
Viewpoint

Fats and oils report

Will there be enough soybeans?

This article by David Bartholomew was prepared the third week of August, shortly after the publication of the U.S. Department of Agriculture's first forecast of the 1980 soybean harvest. Bartholomew, a regular contributor to *JAACS*, is manager of the oilseeds department for Merrill Lynch Pierce Fenner & Smith Inc. at the Chicago Board of Trade. In this column Bartholomew notes the soybean harvest forecast is lower than last year and suggests the reduced supply may lead to increased prices for soybeans for two reasons: first, farmers will hold soybeans for higher prices to cover their production costs on reduced yields; second, processors will have to compete in price for the smaller supply available.

Will there be enough? That is now the question. With the first USDA 1980 crop estimate now published, the market must wrestle with the supply question, not only in the next few weeks prior to harvest, but for the next 12 months until the 1981 harvest. That first 1980 estimate showed a crop of 1,880 million bushels versus 2,283 million last year. Harvest acreage was forecast at 68.6 million versus 70.5 million in 1979. The decrease was due partly to unattractive price outlooks at time of planting, and partly because of poor growing conditions due to hot and dry weather. Yield was forecast at 27.4 bushels per acre versus 32.2 a year ago, again because of inferior weather conditions.

Further reductions in the acreage in subsequent crop estimates are considered a certainty. The drop in the August estimate, in our opinion, reflected only the fact that some 600,000 of the intended acreage was never planted because it was too dry to assure germination. Still to be reported is another reduction of 500,000 to one million acres that are being abandoned because the crop never made satisfactory growth. The reduction might be even more. Under those circumstances farmers will decide that it would cost too much to try to harvest such a poor yield on that land.

Yield has been impaired also by weather that was too hot and dry as the crop reached the reproductive phase of the life cycle. This was partly true in the prime producing area of the Midwest, i.e., Illinois and Iowa. Moisture ade-

quacy was very scattered, with deficiencies noted frequently from one field to the next, adjacent to good fields. But, primarily the problem centered in the secondary, but very important, areas of the central and southern states. Attention has been focused on the Mississippi River Delta states and contiguous areas such as Missouri, Arkansas, Louisiana, Tennessee and Mississippi, as well as Alabama, Georgia and the Carolinas.

There has been improvement in moisture during late July and the first half of August in the Midwest. This has kept the crop from being a major disaster because the kind of soybeans grown there can produce improved yield from better moisture received at that time. It has happened many times in past years. Such soybean strains are called "indeterminant" varieties. But moisture did not become available at that time in central and southern states, and it is doubtful that moisture could have restored yield prospects anyway because the varieties sown there are called "determinant" varieties. The reason for this varietal differentiation is that in the milder climate of the south, the plant would just keep on making vegetative growth without going into the reproductive phase unless there were a built-in mechanism to cause it to go from one phase to the other. It is our opinion that the continued decline in the central and southern crops more than offsets the improvement in the north. As a result, both acreage for harvest and yield per acre must decline further so that the final crop estimate must be close to 1,800 million bushels.

Supply vs demand

Next the market must wrestle with the equation of fitting supply to demand. The most readily understood figure in this regard is carryover supply at the end of the season. Anytime that carryover approaches no more than 150 million bushels, at today's demand levels, it is considered a sensitive situation. Crush and exports in September have been close to four million bushels per day in recent years.

This means that about 60 million bushels are needed from the end of the statistical year (August 31) to the beginning of harvest (about September 15). And harvest might be delayed a week or two because of rain (another 30 to 60 million bushels of demand). Here is how the equation could develop, in million bushels:

	<u>1979/80</u>	<u>1980/81</u>
Carryover Sept. 1	174	400
Production	2,283	1,880
Total supply	2,457	2,280
Consumption	2,057	2,057
Carryover Aug. 31	400	223

This assumes consumption remains unchanged, and that the crop really is as large as the USDA August estimate. It must be realized that there is a built-in upward thrust in consumption. It goes up every year when supply increases. The only years in which consumption has decreased are those seasons when supply decreased. That decrease came about only with higher price. Therefore, we must conclude that price must stay firm in the 1980-81 season to keep consumption from going higher than the previous season.

