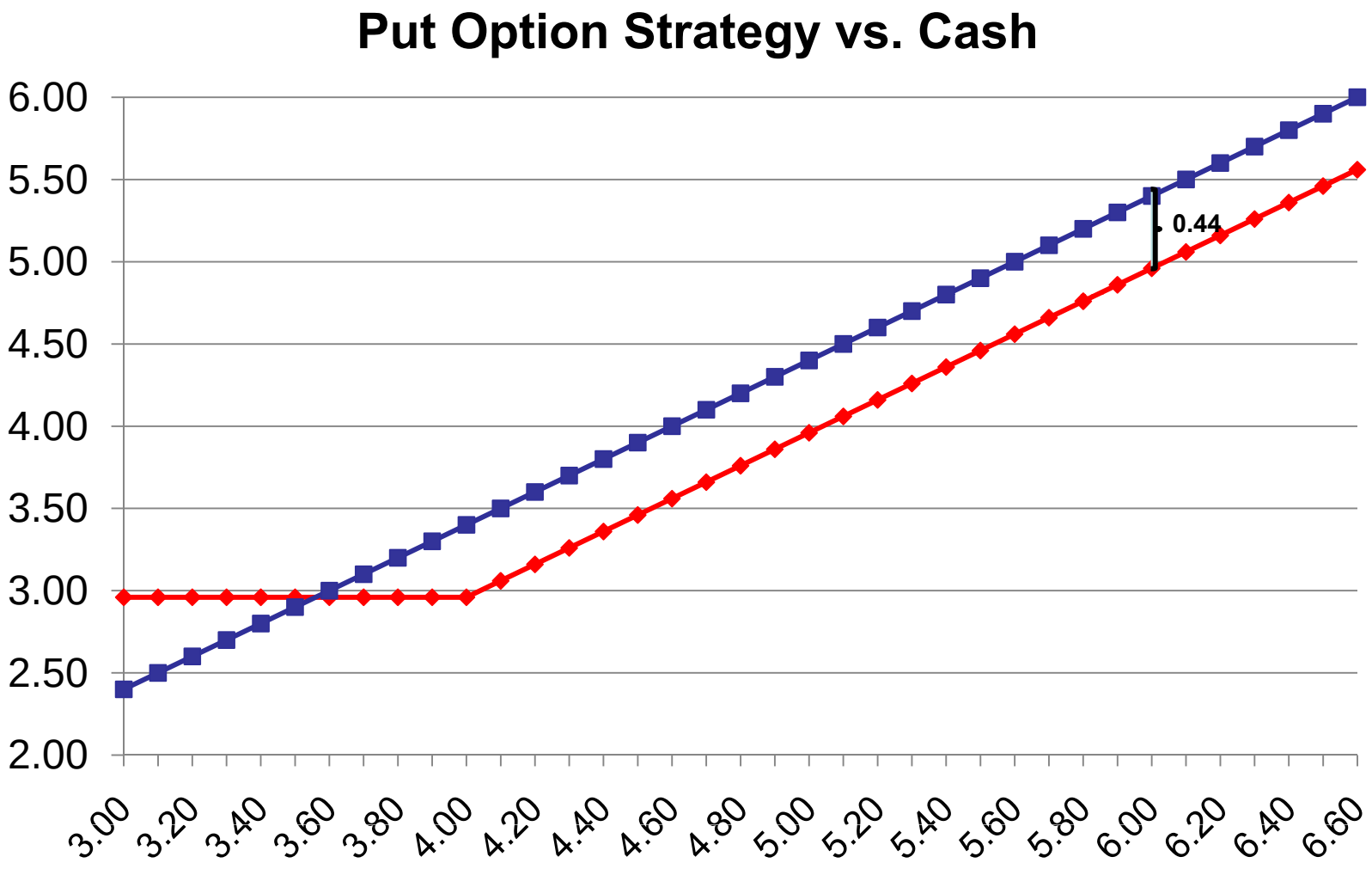
Buy $4.00 put at $0.44 sets floor price at $2.96 (basis = -$0.60)



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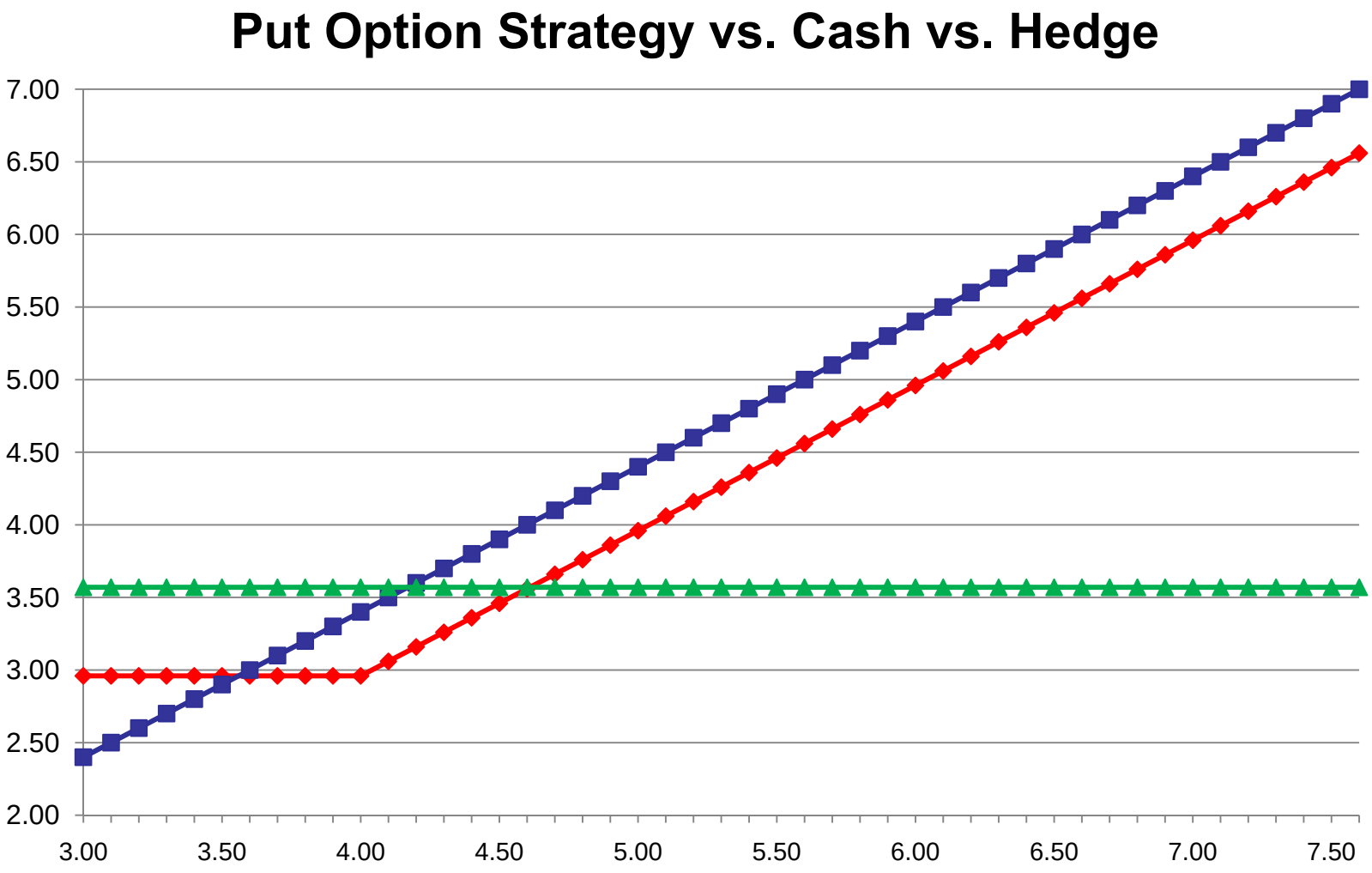
Buy $4.00 put at $0.44 vs. Hedge (sell futures) at $4.17 (basis = -$0.60)



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Buying Put Options

- Effectively creates a minimum price contract
- Never the most profitable strategy
- Limits losses if prices go down
- Gains are unlimited if prices go up
- Expensive

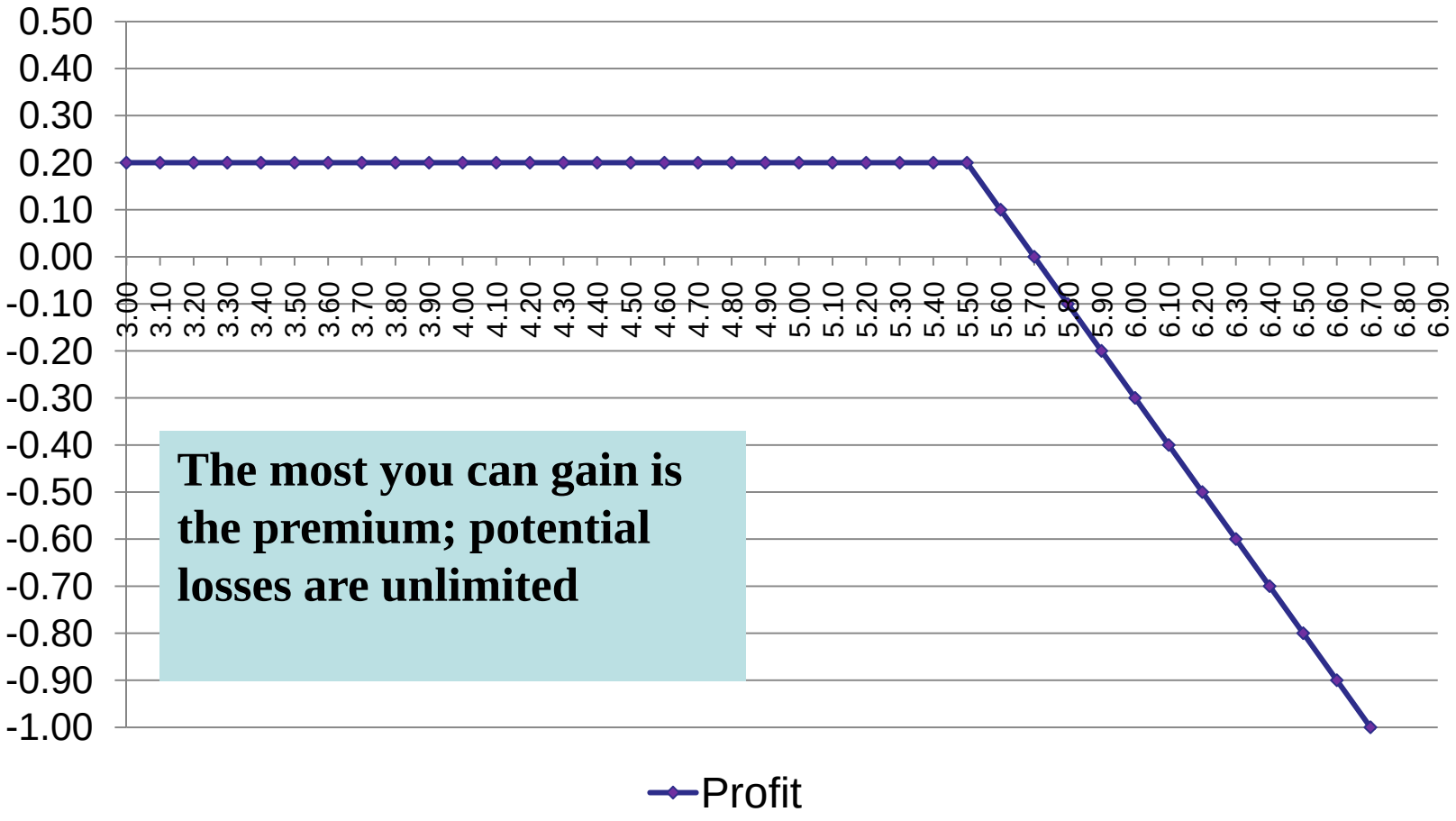
Window Strategy

- Buy a put and sell a call
- Creates a price window with a floor and ceiling
- Cheapens price floor strategy but imposes top side price limit

Floor = Put Strike price – put premium + call premium – basis

Ceiling = Call Strike price – put premium + call premium – basis

Sell a $5.50 Dec Corn Call for $0.20



If Strike ≥ Futures, Profit = Premium Received (buyer will not exercise)

If Futures > Strike, Profit = Strike – Futures + Premium

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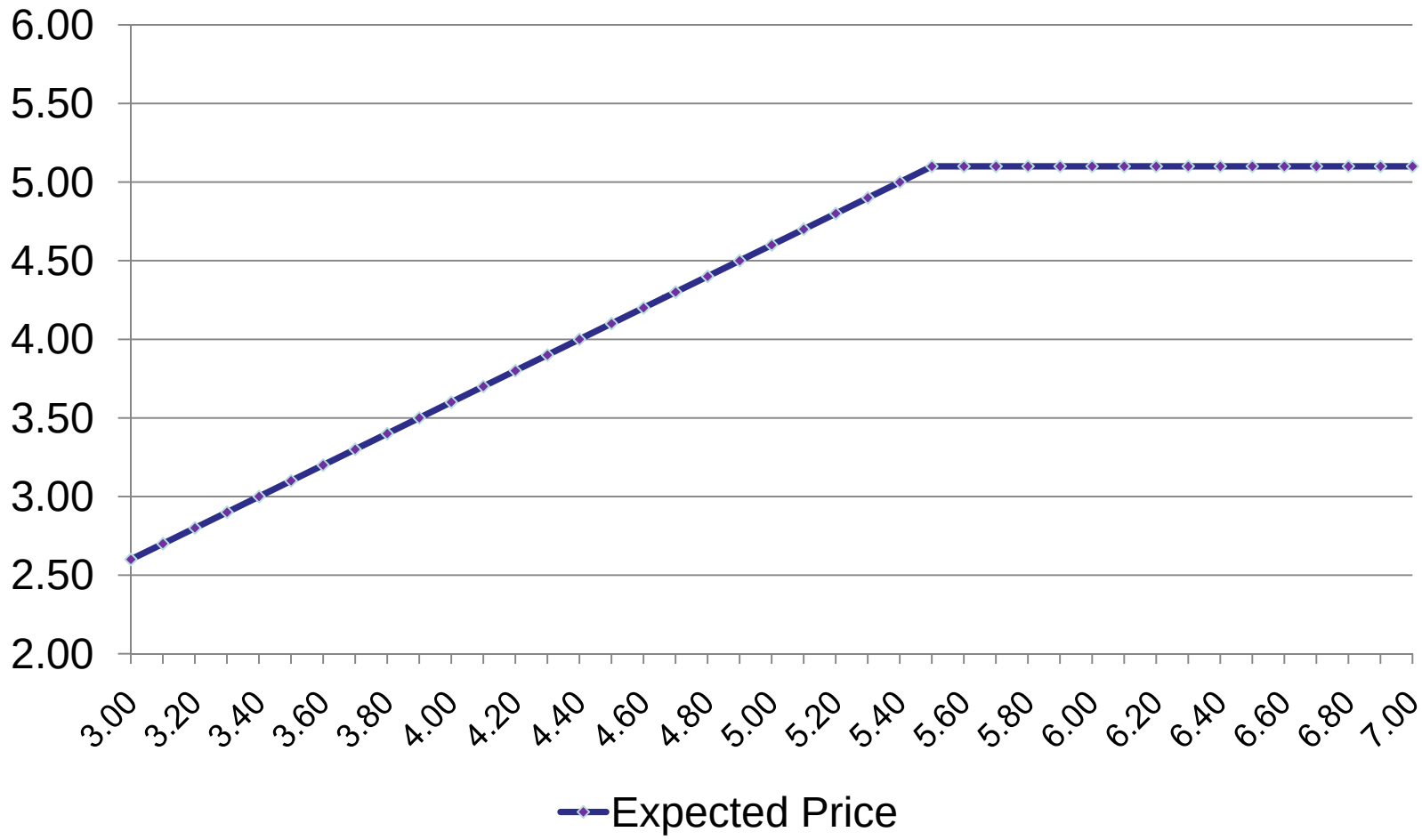
Expected Price when selling a $5.50 call option for $0.20, basis = -0.60



If Futures ≤ Strike, Price = Futures + Premium

If Strike < Futures, Price = Strike + Premium

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Sorghum Example (-$0.60 basis)

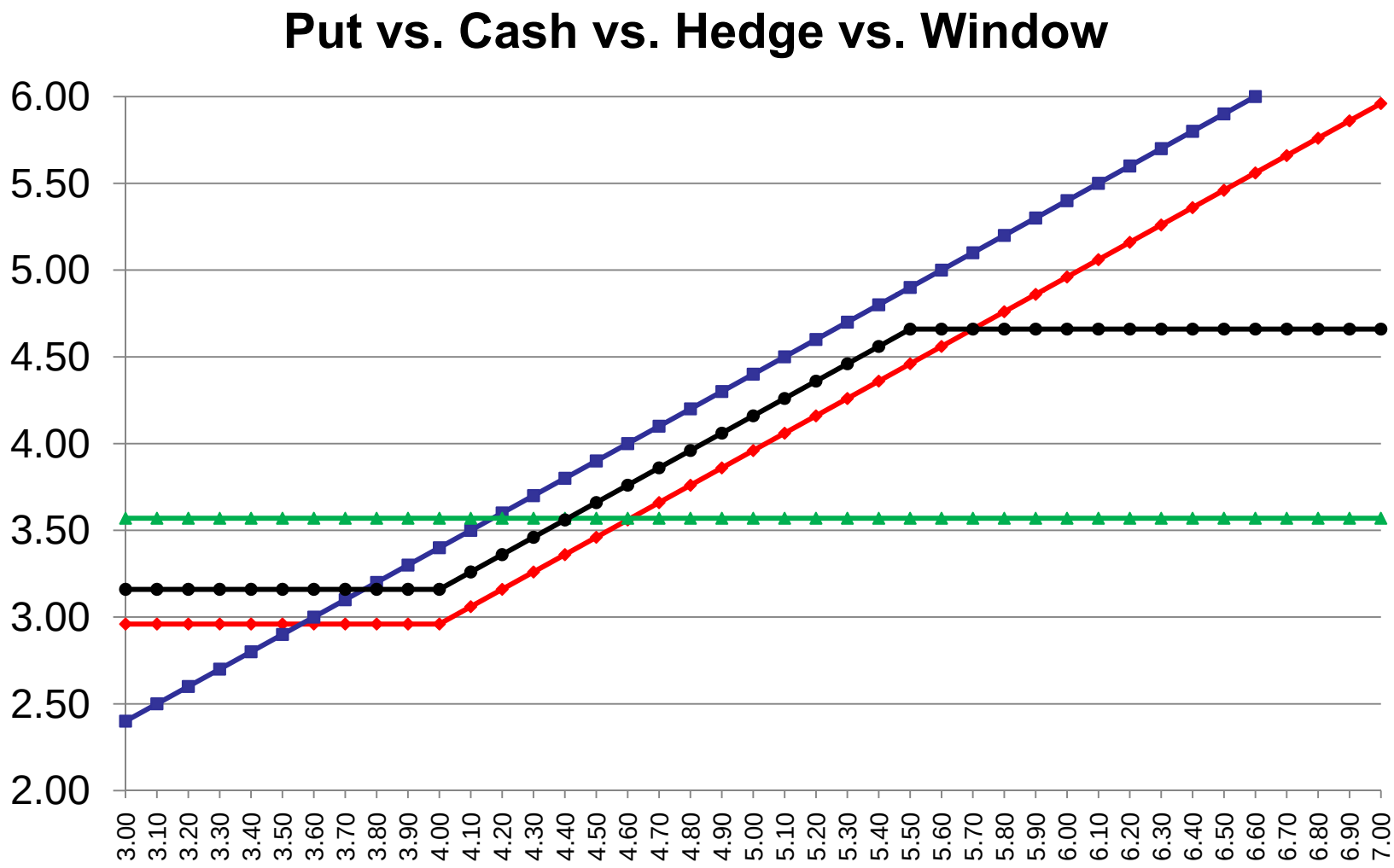
- Futures closing price: $4.17
- Buy a $4.00 put at $0.44
- Sell a $5.50 call at $0.18
- Price floor

  = 4.00 – 0.44 + 0.20 – 0.60 = 3.16
- Price Ceiling

  = 5.50 – 0.44 + 0.20 – 0.60 = 4.66

  (Net premium paid = $0.24)

Buy $4.00 put at $0.44 vs. Hedge (sell futures) at $4.17 vs. Window (buy 4.00 put and sell $5.50 call) (basis = -$0.60)



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Corn Example

- Want to set a price floor for 2010 crop but afraid of locking in a price that is too low
- December corn is trading at $4.30/bu
- My basis is +$0.10 the CBOT

Determine Expected Selling Price

Select Appropriate Futures Contract Month	December		
Select Appropriate type of Option	Buy Put (right to sell)		
Calculate Minimum Selling Price			
Strike price	4.30	**4.10**	3.90
Subtract premium	- 0.72	**-0.57**	-0.47
Adjust for basis	+0.10	**+0.10**	+0.10
Minimum price	3.68	**3.63**	3.53

