U.S. Agriculture: Another Solid Year in 1998?

By Mark Drabenstott and Russell L. Lamb

U.S. agriculture had a very good year in 1997, with profits widely shared among the nation's farmers. While few producers could boast of bell-ringer profits, as they did in 1996, nearly all could claim a good year. The year was especially welcome to the nation's cattle producers, who had struggled through an extended period of losses. The cattle industry rebounded much faster and further than anyone expected. While Mother Nature did bring major flooding to the Northern Plains states in late spring, most parts of the nation had good growing conditions in 1997. The result was an abundant harvest of the major crops and a moderate slide in crop prices. All in all, farm income was strong, but not as strong as the year before, and agriculture's balance sheet was bolstered further by gains in farmland values.

The year ahead will be solid for agriculture, but income probably will slip from 1997 levels. After a big harvest last year, U.S. grain bins are fuller than they have been in three years. Moreover, the turmoil in Asian financial markets is likely to trim export demand for U.S. food and agricultural products in the year ahead. Profits in the livestock industry should continue, but fall somewhat from last year's level. Pork prices, in particular, may be under some downward pressure due a buildup in pork supplies and a tailing off in export demand. One major wild card in the 1998 outlook is El Niño. While current forecasts suggest little impact on 1998 crop production, much depends on when and how quickly the El Niño weather conditions fade. World grain stocks are still small enough that any crop shortfall could send prices sharply higher. Barring a major weather disruption, however, U.S. agriculture appears headed toward a solid year in 1998.

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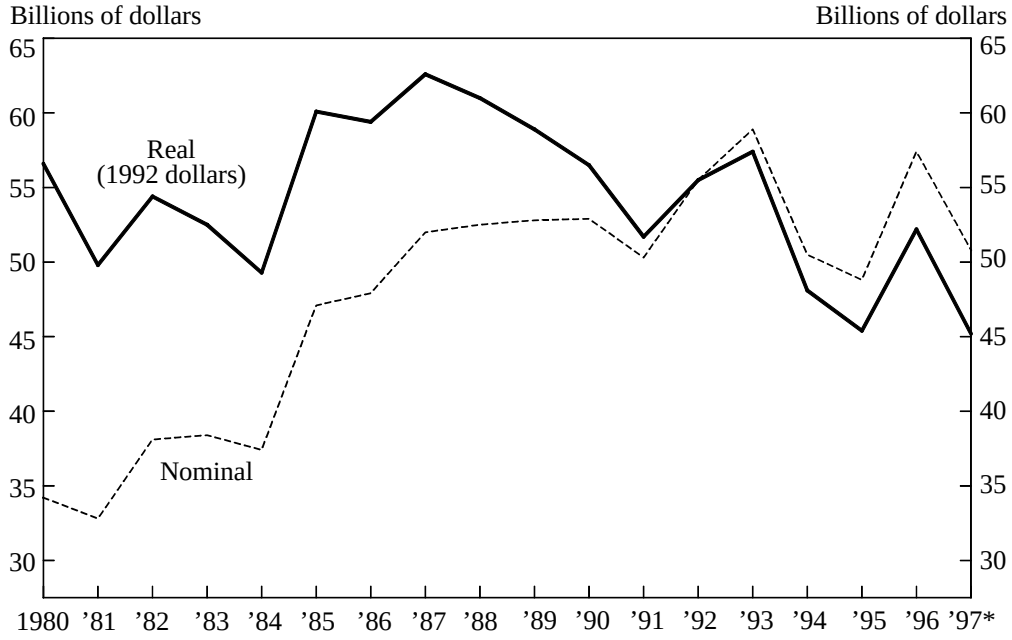
I. A GOOD YEAR IN 1997

In many respects, 1997 was exactly the year that many in U.S. agriculture had wanted. The year before brought record grain prices and memorable incomes to some producers. But many farmers were left out—namely, producers of wheat and cattle, commodities that are very important to the Tenth District states. To the disappointment of some producers, grain prices gave some ground in 1997, but the year also brought a major turnaround in the cattle industry and big harvests of major crops—including wheat. All things said, 1997 brought a tide of profits to U.S. agriculture that lifted nearly all boats and further bolstered agriculture's already strong balance sheet.

