

ACE 427
Spring 2009

Lecture 1

Introduction to Price Analysis and Forecasting

by
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Required Readings:

Baker, A., and S. Zahnhiser. “Ethanol Reshapes the Corn Market.” *Amber Waves*, May 2007, pp. 66-71 (class website)

Good, D. and S. Irwin. “Implications of Credit Market Problems for Crop Prices.” IFEU 08-03.

(http://www.farmdoc.uiuc.edu/IFEU/IFEU_08_03/IFEU_08_03.pdf and class website)



Commodity Prices

Commodity prices are important both _____ and _____ in almost all countries

Strongly influence level of _____ income

Important factor in export _____ of numerous countries

Influence _____ income in many countries

Uniqueness of Agricultural Commodities

Range of market structure

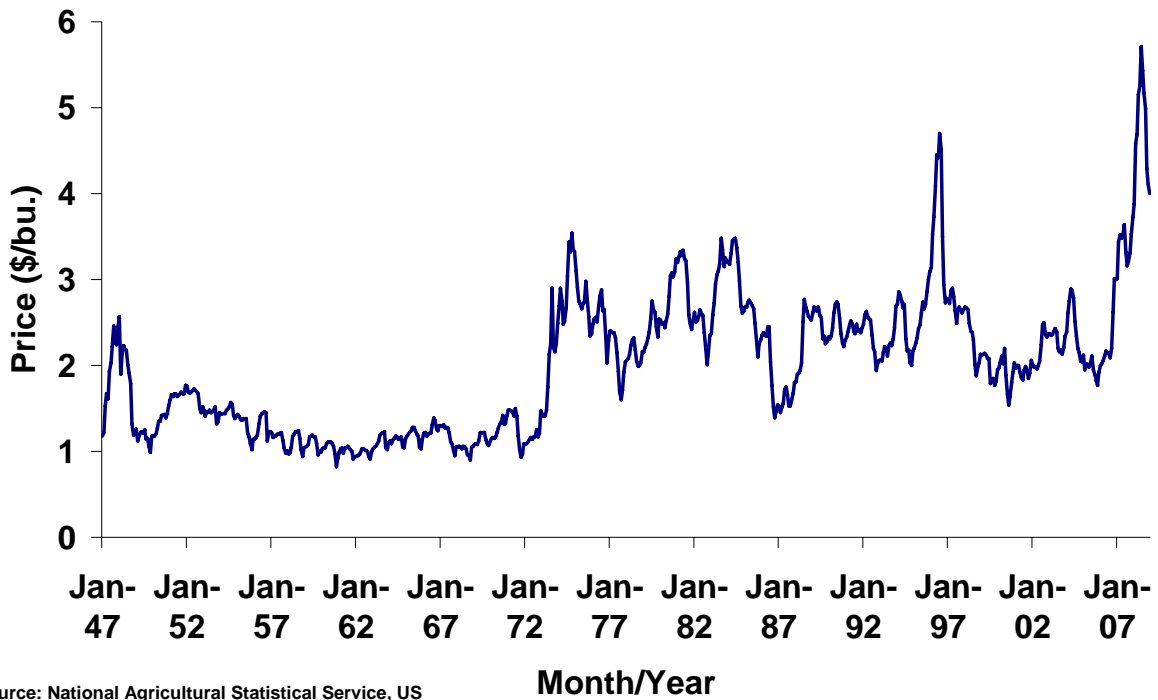
- Markets with _____ institutions, sometimes assisted by government regulations
- Markets that are reasonable approximations of textbook _____ pricing

Wide range of government intervention

Agricultural commodity prices are more _____ than the prices of most other _____ goods and services



