Commodity Market Outlook:
Corn, Forage, Wheat & Cattle

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Greeley, Colorado
March, 2016
Outline

• Long-term Price Outlook
  – Corn
  – Forage
  – Wheat
  – Cattle
  – Sheep & Lambs
  – Others...

• Short-term Price Comments.

• General Economy

\[ I \text{ would love to stand here and tell you,} \]
\[ “$5.00 \text{ corn, }$8.00 \text{ wheat and }$3.00 \text{ calves – for the rest of your life.”} \]

\[ \text{But this is a competitive economy and} \]
\[ \text{agriculture is a competitive industry.} \]
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
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Summary

• High prices in 2007-2013 were the result of
  – Strong demand.
  – Supply disruptions.
  – World-wide volatility but by underlying growth.

• Moving forward 2016-2020?:
  – Plentiful supplies of everything.
  – Weak-to-little demand growth.
  – Strong dollar.

• It’s not the 1980’s – but there are similarities.

• Weaker prices & margins.
Objective **Long-Term** Drought Indicator Blend Percentiles

Mar 05, 2016

**Percentile (D0-to-D4 equivalent):**
- 0 to 2 (D4)
- 2 to 5 (D3)
- 5 to 10 (D2)
- 10 to 20 (D1)
- 20 to 30 (D0)
- 70 to 80
- 80 to 90
- 90 to 95
- 95 to 98
- 98 to 100

**Inputs (as percentiles):**
- 25% Palmer Hydrologic Index
- 20% 24-Month Precipitation
- 20% 12-Month Precipitation
- 15% 6-Month Precipitation
- 10% 60-Month Precipitation
- 10% CPC Soil Moisture Model
- 30% Palmer Hydrologic Index
- 30% 60-Month Average Z-Index
- 10% 60-Month Precipitation
- 10% 24-Month Precipitation
- 10% 12-Month Precipitation
- 10% CPC Soil Moisture Model

This map approximates impacts responding to precipitation over the course of several months to a few years, such as reservoir content, groundwater, and lake levels. HOWEVER, THE RELATIONSHIP BETWEEN INDICATORS AND WATER SUPPLIES CAN VARY MARKEDLY WITH LOCATION, SEASON, SOURCE, AND MANAGEMENT PRACTICE. Do not interpret this map too literally.

This map is based on preliminary climate division data. Local conditions and/or final data may differ. See the detailed product suite description for more details.
Objective Short-Term Drought Indicator Blend Percentiles
Mar 05, 2016

Percentile (D0-to-D4 equivalent)
- 0 to 2 (D4)
- 2 to 5 (D3)
- 5 to 10 (D2)
- 10 to 20 (D1)
- 20 to 30 (D0)
- 70 to 80
- 80 to 90
- 90 to 95
- 95 to 96
- 98 to 100

Inputs (as percentiles):
- 35% Palmer Z-Index
- 25% 3-Month Precipitation
- 20% 1-Month Precipitation
- 13% CPC Soil Moisture Model
- 7% Palmer Drought Index

This map approximates impacts that respond to precipitation over several days to a few months, such as agriculture, topsoil moisture, unregulated streamflows, and most aspects of wildfire danger. The relationship between indicators and impacts can vary significantly with location and season. Do not interpret this map too literally.

This map is based on preliminary climate division data. Local conditions and/or final data may differ. See the detailed product suite description for more details.
U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for February 18 - May 31, 2016
Released February 18, 2016

Author:
Rich Tinker
NOAA/NWS/NCEP/Climate Prediction Center

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

http://go.usa.gov/3eZ73
Monthly Corn Contract
Weekly Corn Contract

The trading range for corn is $3.35-$4.50/bu. Except...
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<td>90.6</td>
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<tr>
<td>Harvested Acres (Million Acres)</td>
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<td>1,731</td>
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<td>SUPPLY</td>
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<td>15,479</td>
<td>15,372</td>
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<td>Feed and Residual</td>
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DEC 2015 Corn Contract

