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Staff Paper

**Soybean Outlook Presented for the
Organized Symposium of the Extension Crops Outlook
at the 2003 AAEA Meetings**

By
Jim Hilker

Staff Paper #03-09

July 2003



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7 pages

Abstract:

We should expect 2003-04 soybean prices to be lower than this year and maybe slightly better than the previous couple of years. On the other hand, while the numbers shown are my best analysis, I feel there is a lot of price risk in both directions as we go from now through the 2003-04 marketing year.

**Soybean Outlook Presented for the
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**By
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Soybean Outlook

“Given” all my numbers are right, we should expect 2003-04 soybean prices to be lower than this year and maybe slightly better than the previous couple of years. I generally try and tell my stories using Supply/Demand Balance Sheets. Tables 1-3 are attached. On the other hand, while the numbers shown are my best analysis, I feel there is a lot of price risk in both directions as we go from now through the 2003-04 marketing year, see Figure 1. I keep my outlook information undated and available bi-monthly on my website at <http://www.msu.edu/user/hilker/>. I also post future price probability distribution forecasts based on the options markets weekly, generally based on Wednesday’s closes, at the same website.

The June Acreage Report showed that 73.7 million acres of soybeans were planted this year, only a 100,000 less than last year. The March Intentions Report had indicated acreage would be down a half million acres, but the late planting season in the eastern corn belt changed that. Acreage harvested is expected to go back to a more normal 1 million less acres than planted, after last year’s 1.6 million acres of abandonment. The flooding in the eastern corn belt may up that number a bit, although seeing some of it in Indiana first hand may of biased my perception of the damage.

They say soybeans are made in August, given that, the trend yield was used for this analysis. Soybean crop conditions as of July 20 showed 69% of the crop in good to excellent conditions, which by itself would indicate a yield a bit over trend. However, both the rate of bloom and setting pods is running behind the last 5 year average. When you multiple expected acres harvested times the trend yield you have a projected soybean crop of 2.885 billion bushels, only 6 million below the 2000 record crop.

Domestic crush is down 5% in this 2002-03 marketing year due fewer soy meal and soy oil exports, and lower domestic use. The export competition came from the huge crop in South America this year as well as last. The domestic use has been affected by a few less animal units, and the large increase in ethanol by-products are affecting meal use as well. See the paper given at the USDA February 2003 Outlook Forum for a more complete story, it is on a USDA Web Site, <http://www.usda.gov/oce/waob/agforum.htm>. The BSE case in Canada has folks at least looking at banning some feed protein sources like bone meal and meat meal in all feeds. This would greatly increase soy meal demand, although a ban is not expected at this time. The by-products from the 10-12 new ethanol plants being built will continue to provide competition. Domestic crush is expected to grow by only 15 million bushels in 2003-04.

With seven weeks left export shipments were already at 1009 million bushels versus the 1030 USDA projection. Weekly shipments have been running 7-8 million bushels a week. Export sales July 21 were at 1083 million bushels versus last year’s 1093 the same date. Last year exports ran 1063 million bushels. So what will exports be in 2003-04? The USDA projects they will be 990 million bushels, and that seems reasonable, but strong world demand has fooled us two years in a row. South America is projected to increase their production 180 million bushels next year over last, in addition to the extra 155 the U.S. is expected to supply. Can the world demand keep up with this, or we come out on the short end of the stick.

Lets look at 2001-02 compared to 2002-03. The world increased soybean production almost 400 million bushels, Brazil and Argentina were up 520 million, the U.S. was down 161 million, and yet our exports only fell 30 million bushels. However, as mentioned earlier our meal and oil exports were down sharply, see Tables 2 and 3. China’s soybean imports are expected to grow almost 80% from 2001-02 to 2003-04. As will be seen, 2003-04 ending stocks, both the worlds and U.S. are expected to grow as well.

See Table 1, U.S. ending stocks for 2003-04 are projected to be 260 million bushels, 9.3 percent of use. The USDA is projecting the annual average weighted price to be \$4.35-5.35, which is centered on \$4.85. This is close to new crop bids at this time. How do we get from the 9.3% ending stocks as a percent of use to the price.

Let's look at Graph 1, which is a plot of prices versus ending stocks/use. If we look at 1981 through about 1998 there appears to be a pattern as prices go up and down which was gradually shifting to the left, than BOOM. Lower ending stocks as a percent of use and lower prices from 1999-2001, not good! Something has changed big time.

As shown on Table 1, 2002-03 will have very tight ending stocks. A 5.6 % of use ending stocks would have given us \$7 prices just 5-6 years ago. What's happened? I call it the "Just in Time Inventory" phenomenon. Nobody is worried, by the time we know the U.S. crop size South America can still adjust, and vice a versa. How likely is it that each of us won't have enough to get to the other ones harvest? It can happen, two bad crops, but unlikely. It is time to start looking at both world ending stocks and the interaction cause by crops coming in two times a year. I realize that economics would suggest we always should have been looking at world stocks/use, but as long as we were the residual suppliers the U.S. number worked.