Chart 1
U.S. NET CASH FARM INCOME



* Forecast.
Source: U.S. Department of Agriculture, Economic Research Service, Agricultural Income & Finance.

Strong farm finances

U.S. agriculture posted strong overall financial performance in 1997, despite a modest drop in farm income across the nation. The drop in income resulted from a combination of crop prices, which retreated from their 1996 peaks, and farm expenses, which rose moderately. In the Tenth District states, however, farm incomes rose sharply due to a bumper wheat harvest and a big turnaround in the cattle industry. Farmland values, another important barometer of farm finances, showed marked gains in 1997.

U.S. net cash farm income, a broad income gauge that nets cash expenses from cash receipts, fell $5.2 billion to $54.7 billion in 1997 (Chart 1). Most of the decline was due to a substantial drop in crop receipts, as prices fell in the wake of a good 1996 harvest. Livestock receipts, meanwhile, reached a new record in 1997 on the strength of recovering cattle prices. In nominal terms, the 1997 farm income total was the third best on record, although in real terms it was near its lowest level of the 1990s. Net farm income, another measure of farm income which takes into account farm inventory adjustments and capital depreciation, fell 12 percent due to a moderate rise in capital expenses.

In the Tenth District states, farm income rose sharply in 1997. Wheat farmers posted strong

Table 1

U.S. FARM BALANCE SHEET ON NOVEMBER 19

(Billions of dollars)

	1989	1990	1991	1992	1993	1994	1995	1996	1997
Assets									
Real estate	600.8	620.0	625.6	642.8	673.4	706.9	755.7	811.0	855
Nonreal estate	211.6	219.8	218.0	226.2	231.2	231.2	222.3	224.1	230.0
Total assets	812.4	839.9	843.5	869.0	904.6	938.1	978.0	1,035.1	1,085.0
Deflated	905.7	897.3	866.9	869.0	881.7	894.3	908.9	941.9	964.4
Liabilities									
Real estate	76.0	74.7	74.9	75.4	76.0	77.7	79.3	81.8	84.0
Nonreal estate	61.9	63.2	64.3	63.6	65.9	69.1	71.5	74.4	77.0
Total liabilities	137.9	137.9	139.2	139.0	141.9	146.8	150.8	156.2	162.0
Deflated	153.7	147.3	143.1	139.0	138.3	139.9	140.1	142.1	144.0
Proprietor's equity	674.5	701.9	704.3	730.0	762.6	791.3	827.2	879.0	923
Deflated	752.0	749.9	723.8	730.0	743.3	754.3	768.8	799.8	820.4
Debt-asset ratio (percent)	17.0	16.4	16.5	16.0	15.7	15.6	15.4	15.1	14.9

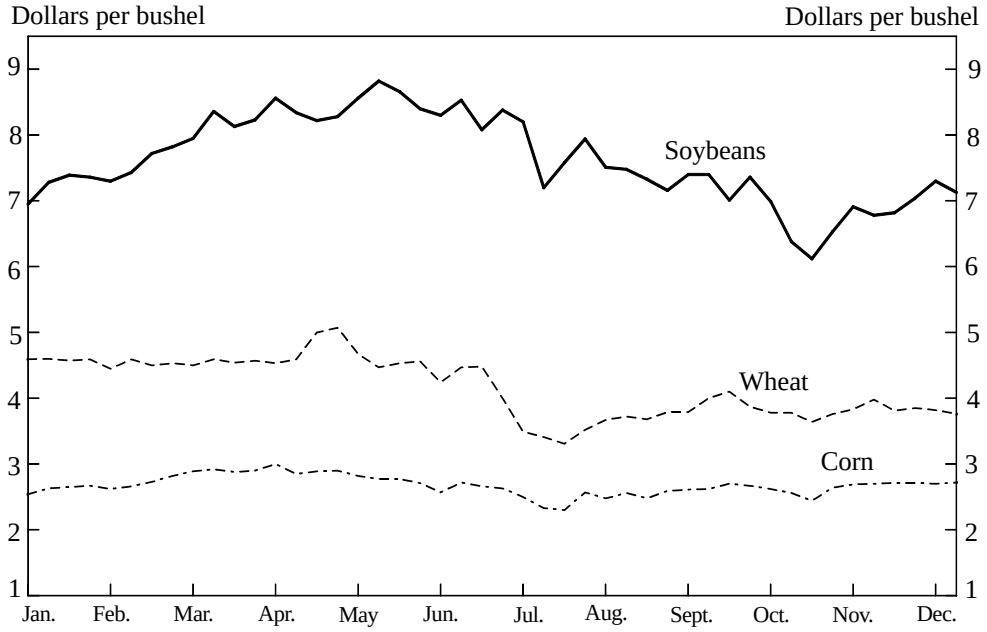
Note: Figures for 1996 and 1997 are forecasts. Also, table excludes operator households.
Source: U.S. Department of Agriculture.