Blue was the correct trading range & green can happen again but not for long…
Corn Basis, 03-02-2016

Basis = Cash Price - Nearby Futures Price

CBT May Futures Price: $3.56

$/Bushel

- .34
- .24
- .32
- .36
- .38
- .41
- .44
- .51
- .57
- .64

www.agmanager.info
K-State Research and Extension
Bottom line on corn basis: strong for as big as the crop was. Good demand and movement. Big weak basis in regions with excellent sorghum crop.
### CORN - February 2016
(Crop Year: Sep 1 - Aug 31)

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Forecast $3.65-4.20/bu...
We will trade $3.75-$4.05 until there is a reason not to. We could move up to $4.10, $4.20, & $4.45 but… Sell rallies…
Corn Outlook

• Market price is where fundamentals say it should be.
• Acreage next year? Rotation with soybeans? Cash flow & debt?
• Demand? Trade? Storage?
• Basis?
• Price outlook – 16/17 @ $3.65-$4.00/bu. And we’ve had the two big crops.
• Aggressive sales on any weather-driven rally. Resistance @ $4.20 & $4.50.
All Wheat Production & Ending Stocks - U.S.
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<td>Average Colorado Price</td>
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<td>4.65</td>
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|                                |         |         |         |         |         |         |
|                                | 0.242   | 0.373   | 0.475   | 0.583   | 0.376   | 0.504  | 0.602  |         |         |
Wheat Basis, 03-02-2016

Basis = Cash Price - Nearby Futures Price

KCBT May Futures Price: $4.55

$/Bushel

- .01
- .64
- .68
- .69
- .74
- .76
- .78
- .79
- .84
- .92

www.agmanager.info
K-State Research and Extension
Bottom line on wheat basis: weak for the reduced acres. Poor demand and movement.
Forecast $4.25-4.75/bu...
Wheat Outlook

- World: Building stocks.
- U.S.: huge stocks but reduced acres.
- World weather?
- But soft exports due to strong dollar.
- Basis?
- Forecasts: JUL 2016 @ $5.00 with range $4.50-5.25/bu. And aligned with fundamentals.
- Aggressive sales @ $5.20 & $5.75. Likely storage opportunity into late 2016.
Data Source: USDA-NASS, Compiled & Forecasts by LMIC
Livestock Marketing Information Center
US ALL HAY SUPPLY & DISAPPEARANCE

Crop Year

Data Source: USDA-NASS, Compiled & Forecasts by LMIC
Livestock Marketing Information Center

G-NP-20
08/12/15
US ALL HAY STOCKS
December 1

Mil. Tons

Data Source: USDA-NASS, Compiled & Forecasts by LMIC
Livestock Marketing Information Center
US ALL HAY STOCKS
May 1 (Beginning of Crop Year)

Data Source: USDA-NASS, Compiled & Forecasts by LMIC
Livestock Marketing Information Center
US HAY STOCKS AND PRODUCTION
Crop Year

Data Source: USDA-NASS, Compiled & Forecasts by LMIC
Livestock Marketing Information Center

08/12/15
2014 DECEMBER 1 HAY STOCKS
(1000 Tons)

U.S. Total: 92052
PERCENT CHANGE DECEMBER 1 HAY STOCKS
(2013-2014)

U.S. Total: 3%

Livestock Marketing Information Center
Data Source: USDA-NASS
2015 MAY 1 HAY STOCKS
(1000 Tons)

U.S. Total: 24517

Livestock Marketing Information Center
Data Source: USDA-NASS
PERCENT CHANGE MAY 1 HAY STOCKS
(2014-2015)

U.S. Total: 27.9%
2014 ALL HAY ACRES
(1000 Acres)

U.S. Total: 57,029

Livestock Marketing Information Center
Data Source: USDA-NASS

2/2/2015
PERCENT CHANGE ALFALFA HAY ACRES
(2013-2014)

U.S. Total: 4.4%
2014 OTHER HAY ACRES
(1000 Acres)

U.S. Total: 38,647
PERCENT CHANGE OTHER HAY ACRES
(2013-2014)

U.S. Total:  -4%

Livestock Marketing Information Center
Data Source: USDA-NASS
PERCENT CHANGE ALL HAY ACRES
(2013-2014)

U.S. Total: -1%
Colorado Hay Report

Compared to the last week, hay movement limited and prices steady. The bulk of the market activity is on contracted hay. Demand good on Dairy quality alfalfa. Demand and movement light on lower quality alfalfa. Grass hay trade activity mostly on small squares. All prices reported are FOB at the stack or barn unless otherwise noted. Prices reflect load lots of hay.

