

Price Reaction To USDA Reports

**Price Analysis: A Fundamental
Approach to the Study of Commodity
Prices**

Price Reaction to USDA Reports

- USDA reports contain very sensitive market information causing market prices to adjust rapidly to new information about supply and demand.
- Access to the contents of a market sensitive report would result in the ability to perform **insider trading**.
- This activity is illegal, and the USDA's Interagency Commodity Estimates Committees prepares the reports under lock-down conditions.
- The process of finalizing estimates of the report's content, officials are locked in a secure area and not allowed to leave until the report is made known to the public.

History - "The Great Data Leak of 1905"

- This abundance of care can be traced to a particular event in history.
- The details are recounted in a historical publication by the NASS.

Excerpt From Chapter 1

- **USDA Bureau of Statistics** reports in the early 1900s produced separate summary tabulations for each data source available.
- The release time for cotton reports was at 12 noon when markets paused trading.
- The original procedures allowed three people who had determined the final numbers to go about their business.
- They can leave the building if they wished, once a report contents had been set.

Excerpt From Chapter 1 (CONT...)

- In 1904, there were rumors about insider trading.
- One of the three Bureau of Statistics people, **E.S. Holmes, Jr.**, did have an outside partner.
- A New York cotton trader named **Louis Van Riper**.
- Shortly after an estimate was set, **Holmes** would meet **Van Riper** and tell him about cotton estimate was going to be published.
- **Van Riper** would take whatever market action would be most profitable based on the advance information.

Excerpt From Chapter 1 (CONT...)

- The scheme came to light when the cotton acreage report issued on June 2, 1905.
- The three members met and adopted the state and national figures to be published.
- After **Holmes** had sent his signal, one of the other people who had worked on the report asked for reconsideration.
- After further review, the figures to be published were revised.
- At that point, the outside partner had already interpreted the original signal and proceeded to place trades.

Excerpt From Chapter 1 (CONT...)

- The scheme came to light when **Van Riper** charged in a telegram that a “**fraudulent**” report had been released.
- In explaining, this was a false report, he unwittingly revealed that he had the information ahead of time.
- Evidently, **Holmes** outside partner had an overabundance of ego, but not a good balance of common sense in going public with his story.

Excerpt From Chapter 1 (CONT...)

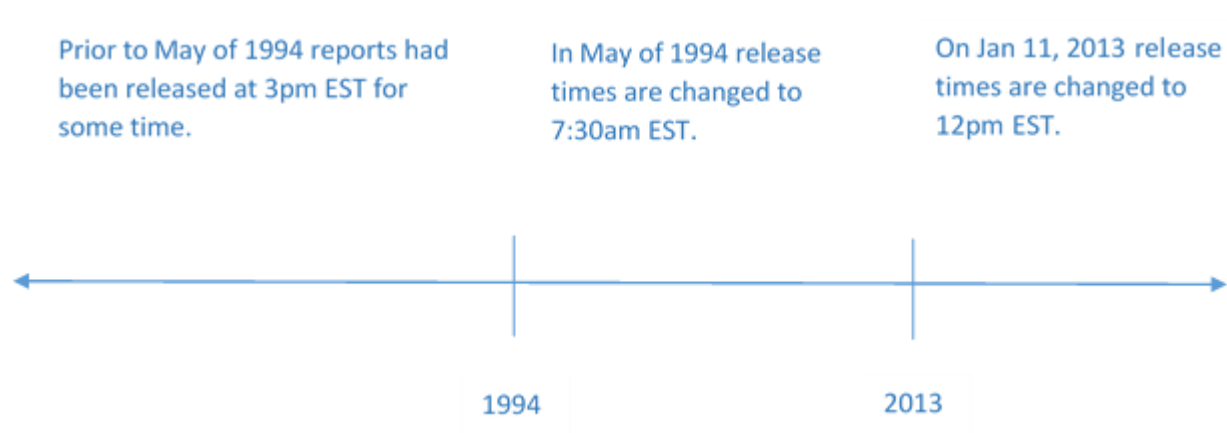
- This story is quite similar to the plot line of the 1980's movie, Trading Places.
- The protagonists **Dan Aykroyd and Eddie Murphey** trick to antagonists.
- The Duke Brothers by replacing the **Orange Juice Crop Report** that they obtained illegally with a forged one that would cause exactly the opposite price effect.
- They started buying before the report to profit and **Dan Aykroyd and Eddie Murphey** start selling based on the correct crop report information.
- The frenzy on the trading floor captures the feeling of what happens during crop reports that move the market.