gains in income compared with 1996. Similarly, cattle producers enjoyed healthy profits in 1997, a welcome turnaround from two straight years of losses. Cattle ranchers had particularly strong profits. The cattle industry is especially important to district farm income since it accounts for 60 percent of district gross farm receipts. Another factor in the financial turnaround in the district was a bumper wheat crop. Most district wheat producers had a record crop after two bad years.

Despite a drop in U.S. farm income, the sector's balance sheet grew even stronger in 1997 (Table 1). Farm assets climbed 5.5 percent, nearly matching the gains of the year before. The big factor behind the jump in farm assets was a significant increase in farmland values throughout the nation. Many portions of the Farm Belt again saw double-digit gains in land values. In the Tenth District states, nonirrigated farmland values rose 6.2 percent for the 12 months ended September 30, 1997. Gains were biggest in Oklahoma, Kansas, and Nebraska—states where farm incomes all benefited from the profit turnaround in wheat and cattle.

Farmers continued to restrain their debt levels. For the nation, farm debt advanced a mere 3.7 percent to $162 billion. Since farm assets grew at a faster rate, the farm sector's debt-asset ratio fell to 14.9 percent, the lowest in more than 30 years. Similarly, agriculture's debt-equity ratio dropped to 17.5 percent, the lowest level in more than 30 years.

Chart 2
GRAIN PRICES, 1997



Source: U.S. Department of Agriculture.

Overall, U.S. agriculture is in good shape financially. While many producers throughout the nation had smaller incomes than in the banner year of 1996, most did well overall. In the Tenth District, farm incomes rose markedly from 1996, thanks to bumper crops and, even more important, a big profit rebound in the cattle industry. Attesting to the sector's overall financial health, farmland values posted solid gains in 1997 while most farmers saw their net worth rise.

A bountiful harvest for crop producers

Large crops and relatively strong prices resulted in an excellent year for crop producers in 1997. Coming off the high prices in 1996, many producers boosted plantings this year. The large plantings met with a good growing season, and farmers reaped a big harvest. Of note in the Tenth District, winter wheat production jumped to a new record following drought-ravaged crops the two previous years. While the large crops in 1997 resulted in a falloff in crop prices from the lofty peaks of 1996, strong exports held prices relatively firm (Chart 2). Overall, crop producers posted healthy earnings, helped by the second year of transition payments under the 1996 farm bill.

Wheat producers harvested a bumper crop thanks to excellent growing conditions. The nation's wheat production totaled 2.53 billion

bushels, the biggest crop since 1990 (Table 2). The surge in wheat output was led by a big winter wheat harvest. Many states in the Tenth District saw their 1997 wheat crop double from the drought-reduced production of the previous year. In Kansas, for instance, wheat production jumped from 255 million to 506 million bushels, a new record. The big winter wheat crop was a surprise to the market, since many analysts believed that a hard freeze in April had seriously damaged the crop; in the end, those fears proved false. Spring wheat production, meanwhile, was off somewhat in 1997 due to the record spring floods across the Northern Plains states. Overall, the nation's wheat yield was 39.7 bushels per acre, the highest since 1990.

After wide fluctuations in 1996, wheat prices traded in a much narrower range in 1997. Prices held around $4.50 through the spring months, then slid about $1 as the winter wheat harvest began and the market realized a bumper crop was in the making. With export demand picking up, wheat prices firmed in the fall months and closed out the year just below $4 a bushel. For the 1996-97 marketing year that ended May 31, 1997, wheat prices averaged $4.30 a bushel, only $0.25 less than the high price posted for the previous year (Table 3).