Northeast Colorado Areas

Alfalfa
Large Squares: Good 125.00; Fair 100.00; Utility 80.00 DEL.
Small Squares: Supreme 229.00 (8.00 per bale); Utility 133.00 (4.00 per bale).
Grass
Small Squares: Premium 183.00 (5.50 per bale).
Corn Stalks
Large Squares: Good 55.00-60.00 DEL

Southeast Colorado Areas

Alfalfa
Large Squares: Good 120.00, 140.00-150.00 DEL; Fair 110.00; Utility 70.00.
Timothy Grass
Small Squares: Premium 154.00-167.00 (5.00 per bale), Retail 277.00-300.00 (9.00 per bale).

San Luis Valley Area

Alfalfa -- Large Square: Supreme 180.00.
Alfalfa/Grass -- Large Square: Utility 100.00.

Southwest Colorado Areas

Alfalfa
Large Squares: Supreme 175.00; Premium to Good 160.00; Utility 75.00.

Mountains and Northwest Colorado Areas

Grass
Large Squares: Premium 110.00-135.00; Fair 100.00.
Compared to the last week, hay movement light with prices steady on grass hay and lower quality alfalfa. Very little movement on Dairy quality alfalfa. Demand light. All prices reported are FOB at the stack or barn unless otherwise noted. Prices reflect load lots of hay.

Northeast Colorado Areas
Alfalfa
Large Squares: Utility 85.00 DEL.
No reported quotes for all other classes of hay.

Southeast Colorado Areas
Alfalfa
Small Squares: Premium 200.00 (6.45-6.90 per bale).
Sorghum Sudan
Round: Good 85.00.
No reported quotes for all other classes of hay.

San Luis Valley Area
No reported quotes for all other classes of hay.

Southwest Colorado Areas
Grass
Small Squares: Premium 245.00 (8.00 per bale, Certified Weed Free).
Orchard Grass
Small Squares: Premium 265.00 (8.00 per bale).
No reported quotes from all other classes of hay.

Mountains and Northwest Colorado Areas
No reported quotes for all other classes of hay.
Colorado Hay Report

Compared to the last week, hay movement continued light with prices steady to weak on inactive trade. The bulk of hay trades are at auction markets. All prices reported are FOB at the stack or barn unless otherwise noted. Prices reflect load lots of hay.

Northeast Colorado Areas
- Alfalfa
  - Large Squares: Utility 110.00.
- Wheat Straw
  - Large Squares: Good 55.00.

Southeast Colorado Areas
- Alfalfa
  - Small Squares: Premium 200.00 (6.45-6.90 per bale).
- Sorghum Sudan
  - Round: Good 80.00.
- Haygrazer
  - Large Squares: Good 80.00.

San Luis Valley Area
- No reported quotes for all other classes of hay.

Southwest Colorado Areas
- No reported quotes from all other classes of hay.

