

Price Forecasting

Fundamental Analysis

Hypothesis

Every asset has some intrinsic value or price

- Econ: equilibrium or market clearing price
- Finance: Fair market value

However, because market forces are complex and ever changing, prices can be distorted. This can result in an asset being over or under valued at any given point in time.

Fundamental Analysis

Fundamental analysts assess commodity price implications by evaluating supply and demand variables. These include:

- Seasonal Use Patterns
- Seasonal Supply Patterns
- Price of Substitute Goods
- Price of Compliment Goods
- Market Structure (how many buyers and sellers)

Demand Factors

- Current Price Level
- Prices of substitutes or compliments
- Income
- Exchange Rates
- Trade Agreements
- Government Programs

Strategy

Using economic theory, predict the (usually) long-run market clearing price. If the asset is overvalued relative to the expected market clearing price, then the asset is sold. If it is under valued, it is bought.

The result is a long-run approach to price forecasting.

Supply Factors

- Factors of Production
- Inventory Levels
- Carryover
- Government Programs
- Production in other Countries
- Weather

Approaches to Fundamental Analysis

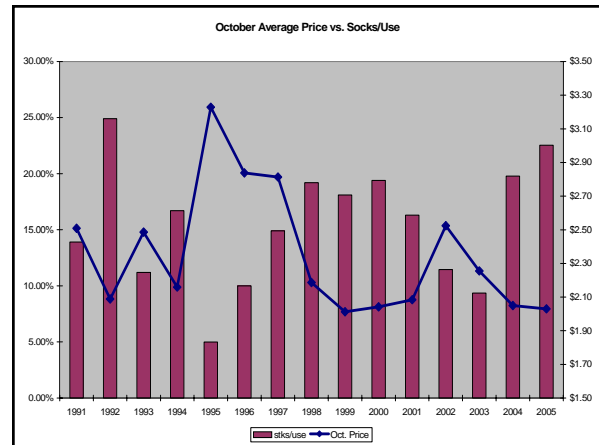
- Intuitive Analysis
Use a basic understanding of economic principles to hypothesize about prices
- Quantitative Analysis
Combine knowledge of economic theory with mathematical and statistical techniques to establish explicit relationships between economic variables and prices.

Marketing Year	USDA						USDA	USDA
	99/00	00/01	01/02	02/03	03/04	04/05	Feb Est. 05/06	Feb Fore. 06/07
Beg Stocks	1,787	1,718	1,899	1,596	1,087	958	2,113	2,012
Imports	15	7	10	14	14	11	9	10
Acres Planted	77.4	79.5	75.8	78.9	78.6	80.9	81.8	78.3
Acres Harvested	70.5	72.7	68.8	69.3	70.9	73.6	75.1	70.6
% Harvested	91.1%	91.4%	90.8%	87.8%	90.2%	91.0%	91.8%	90.2%
Yield	133.8	137.1	138.2	129.3	142.2	160.4	148	149.1
Production	9,431	9,968	9,507	8,967	10,089	11,807	11,114	10,535
Total Supply	11,232	11,693	11,416	10,578	11,190	12,776	13,236	12,512
Feed & residual	5,664	5,890	5,868	5,563	5,795	6,158	6,141	5,975
Food/Seed/Ind.	1,913	1,967	2,054	2,340	2,537	2,686	2,981	3,535
Ethanol						1,323	1,603	2,150
Exports	1,937	1,937	1,905	1,588	1,900	1,818	2,147	2,250
Total Demand	9,515	9,794	9,820	9,491	10,232	10,662	11,269	11,760
Ending Stocks	1,717	1,899	1,596	1,087	958	2,113	1,967	752
Stocks To Use	18.05%	19.39%	16.25%	11.45%	9.36%	19.82%	17.45%	6.39%
Avg. Farm Price	\$1.82	\$1.85	\$1.97	\$2.32	\$2.42	\$2.06	\$2.00	\$3.20