Corn production was large but below expectations. After record corn prices in 1996, corn farmers boosted plantings 13 percent last spring, an exceptionally large year-over-year increase. The growing season started off with excellent conditions, and the crop was planted ahead of schedule. But as the growing season progressed, dry weather settled in, especially in the eastern Corn Belt states. In the end, the nation's corn fields turned in an average yield of 126.4 bushels per acre, slightly below the trend yield of 128 bushels that agronomists expected. Thanks to the large plantings, however, U.S. corn production still totaled 9.36 billion bushels, the third biggest on record. Still, with domestic and export demand running strong throughout the year, the large crop resulted in only modest gains in already low corn stocks.

Like wheat prices, corn prices were much less volatile in 1997 than in 1996. A big corn crop in 1996 led to generally lower prices in 1997. After firming seasonally in the late winter months, prices fell throughout the spring as the large plantings and excellent planting season led to market expectations of a possible record crop. But dry weather in midsummer and signs of strong export demand sent prices higher throughout most of the second half of the year. With feed grain production down in Argentina and China, U.S. corn prices remained strong right through the harvest season, an unusual seasonal pattern. For the marketing year that ended August 31, corn prices averaged $2.70 at the farm level, about a sixth less than the record prices posted the year before.

Soybean producers had an especially good year in 1997, benefiting from a combination of record production and firm prices. Soybean plantings jumped 10 percent to the highest level in 15 years. Despite a good 1996 crop, soybean stocks were low entering 1997, and prices remained strong as a result, triggering the increase in acreage. Growing conditions were nearly ideal throughout the summer, and the combination of high yields and big plantings resulted in a record crop of 2.74 billion bushels. The national average yield was 39.2 bushels an acre, the best in five years.

Soybean prices reflected seasonal patterns in 1997, but traded at relatively high levels due to low soybean stocks. Prices jumped nearly $1.50 a bushel throughout the spring months on fears that stocks might not be big enough to meet the needs of all users. There were reports of some crushing plants shutting down, and for the first

Table 2

U.S. AGRICULTURAL SUPPLY AND DEMAND ESTIMATES

(November 19, 1997)

	Corn (bu.)			Feedgrains (mt.)		
	September 1-August 31			June 1-May 31		
	1995-96	1996-97	1997-98	1995-96	1996-97	1997-98
Supply						
Beginning stocks	1,558	426	884	45.3	14.4	27.0
Production and imports	7,390	9,306	9,359	211.9	270.1	268.0
Total supply	8,948	9,733	10,253	257.2	284.6	295.0
Demand						
Domestic	6,294	7,054	7,400	179.7	206.0	211.3
Exports	2,228	1,795	1,925	63.0	51.5	56.0
Total demand	8,522	8,849	9,325	242.8	257.6	267.3
Ending stocks	426	884	928	14.4	27.0	27.8
Stocks-to-use ratio (percent)	5.0	10.0	10.0	5.9	10.5	10.4

	Soybeans (bu.)			Wheat (bu.)		
	September 1-August 31			June 1-May 31		
	1995-96	1996-97	1997-98	1995-96	1996-97	1997-98
Supply						
Beginning stocks	335	183	132	507	376	444
Production and imports	2,181	2,391	2,740	2,251	2,377	2,622
Total supply	2,516	2,575	2,872	2,757	2,753	3,065
Demand						
Domestic	1,482	1,561	1,637	1,140	1,308	1,335
Exports	851	882	980	1,241	1,001	1,075
Total demand	2,333	2,443	2,617	2,381	2,310	2,410
Ending stocks	183	132	255	376	444	655
Stocks-to-use ratio (percent)	7.8	5.4	9.7	15.8	19.2	27.2

Note: Data represent millions of bushels or metric tons.

Source: U.S. Department of Agriculture.