Mountains and Northwest Colorado Areas
- Grass
  - Large Squares: Utility 50.00-65.00.
  - Small Squares: Premium 200.00 (5.50 per bale).
  - Round: Utility 50.00-65.00.
Forage Outlook

• Plentiful except for high-quality.
• Excellent hay:
  – Alfalfa $150-$175/T.
  – Grass $85-$100/T.
• Low-quality hay: <$60-$80/T.
• Back to more small bales...
Other Crops

• Oilseeds: The one market with long-term growth potential.
  – Record large crop last year in S. Am.
• Sorghum: Superb crop last year.
  – Growth will depend on feed use & exports.
• Millet: Domestic demand growth potential.
  – Decreased acres but increased production.
• Malting barley: Excellent premiums past several years.
  – Weather related but weather other places.
• Potatoes: Excellent production this year.
  – Soft trade.
• Sugar: World versus domestic prices.
  – Substantial long-term world pressure on prices.
• Hops:
  – This is the only commodity that I hear persistent discussion of limited availability...
Weekly Live Cattle Contract

This market is looking for a bottom – trading range $120-145/cwt.
This market will drift lower – trading range $130-170/cwt.
2010 Ranchers sell cattle to capitalize on rising prices amid strong demand for beef.
2011 Drought in Texas and Oklahoma spurs ranchers to sell, not breed, calves.
2012 Dry conditions spread northward to the Midwest, with more cows culled.
2013 Drought intensifies in first half of the year. Efforts to rebuild herds are delayed.
2014 Grain prices fall. Ranchers begin retaining more female calves for breeding.
2015 Herds expand as drought eases. Forage and grain supplies are abundant.

Drought conditions, first week of May of each year

Cattle-herd size, percentage change from a year earlier

Sources: U.S. Drought Monitor; U.S. Agriculture Department (herd size)  Photo: Ty Wright/Bloomberg News
Cattle Outlook

• Fed cattle market will trend down:
  – Domestic demand was strong.
  – International demand & trade are weak.
  – Abundant supplies of competing meats.

• Feeder cattle and calf prices will weaken for the next several years:
  – Herd building.
I can see a rally this spring until summer with greening of grass – like we saw in 2015. Sell your calves on the video in 2016 if that happens!
RETAIL ALL FRESH BEEF DEMAND INDEX
Annual, Using CPI 1990=100

Data Source: Bureau of Labor Statistics, USDA-ERS, Compiled & Analysis by LMIC
Livestock Marketing Information Center
RETAIL ALL FRESH BEEF DEMAND INDEX
First Quarter, Using CPI 1990=100

Data Source: Bureau of Labor Statistics, USDA-ERS, Compiled & Analysis by LMIC
Livestock Marketing Information Center
RETAIL ALL FRESH BEEF DEMAND INDEX
Fourth Quarter, Using CPI 1990=100

Data Source: Bureau of Labor Statistics, USDA-ERS, Compiled & Analysis by LMIC
Livestock Marketing Information Center
US EXPORTS OF BEEF MUSCLE CUTS
Weekly

Data Source: USDA-AMS & USDA-APHIS
Livestock Marketing Information Center
US BEEF AND VEAL IMPORTS

Carcass Weight, Monthly

Data Source: USDA-ERS & USDA-FAS
Livestock Marketing Information Center
US BEEF AND VEAL EXPORTS
Carcass Weight, Monthly

Mil. Pounds

JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

Data Source: USDA-ERS & USDA-FAS
Livestock Marketing Information Center
US NET BEEF IMPORTS
Carcass Weight, Monthly

Data Source: USDA-ERS & USDA-FAS, Compiled & Analysis by LMIC
Livestock Marketing Information Center

I-N-31
02/09/16
US BEEF AND VEAL NET IMPORTS
Carcass Weight, Annual

Bil. Pounds

Data Source: USDA-ERS & USDA-FAS, Compiled & Analysis by LMIC
Livestock Marketing Information Center

I-N-28
02/09/16
Calf Crop
July Estimates, U.S., Annual

2015 = 34.3 Million Head
+2.3 Percent

Data Source: USDA-NASS
Livestock Marketing Information Center
HEIFERS HELD AS BEEF COW REPLACEMENTS
January 1, U.S.

Data Source: USDA-NASS
Livestock Marketing Information Center
HEIFERS HELD AS BEEF COW REPLACEMENTS
July 1, U.S.