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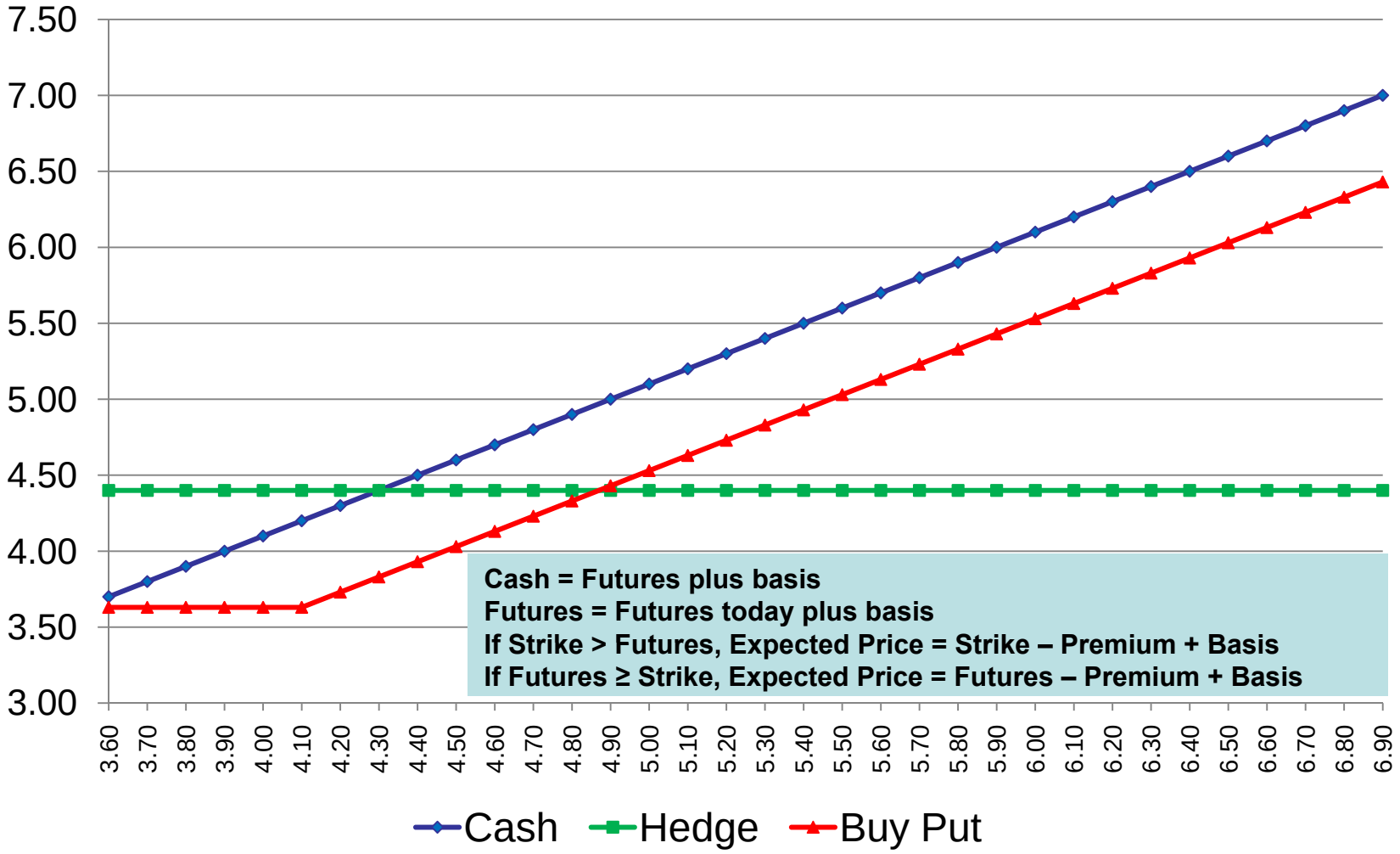
Comparison of Expected Prices



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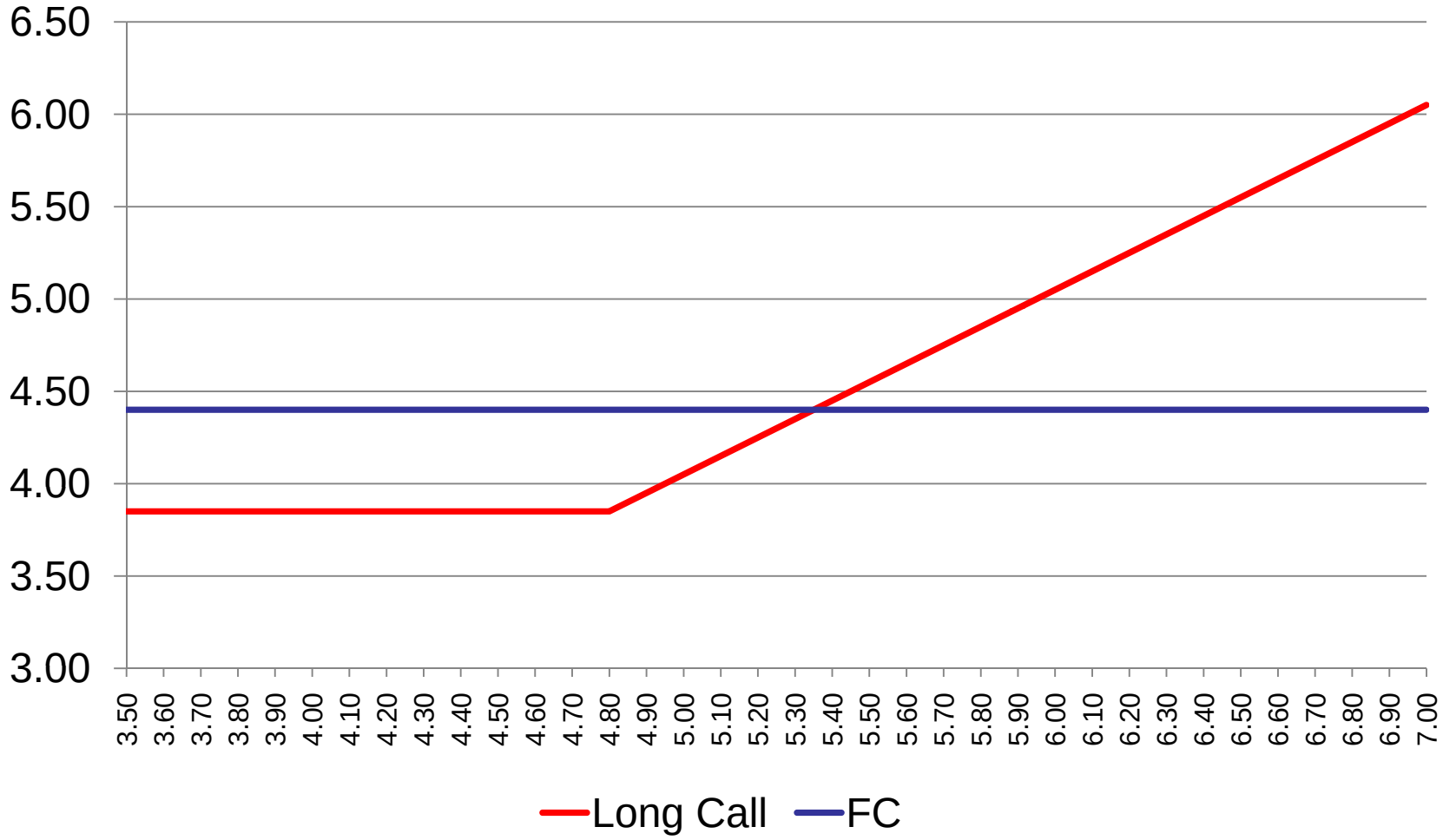
Forward Contract and Buy a Call Option

- FC at $4.40
- Buy $4.80 call at $0.55
- Price floor:

  FC price – call premium = $3.85
- Price ceiling: none

Corn FC with Long Call



FC = Futures + Basis

If Futures > Strike price, Long Call = FC – Premium

If Strike Price > Futures, Long Call = FC – Premium + (Futures – Strike price)

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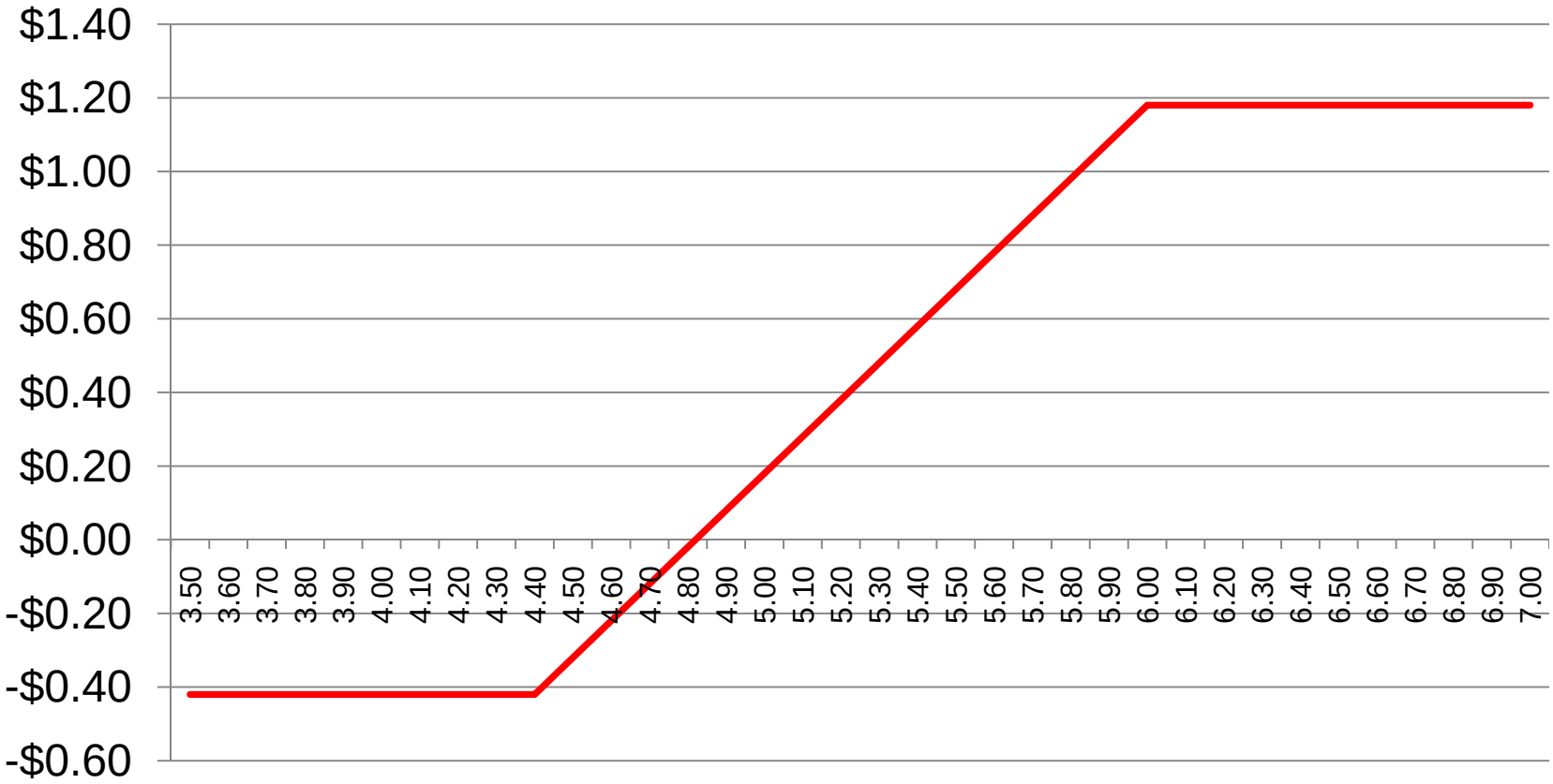
Bull Call Spread

- Buy lower strike price (SP1) call option, 4.40 @ $0.74
- Sell higher strike price (SP2) call option, 6.00 @ $0.32
- If Futures < SP1, profit (loss) = net premium paid (most you can lose)
- If SP1> Futures < SP2, profit = Futures minus SP1 + net premium paid
- If Futures > SP2, profit = Futures minus SP1 + SP2 minus Futures + net premium paid (most you can gain)

Bull Call Spread



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Futures or Options?

- Use options in markets likely to be characterized by large and sustained price moves
- Use options when there will be problems in arranging financing for a margin line
- Use options when the ability to manage a selective hedging program is questionable

Don't gamble; take all your savings and buy some good stock and hold it till it goes up, then sell it. If it don't go up, don't buy it.

--Will Rogers

Option Strategies Continued

Mark Welch
Texas AgriLife Extension Economist
January 20, 2010

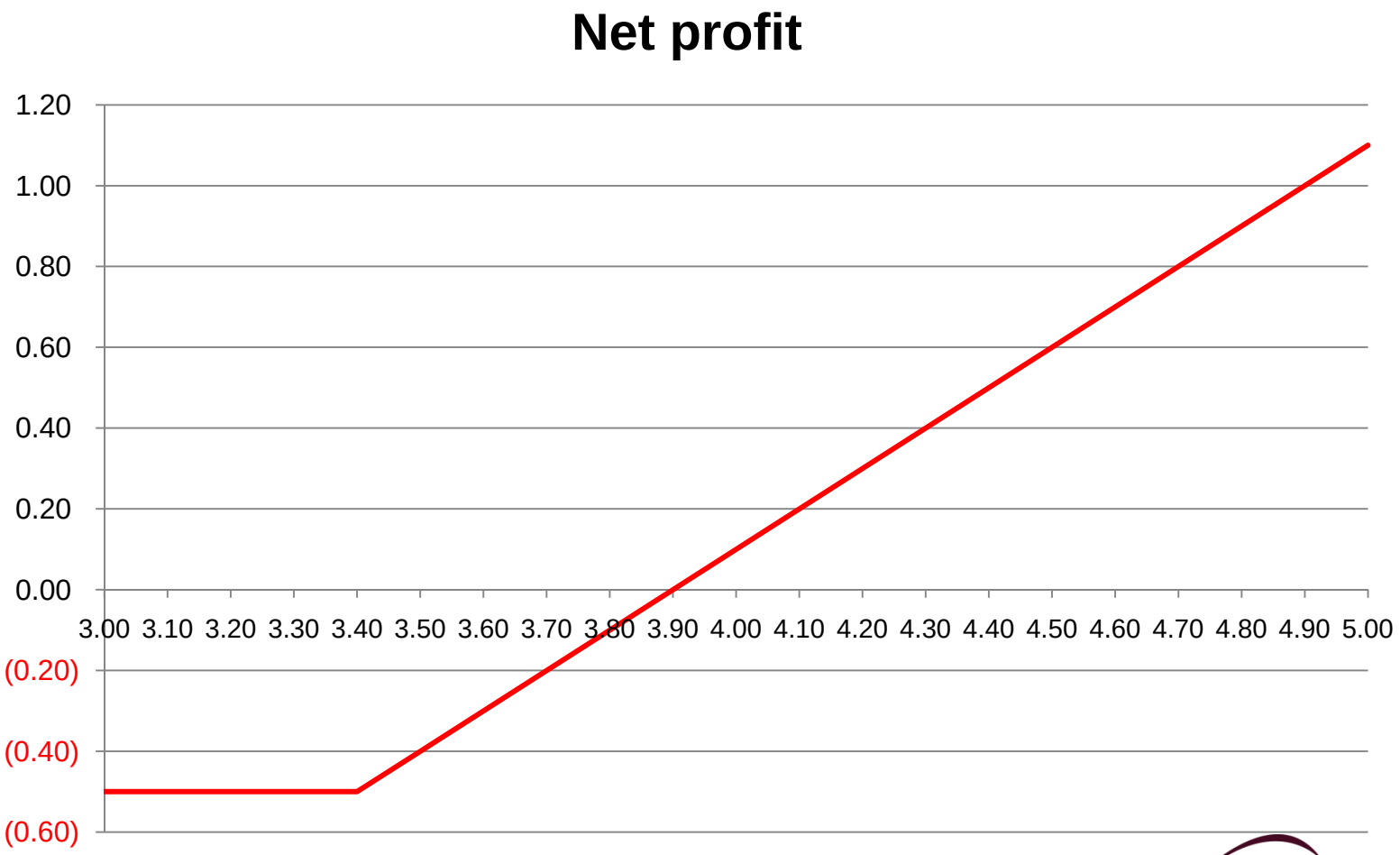
Long Butterfly

- Do not expect market to make major move up or down
- Buy a call with lower strike price
- Sell 2 calls with intermediate strike prices, at the money
- Buy a call with higher strike price