Table 3

FARM PRODUCT PRICE PROJECTIONS

(November 19, 1997)

	Calendar years		
	1996	1997*	1998†
Choice steers	$65.21/cwt.	$67-68/cwt.	$70-76/cwt.
Barrows and gilts	$53.39/cwt.	$54-55/cwt.	$51-55/cwt.
Broilers	$.61/lb.	$.59-.61/lb.	$.57-.62/lb.
Turkeys	$.67/lb.	$.67-.68/lb.	$.62-.67/lb.
	Marketing years		
	1995-96	1996-97*	1997-98†
Wheat	$4.55/bu.	$4.30/bu.	$3.40-3.70/bu.
Corn	$3.24/bu.	$2.70/bu.	$2.45-2.85/bu.
Soybeans	$6.72/bu.	$7.38/bu.	$5.90-6.90/bu.

*Estimated.

†Projected.

Source: U.S. Department of Agriculture.

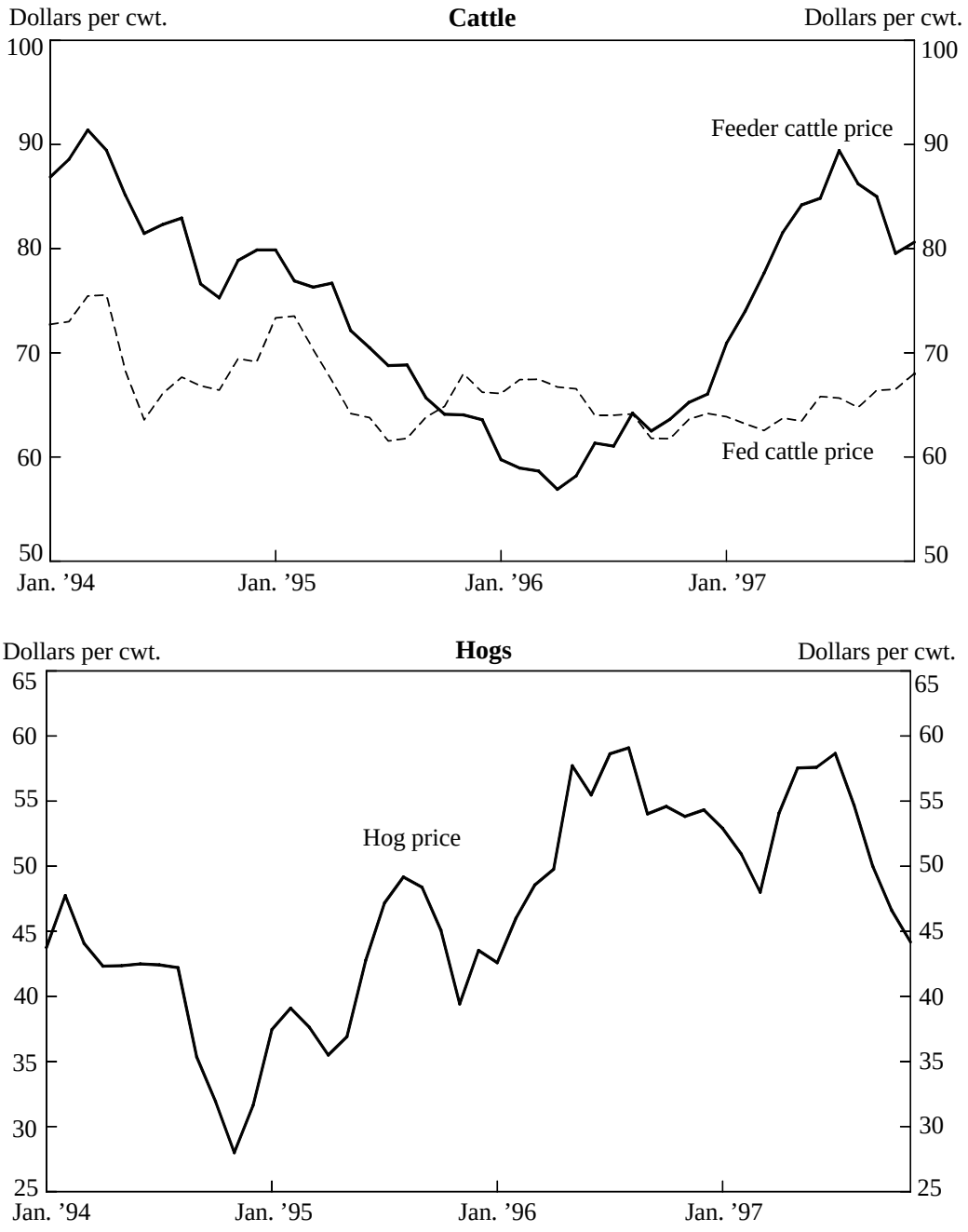
time in memory some U.S. firms imported soybeans from South America. Once the crop was planted and well-established, however, fears of scarcity began to wane and prices drifted down through the late summer. With export demand especially strong, prices strengthened through the harvest. For the 1996-97 crop marketing year ended August 31, farm-level prices averaged $7.38 a bushel, up about 10 percent from the previous year.