Data Source: USDA-NASS
Livestock Marketing Information Center

C-N-37
02/01/16
PERCENT CHANGE IN CATTLE INVENTORY
U.S., January 1

Data Source: USDA-NASS, Analysis by LMIC
Livestock Marketing Information Center
AVERAGE ANNUAL CATTLE PRICES
Southern Plains

Data Source: USDA-AMS, Compiled and Forecasts by LMIC
Livestock Marketing Information Center
ESTIMATED AVERAGE COW CALF RETURNS

Returns Over Cash Cost (Includes Pasture Rent), Annual

$ Per Cow

Data Source: USDA & LMIC, Compiled by LMIC

Livestock Marketing Information Center
ESTIMATED AVERAGE COW CALF COSTS
Total Cash Cost Plus Pasture Rent, Annual

Data Source: USDA & LMIC, Compiled by LMIC
Livestock Marketing Information Center

02/12/16
## LMIC Cattle Price & Quantity Forecasts

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<th>Date</th>
<th>% Change Production</th>
<th>% Change Consumption</th>
<th>Fed Cattle</th>
<th>7-800# Feeder</th>
<th>5-600# Calf</th>
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<td>$136-137</td>
<td>$161-163</td>
<td>$195-197</td>
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<td>2016: II</td>
<td>+1.3</td>
<td>+0.1</td>
<td>$138-140</td>
<td>$165-169</td>
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<td>2016: III</td>
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<tr>
<td>2017: III</td>
<td>+3.3</td>
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<td>$127-134</td>
<td>$155-165</td>
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<td>2017: VI</td>
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<td><strong>$181-195</strong></td>
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<tr>
<td>2017</td>
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<td>$130-136</td>
<td>$157-165</td>
<td>$190-198</td>
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BREEDING EWES 1 YEAR & OLDER
Projections, January 1, U.S., Annual

Data Source: USDA-NASS
Livestock Marketing Information Center
SLAUGHTER LAMB PRICES
Wooled, 110-130 lbs, San Angelo, Weekly

Data Source: USDA-AMS
Livestock Marketing Information Center
SLAUGHTER LAMB PRICES
Calculated Formula Live (April 2009 to present), Weekly

Data Source: USDA-AMS
Livestock Marketing Information Center
SHEEP & LAMB SLAUGHTER
Federally Inspected, Weekly

Data Source: USDA-AMS & USDA-NASS
Livestock Marketing Information Center
MATURE SHEEP SLAUGHTER
Federally Inspected, Weekly

Thou. Head

JAN  APR  JUL  OCT

Avg. 2010-14  2015  2016

Data Source: USDA-AMS & USDA-NASS
Livestock Marketing Information Center
LAMB AND YEARLING SLAUGHTER
Federally Inspected, Weekly

Thou. Head

Data Source: USDA-AMS & USDA-NASS
Livestock Marketing Information Center
LAMB AND YEARLING DRESSED WEIGHT
Federally Inspected, Weekly

Thou. Head

Data Source: USDA-AMS & USDA-NASS
Livestock Marketing Information Center
AVERAGE WOOL PRICE
U.S., Grease, Annual

Cents / Pounds

Data Source: USDA/NASS
Livestock Marketing Information Center
MONTHLY AVERAGE U S WOOL PRICE

26 Micron (USDA 56s), Clean, FOB

$ Per Pound

2.20
2.40
2.60
2.80
3.00
3.20
3.40
3.60

JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

Data Source: USDA-AMS
Livestock Marketing Information Center
MONTHLY AVERAGE U S WOOL PRICE

24 Micron (USDA 60s), Clean, FOB

$ Per Pound

Data Source: USDA-AMS
Livestock Marketing Information Center
MONTHLY AVERAGE U S WOOL PRICE
22 Micron (USDA 64s), Clean, FOB

$ Per Pound

Data Source: USDA-AMS
Livestock Marketing Information Center

W-P-03
12/09/15
MONTHLY AVERAGE WOOL PRICE
26 Micron (USDA 56s), Clean
Australian deliv. to South Carolina vs. U.S. FOB

Data Source: USDA-AMS
Livestock Marketing Information Center
MONTHLY AVERAGE WOOL PRICE
22 Micron (USDA 64s), Clean
Australian deliv. to South Carolina vs. U.S. FOB

Data Source: USDA-AMS
Livestock Marketing Information Center
Sheep, Lamb & Wool Outlook

• Expansion
  – Lower prices.
  – Modest longer term trade issues.