Long Butterfly

1. Buy a lower priced call

340 call for 50 cents

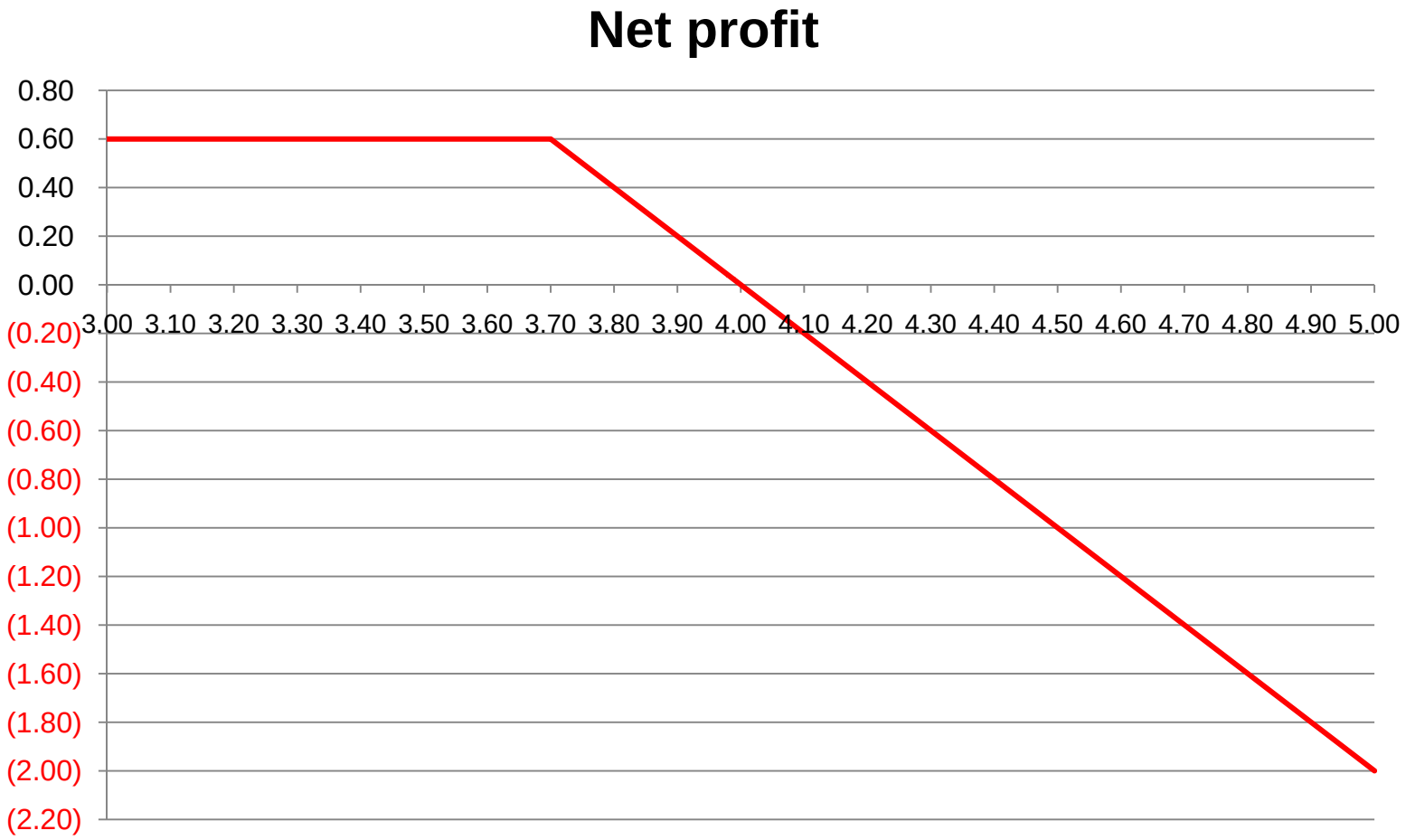


AgriLIFE EXTENSION
Texas A&M System

Long Butterfly

2. Sell 2 Intermediately priced calls

370 calls for 30

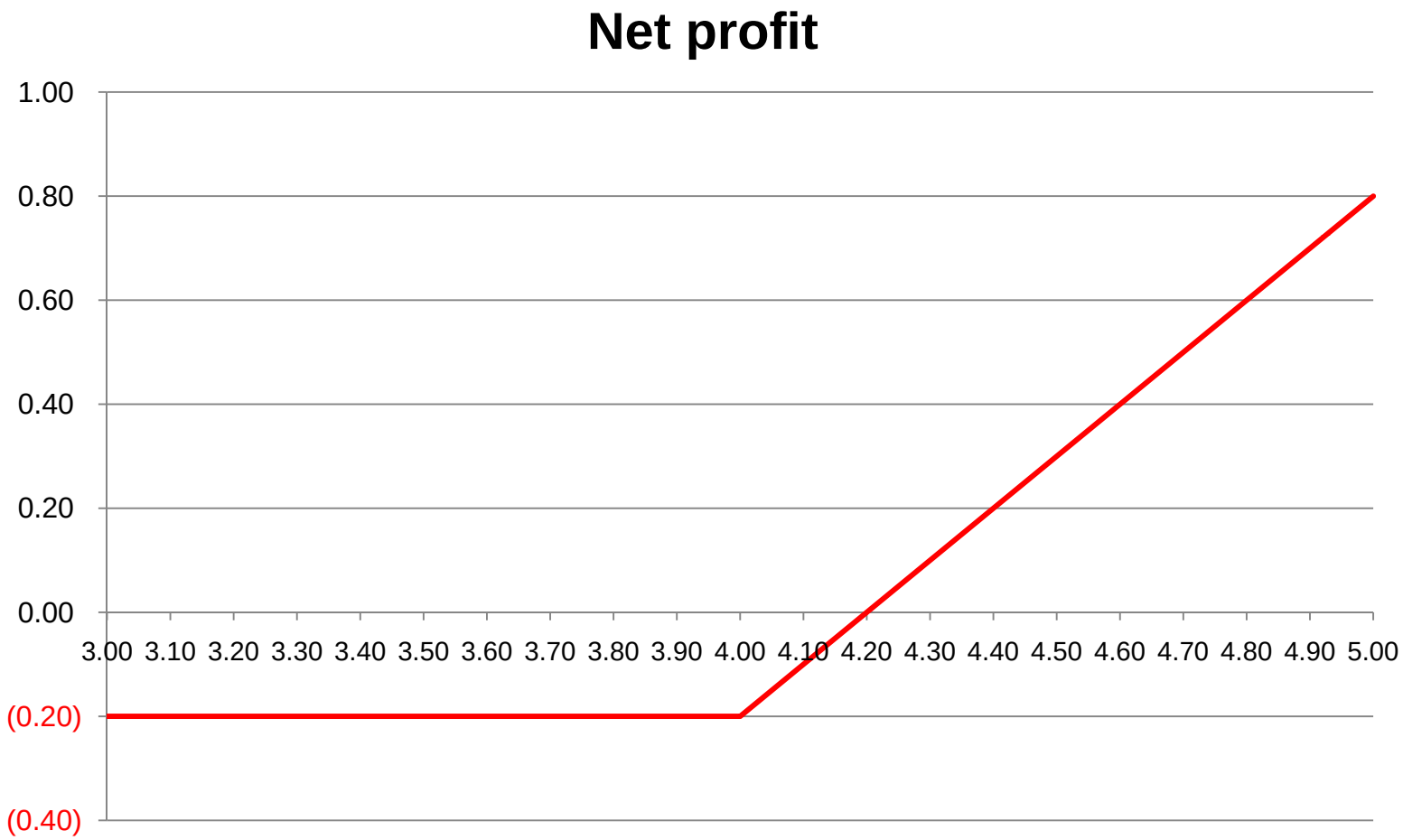


AgriLIFE EXTENSION
Texas A&M System

Long Butterfly

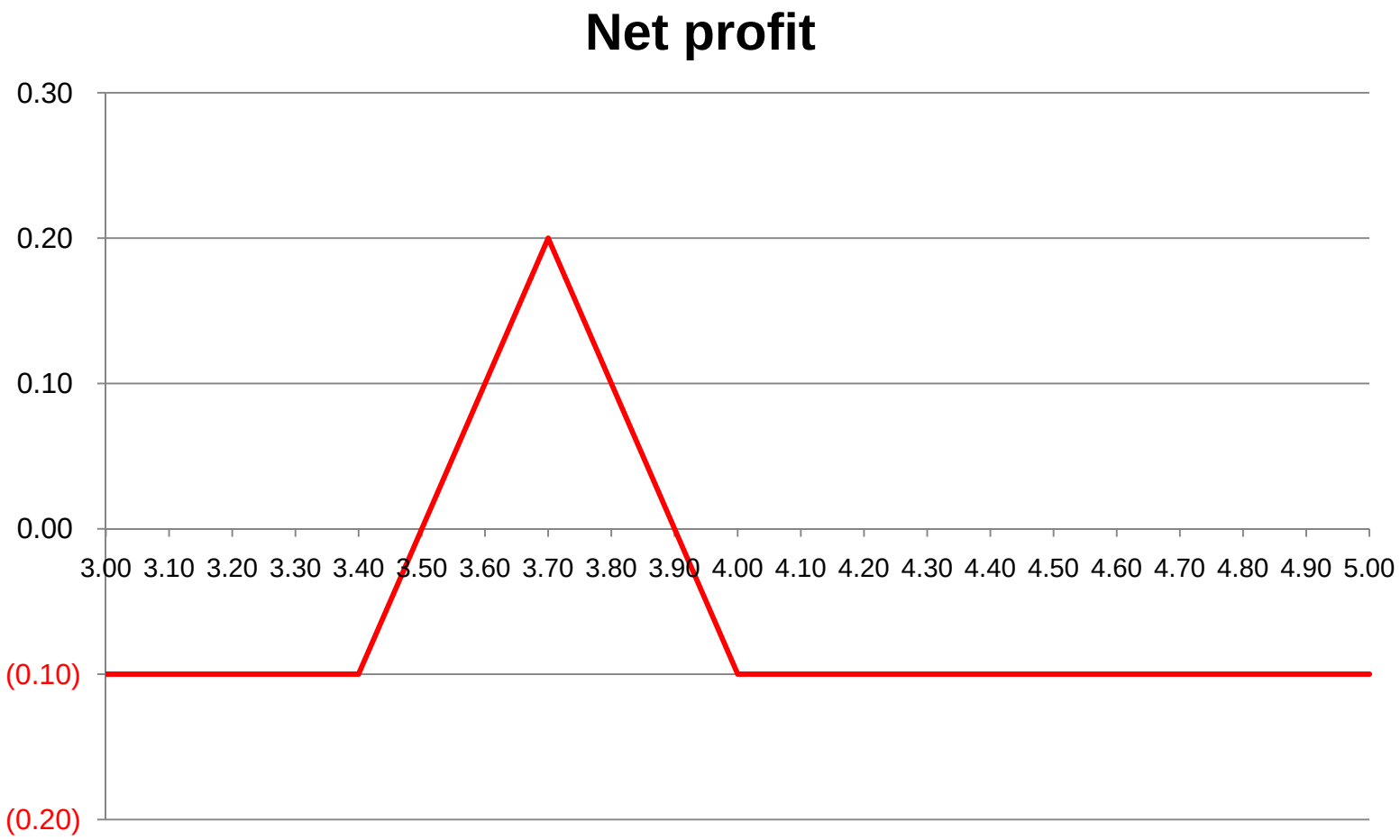
3. Buy a higher priced call

400 call for 20



AgriLIFE EXTENSION
Texas A&M System

Long Butterfly
Net profit from combined positions



AgriLIFE EXTENSION
Texas A&M System

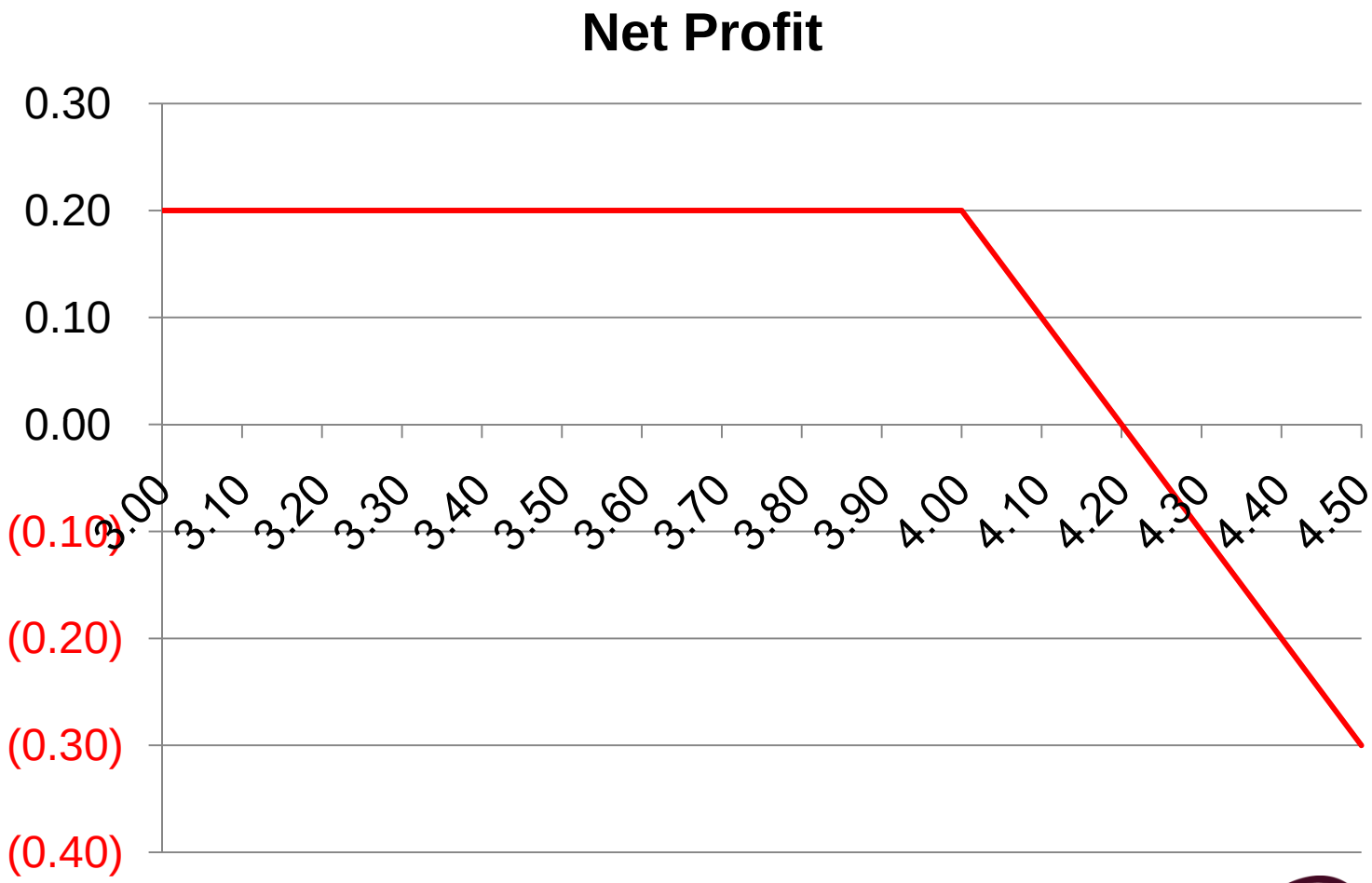
Short Butterfly

- Market may move up or down but do not expect it to stay neutral
- Sell 1 higher priced call
- Buy 2 intermediately priced calls, at the money
- Sell 1 lower priced call