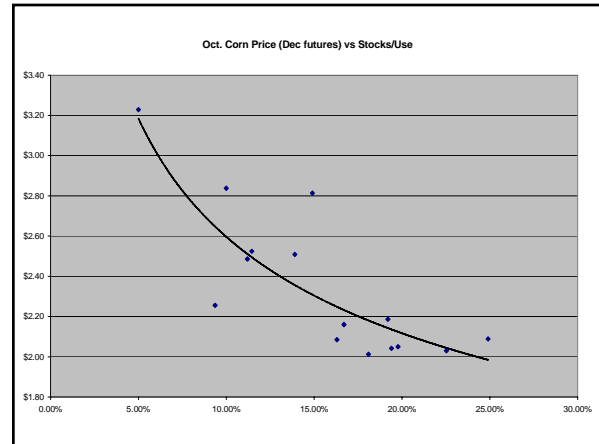
Leading Indicator Models

Assume prices do not respond immediately to new information. Attempt to determine the final price response, and how long it will take.

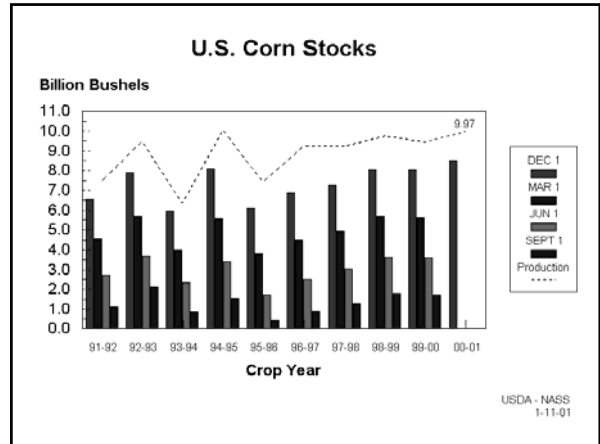
Indicator	Market
USDA Crop Production	Soybeans
USDA Cattle on Feed	Cattle



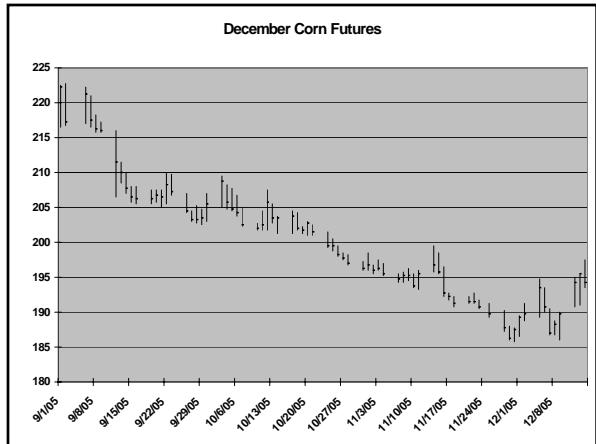
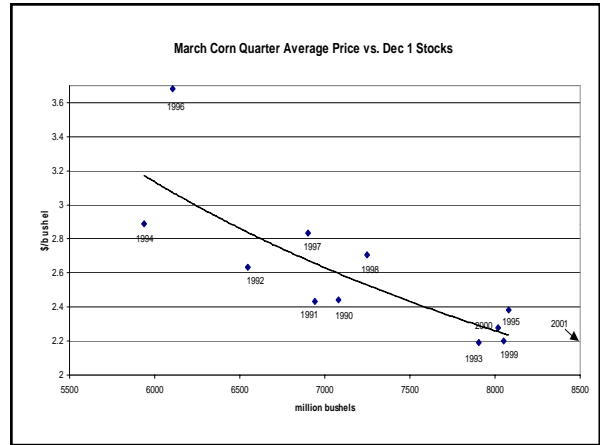
Marketing Year	USDA						USDA	USDA
	98/99	99/00	00/01	01/02	02/03	03/04	Dec. Est. 04/05	Dec. Fore. 05/06
Beg Stocks	1,308	1,787	1,718	1,899	1,596	1,087	958	2,114
Imports	19	15	7	10	14	14	14	10
Acres Planted	80.2	77.4	79.5	75.8	78.9	78.6	80.9	81.8
Acres Harvested	72.6	70.5	72.7	68.8	69.3	70.9	73.6	75.1
% Harvested	90.5%	91.1%	91.4%	90.8%	87.8%	90.2%	91.0%	91.8%
Yield	134.4	133.8	137.1	138.2	129.3	142.2	160.4	147.9
Production	9,759	9,431	9,968	9,507	8,967	10,089	11,807	11,112
Total Supply	11,085	11,232	11,693	11,416	10,578	11,190	12,776	13,236
Feed & residual	5,496	5,664	5,890	5,868	5,563	5,795	6,162	6,000
Food/Seed/Ind.	1,822	1,913	1,967	2,054	2,340	2,537	2,686	2,980
Exports	1,981	1,937	1,937	1,905	1,588	1,900	1,814	1,850
Total Demand	9,298	9,515	9,794	9,820	9,491	10,232	10,662	10,810
Ending Stocks	1,787	1,717	1,899	1,596	1,087	958	2,114	2,426
Stocks To Use	19.22%	18.05%	19.39%	16.25%	11.45%	9.36%	19.83%	22.44%
Avg. Farm Price	\$1.94	\$1.82	\$1.85	\$1.97	\$2.32	\$2.42	\$2.06	\$1.90