A good year for livestock producers

Livestock producers enjoyed a profitable year in 1997, with few areas of weakness. Ranchers generally experienced high prices for feeder calves throughout 1997, as the cattle industry snapped back from last year's problems. The moderation in corn prices in 1997 and higher prices for fed cattle helped feedlot operators remain profitable during most of 1997, although some weakness in earnings emerged late in the year. Hog producers expanded their herds, reversing two years of decline in the hog inventory. In spite of the expansion in hog numbers, prices stayed at profitable levels throughout the fall, boosted by strong exports and healthy domestic demand. The poultry industry experienced falling prices during 1997, but the sharp drop in feed costs generally kept earnings in the black.

The cattle industry turned the corner on profits in 1997 after three years of losses. The rebound was due to lower corn prices and stronger than expected cattle prices (Chart 3). The price of corn was lower on average in 1997, pushing down the cost-of-gain for cattle feeders and helping bid up the price of feeder cattle. Moreover, cattlemen started the year with about 2 percent fewer cattle in the United States after

Chart 3
LIVESTOCK PRICES



Source: Iowa State University, Estimated Livestock Returns.

liquidating part of the breeding herd in 1996. The decline in numbers left supplies of feeder calves well below year-earlier levels, boosting prices for feeder cattle throughout 1997. The price of feeder cattle soared from around $67 a hundredweight at the beginning of the year to almost $90 a hundredweight at its peak in July. Although prices moderated somewhat during the fall, prices still remained close to $80 a hundredweight through the end of the year. With strong prices and lower feeding costs, ranchers were profitable all year long.

Cattle feeders also earned profits during much of 1997. Prices for fed cattle moved only marginally during the year. After starting the year close to $65 a hundredweight, fed cattle prices moved between $63 and $68 a hundredweight throughout the year. However, the sharp moderation in feed costs in 1997 benefited feeders significantly. In addition, feeders bought many of the fed cattle marketed in 1997 at low prices during 1996, helping their profit margins substantially during much of the year. Nonetheless, by the end of the year profits for feeders were disappearing, as an expected jump in fed cattle prices failed to materialize. Feeders who bought higher priced feeder cattle last spring were likely losing money by year's end.

One factor that probably limited profitability for the cattle industry in 1997 was a series of concerns about the safety of the food system prompted by an outbreak of *E. coli* in hamburger and other meat products. A midsummer scare forced the closure of a plant in Nebraska that manufactured hamburger patties for food retailers and a national restaurant chain. Ultimately, the chain stopped serving hamburgers for a day to calm fears about the safety of its product. A Washington, D.C. area supermarket chain experienced late-summer concerns about the safety of the hamburger sold in its stores and removed the product from its meat counter. USDA acted quickly in both cases cited above to restore consumer confidence in the safety of the food system, but concerns lingered, as indicated by the press attention received by food safety issues over the balance of the year. While the impact of such scares is hard to quantify, they undoubtedly dampened demand for beef and likely held prices back somewhat.

Pork producers had banner profits in 1997, their third profitable year in a row. The decline in corn prices in early 1997 was not matched by a fall in hog prices, resulting in hefty profit margins for pork producers early in the year. At the beginning of 1997, cash prices in the Omaha direct market approached $50 a hundredweight. Despite the strength in hog prices, though, hog producers were slow to boost the size of the hog herd. Indeed, hog numbers continued to decline in the first quarter of 1997 in spite of the decline in corn prices. The decline in hog numbers pushed up prices to over $60 a hundredweight in mid-May.