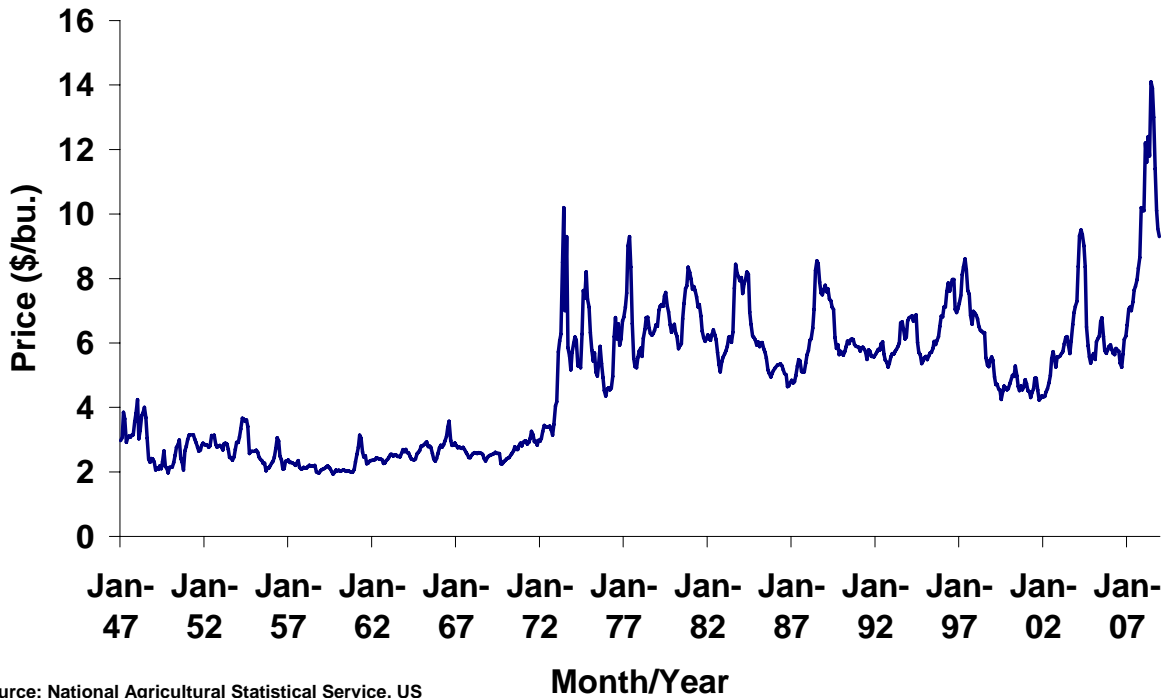
**Monthly Farm Price of Corn in Illinois, January 1947-
December 2008***



Source: National Agricultural Statistical Service, US
Department of Agriculture

* Mid-Month Estimate

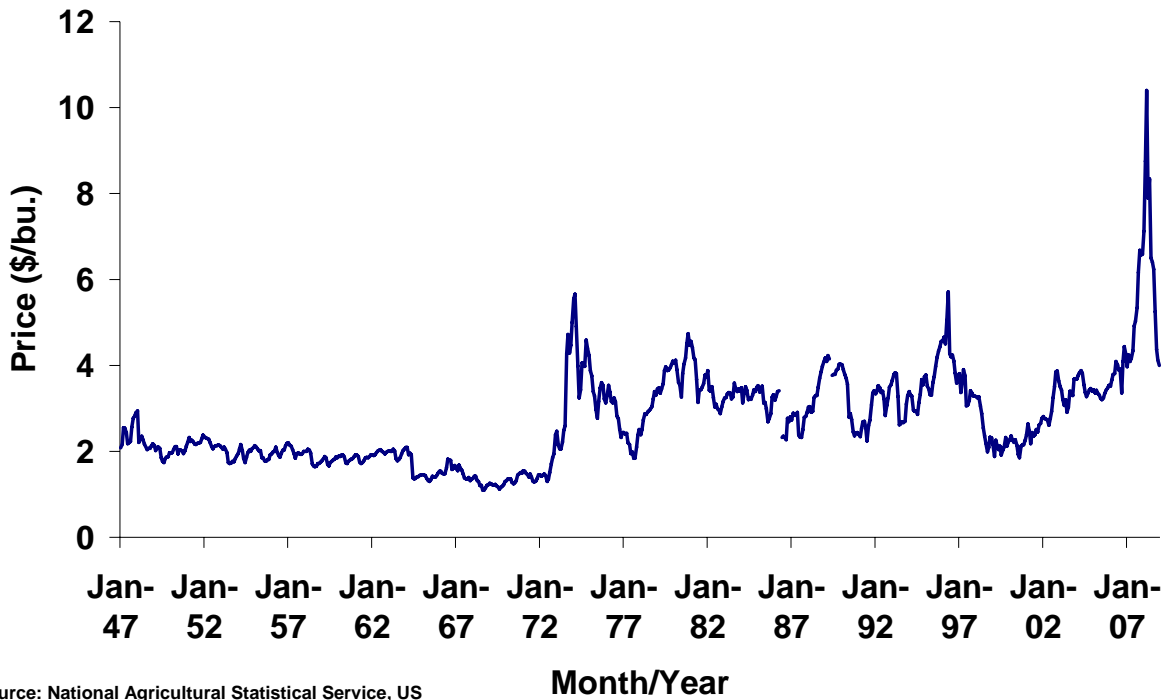
**Monthly Farm Price of Soybeans in Illinois, January 1947-
December 2008***