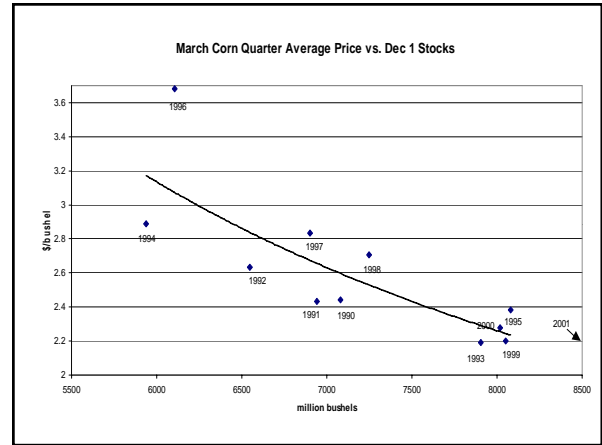
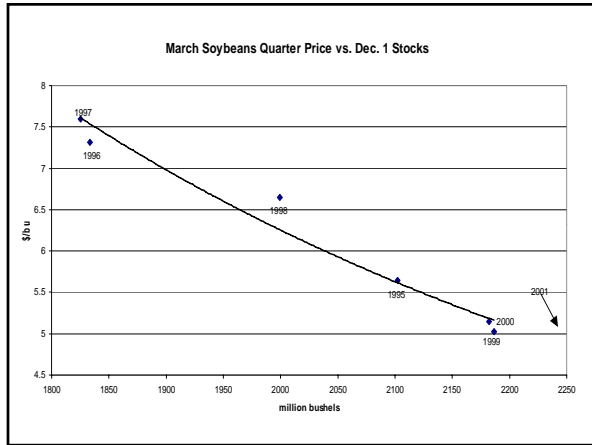
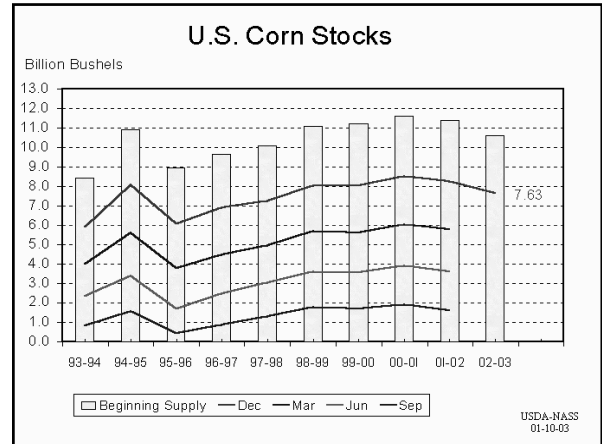
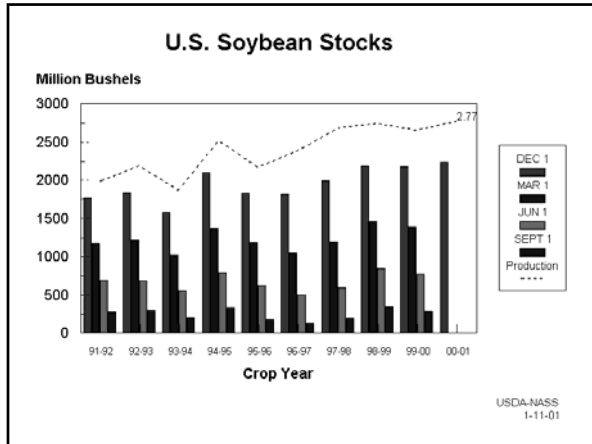