Trading Places material nonpublic info



Changing Report Release Times

- Timing of report releases has important implications for the market reaction.



Changing Report Release Times

- Timing of report releases has important implications for the market reaction.
- Figure 2 provides a brief history of report release times of major market sensitive reports.
- **Prior to 1994** most market sensitive USDA reports were released at 3pm EST.
- This made sense from the USDA workflow perspective because it allowed the lock-down to be enacted during normal working hours.
- And, minimizing disruption of the analysts and regular lives.

Changing Report Release Times (CONT...)

- By the early 90's, releasing the report at this time became unpopular with market participants.
- By releasing the report late in the afternoon in the U.S. futures markets in other parts of the world could trade the USDA numbers overnight before the U.S. market had a chance to react.
- Therefore, price discovery after reports was essentially shifted from Chicago to other major exchanges across the world.
- In **May of 1994**, the USDA shifted the release time to 8:30am EST.
- This meant the report was released during regular business hours in the U.S. and just one hour before trading begins on the U.S. futures exchange.

Changing Report Release Times (CONT...)

- **By 2011**, presumably due to the ability to trade electronically with high speed.
- There was a desire for the futures market to be open and actively trading at the time USDA reports were released.
- In this case, the futures exchange acted first, expanding trading hours to an earlier market open.
- Since futures market participants wanted it and added the benefit of moving the beginning of the lockup period from late night to early morning.
- The USDA began releasing most reports at 12pm EST on January 11, 2013.

Price Reactions

Market prices react strongly to USDA reports when the reports inject significant and unanticipated information into the market.

Report	Dates	Reason
Grain Stocks	Quarterly	Information about scarcity or surplus of supplies
Prospective Plantings	End of March	Acreage and therefore production estimates
Planted Acres	End of June	Acreage and therefore production estimates
WASDE	October	Some years the Oct report will contain significant revisions from previous estimate
WASDE	January	Final production estimate for the preceding harvest. Sometimes includes and unanticipated revision
Crop Progress Report	Weekly	Condition estimates. Only moves market prices if significant deterioration associated with a drought or flood occurs

Table 1: Reports most likely to cause significant movements in market price.

Price Reactions (CONT...)

- Grain stocks
 - Estimates only come out quarterly.
 - scarcity or surplus is a primary driver of price, and we only get this report four times per year.
 - The stocks estimate can cause significant adjustments in price.
- Prospective Planting and Planted Acres
 - Reports give a baseline expectation about production for the coming marketing year.
 - Deviations from expectations or recent history will cause rapid adjustments in price.

Price Reactions (CONT...)

- **WASDE**
 - The reports in October and January are relatively more likely to cause rapid price adjustments than other months.
 - In October, the yield estimates tend to become more precise and can involve significant revisions from the previous month's estimate.
 - Similarly, January report contains finalized estimates of the crop production and in some cases will involve unexpected revisions from previous estimates.
- **Crop Progress**
 - These reports generally only move markets when crop conditions are deteriorating rapidly due to drought or excess moisture.
 - During years with more typical weather, this report does not affect markets much week-to-week.

Some Examples of Recent Big Market Reactions

- Using the Best Bid Best Offer database from the CME Group's.
- We can examine historical intraday transaction prices (availability of streaming in real-time from Yahoo Finance or other sources).
- These data are time-stamped to the second and allow the most accurate fine scale picture of futures market trading tick-by-tick.

Three Examples from 2010 Marketing year

- In June 30, planted Acres report resulted in the market opening (at 8:30am EST) 15 cents higher than it closed the overnight trade.
- Ultimately, it closed the day trading session 3.54 cents/bushel - 7.5% or 25 cents higher than the most recent pre-report price.
- Put that into perspective, 25 cents that is an increase in value of one futures contract of \$1,250.
- The future contracts are specified for a quantity of 5,000 bushels.

