Viewpoint

How low can prices go?

The following article was prepared by David Bartholomew, a frequent contributor to JAOCS *News. In this article, Bartholomew shows how the government price support program for soybeans provides a floor for soybean prices. But for the first time in many years, U.S. farmers who have taken loans on soybeans may let the federal Commodity Credit Corporation take title to those soybeans, rather than repay the loans (plus interest and storage costs). This column was written in early April. Bartholomew is manager of the oilseeds department, senior soybean analyst, for Merrill Lynch, Pierce, Fenner & Smith Inc. at the Chicago Board of Trade.*

HOW LOW CAN PRICES GO?

The relentless bearish trend has continued for approximately 16 months. At many points on the way down there have been signals that a recovery was imminent. Many were technical. A few were fundamental.

Late in 1981, it was impressive to see the demand recovery taking shape. Interest rates dropped sharply. Logically, the US dollar also showed a large decline against other major foreign currencies at the same time. This promised to bring about a demand recovery in established markets to the record level achieved two years ago. At the same time the newly developed markets of Eastern Europe and the USSR were seen as making a major expansion. Simultaneously, the growing crop in Brazil was having trouble.

Then everything reversed. Interest rates moved up and so did the US dollar. Moisture conditions in Brazil improved enough to keep crop outlook to only a modest reduction. East European ability to pay for imports was seriously crippled by previous over-extension of credit. The Soviet economy came on hard times as, much to the surprise of that government, values of gold and petroleum weakened seriously and those are the two major commodities normally sold to generate hard currency with which to buy food and feed the Soviets so badly need.

So the price trend resumed its downward bias and the most popular question by farmers, speculators, and commercial customers and others has once again become: "How low can prices go?" Or more accurately, "How do you calculate a probable bottom?"

For soybeans it is relatively simple. Not precise, but certainly more simple than for grains because of the commercial nature of the commodity and because the government support program is not nearly so complicated. Here are the considerations:

National average support loan is $5.02 per bushel. There are slight variations depending on location. All soybeans from the 1981 crop are eligible for the support loan. Farmers can receive the loan against soybeans in storage which become the collateral. Ultimately, the collateral is redeemed by paying off the loan or else it is surrendered and the farmer keeps the money. In that case, the soybeans become the property of the government and are placed in CCC (Commodity Credit Corporation) inventory for disposal later.

Soybeans may be placed in the loan program at any time from harvest until the end of May of the following year. They may be redeemed any time during the nine months following entry into the loan. Mostly they go into the program from November to February. Most are redeemed by August so farmers can have the storage space available before the next harvest and because most years the market pays more than the loan value.

This will be the first year in more than ten years when it must be anticipated that some soybeans may not be redeemed. Just how many will be forfeited is the question with which the market must wrestle in the months ahead. A carryover of about 100 million bushels in the free supply on Aug. 31 would be ample. Using the latest projection of a total carryover of 350 million bushels, it is seen that 250 million could safely be carried by CCC without stressing the market.

With this in mind, and with the prospect of a larger crop soon to be produced in 1982, it seems unlikely that the market must decline to a level that will insulate approximately 200 million bushels from the free market supply. In

Soybean loan participation

	Placed in price support program*		Million bushels carryover stocks		Average support price
	Million bushels	% of crop	Total	CCC	
1962-1963	68.8	10.2	15.1	1.7	$2.25
1963-1964	72.8	10.4	31.9	0	2.25
1964-1965	28.7	4.1	29.7	0	2.25
1965-1966	86.5	10.2	35.6	0	2.25
1966-1967	153.5	16.5	89.7	7.3	2.50
1967-1968	201.4	20.6	166.3	29.4	2.50
1968-1969	340.3	30.7	325.5	171.4	2.50
1969-1970	179.5	15.8	229.8	150.2	2.25
1970-1971	146.4	13.0	98.8	2.5	2.25
1971-1972	168.2	14.3	72.0	0	2.25
1972-1973	90.6	7.0	59.6	0	2.25
1973-1974	122.8	7.9	170.9	0	2.25
1974-1975	34.6	2.2	185.0	0	2.25
1975-1976	–	–	244.6	0	–
1976-1977	2.2	0.1	102.9	0	2.50
1977-1978	12.9	0.8	161.0	0	3.50
1978-1979	67.0	3.0	174.0	0	4.50
1979-1980	42.0	2.3	359.0	0	4.50
1980-1981	133.0	7.4	318.0	0	5.02
1981-1982**	215.0	10.6	350.0	?	5.02

* Part or all of this was redeemed, with the balance going into government CCC inventory.
**As of March 31, 1982.

other words, it has to become unattractive for the farmers to redeem their collateral and allow it to move into CCC inventory instead. So now the question is: "What price will cause that to happen?"

If a farmer elects to pay off the loan and redeem his collateral (the soybeans) he must pay interest on his loan. On the other hand, if he elects to keep the money and let the government have the collateral, no interest is charged. Therefore, the farmer will want the market to compensate him for both the principal and interest on his loan before paying it off.

Interest rates have fluctuated between 12 and 14½% during the period of the majority of loan entries (November through February). At the higher rate this is equal to 6¢ per month per bushel. The majority of redemptions will come in the period of June to August, if there are redemptions, in order to get the soybeans moved out of farm storage before the new crop harvest. Therefore, the accrued interest will mostly be from 36¢ to 54¢ per bushel.

Therefore, the price at the farm level that could be called par value would be a range of approximately $5.38 to $5.56 per bushel with slight variations due to location. Translating this to Chicago futures becomes a little more difficult. Usually it is to be expected that the cash basis in the major producing areas during the summer months is a range of 10¢ over to 40¢ under spot futures depending upon location.

Consequently, we would calculate the spot futures may go down to $5.80 where some loan forfeitures would take place and probably could go as low as $5.40 where near unanimous forfeitures would be encountered. Potentially contributing to the lower figure could be some active loan redemptions in a hasty move by farmers to sell and pay off before their local price gets down to loan principal plus interest in their area. That would help assure prices declining to the lower level.

An interesting consideration in this scenario can happen to spread differentials between futures months. It is common for traders to expect a widening of spreads in a declining market, because of burdensome supply, and a narrowing of spreads, or maybe inverted relationships in a rising market, because of supply shortage.

The opposite is to be expected, however, when burdensome supply drives prices down to loan level.

When the market goes down to loan level on spot month, all other months can decline to the same level. In fact, the spot month may rise above other months (invert) if it becomes necessary to buy soybeans from CCC inventory at some formula price not yet decided upon. Historically, that formula has been at 105 to 115% above loan. If it is 115% this time that would be $5.77 per bushel.

Conversely, spreads would widen if prices stay high enough to encourage major redemptions from the loan programs. With such a surplus thrust into the free market channels, the industry would not accept this responsibility without adequate compensation for storage and interest costs.

This explanation of how the government loan program works also provides an answer to the nagging question, "How low can prices go?" There is no guarantee that prices will not go lower; it could happen. If most of those 215 million bushels are redeemed from the loan program, they of course, cannot go back into the program again. Therefore, the previous support floor no longer exists. Already 29 million were redeemed by late March. So it would be possible that subsequent redemptions would be so large as to force prices lower, but based on past experience that probably would never happen.