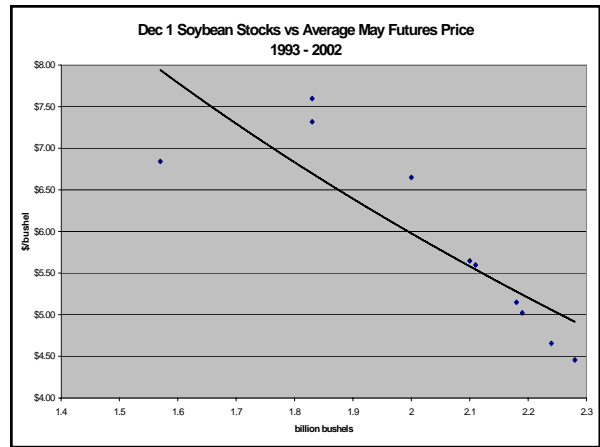
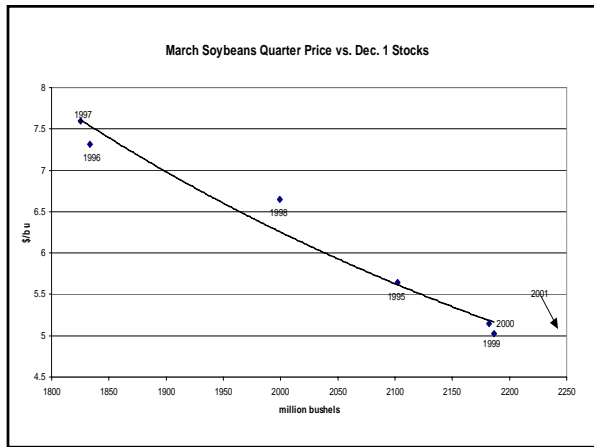
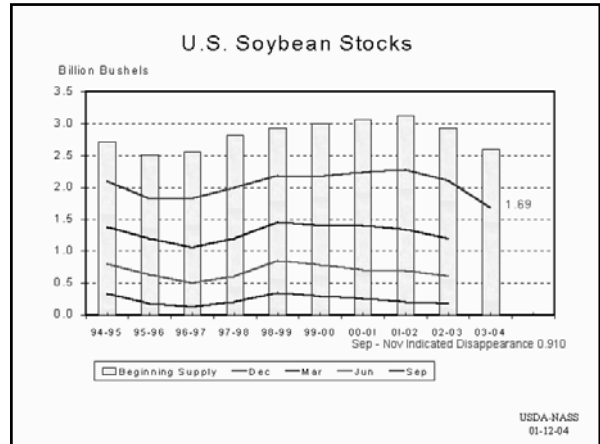
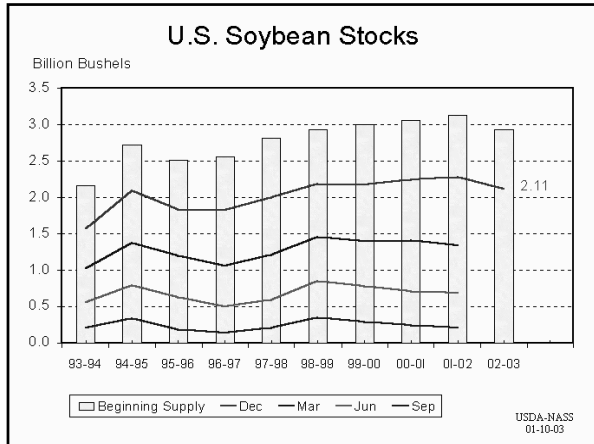
US Corn Balance Sheet (Sep/Aug)							USDA	USDA
Marketing Year	USDA 01/02	USDA 02/03	USDA 03/04	USDA 04/05	USDA 05/06	USDA 06/07	Jan Est. 07/08	Jan Fore. 08/09
Beg Stocks	1,899	1,596	1,087	958	2,114	1,967	1,304	1,624
Imports	10	14	14	11	9	12	20	15
Acres Planted	75.8	78.9	78.6	80.9	81.5	78.3	93.5	86
Acres Harvested	68.8	69.3	70.9	73.6	75.1	70.6	86.5	78.6
% Harvested	90.8%	87.8%	90.2%	91.0%	92.1%	90.2%	92.5%	91.4%
Yield	138.2	129.3	142.2	160.4	148	149.1	150.7	153.9
Production	9,507	8,967	10,089	11,807	11,114	10,535	13,038	12,101
Total Supply	11,416	10,578	11,190	12,776	13,237	12,514	14,362	13,740
Feed & residual	5,868	5,563	5,795	6,158	6,155	5,595	5,938	5,300
Food/Seed/Ind.	2,054	2,340	2,537	2,686	2,981	3,490	4,363	4,900
Ethanol				1,323	1,603	2,119	3,026	3,600
Exports	1,905	1,588	1,900	1,818	2,134	2,125	2,436	1,750
Total Demand	9,820	9,491	10,232	10,662	11,270	11,210	13,737	11,950
Ending Stocks	1,596	1,087	958	2,114	1,967	1,304	1,624	1,790
Stocks To Use	16.25%	11.45%	9.36%	19.83%	17.45%	11.63%	11.82%	14.98%
Avg. Farm Price	\$1.97	\$2.32	\$2.42	\$2.06	\$2.00	\$3.04	\$4.20	\$3.90