Source: National Agricultural Statistical Service, US
Department of Agriculture

* Mid-Month Estimate

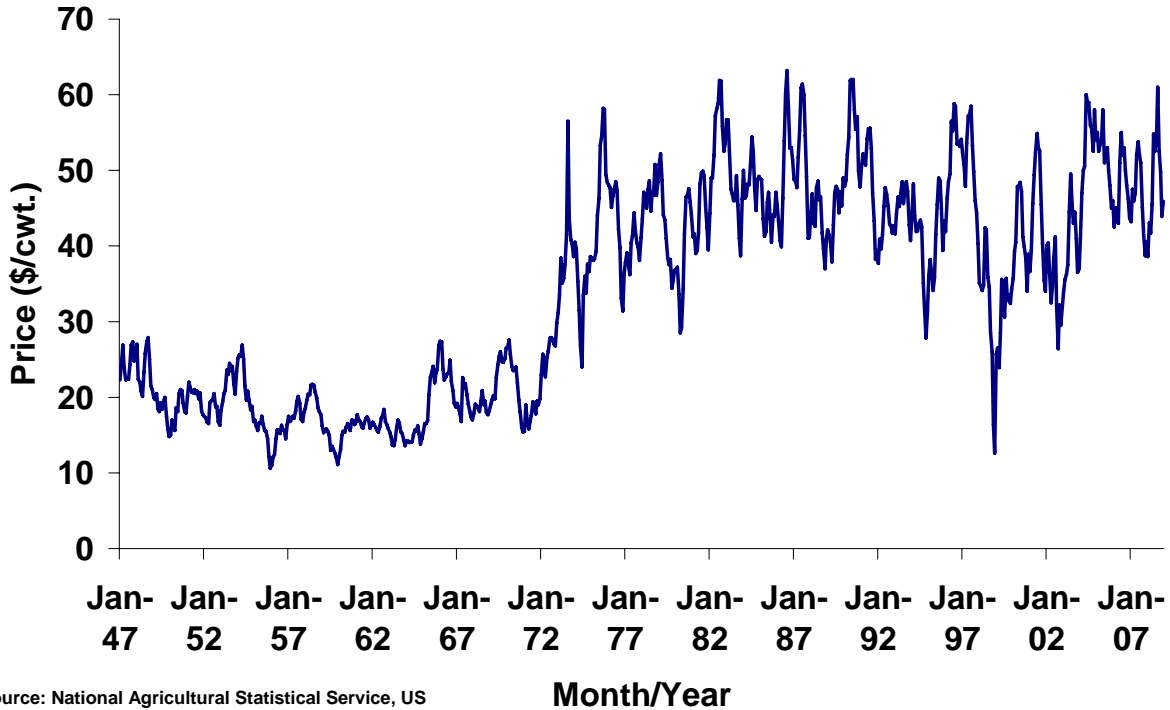
**Monthly Farm Price of Wheat in Illinois, January 1947-
December 2008***