Short Butterfly

1. Sell 1 higher priced call

400 call for 20

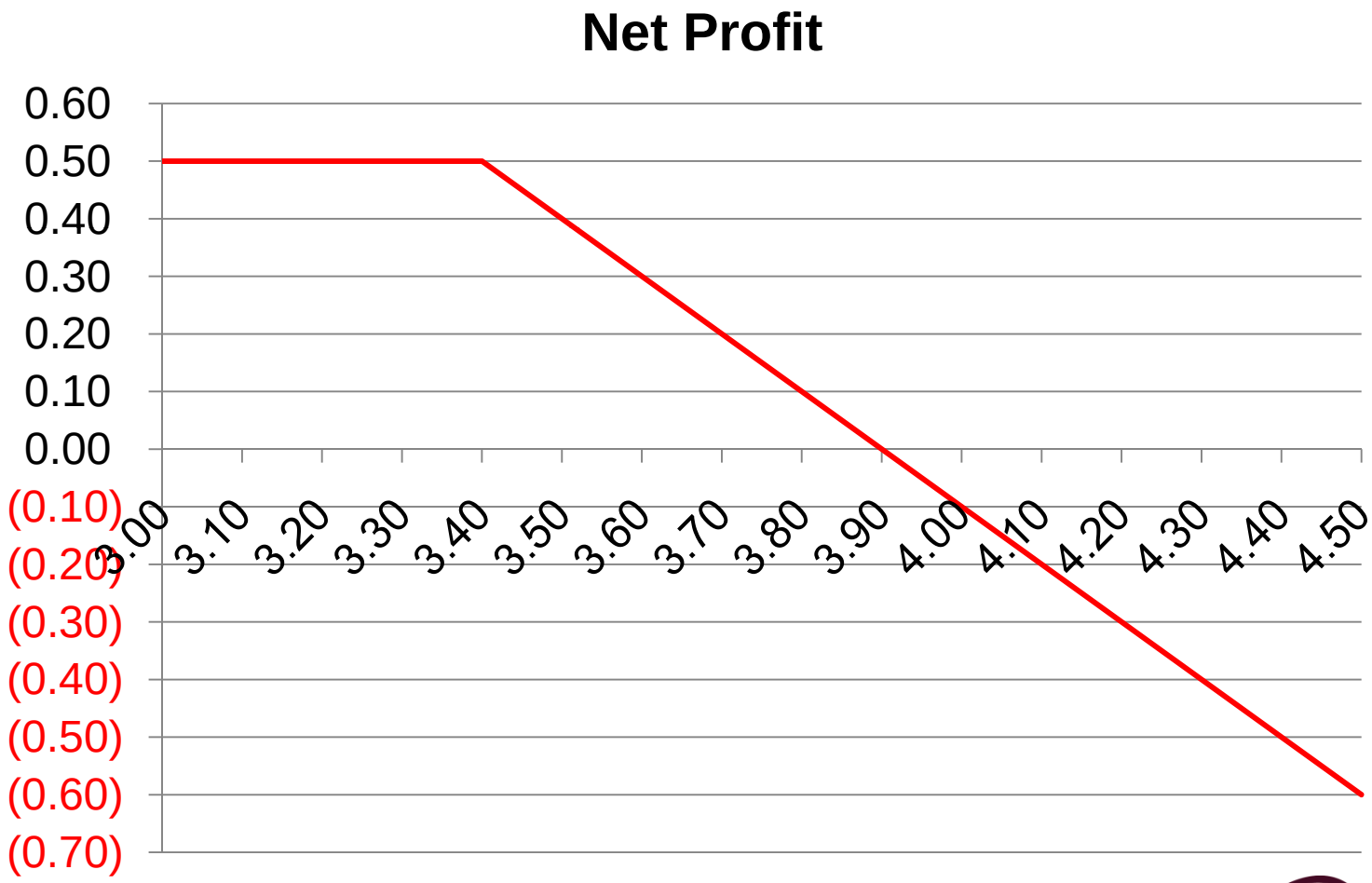


AgriLIFE EXTENSION
Texas A&M System

Short Butterfly

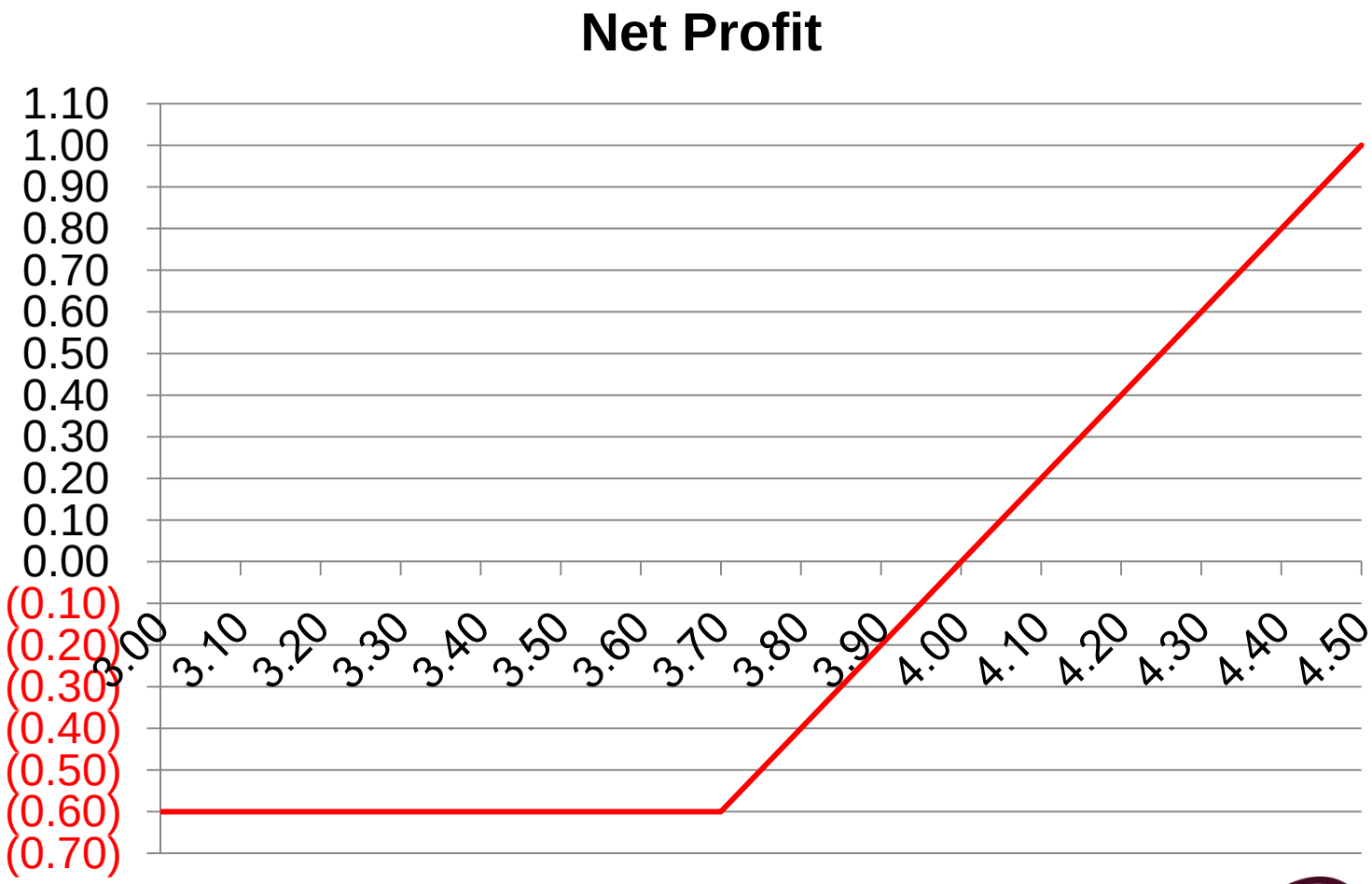
2. Sell 1 lower priced call

340 call for 50



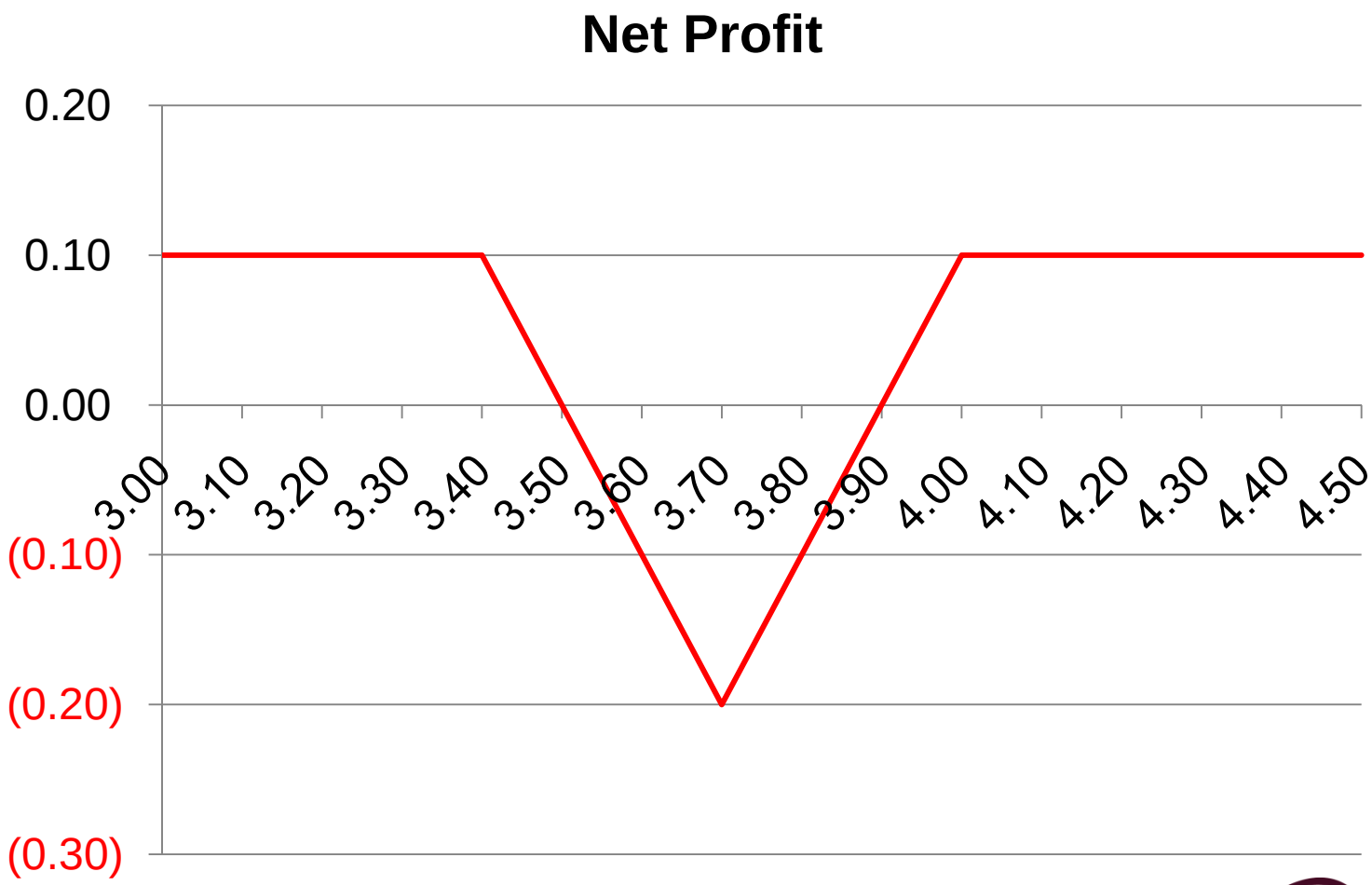
Short Butterfly

3. Buy 2 intermediately priced calls 370 call for 30



AgriLIFE EXTENSION
Texas A&M System

Short Butterfly
Net profit from combined positions



AgriLIFE EXTENSION
Texas A&M System

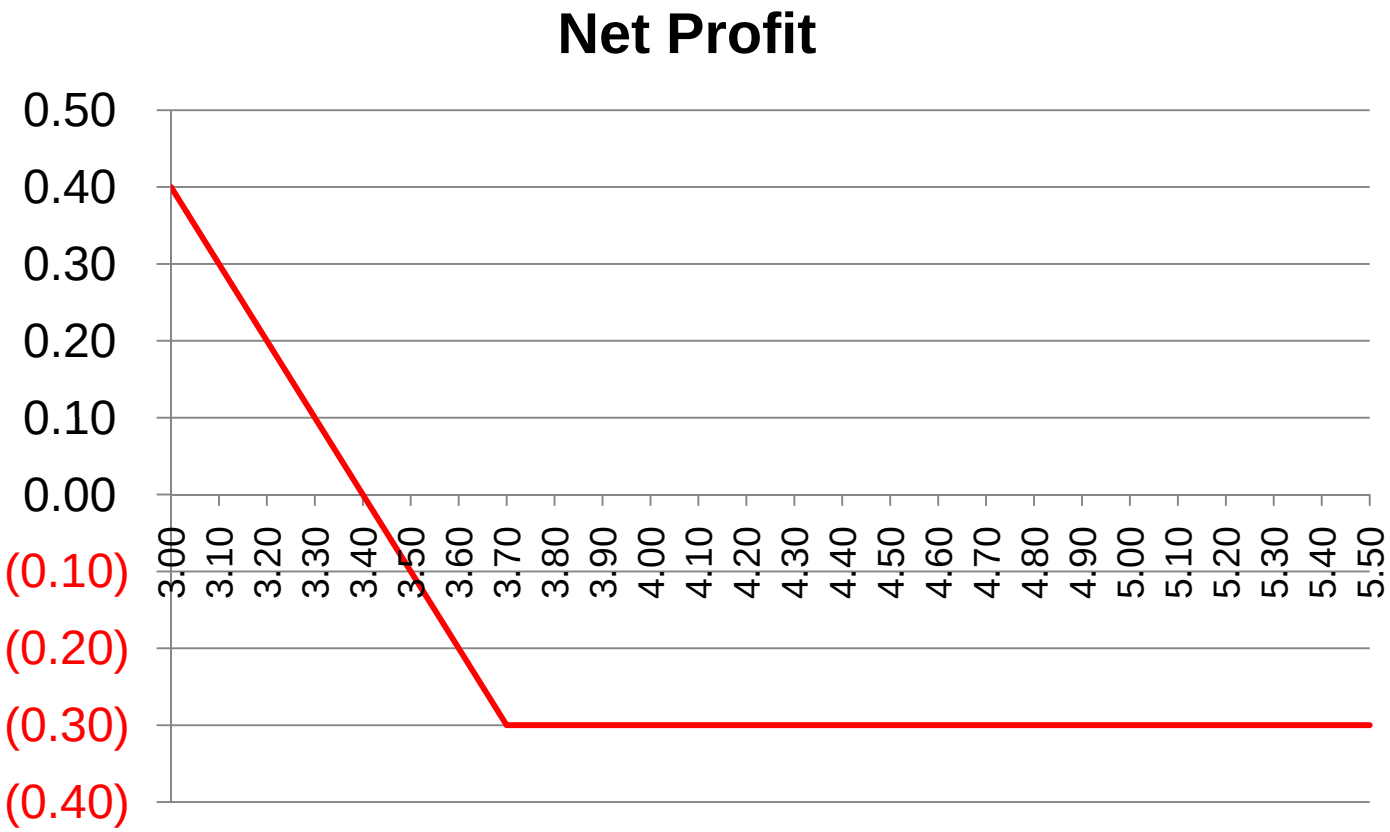
Long Straddle

- Strong market move is expected but could be either way; open ended in either direction
- Buy a call, at the money
- Buy a put, at the money

Long Straddle

1. Buy a put

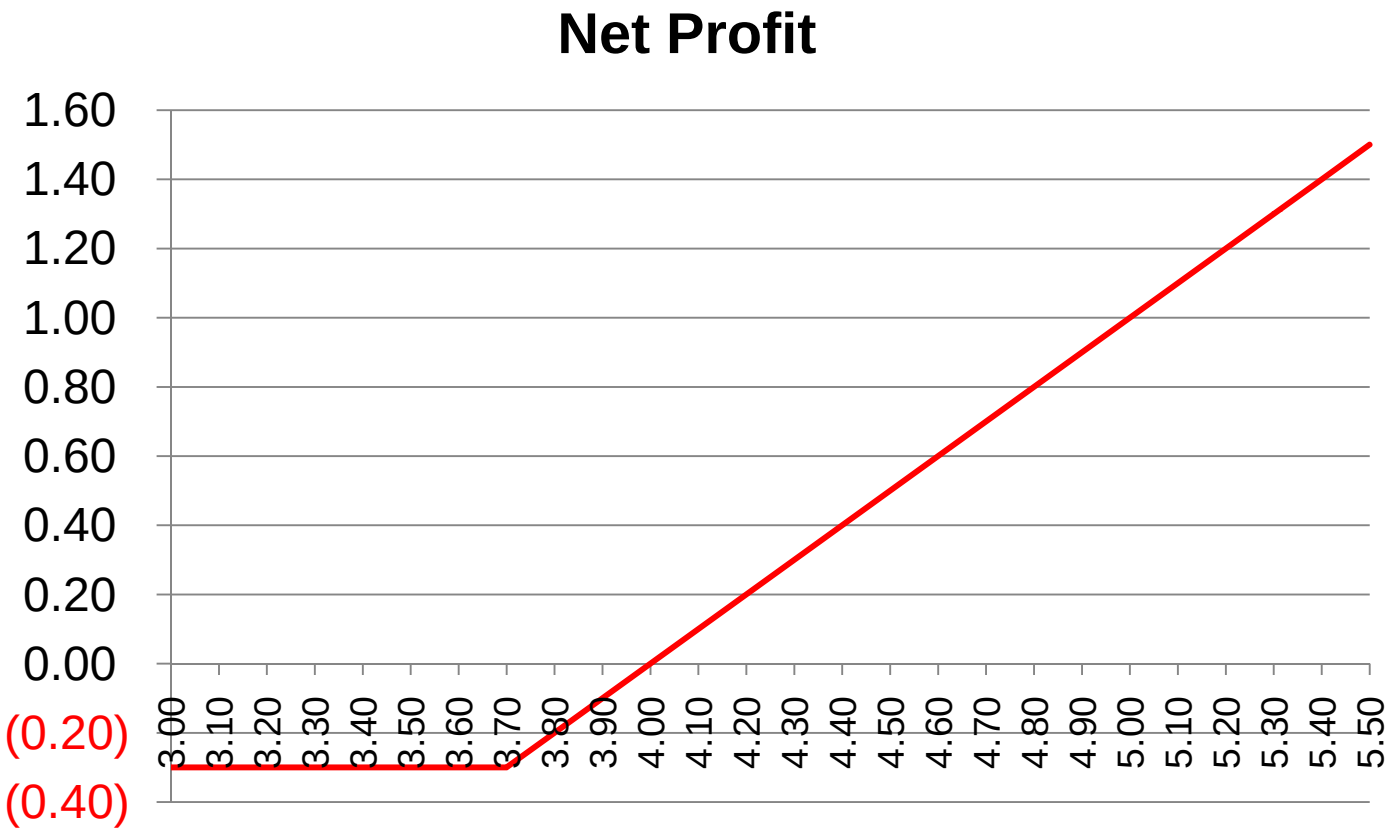
370 put for 30



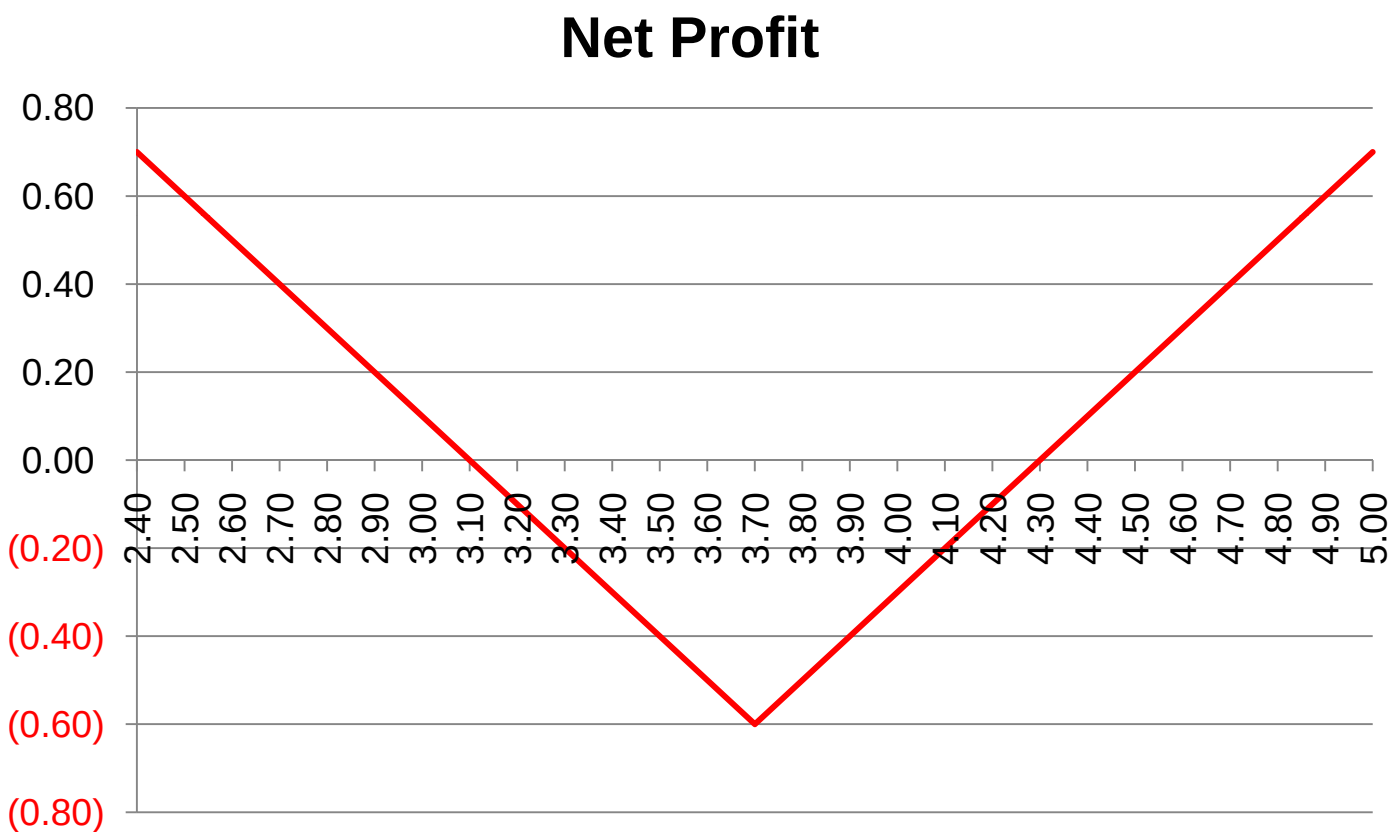
Long Straddle

2. Buy a call

370 call for 30



Long Straddle
Net profit from combined positions



AgriLIFE EXTENSION
Texas A&M System

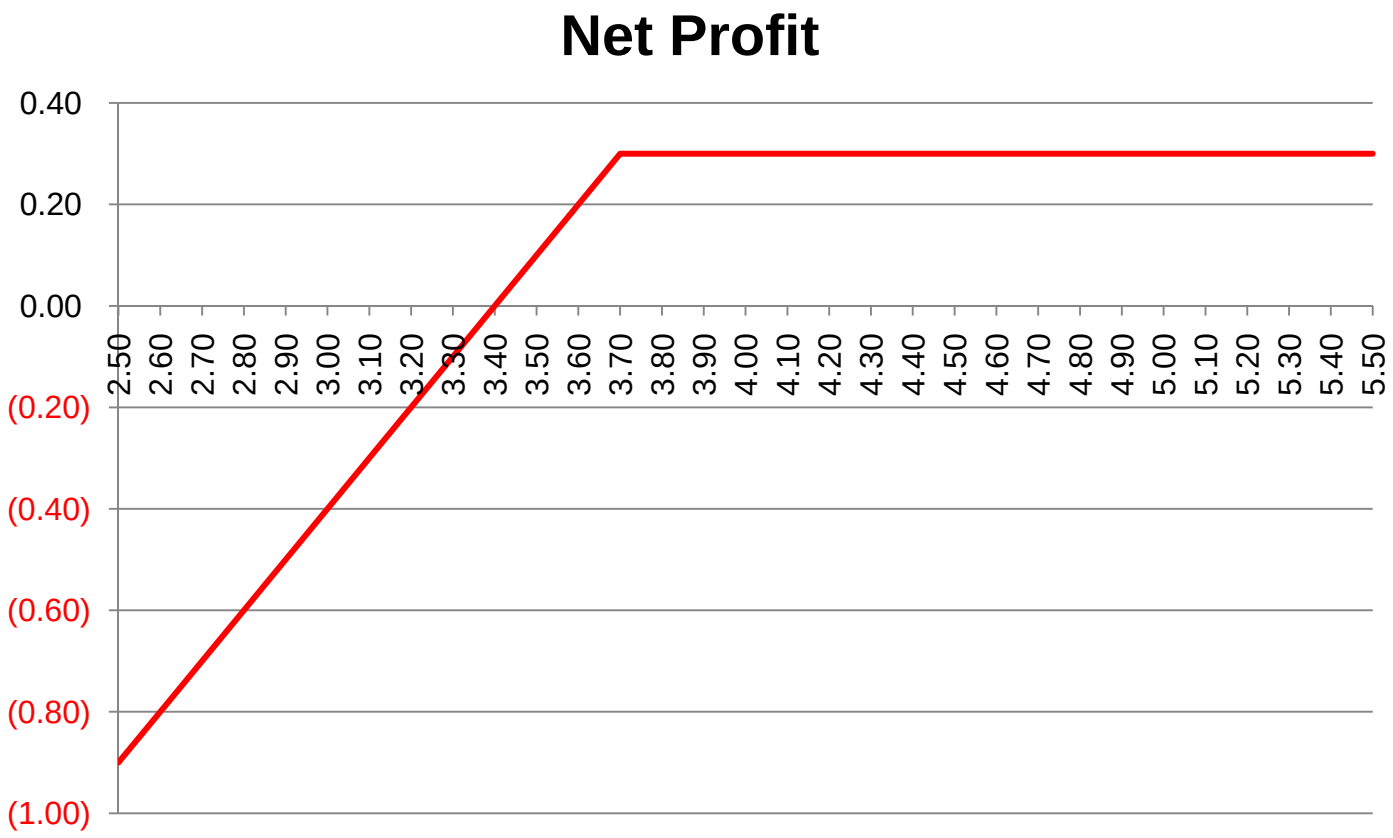
Short Straddle

- Do not expect the market to move before options expire
- Sell a put
- Sell a call