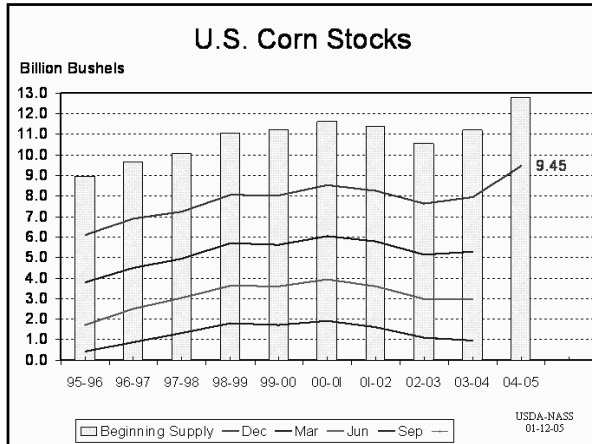


In early September, USDA estimated the 2005/06 corn carryout would be about 2.1 billion bushels. At that time the price for December corn futures was \$2.12 per bushel. Using demand projections, a 2.1 billion bushel carryout implied a stocks to use ratio of over 20 percent, and an average price in October for December corn futures of about \$2.00 per bushel. The actual average ended up being \$2.03.









Summary

Fundamental forces are those that deal with the basic concepts of supply and demand. Fundamental analysis applies the understanding of these relationships to the expected price formation of a commodity. However, the price forecast is only as good as :

- 1) the basic understanding of underlying economic conditions, and
- 2) the ability to accurately anticipate changes in current economic conditions.