In late spring pork producers began boosting production. One factor behind the expansion was the anticipation by U.S. producers of greater access to the Japanese market. An outbreak of foot-and-mouth disease in Taiwan, a leading pork exporter to Japan, led to a ban on exports from that country to Japan, creating new opportunities for U.S. pork. Stable corn prices throughout 1997 were the other factor that boosted the expansion in the hog herd. Hog numbers began rising in the second quarter of 1997 and were 4 percent higher in September than a year earlier.

Owing to the rise in supplies, hog prices fell back throughout the late summer and fall, and finished the year close to $45 a hundredweight. For the year as a whole, pork production declined 0.3 percent from 1996 levels, as most of the increase in hog numbers went into the breeding herd. Demand for pork was healthy throughout the year, and pork producers continued to benefit

from innovations in the consumer marketplace and healthy export levels in 1997.

Poultry producers also had a good year in 1997, benefiting from lower feed costs and relatively strong prices for their output. Strong consumer demand both here and abroad for chicken and turkey products again helped producers earn profits. Broiler production rose about 5.25 percent in 1997 as producers responded to the drop in corn prices by expanding production. However, prices for broilers remained quite strong throughout most of 1997. Prices began to drop by late summer and, by the end of last year, broiler prices had dropped 20 percent. Nonetheless, broiler prices for the year as a whole averaged close to 60 cents per pound, allowing for healthy profits by producers.

Turkey producers had another rough year in 1997. Net returns to turkey producers were negative for most of the year, with losses averaging about 6 cents per pound, the second straight year of losses. Turkey production in 1997 was virtually unchanged from the year before. In spite of strong export demand, prices edged down about 3 percent in 1997, reflecting weaker domestic demand for turkeys. One reason for the weak demand was lower prices on pork, a key competitor for turkey in the meatcase.

II. A SOLID YEAR IN 1998

While many of agriculture's strengths in 1997 are likely to persist in 1998, profits still may fall. Crop stockpiles are bigger than a year ago and are likely to weigh on prices. Compounding the outlook for crop producers will be a trimming of U.S. agricultural exports. Current financial problems in Asia will hurt sales to a region that represents the single best market for U.S. food and agricultural products. Livestock producers should add some stability to farm income, although pork profits may be harder to come by. A major unknown in 1998 is the effect El Niño will have on the weather. Overall, while there are some notable risks associated with the 1998 outlook, agriculture should post a solid year, with most segments sharing in the financial gains.[1]