Short Straddle

1. Sell a put

370 put at 30

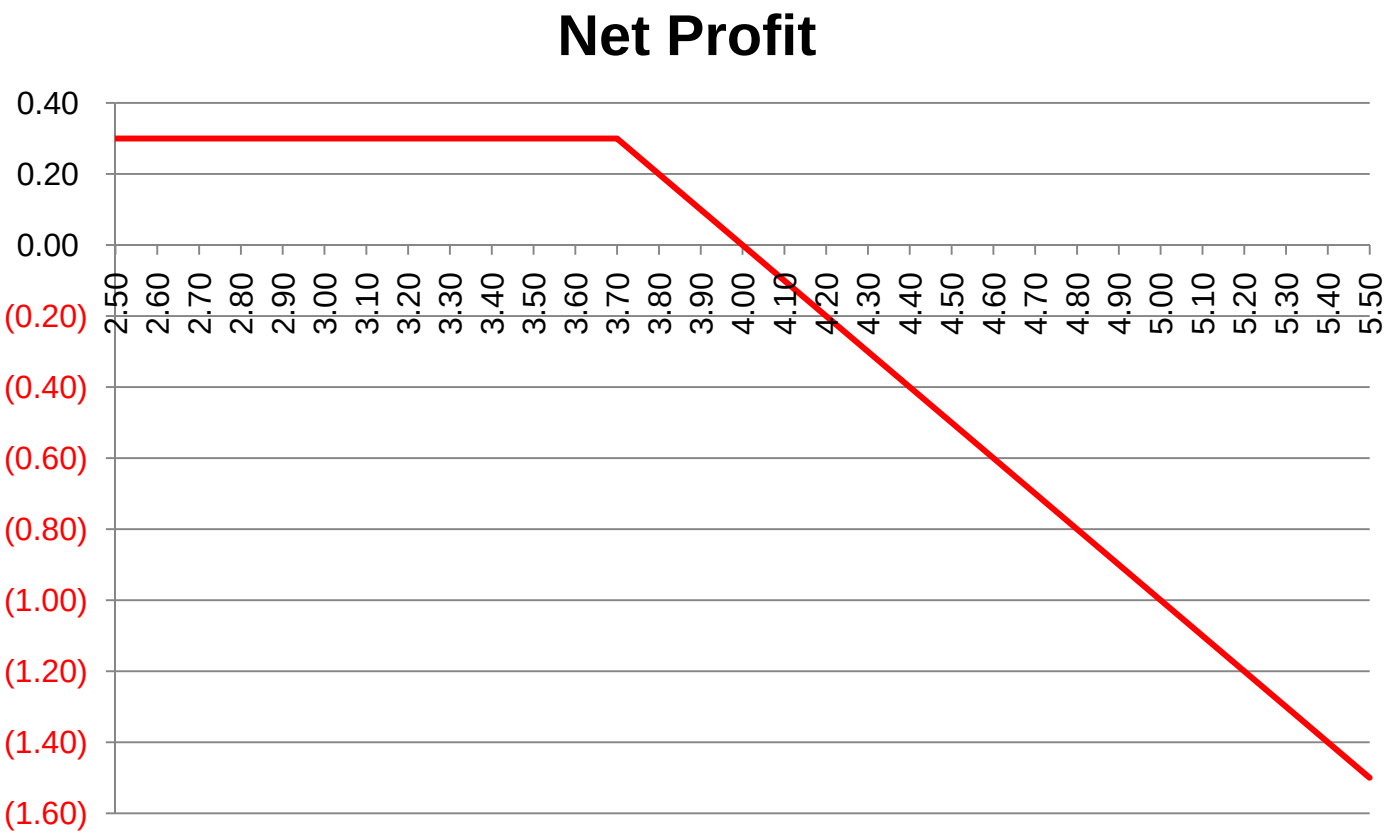


AgriLIFE EXTENSION
Texas A&M System

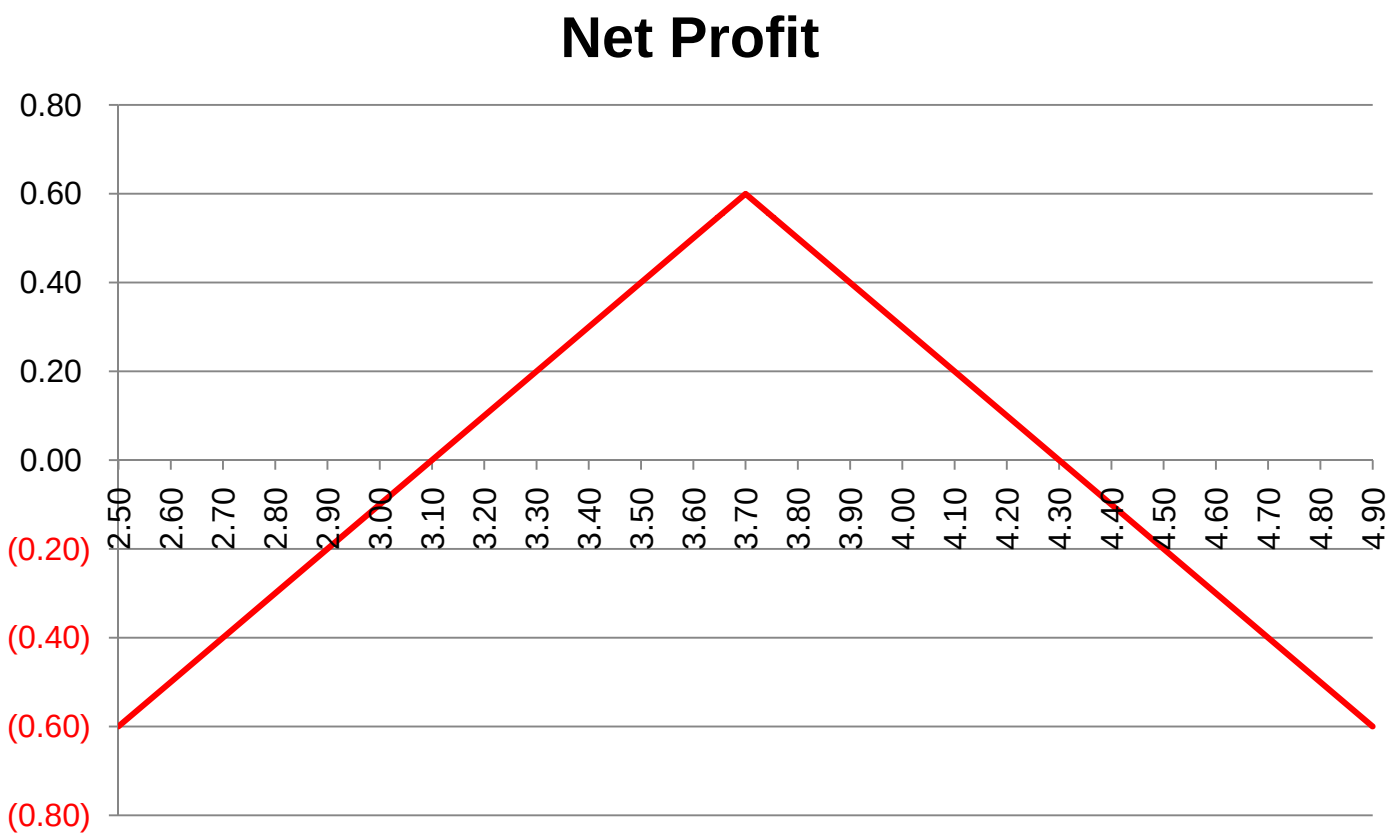
Short Straddle

2. Sell a call

370 call at 30



Short Straddle
Net profit from combined positions

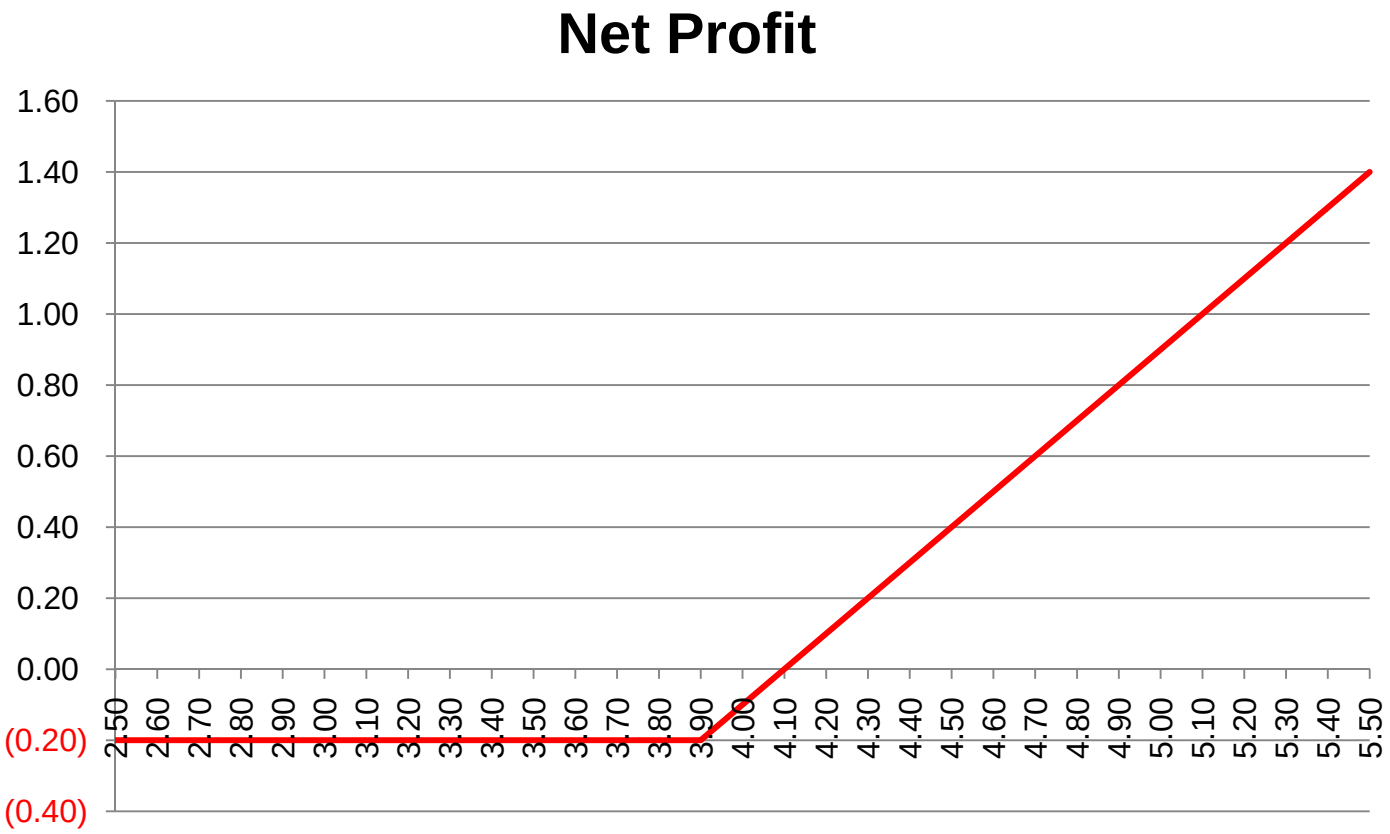


Long Strangle

- Expect the market to move either way; but if it stays stagnant, the losses are less than with a long straddle
- Buy put, out of the money
- Buy call, out of the money

Long Strangle

1. Buy a call, out of the money 390 for 20

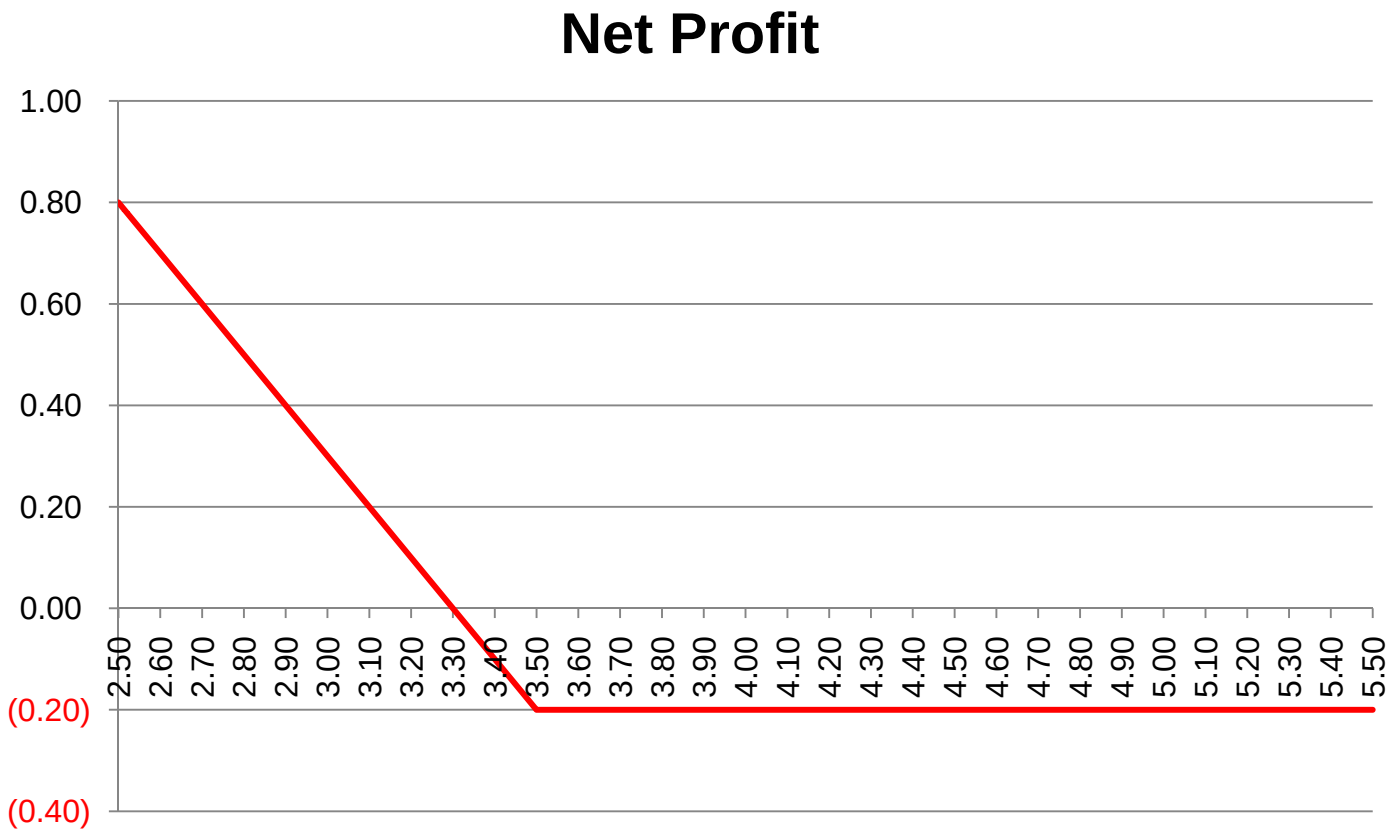


AgriLIFE EXTENSION
Texas A&M System

Long Strangle

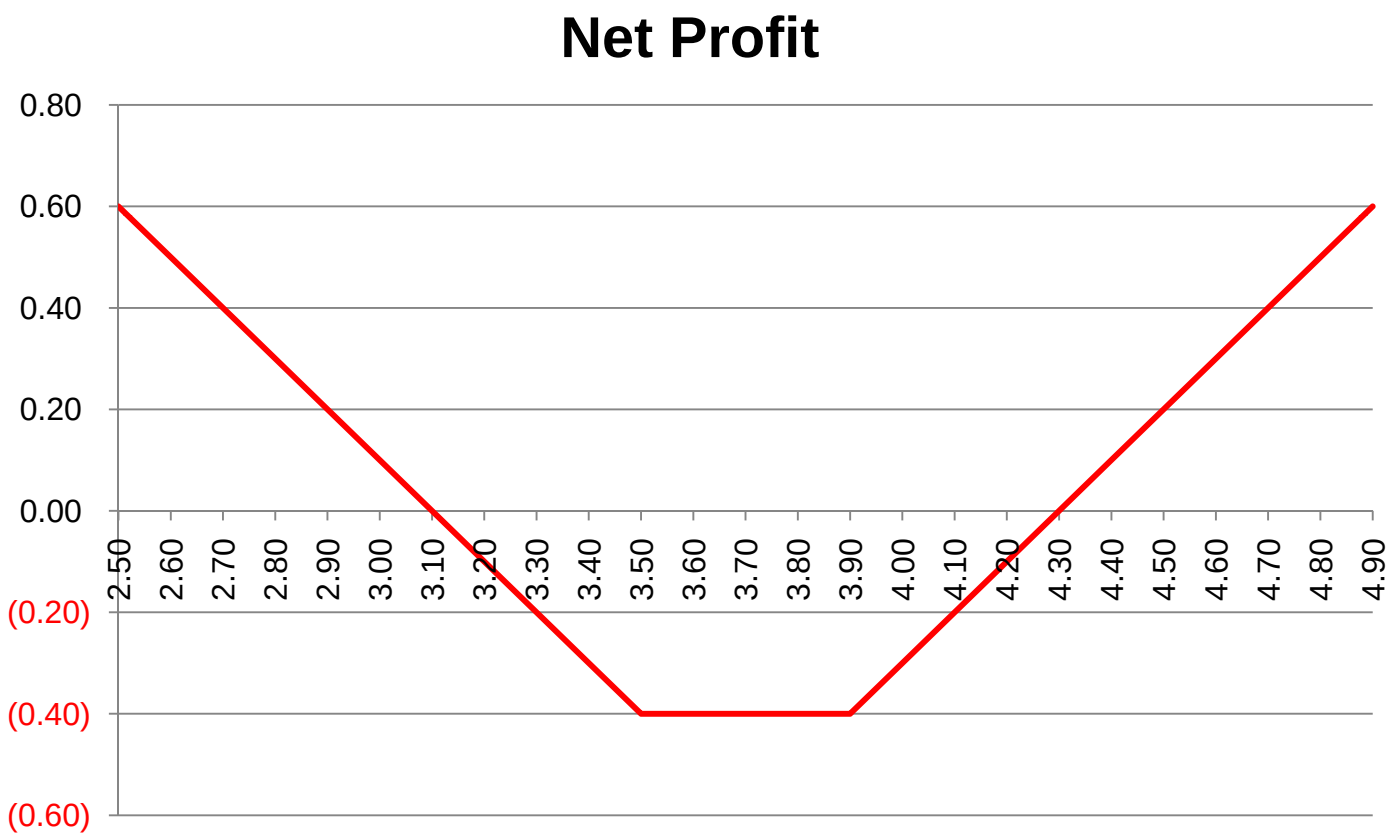
2. Buy a put, out of the money

350 for 20



AgriLIFE EXTENSION
Texas A&M System

Long Strangle
Net profit from combined positions



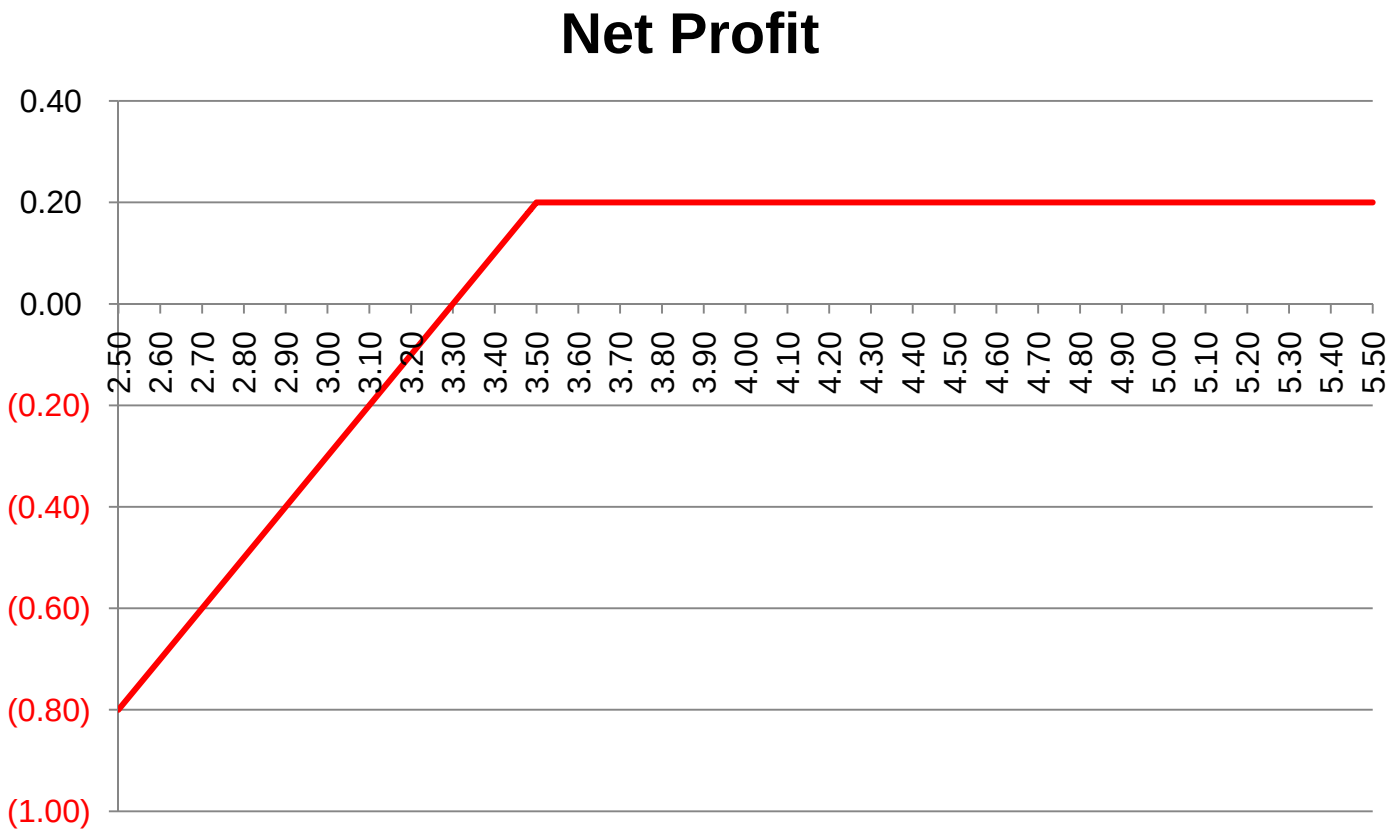
AgriLIFE EXTENSION
Texas A&M System

Short Strangle

- Expect stable prices
- Compared to a short straddle, premiums received are less and so is profit potential
- Sell a call, out of the money
- Sell a put, out of the money