• No wreck similar to cattle
  – No weight problem.
  – No market-ready inventory problem.
  – Also not immune going forward.

• Strong wool market.
Input Market Outlook Summary

• Soft everything. Even land valuations...
• Risks moderating.
• Softening fuel costs with no volatility
  – Fertilizer...
  – Chemicals...
• Supply industries remain operating under-capacity & unwilling to take risk.
• We haven’t had this much cheap energy in a while. Let’s see what happens.
Weekly Crude Oil Contract

$150

$35

$40-$60
Weekly Natural Gas Contract
Producer Price Index: Agricultural Chemicals

Percent Change from Prior Year

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

2010 2011 2012 2013 2014 2015
David Kohl’s: Worst Farm Management Practices

• Investment into nonproductive assets.
• High family living cost or withdrawals from the business.
• Spending your way out of income taxes.
• Poor financial record systems.
• Co-mingling business and personal expenses.
• Bigness on the brain!
• Mismanagement of a family member’s return.
• Skipping the details.
• Attempting to hit a home run each time at bat!
• Refusal to learn.
Ed Usset’s: “A Fresh Start” Marketing

• Have a plan.
  – Planning & wishing are different.

• Find a dime.
  – This year’s big moves will be smaller than prior years.

• Know your costs of production.
  – What is your target profit or rate of return?

• Eliminate mistakes.
  – What did you do wrong last year?

• Look ahead.
  – Be proactive not reactive.
Marketing?

- Forward selling needs to be considered one day of the week each week of the year.
- Set a target, be reasonable, & sell some when you can get that.
- Write it down.
- Do your fundamentals.
- Do your technical analysis.
- Sell when they say sell & buy when they say buy.
- Marketing will not fix production/cost problems.
QTRLY GROSS DOMESTIC PRODUCT (GDP)
Real Dollar (2005) Change from Previous Quarter

Data Source: Bureau of Economic Analysis, Compiled & Analysis by LMIC
Livestock Marketing Information Center 11/13/15
U.S. UNEMPLOYMENT RATE
Seasonally Adjusted, Quarterly

Data Source: Bureau of Labor Statistics, Compiled & Analysis by LMIC
Livestock Marketing Information Center
Domestic U.S. Consumer Confidence
Monthly, Index year 1966 = 100

Data Source: Thomson Reuters/University of Michigan
Livestock Marketing Information Center
93/76 = 1.224. So foreign buyers of our commodities face a 22% increase in prices before even they get a chance to buy the commodities.

It’s not as bad as in the early-2000’s or the entire 1980s. But it’s worse than the Great Recession.
Trimmed Mean PCE Inflation Rate

Source: Federal Reserve Bank of Dallas
research.stlouisfed.org
Weekly S&P 500 Index Contract

SP - S&P 500 Index - Weekly Nearest OHLC Chart

[Graph showing the weekly S&P 500 Index Contract from 2007 to 2016, with key price points highlighted.]
Trends Summary

• 2007-14 were due to demand growth & weather-related supply shocks.
• Caught-up & recovered from both.
• Return to more normal prices & margins.
• Plentiful supplies & stocks of everything.
• Strong dollar & weak trade.
• Soft international economies.
• Cheaper energy & fertilizer & rent(?) & seed (??).
• Back to cost-control knitting.
Outlook Summary

• Corn: $3.50-3.85/bu. for 2016/17. Acres & weather?
• Hay: if you have a bidder then sell it
• Wheat: $4.00-4.75/bu. for next harvest.
• Cattle: A different kind of wow...
  – Calves: $175-200/cwt.
• Sheep & Lamb follow beef & other meats.
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Contact and Link Information

Stephen.Koontz@ColoState.Edu

http://webdoc.agsci.colostate.edu/koontz/