Maybe consumption will be actually reduced in 1980-81. To do that, price must go higher still. That certainly would be the case if, in fact, the crop really is only 1,800 million bushels as we have suggested, instead of the 1,880 million projected by USDA in August. That would mean a carryover of only 143 million bushels unless consumption drops, and that is too tight. Only a higher price would make it more comfortable.

Here is the evidence of the natural upward thrust in supply and demand for U.S. production for the past 20 years, in million bushels, for the seasons beginning Sept. 1:

	<u>Supply</u>	<u>Consumption</u>	<u>Percent change</u>	
			<u>Supply</u>	<u>Consumption</u>
1960	607	580		
1961	706	627	+16.3%	+ 8.1%
1962	748	702	+ 5.9	+12.0
1963	745	678	nil	- 3.4
1964	768	739	+ 3.1	+ 9.0
1965	875	840	+13.9	+13.7
1966	964	874	+10.2	+ 4.0
1967	1,066	900	+10.6	+ 3.0
1968	1,269	945	+19.0	+ 5.0
1969	1,451	1,221	+14.3	+29.2
1970	1,354	1,255	- 6.7	+ 2.8
1971	1,275	1,203	- 5.8	- 4.1
1972	1,343	1,283	+ 5.3	+ 6.7
1973	1,607	1,436	+19.7	+11.9
1974	1,387	1,199	- 13.7	- 16.5
1975	1,736	1,491	+25.2	+24.4
1976	1,533	1,429	- 11.7	- 4.2
1977	1,865	1,704	+21.7	+19.2
1978	2,031	1,857	+ 8.9	+ 9.0
1979	2,457	2,057	+21.0	+10.8

Other market implications

Differences between prices of futures months at the Chicago Board of Trade should flatten out, and probably will invert, with the spot month being higher than the next, and so on. This is a natural phenomenon in seasons of short supply. It has already begun with May moving above July,

and March moving above May. It is natural that it should begin with the distant months. It should progressively move forward to the nearby months. There are several reasons which are dynamic in this regard.

Exporters depend on southern production for most of their needs in the October/December quarter. But that is where supply is shortest. So they will have to reach into the Midwest from the beginning of harvest in September. This will place them in direct competition with interior crushers who normally have a protected market at that time of year. Both outlets will be competing for the same source of supply. This will mean a higher cash basis to producers.

Storage space will be plentiful as a result of the sharp reduction in feed grain production. This will cause farmers to hold soybeans off the market in an attempt to secure higher prices. From the point of view of farmers, one thing must be kept in mind. If they were just barely breaking even with the costs last season when the cash market was at \$6 and less, then those who have a 50% reduction in crop will need double that price to just break even this season. To accept anything less will mean significant losses even though politicians and others will think they are getting wealthy at higher prices.

Foreign purchasers have made very little forward purchases compared to normal. They had been confident that supply was ample enough to keep prices low. Then when prices started to advance in June, they refused to believe that the strength could continue, so they still took little protection. They were previously pricing only nearby shipments and that policy continues.

Under this combination of circumstances, it can be expected that the deliverable stocks of soybeans at Chicago and Toledo and of soybean oil and meal at various points will become attractive and move into consumption. Light deliveries, or no deliveries, on futures contracts usually is the ultimate deciding force in causing price inversions. They can stay inverted until supply surpluses develop again. An inverted market is simply saying, "We need more supply now and will not compensate for storage costs to hold it until later." Conversely, a carrying charge market is saying, "We will compensate for storage charges if you will delay marketing it."

Once the market price inversion is accomplished, consuming industries will extend their forward purchase coverage. They traditionally like to purchase price discounts in forward months, when available. To emphasize this point with a contrary example, a major reason not much purchasing has been done for early new crop consumption is that for many months those futures were at premiums to old crop, which doesn't happen very often. Usually new crop months are below the spring and summer months. Again, it was a situation of large carryover supply from old crop to new crop. The industry refused to carry the inventory without being compensated for storage costs.

All these factors direct us to the opinion that the 1980-81 season will be one of many surprises, with more price strength than seemed likely to most observers just two months ago. Not even the larger soybean crop in Brazil early this year and possibly next year, nor increases in other crops elsewhere, can fully offset the phenomenon taking place in the United States. They will help, but not entirely compensate. The natural upward thrust in demand, set in motion by low prices until recently, cannot be reversed so quickly. It will take more time and probably higher prices than have been seen so far.