Source: National Agricultural Statistical Service, US
Department of Agriculture

* Mid-Month Estimate

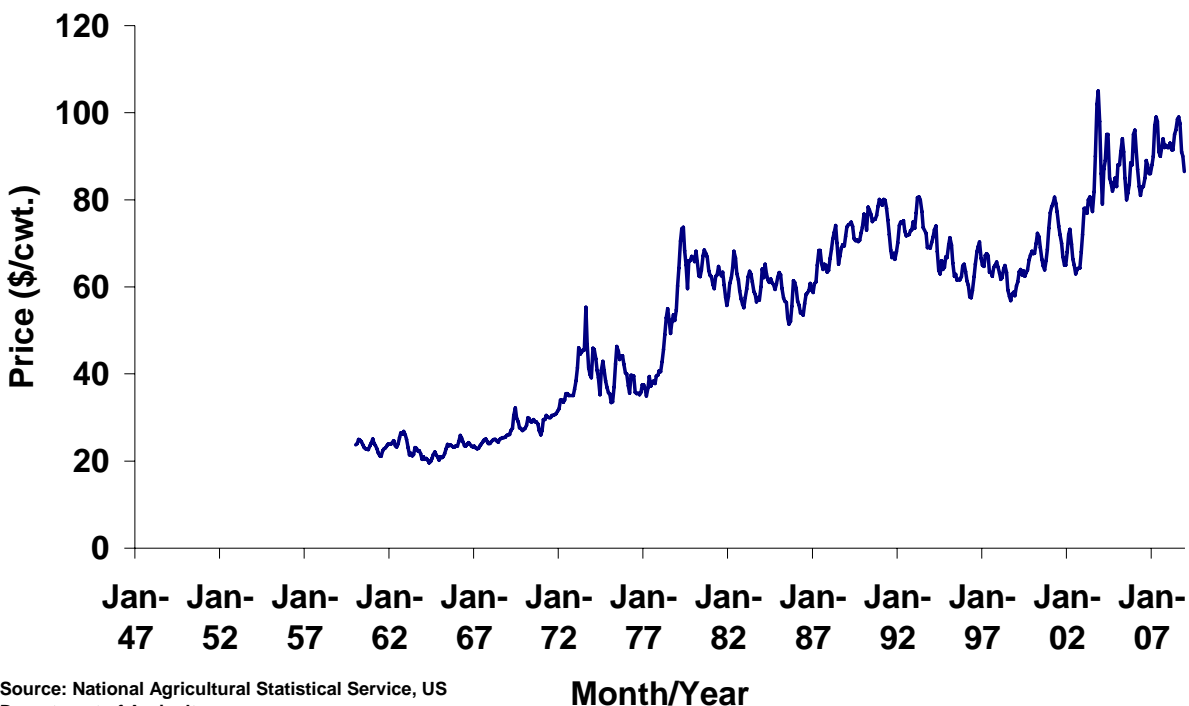
**Monthly Farm Price of Hogs in Illinois, January 1947-
December 2008***