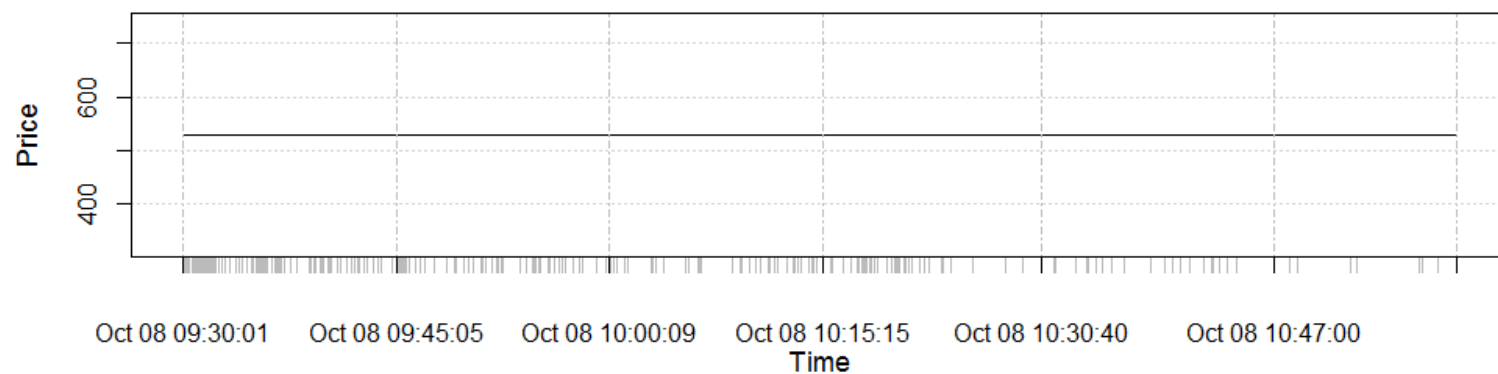
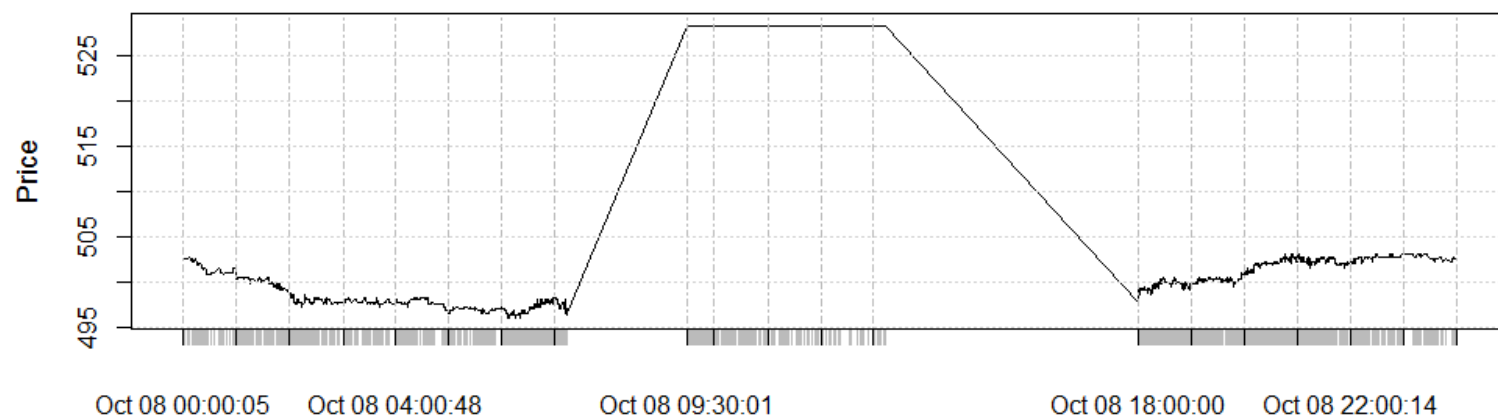
Three Examples from 2010 Marketing year (CONT...)

- In the top panel of Figure 2, the time stamps indicate the transactions occurring in the overnight electronic market.
- There is a break in the morning prior to 9:30 CST when trading begins in the daytime session.
- In this period, the Planted Acres report is released.
- The bottom panel only displays the daytime session and can see the trading action more clearly.
- Between 9:30am and about 10:15 the market trades in a 10 cent range.

Three Examples from 2010 Marketing year (CONT...)

- In Oct 8th, **WASDE report** caused the market to open limit up.
- The exchange sets the maximum fluctuation on a futures price which can trade in a given day.
- The value of the limit can change at the discretion of the exchange with some advance notice.
- The report indicated a sharp drop in forecasted yield for corn.
- This resulted in the ending stocks number for the 2010/2011 marketing year forecast below 1 billion bushels with a very low stocks to use ratio as well. The market reaction is show below in Figure 3.