Short Strangle

1. Sell a put, out of the money 350 put at 20

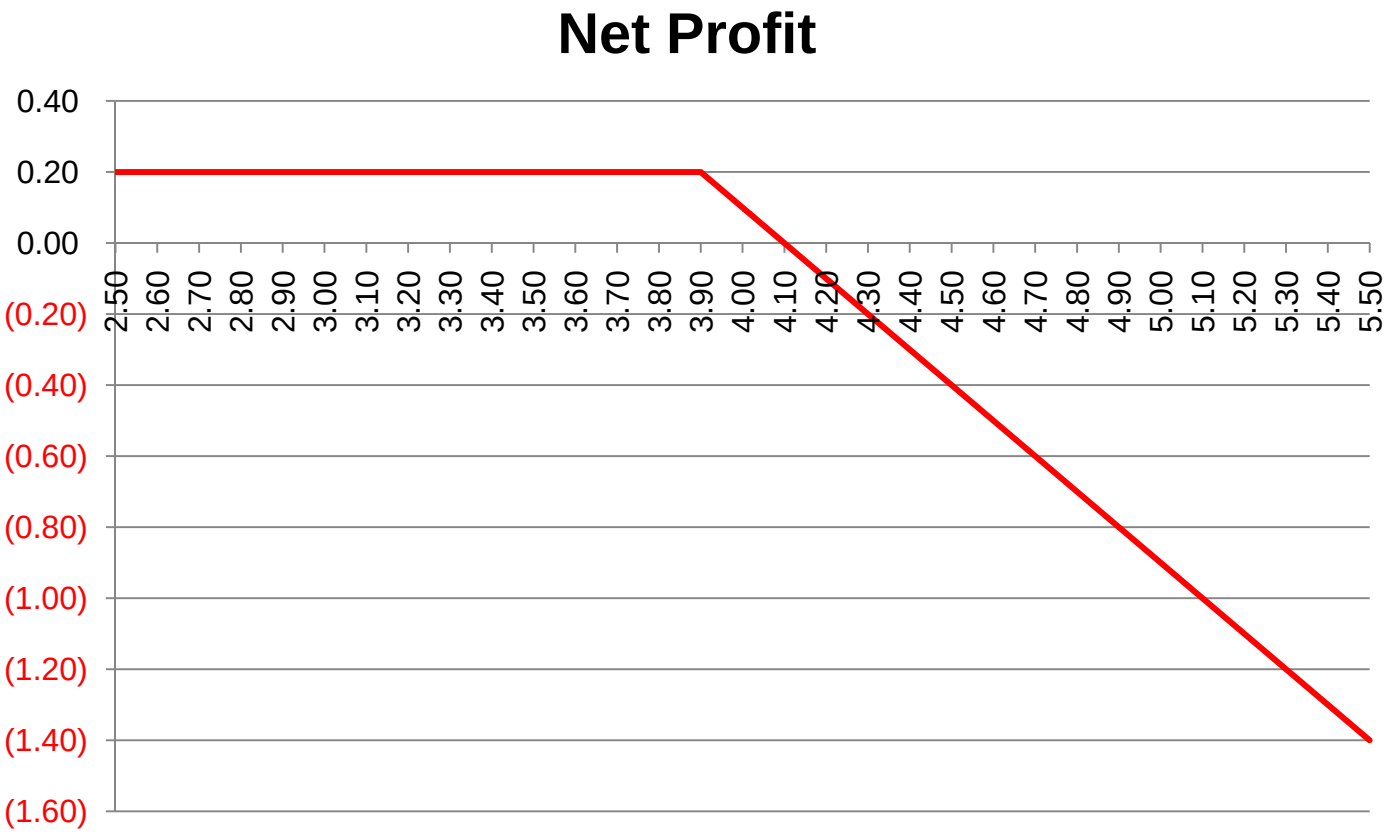


AgriLIFE EXTENSION
Texas A&M System

Short Strangle

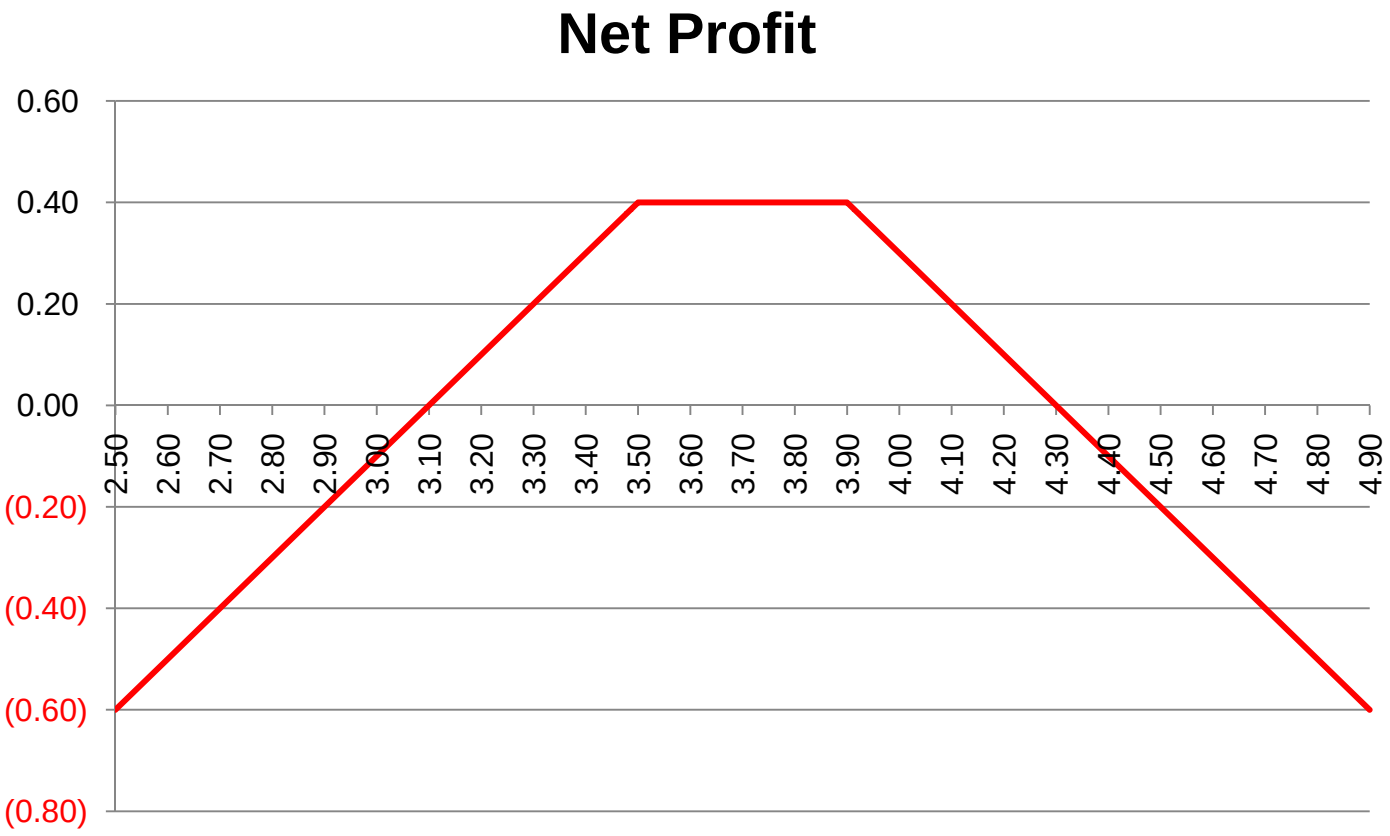
2. Sell a call, out of the money

390 call at 20



AgriLIFE EXTENSION
Texas A&M System

Short Strangle
Net profit from combined positions



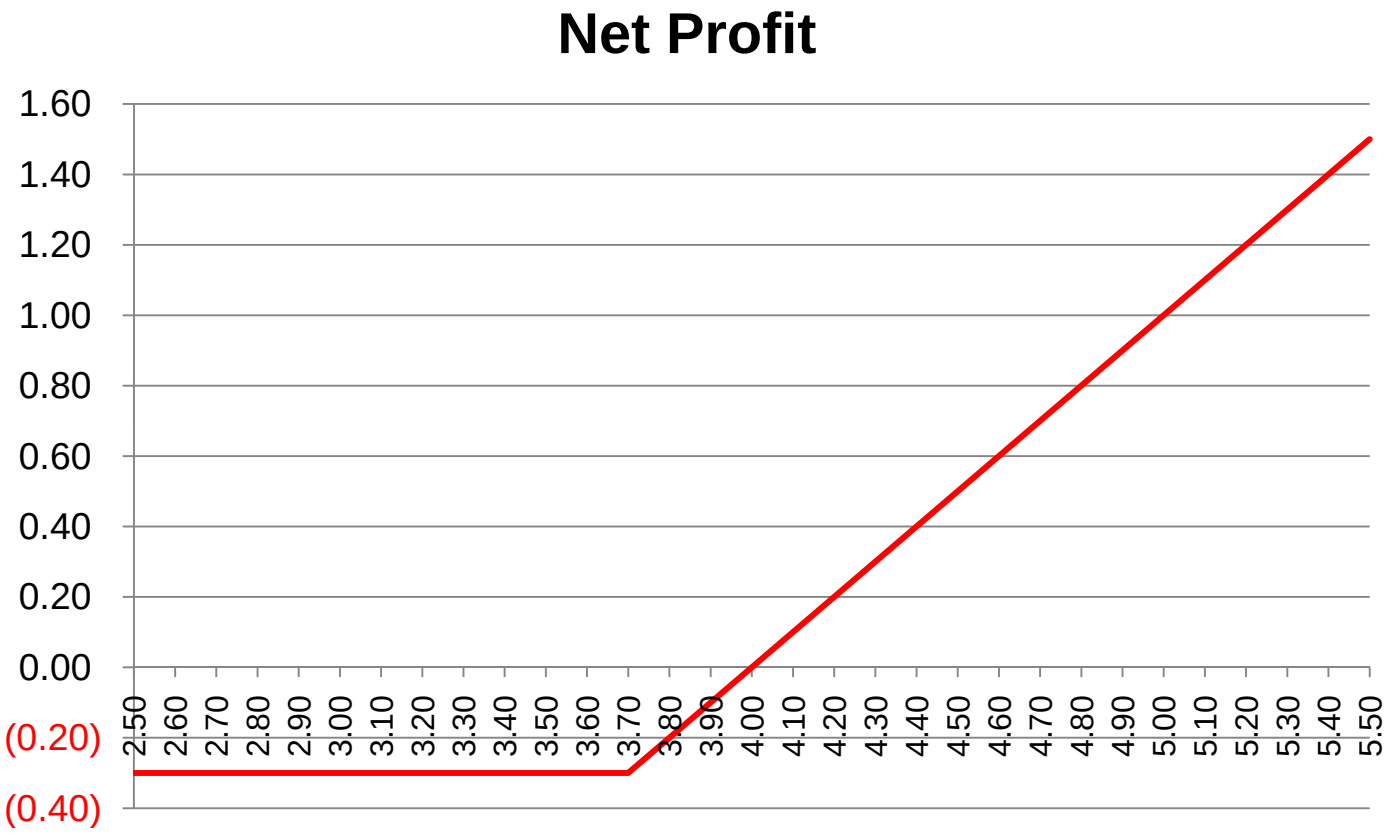
AgriLIFE EXTENSION
Texas A&M System

Call Ratio Spread

- Expect higher prices up to a certain level; some fear that prices may fall dramatically
- Buy an at the money call
- Sell 2 out of the money calls

Call Ratio Spread

1. Buy an at the money call 370 for 30

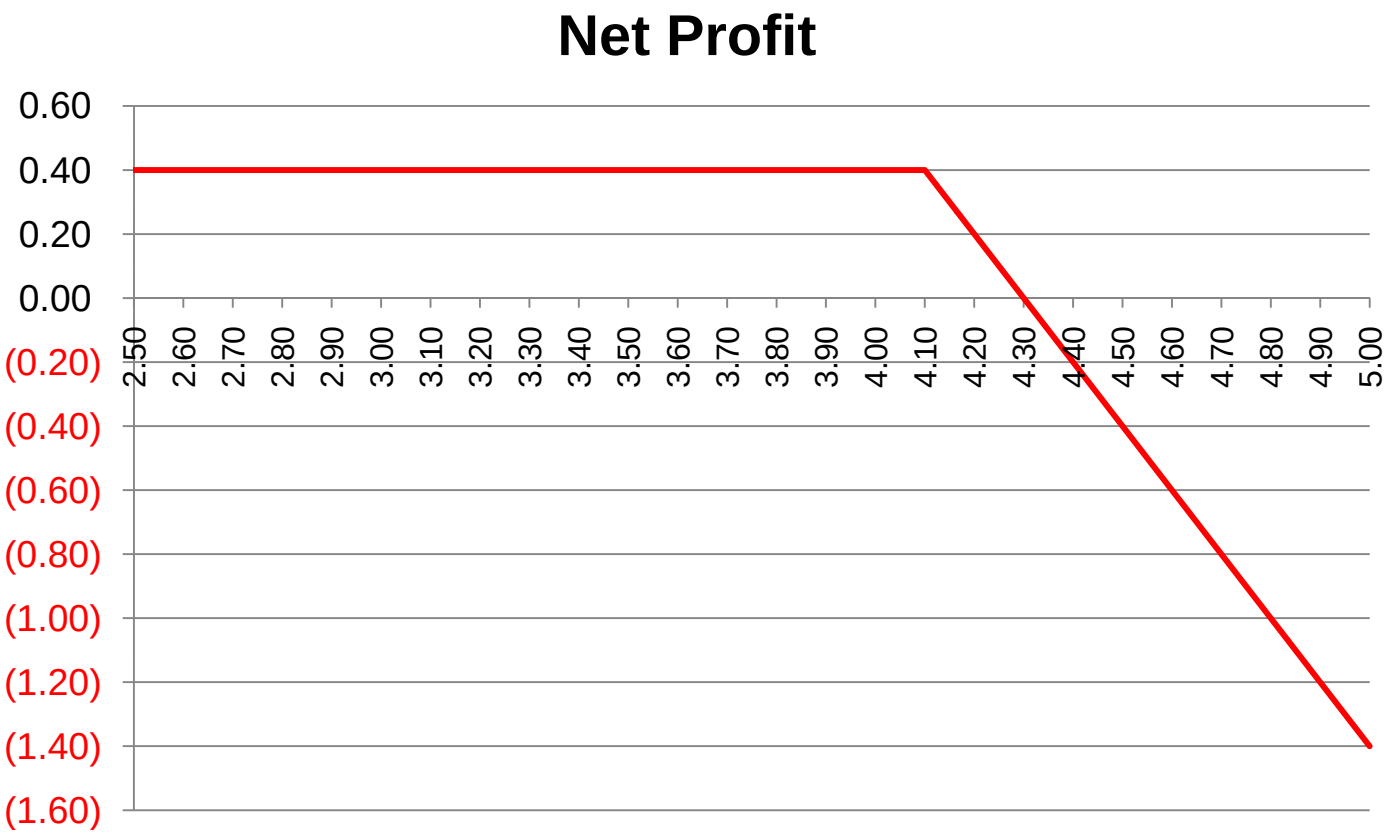


AgriLIFE EXTENSION
Texas A&M System

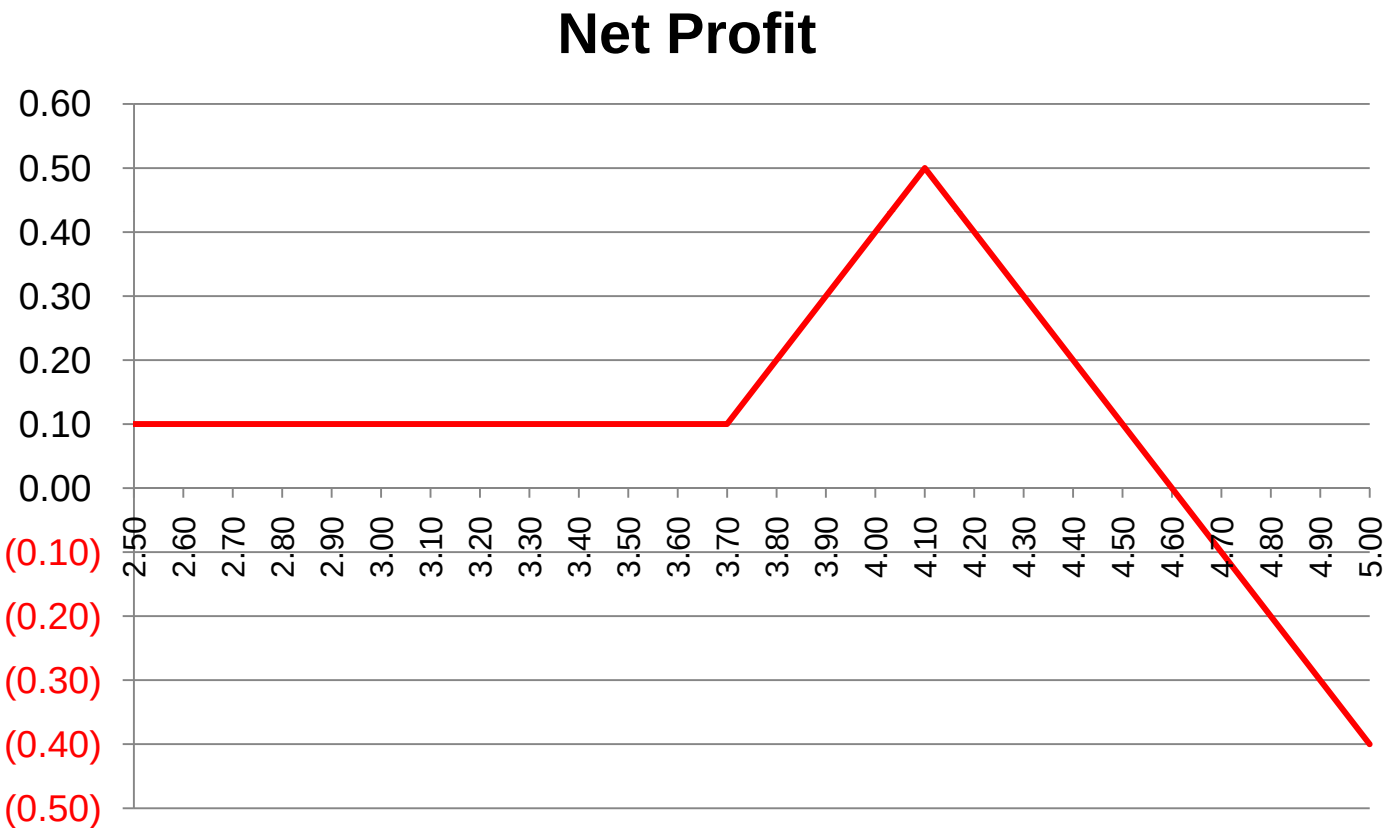
Call Ratio Spread

2. Sell 2 out of the money calls

410 for 20



Call Ratio Spread
Net profit from combined positions



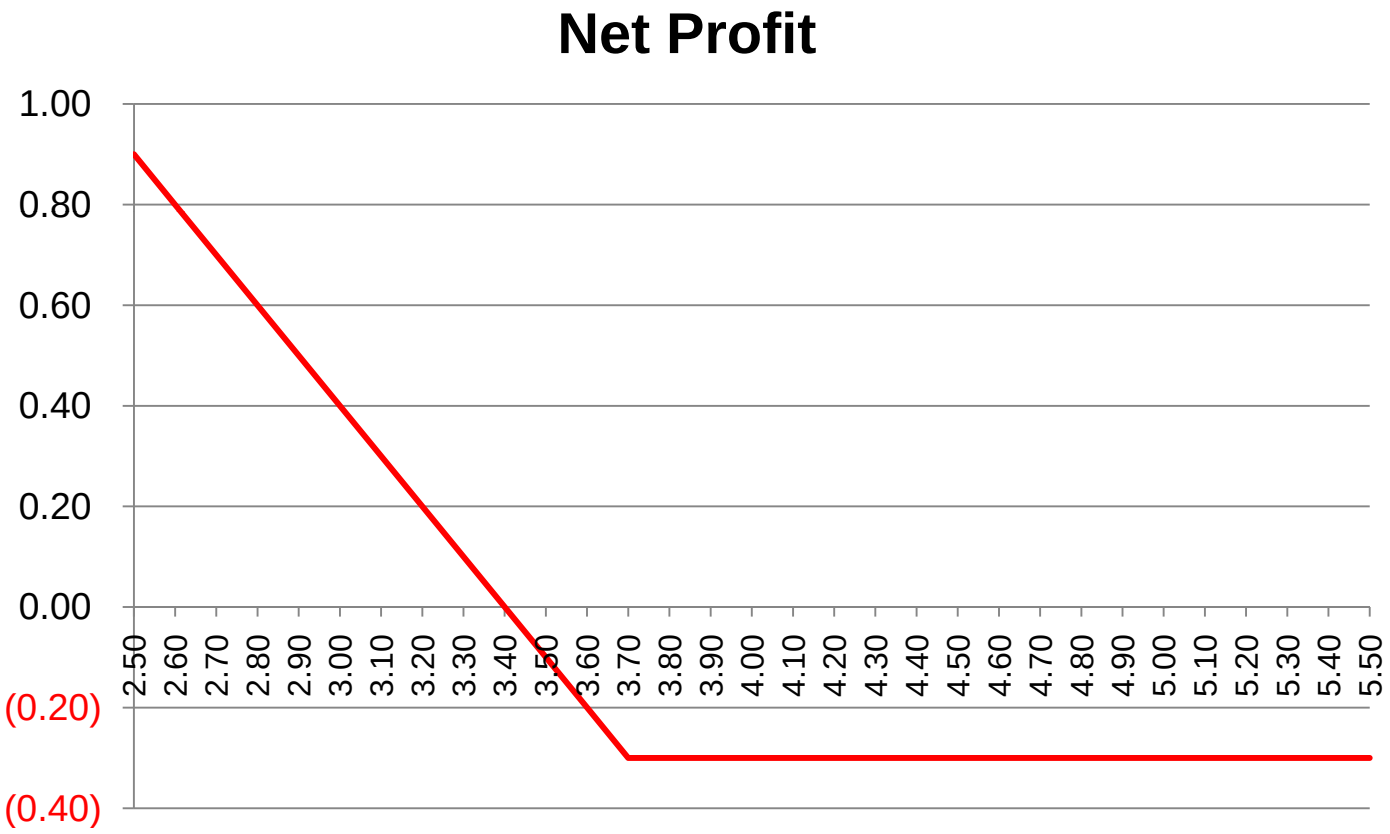
AgriLIFE EXTENSION
Texas A&M System

Put Ratio Spread

- Expect lower prices near term, but limited move down; risk that prices could move higher
- Buy 1 at the money put
- Sell 2 out of the money puts