Source: National Agricultural Statistical Service, US
Department of Agriculture

* Mid-Month Estimate

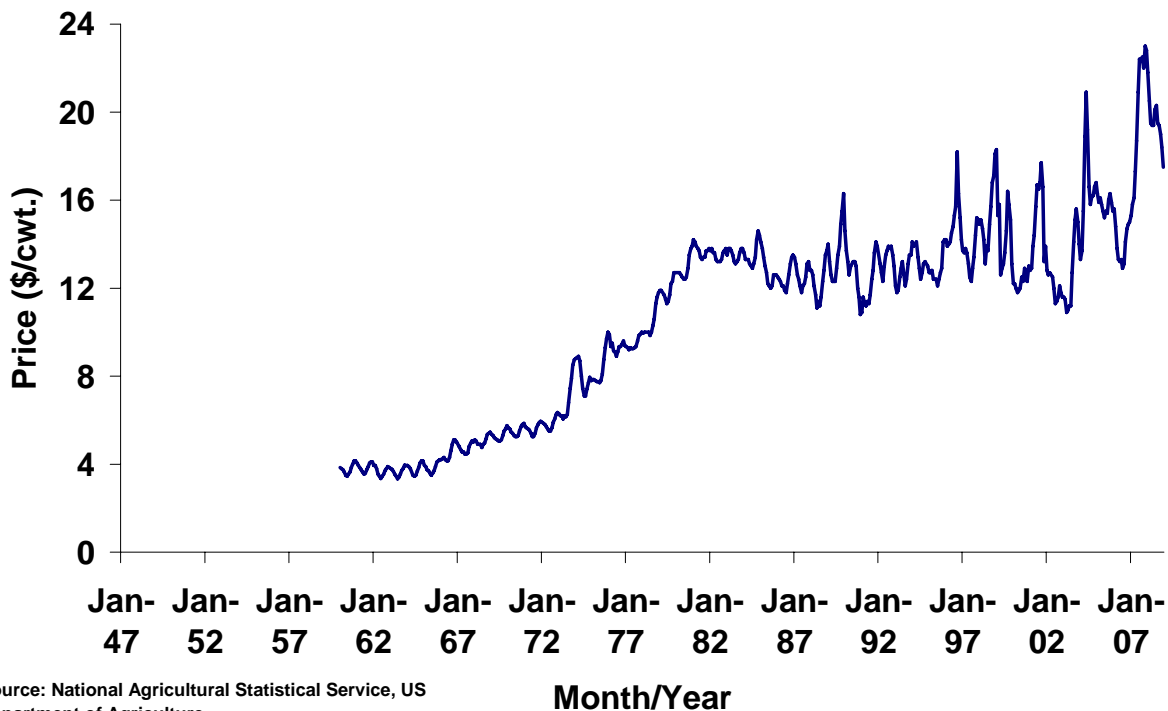
**Monthly Farm Price of Steers and Heifers in Illinois, January
1947- December 2008***



Source: National Agricultural Statistical Service, US
Department of Agriculture

* Mid-Month Estimate

**Monthly Farm Price of Milk in Illinois, January 1947- December
2008***



Source: National Agricultural Statistical Service, US
Department of Agriculture

* Mid-Month Estimate

Why are Agricultural Commodity Prices So Volatile?

1. _____ nature of production

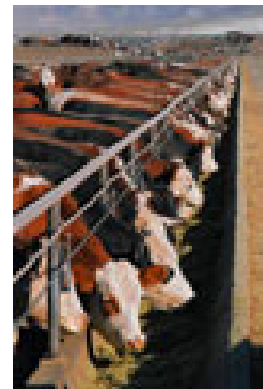
- Significant _____ between decision to produce and realization of production
- Time required to _____ production

Grain – one year

Hogs – one year

Cattle – three years

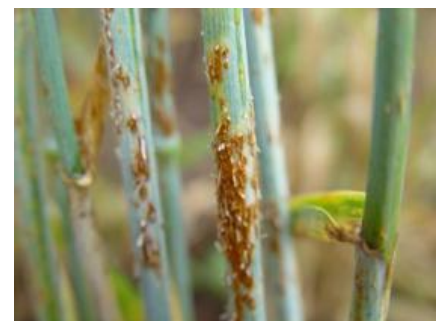
Apples – five to ten years



- _____ production can vary enormously from _____ production due to

_____ conditions

_____ infestations



2. Nature of _____

- _____ nature of most agricultural production assets, like land and equipment, make it difficult for farmers to _____ to expected price changes _____ (in the short-run)
- Implication is that changes in _____ in the short-run due to expected price changes will be relatively _____
- Result is that agricultural supply functions are _____

