Low Prices for Agricultural Commodities - How Long Will They Persist?

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Introduction

Prices for corn and wheat vaulted to historic high levels in the spring and summer of 1996. While not at historic high levels, soybean prices were well above average from early 1996 through late 1997. Of the major Illinois agricultural commodities, only cattle prices languished during the 1996-97 period.

By late summer of 1998, wheat prices had declined to the lowest level in over 20 years; corn and soybean prices were at 10 year lows; hog prices were at the lowest level since the fall of 1994; and cattle prices remained depressed. The extremely high prices, particularly for crops, of 1996 came quickly and surprisingly. The decline since then has been quick and equally surprising. The central question now is how long will the low prices persist? Any attempt to answer that question must first start by identifying the factors that contributed to low prices. Once those factors are identified prospects for change can be assessed. While specific conclusions are not possible, the discussion may help the agriculture sector put the current situation in perspective.

Factors Contributing to Low Livestock Prices

The recent sharp decline in hog prices is primarily a result of large increases in domestic pork production. The combination of high prices of 1996 and 1997 and the changing structure of the industry led to a 10 percent increase in production from 1996 to 1998; with another increase slated for the first half of 1999. Total pork production is at an all time high, and near a record level in terms of per capita supply.

The cattle situation is somewhat more complex. Cattle production and prices tend to move in fairly uniform 10 to 12 year cycles. Cattle numbers reached a cycle low in 1990, peaked in 1996 and have been declining since. The expansion of the early 1990s was in response to generally high prices. The expansion led to low prices which in turn started the liquidation phase of the production cycle. Declining cattle numbers eventually lead to lower beef supplies and higher prices. The impact of the most recent decline has been delayed by increased slaughter weights and some forced marketings from the drought in the southwest. The liquidation phase of the cycle is continuing.

Prospects for Livestock Price Recovery

Historically, periods of low hog prices have "self-corrected". That is, periods of over supply and low prices have led to liquidation of the breeding herd, smaller pork supplies, and ultimately higher prices. This is the classic hog cycle. The cycle may be less predictable with recent changes in the structure of the industry, but is still functioning. Liquidation of the breeding herd is expected in the fourth quarter of 1998 and first quarter of 1999. Pork supplies will likely decline below year-ago levels beginning in the last half of 1999. Smaller supplies are expected into the year 2000. Price recovery, then, is expected to begin in late 1999 and continue through 2000.

The cattle industry also tends to follow a cycle of large supplies and low prices followed by reduced supplies and higher prices. The cycle, however, tends to be quite long, due to the biological lags in cattle

production. The liquidation phase of the cattle cycle began in 1995 and is continuing in 1998. Initially, liquidation increases total beef production, but ultimately leads to smaller supplies. Smaller supplies in the current liquidation phase have been delayed by extremely high average slaughter weights in 1998. Reduced supplies are anticipated beginning in 1999 and continuing for three or four years. Cattle prices are expected to gradually recover during that period. The low prices of the recent cycle appear to have been established in the third quarter of 1998.

Factors Contributing to Low Crop Prices

There appear to be at least three general factors that have contributed to the recent sharp decline in the prices of corn, wheat, and soybeans. These are: large domestic production, large world crops, and demand weakness associated primarily with Asian economic problems. U.S. corn production was record large in 1994, totaling 10.1 billion bushels; declined to 7.4 billion in 1995; and then rebounded to 9.3 billion in 1996, 9.4 billion in 1997, and an estimated 9.7 billion in 1998. The large crops of the past three years reflect a combination of increased corn acreage as a result of the elimination of set aside programs and above-trend yields. Soybean production was a record 2.5 billion bushels in 1994; declined to 2.2 billion in 1995; rebounded to 2.4 billion in 1996; established a new record of 2.7 billion in 1997; and reached an estimated 2.9 billion in 1998. Soybean acreage increased by 16 percent from 1995 to 1998 and yields were well above in 1997 and 1998. U.S. wheat production was at a four year low of 2.2 billion bushels in 1995, increased to 2.3 billion in 1996, 2.5 billion in 1997; and 2.6 billion in 1998.

Foreign coarse grain production reached a record high in 1993-94; declined to more historic levels in 1994-95 and 1995-96; jumped to a new record in 1996-97; and remained large in 1997-98 and 1998-99 (projected). Production has been particularly large in western Europe, China, and Argentina. Foreign wheat production was at a six year low in 1994-95; rebounded in 1995-96 and 1996-97, reached a new record high in 1997-98; and is projected only slightly below that record for 1998-99. Production has been large in western Europe, China, Australia, India, and Argentina. The large world grain crops of recent years reflect some acreage expansion due to the high price of 1995-96 and generally favorable growing conditions.

Foreign soybean production has been trending higher for three decades, led by South America. Foreign production reached a record high in 1994-95, leveled off the following two years, jumped to a new record high in 1997-98 and is projected to be down only slightly in 1998-99. The long term increase is a result of increased acreage. Growing conditions have also been extremely favorable the past two years.