Put Ratio Spread

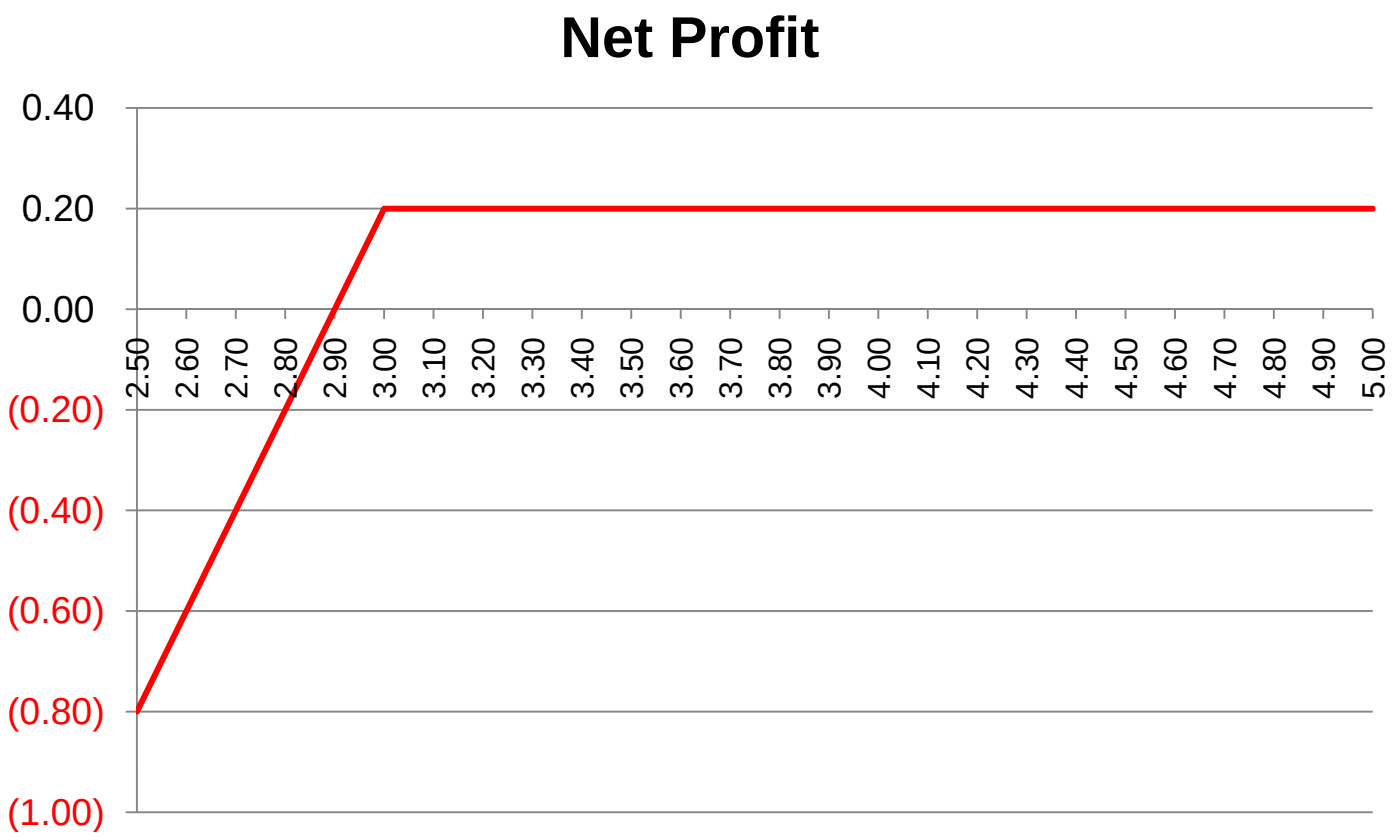
1. Buy an at the money put 370 for 30



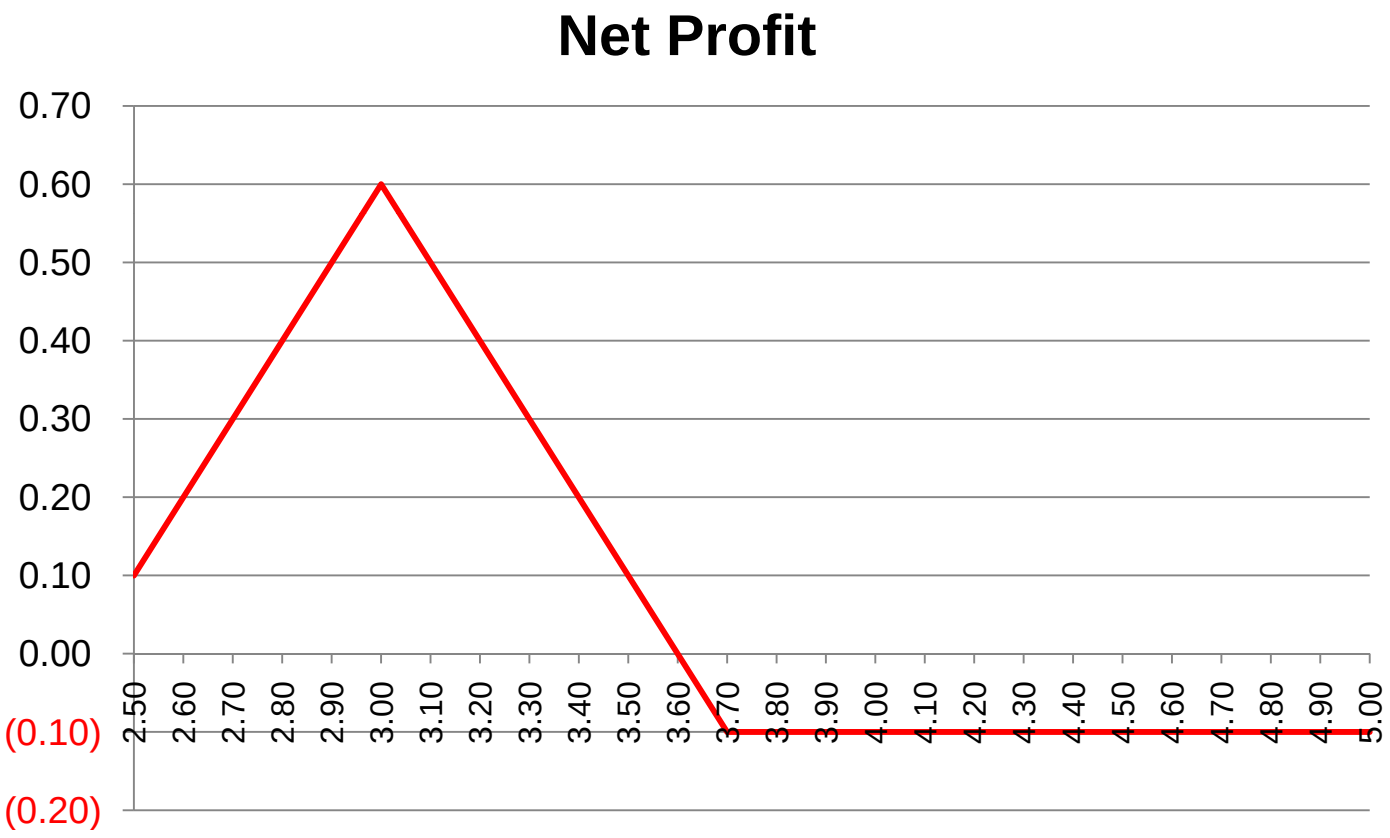
AgriLIFE EXTENSION
Texas A&M System

Put Ratio Spread

2. Sell 2 out of the money puts 300 for 10



Put Ratio Spread
Net profit from combined positions

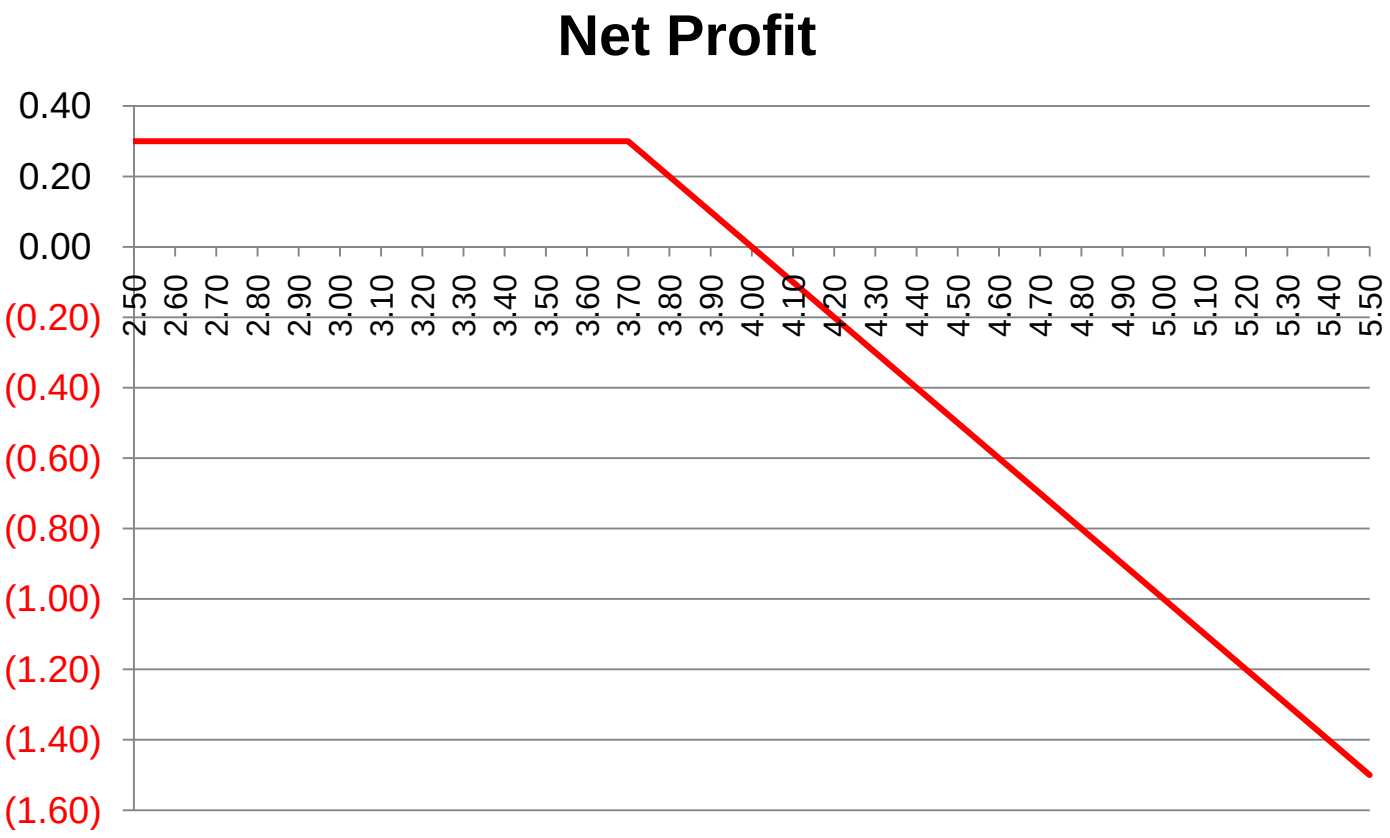


Call Ratio Backspread

- Expect higher prices, but do not want to lose money if market trades lower; do not expect stable prices
- Sell 1 at the money call
- Buy 2 out of the money calls

Call Ratio Backspread

1. Sell an at the money call 370 for 30

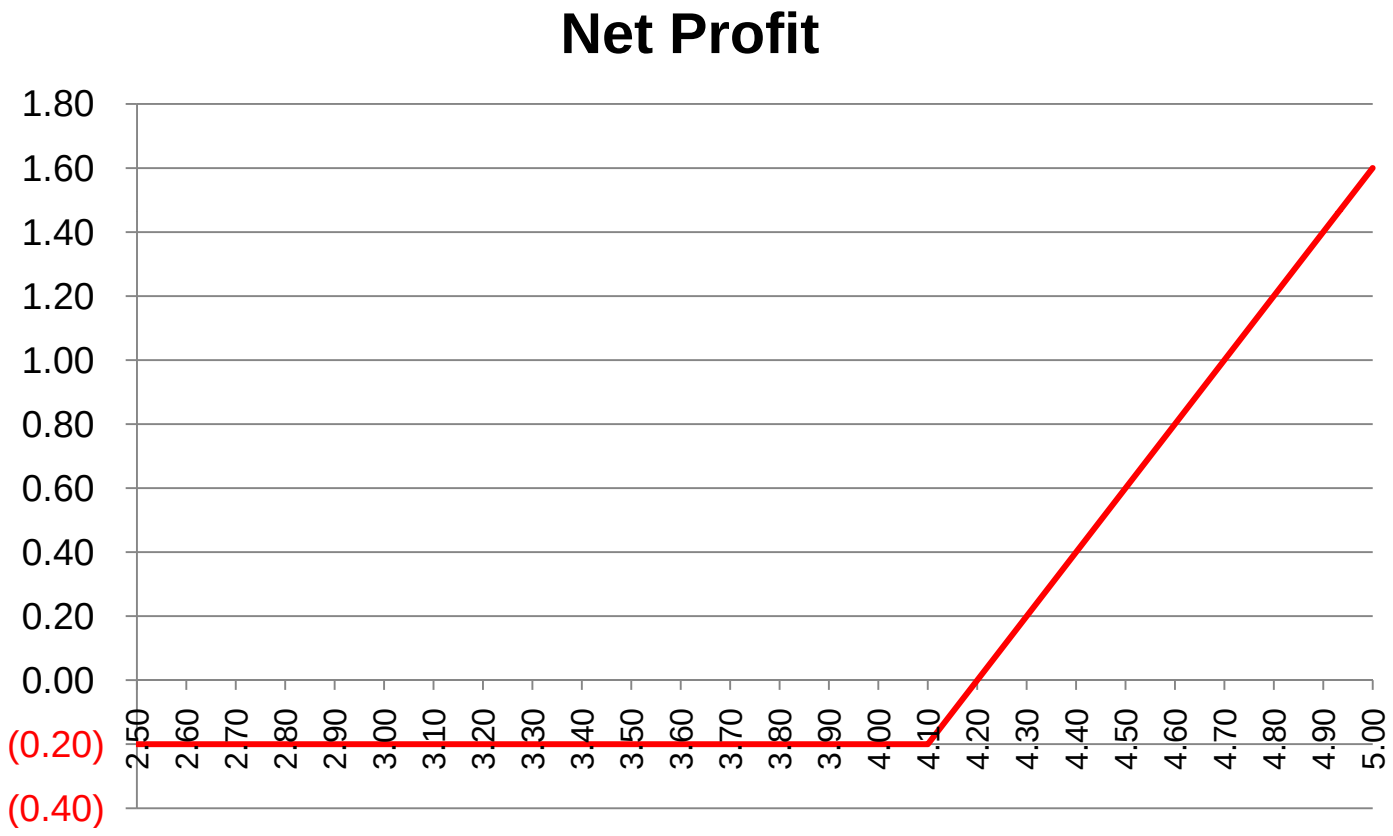


AgriLIFE EXTENSION
Texas A&M System

Call Ratio Backspread

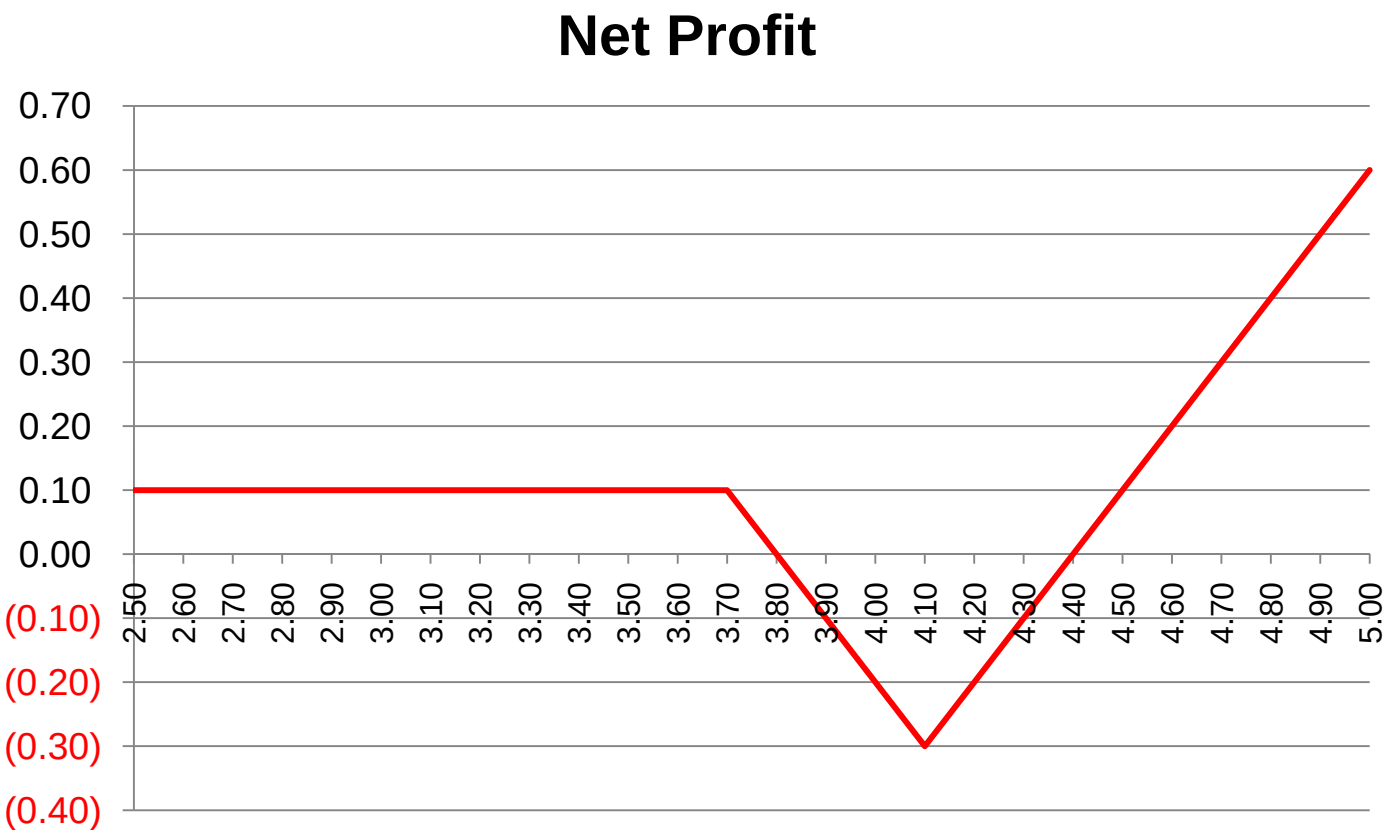
2. Buy 2 out of the money calls

410 for 10



AgriLIFE EXTENSION
Texas A&M System

Call Ratio Backspread
Net profit from combined positions

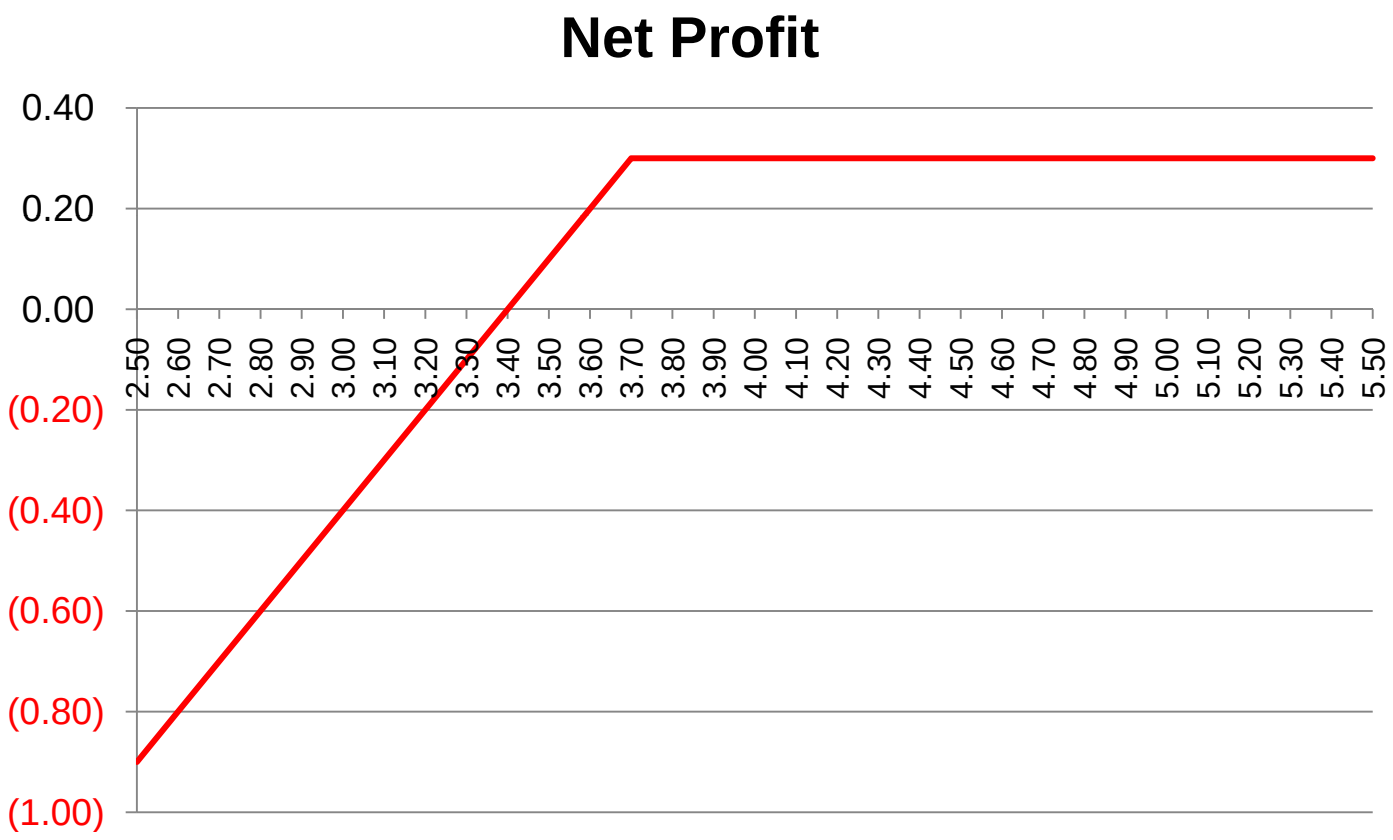


Put Ratio Backspread

- Expect significantly lower prices but do not want to lose money if prices go higher; feels strongly that prices will not stay where they are
- Sell an at the money put
- Buy 2 out of the money puts