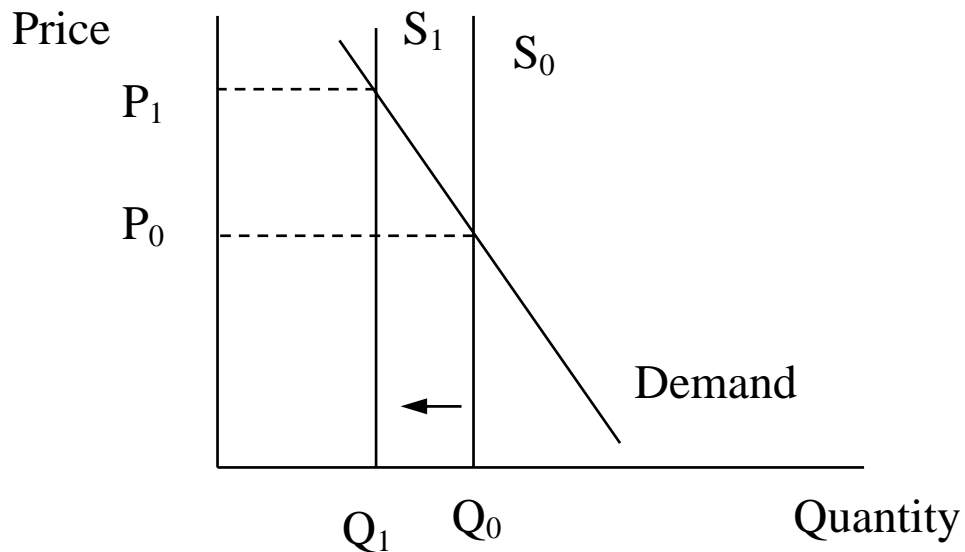
3. Nature of _____

- Agricultural commodities are raw materials for a wide-variety of _____
- Majority of _____ is for some form of food
- Consumer responses to changes in _____ are relatively small



- Result is that agricultural demand functions are _____
- Diverse sources of demand, in terms of products and geography, implies a large potential for _____

Inelastic Demand, Supply and Price Volatility



Degree of Storability

A key _____ among agricultural commodities is their degree of storability

Some can be stored for _____ periods of time

- Corn
- Soybeans
- Wheat
- Sunflowers
- Peanuts
- Almonds



Some products are highly _____ and can be stored only for _____ periods of time (in live form)

- Hogs
- Cattle
- Milk
- Potatoes
- Apples
- Tomatoes



Tend to group agricultural commodities into two groups
_____ and _____

- Storable commodities

Price _____

Strongly _____ price distributions

- Non-storable commodities

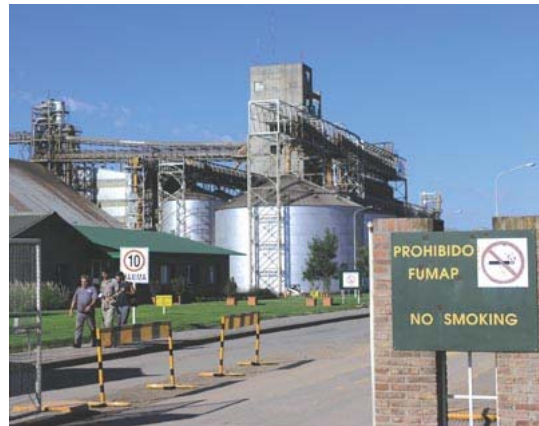
Price _____

Less skewed price _____

Forecasting in Business

- Because of the large _____ of commodity prices on company earnings, many businesses spend considerable resources on _____
- Particularly true for companies that deal _____ in commodities and need to _____ risks

ADM
Cargill
Caterpillar
ConAgra
Kraft
Weyerhaeuser



- Employment opportunities for students trained in price analysis and forecasting
- Growing interest in expertise in _____ strategies
- Farmers often subscribe to some type of _____ or employ a marketing consultant to assist with price analysis and marketing

Price Analysis vs. Price Forecasting

Price analysis

- Goal is to _____ the complex array of _____ that influence the level and behavior of commodity prices
- Aids in understanding the _____ of commodity markets
- Policy analysis

Price forecasting

- Goal is to reliably and accurately _____ future price levels of commodities
- _____ strategies
- _____ strategies

In ACE 427 we will focus on price forecasting

Some Important Considerations in Forecasting

1. All meaningful forecasts guide _____
 - Recognition and awareness of the nature of the decisions will impact the _____
_____of the forecasting process
 - Especially important to understand the _____
function of forecast users:

2. Form of forecast statement

- Simple _____ forecast: fed steer prices for the first quarter of 2009 = \$90/cwt.
- _____ forecast: fed steer prices for the first quarter of 2009 = \$85-95/cwt.
- _____ forecast: 80% confident that fed steer prices for the first quarter of 2009 will be \$80-100/cwt.
- _____ forecast: provides entire distribution of forecast price

3. Forecast horizon

- Forecast horizon is the _____ of periods between today and the date of the forecast made
- If dealing with monthly data:

1-step ahead = One month beyond the current month

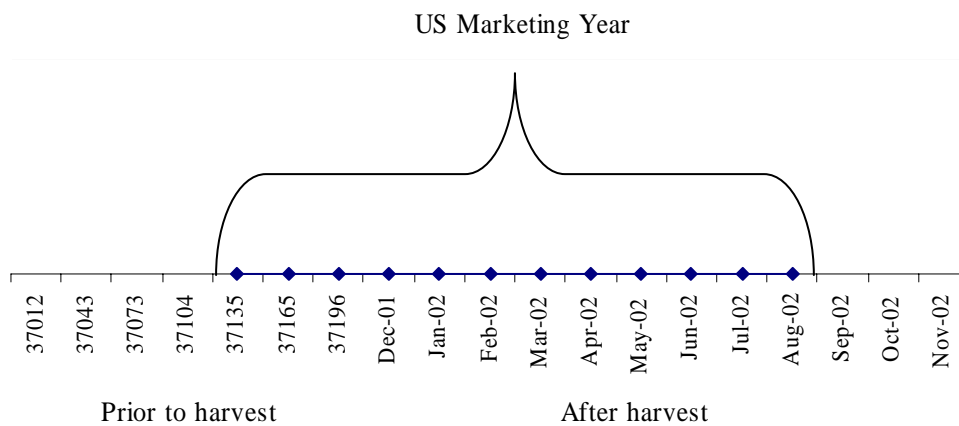
2-step ahead = Two months beyond the current month

h-step ahead = h months beyond the current month

- More complex situations are common in crop market forecasting

Typical unit of time is a _____

Forecasts updated monthly:



The 2001/2002 WASDE forecasting cycle for corn and soybeans

4. Parsimony principle

- Other things equal, _____ approaches are preferred
- Also known as Occam's Razor
- _____ approaches tend to work best in real world applications
 - Based on decades of experience and research
 - Simpler models can be estimated more _____
 - Because simpler approaches can be more easily interpreted and understood, _____ behavior and outcomes can be more easily spotted
 - It is easier to _____ the basic behavior and design of simple approaches, so they are more likely to be used by _____



[Occam's Razor](#). This maxim, as interpreted by [Bertrand Russell](#),^[9] states that if one can explain a phenomenon without assuming this or that hypothetical entity, there is no ground for assuming it, i.e. that one should always opt for an explanation in terms of the fewest possible number of causes, factors, or variables. (Wikipedia)

- Simple approaches lessen the chances that _____ is a problem

Data mining results when a _____ model is tailored to fit historical data very _____ but forecasts the future _____

In this case, the only thing accomplished is an exquisite job of modeling the _____ in the data

We will focus on two types of “simple” forecasting methods in ACE 427

- _____ analysis: use of economic models and data on production, consumption, income, etc. to forecast prices
- _____ analysis: use of past price patterns only to predict future price movements

The Great Debate!

Curiously, however, the broken technician is never apologetic about his method. If anything, he is more enthusiastic than ever. If you commit the social error of asking him why he is broke, he will tell you quite ingeniously that he made the all too human error of not believing his own charts. To my great embarrassment, I once choked conspicuously at the dinner table of a chartist friend of mine when he made such a comment. I have since made it a rule never to eat with a chartist. It's bad for digestion.

---Burton Malkiel (author of a *Random Walk Down Wall Street*)

One evening, while having dinner with a fundamentalist, I accidentally knocked a sharp knife off the edge of the table. He watched the knife twirl through the air, as it came to rest with the pointed end sticking into his shoe. "Why didn't you move your foot"? I exclaimed. "I was waiting for it to come back up," he replied.

---Ed Seykota (an avowed technician)

We will compare the pros and cons of fundamental and technical analysis towards the end of the course