TABLE 1
SUPPLY/DEMAND BALANCE SHEET FOR SOYBEANS

	2000-01	2000-01	Estimated 2002-03	Projected 2003-04
	(Million Acres)			
Acres Planted	74.3	74.1	73.8	73.7
Acres Harvested	72.4	73.0	72.2	72.7
Bu./Harvested Acre	38.1	39.6	37.8	39.7
	(Million Bushels)			
Beginning Stocks	290	248	208	155
Production	2758	2891	2730	2885
Imports	4	2	4	4
Total Supply	3052	3141	2942	3044
Use:				
Crushings	1640	1700	1610	1625
Exports	996	1063	1030	990
Seed, Feed, Residuals	168	170	147	169
Total Use	2804	2933	2787	2784
Ending Stocks	248	208	155	260
Ending Stocks, % of Use	8.8	7.1	5.6	9.3
Regular Loan Rate	\$5.26	\$5.26	\$5.00	\$5.00
U.S. Season Average				
Farm Price, \$/Bu.	\$4.54	\$4.38	\$5.50	\$4.85

Source: USDA and Jim Hilker.

TABLE 2
SUPPLY/DEMAND BALANCE SHEET FOR SOYBEAN MEAL

	2000-01	2000-01	Estimated 2002-03	Projected 2003-04
	(Thousand Short Tons)			
Beginning Stocks	293	383	240	250
Production	39,385	40,292	39,920	38,625
Imports	51	143	240	175
Total Supply	39,729	40,818	34,400	39,050
Use:				
Domestic	31,643	33,070	32,150	32,800
Exports	7,703	7,508	6,000	6,000
Total Use	39,346	40,578	38,150	38,800
Ending Stocks	383	240	250	250
U.S. Season Average				\$145.00 -
Price, \$/Short Ton	\$173.60	\$167.73	\$175.00	\$175.00

Source: USDA and Jim Hilker.

07/23/03

TABLE 3
SUPPLY/DEMAND BALANCE SHEET FOR SOYBEAN OIL

	2000-01	2000-01	Estimated 2002-03	Projected 2003-04
		(Millions Pounds)		
Beginning Stocks		2,877	2,360	1,455
Production		18,898	18,340	18,315
Imports		46	55	75
Total Supply		21,821	20,755	19,845
Use:				
Domestic		16,942	17,100	17,400
Exports		2,520	2,200	1,100
Total Use		19,461	19,300	18,500
Ending Stocks		2,360	1,455	1,345
U.S. Season Average				
Price, \$/lb.		\$0.165	\$0.220	\$0.210

Source: USDA and Jim Hilker.

GRAPH 1

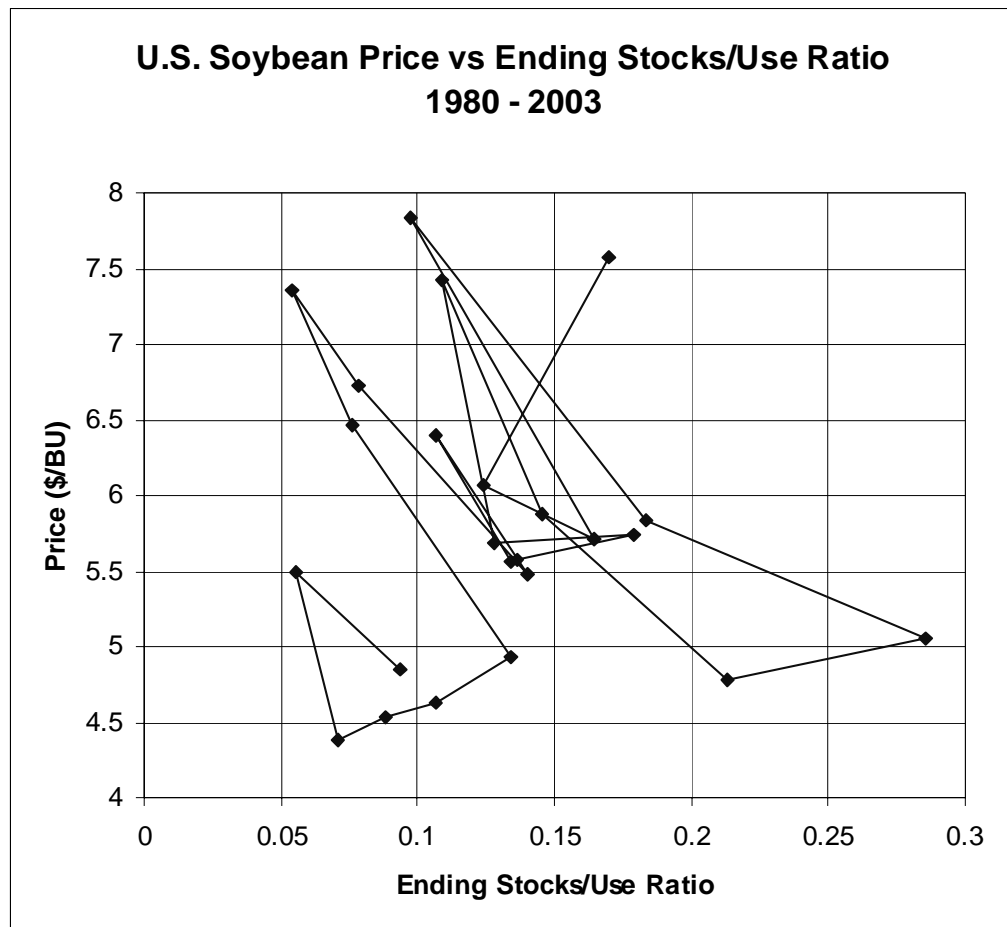


Figure 1

(Updated weekly at <http://www.msu.edu/user/hilker/>)

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Cumulative Distribution Function November 2003 Soybean Futures