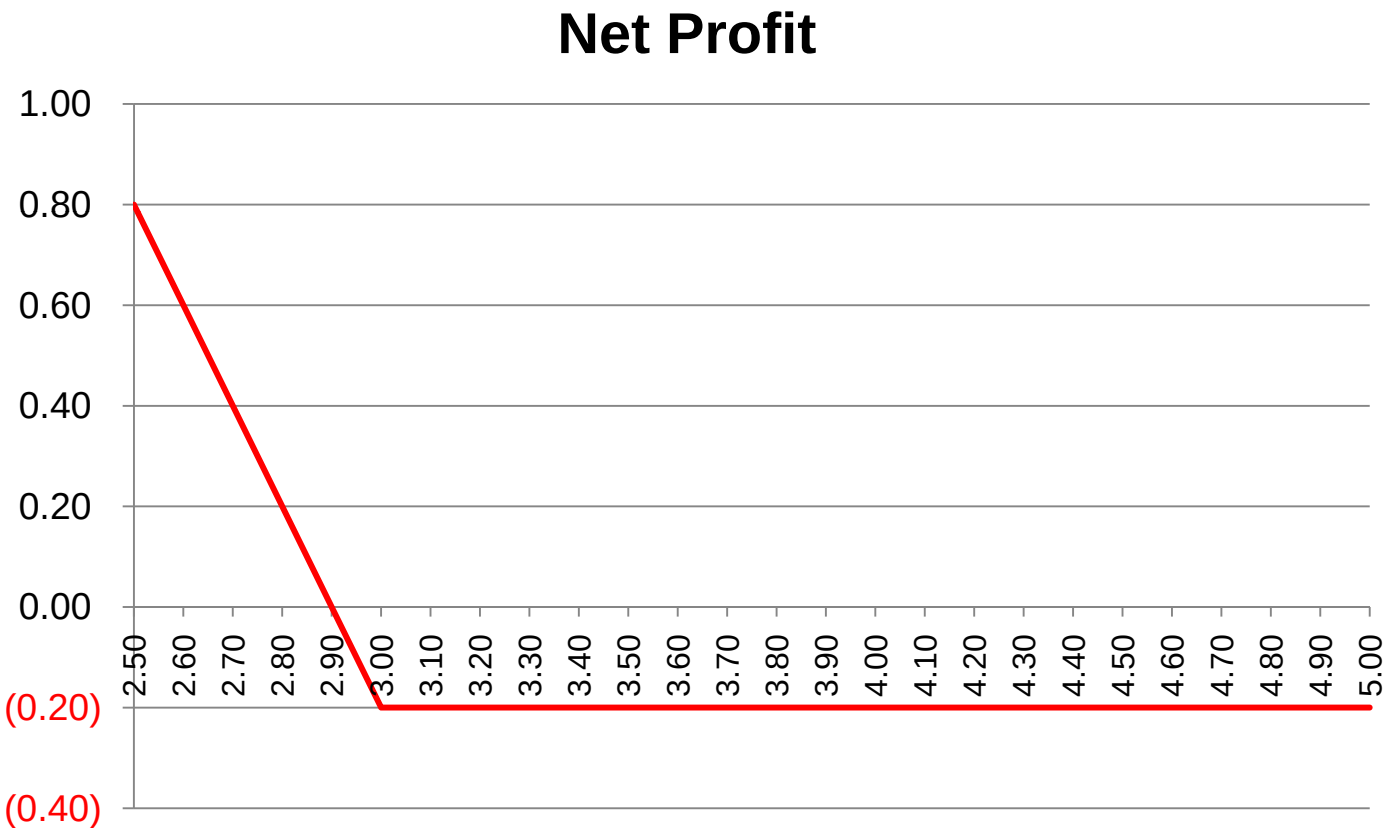
Put Ratio Backspread

1. Sell an at the money put 370 for 30



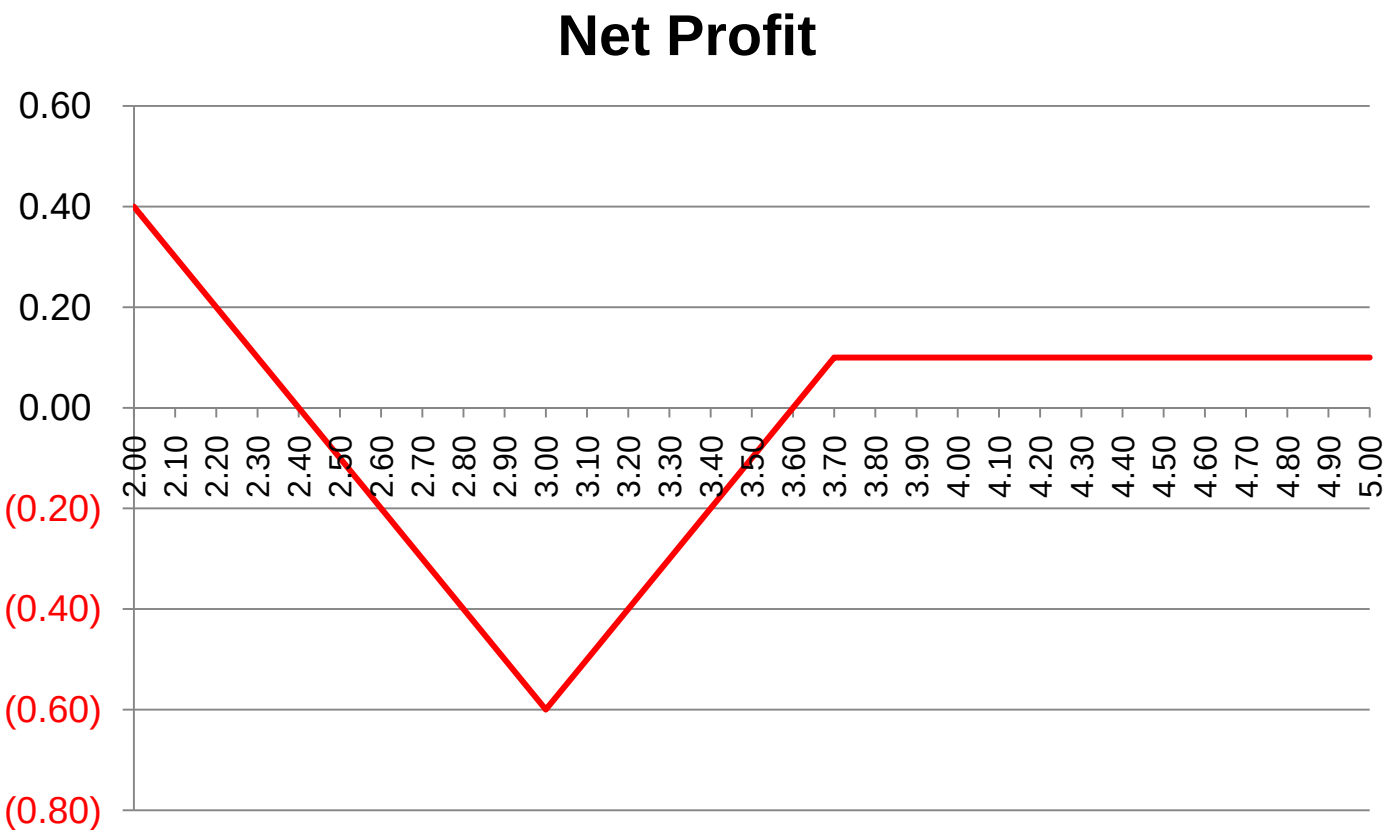
Put Ratio Backspread

2. Buy 2 out of the money puts 300 for 10



AgriLIFE EXTENSION
Texas A&M System

Put Ratio Backspread
Net profit from combined positions



More Resources

- Risk Management Curriculum Guide
  - http://agecoext.tamu.edu/resources/library/risk-management-curriculum-guide.html.
- Online Options Trading Encyclopedia
  - http://www.optiontradingpedia.com/

8.

Marketing Simulation Exercise

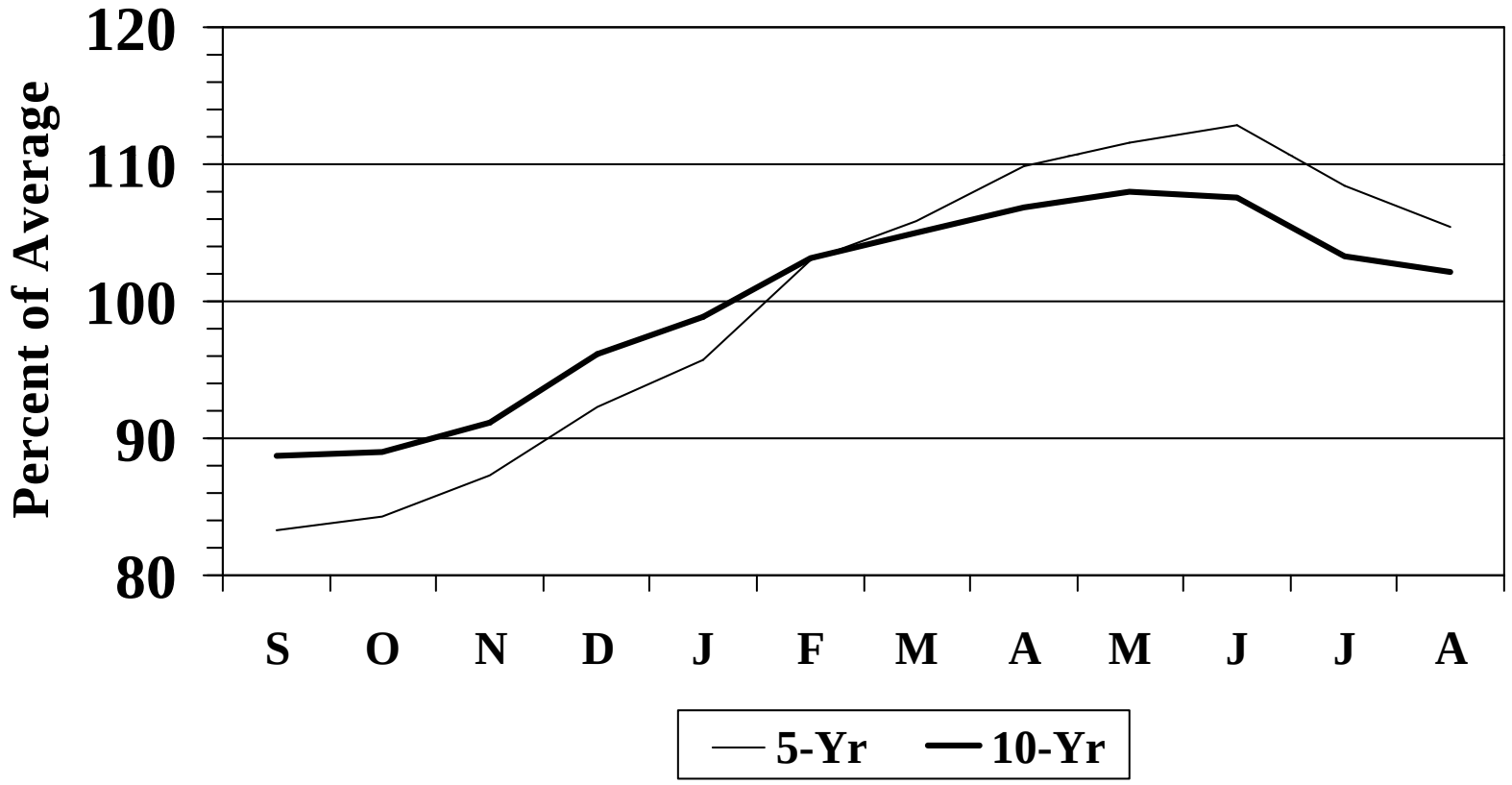
Alternative Approaches

1. Sell 100% of production at harvest (Oct 15)
2. Sell a little each month of the year (10% for 10 months beginning on Jan 15)
3. Market according to a target price (Total Costs plus 10%)
4. Sell based on seasonal price tendencies by the calendar (Mar 1, Jun 15, Aug 1, Oct 15)
5. Sell based on seasonal price tendencies using Moving Averages to time sales

Seasonal Price Index for U.S. Corn

September 1998 – August 2008

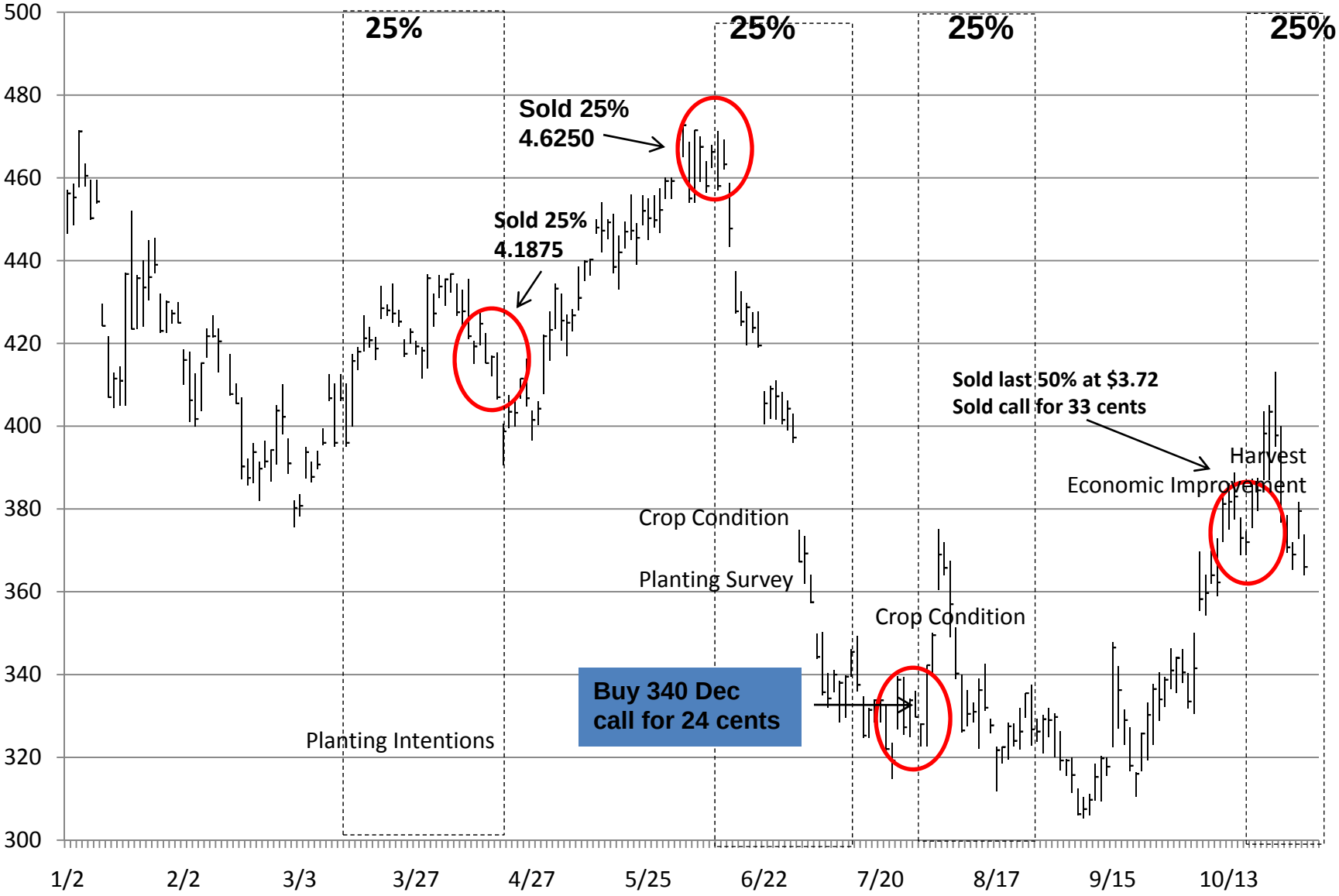
Marketing Year



Marketing Results

	2005	2006	2007	2008	2009
1. Harvest	2.04	**3.17**	3.62	3.88	3.73
2. Average	2.31	2.64	**3.89**	5.80	3.88
3. Target	2.04	**3.17**	3.62	4.57	**4.25**
4. Seasonal	**2.33**	2.74	3.84	5.78	3.98
5. Seasonal plus MA	2.31	2.73	3.72	**6.10**	3.87

December Corn 2009, avg price = $4.09



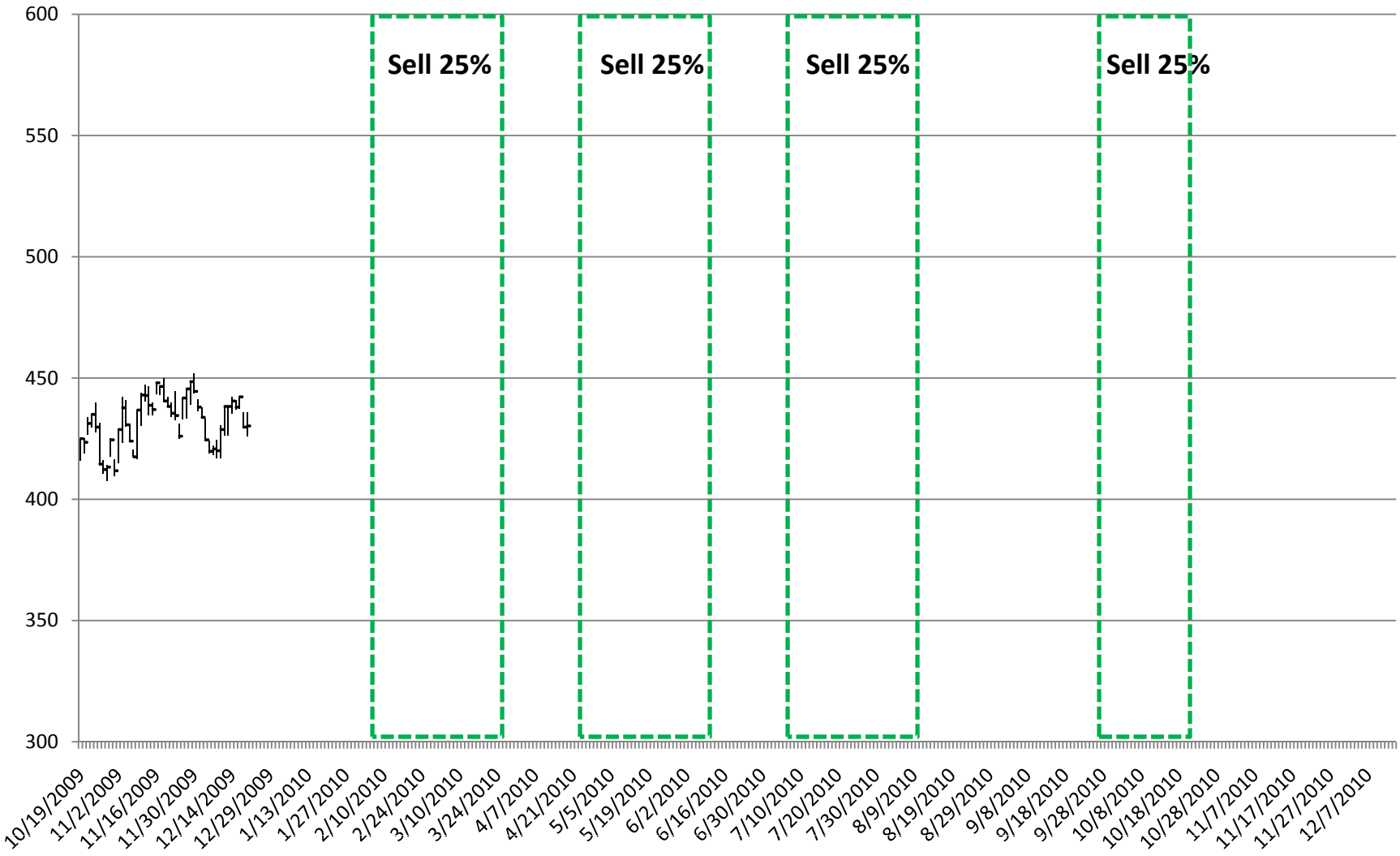
BE to cover Total Costs = $4.15/bushel

Where Do We Go From Here?

- **Input Use Efficiency**
  - **Crop Rotations**
  - **Hybrids/ Variety**
  - **Conservation Tillage**
  - **Soil and plant testing**
  - **Precision Application**

- **Financial Management**
  - **Budget/ BE analysis**
  - **Cash Flow Projections**
  - **Crop Insurance**
  - **Price Safety Net**
  - **Marketing Plan**

December Corn 2010 Marketing Plan



Manage the Margin

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(979)845-8011

http://agecoext.tamu.edu/index.html

Agriculture and Natural Resources • Family and Consumer Sciences • 4-H and Youth Development • Community Development

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