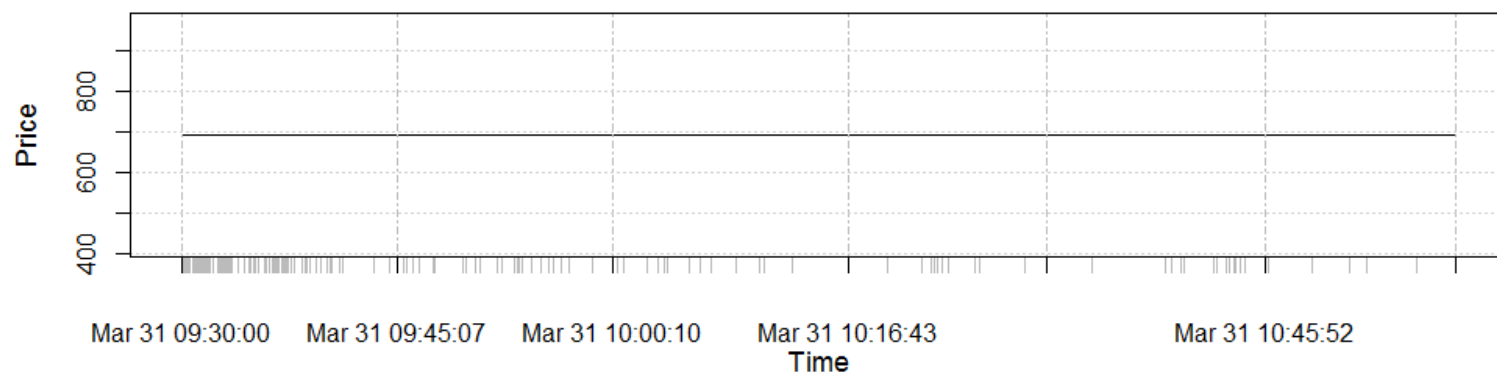
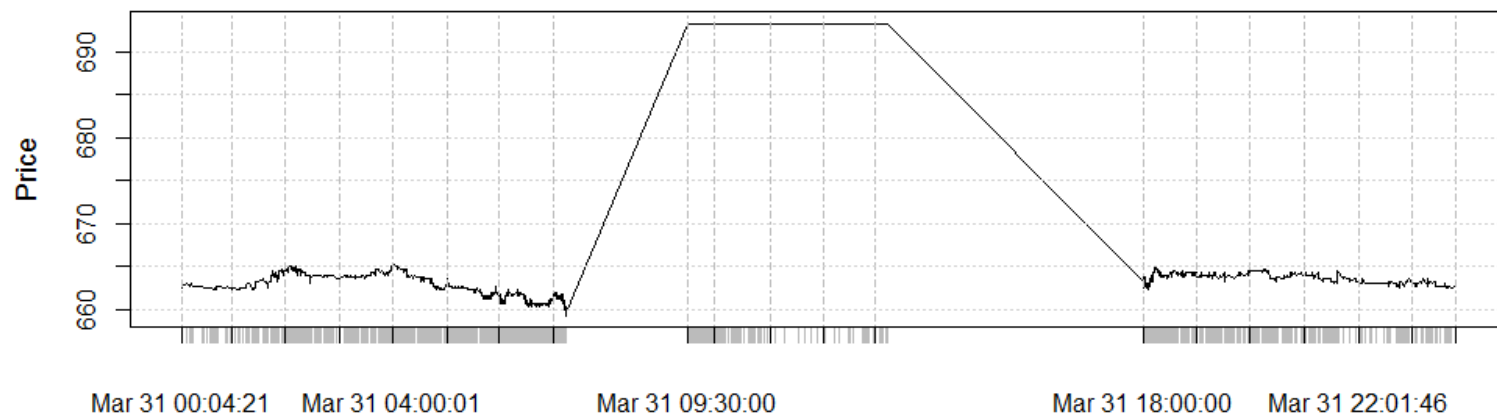
Corn Transaction Price (20101008)



Three Examples from 2010 Marketing year (CONT...)

- Figure 5, is the price action on the March 31st, 2011, the day the Prospective Plantings and Grain Stocks reports were released.
- This report indicated that corn acreage was to be higher than previously expected, but corn stocks were lower than expected.
- The stocks number dominated the price direction strongly and the market traded limit up on this day as well.

Corn Transaction Price (20110331)



Conclusions

- This chapter reviewed the history of report released by the USDA.
- We noted a data leak in **1905** led the agency to consider security from an early date.
- An important component of report production persists to this day.
- We also learned:
 - Prospective Plantings
 - Planted Acreage
 - October WASDE
 - January WASDE
 - Grain Stocks reports are most likely to produce rapid price adjustments in the market.
- Some specific examples were given, and depicted through charts of transaction prices.

CHAPTER END