U.S. corn exports reached a peak of 2.4 billion bushels in 1980-81; cycled to a low in 1985-86; recovered in 1989-90; declined again in 1993-94; recovered in each of the next two years; declined in 1996-97 and again in 1997-98 to only 1.5 billion bushels. The recent decline is associated with larger world crops and declining economic conditions in Asia. U.S. Shipments to all Asian destinations declined by 33 percent from 1995-96 to 1997-98.

U.S. wheat exports have followed a pattern similar to that of corn, with a recent high of 1.4 billion bushels in 1992-93 and a low of 1 billion bushels in 1996-97. Exports were just over 1 billion bushels in 1997-98 and one projected at only 1.1 billion in 1998-99. Recent declines in exports have been for the same reasons as the decline in corn exports.

U.S. soybean exports reached a record 905 million bushels in 1982-83, declined to 527 million in 1988-89; recovered to 840 million bushels in 1994-95 and have remained large since. World demand for soybeans and soybean products has been strong enough to absorb increases in world production until

recently. Back to back large crops in South America and the United States have finally overwhelmed the market. Year ending stocks (1998-99 marketing year) are projected at 1.9 billion bushels for corn, 885 million for wheat, and 485 million for soybeans. Those are the highest in 6 years for corn, 11 years for wheat, and 13 years for soybeans.

Prospects for Crop Price Recovery

Over the past 20 years, crop prices have tended to "cycle" from very low levels to very high levels. The timing and magnitude of cycles, however, are not uniform and are generally not predictable. The primary factor contributing to the cycle is weather and crop yields, both domestically and internationally. Domestically, the employment of acreage set aside programs has also had a significant influence on production and prices. The magnitude of price swings has also been influenced by the relative strength/weakness of demand, particularly export demand. Periods of extremely low prices have tended to be relatively short in duration over the past 20 years. For corn, the longest period of very low prices was from mid 1986 to early 1988. This was a period of consecutive large crops (1985, 1986, 1987) and weak export demand. The period from early 1989 through mid 1995 was an unusually long period of moderate prices. The price patterns for soybeans and wheat have generally been similar to that of corn, although soybean prices have tended to be more volatile than corn and wheat prices.

The current condition of low crop prices is similar to that of the mid 1980s, with consecutive large crops in the U.S. and relatively weak export demand, particularly for corn and wheat. The major difference is that there is no domestic acreage set aside program to reduce plantings. Conversely, there is not a government financed storage program so that stocks of corn and wheat have not, and probably will not, build to the levels of the mid 1980s.

A reversal of low crop prices will require a reversal in one or more of the fundamental factors that created the current situation - large domestic crops; large foreign crops; and economic problems, particularly in Asia. Recovery in Asian and other economies will occur, but full recovery is not anticipated before the year 2000. Price recovery based on demand recovery may still be a couple of years away. Prospects for near term price recovery, then, are tied to the size of U.S. and world crops in 1999 and 2000. Some decline in foreign production is anticipated in 1999 as a result of small declines in planted acreage and lower average yields. Such declines will be supportive for U.S. exports and prices, but modest production declines would not propel prices sharply higher.

While some shifting of U.S. acreage is anticipated in 1999 (less wheat, more soybeans) an overall decline in acreage is not expected unless there is a sudden shift in policy allowing set-aside programs. Changes in production will be primarily determined by crop yields. Accurate forecasts of growing season weather are not possible. History, however, does suggest that crop yields do not persist above trend values indefinitely. More than three consecutive years of above trend yields have been rare.

In summary, price recovery based on demand strength is not likely in the next year or two. There is some chance that economic problems could accelerate and spread to the U.S. There is a better probability that a decline in crop production will occur in the next year or two that will reduce surpluses and push crop prices higher. This temporary solution may provide price relief until world economic growth gets back on track.

The central concern, however, is farm income rather than price levels. The cause and duration of a crop price recovery will have significant implications for farm incomes. If recovery is generated by shortfalls in domestic production, incomes may remain low. Higher prices due to lower foreign production and/or

increased world demand would do more to boost farm income.

Persistence of low prices beyond 1998-99 is a real possibility. It now appears that the Administration and Congress will be willing to significantly increase transfer payments to address a low income scenario.

Selected U.S. Supply and Consumption Indicators

	1990/91 - 1994/95 Average	1995/96	1996/97	1997/98	1998/99
		(units = thousand bushels)			
Corn production	8,265	7,974	9,293	9,366	9,738
Corn exports	1,696	2,228	1,795	1,525	1,625
Corn carryout	1,429	426	883	1,399	1,922
Soybean production	2,098	2,177	2,382	2,727	2,909
Soybean exports	688	851	882	875	860
Soybean carryout	289	183	131	200	485
Wheat production	2,379	2,183	2,285	2,527	2,565
Wheat exports	1,224	1,241	1,001	1,040	1,075
Wheat carryout	590	376	444	723	885
	1990-94	**1995**	**1996**	**1997**	**1998**
		(units = thousand pounds)			
Pork production	16,625	17,849	17,117	17,274	18,822
Pork net exports	(383)	107	333	411	605
Beef production	23,125	25,222	25,525	25,490	25,759
Beef net exports	(1,124)	(282)	(196)	(207)	(426)

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