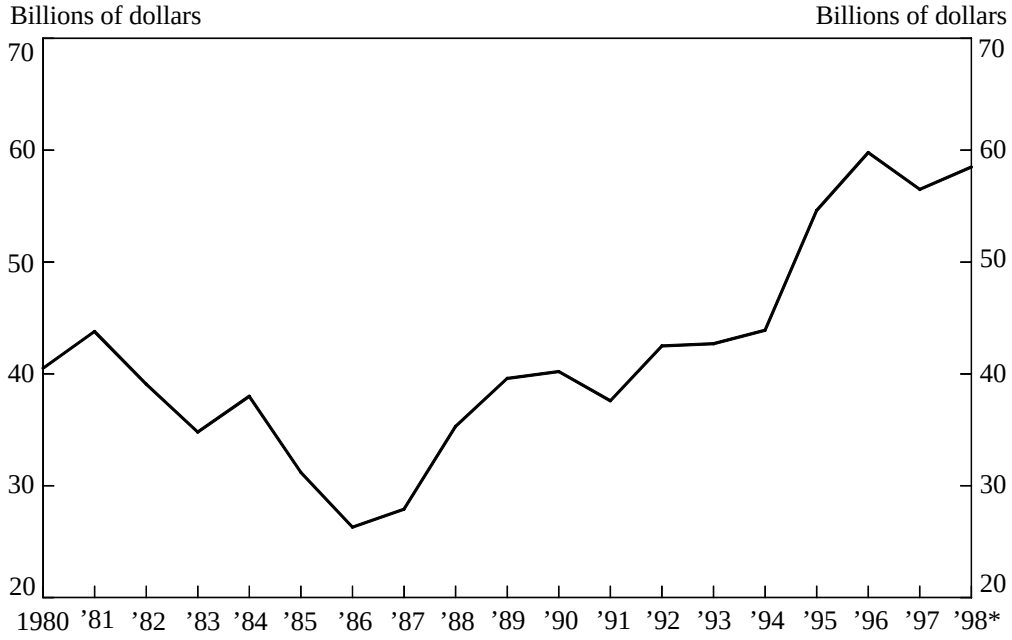
Weaker farm income in 1998

U.S. agriculture will probably record a modest drop in farm income in 1998. Crop prices will likely be lower, on average, than in 1997 due to more generous stockpiles. Asian financial and economic troubles will also put a damper on crop prices, since the region is such an important buyer of both bulk commodities and high-value products. Still, with world grain stocks relatively lean and the aftereffects of El Niño still unknown, crop producers may encounter periods of higher prices. Livestock producers will be mostly in the black, but profit margins will be thinner than a year ago. Profits in the cattle industry may be more evenly shared as feeder cattle prices fall relative to finished cattle prices. Overall, U.S. net cash farm income may slide about 5 percent.

The drop for agricultural producers in the district likely will be similar. Farm income in the district has marched to its own drummer the past three years due to unusual weather and cattle cycle factors. But with those effects now past, producers in the district states are likely to track fairly closely with national farm income trends. As in 1997, farm profits in the upcoming year appear likely to be widely shared in the district. The one exception may be pork producers, who could see much smaller profit margins in 1998. The pork industry has expanded substantially in district states in recent years, and any falloff in pork profits will thus be felt more than in the past.

Notwithstanding a dip in farm income in 1998, agriculture's balance sheet should stay strong in

Chart 4
U.S. AGRICULTURAL EXPORTS



* Forecast.
Source: U.S. Department of Agriculture, Economic Research Service, Outlook for U.S. Agricultural Exports.

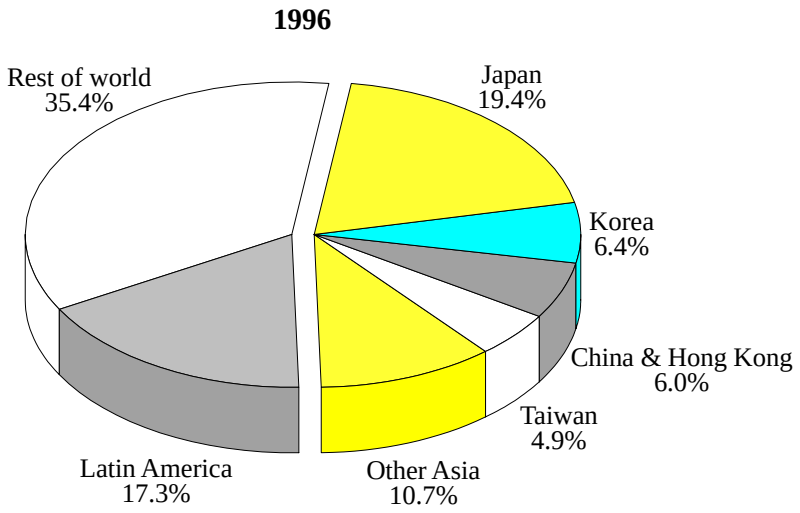
1998. Most farmers have built up strong cash balances in recent years, and most have used some of that cash to buy more land—a major factor behind the gains in farmland values in recent years. With crop prices at lower levels in 1998, farmers may be less aggressive in buying land, but values are still likely to trend higher, boosting farm assets overall. As incomes slide, farmers may be tempted to expand debt levels somewhat. Still, they have kept a tight grip on borrowings in recent years, and debt levels are low enough that most producers could add loans and keep financial ratios in comfortable ranges. Overall, both farm assets and farm debt may rise moderately in the year ahead, keeping agriculture on solid financial footing.

The outlook for exports remains bright

U.S. agricultural exports stayed strong in 1997 but edged back a bit in value terms from the record-setting 1996 levels (Chart 4). The healthy export picture last year provided a good base, and U.S. agricultural exports are likely to remain strong overall in 1998. Currency problems in the Pacific Rim countries are worrisome for U.S. producers, since Asia is an important export market. Moreover, a big U.S. crop harvest in 1997 and expanding meat production in 1998 will heighten the importance of exports in supporting prices for U.S. crops and livestock products.

A key factor affecting U.S. agricultural exports

Chart 5
SHARE OF U.S. AGRICULTURAL EXPORTS



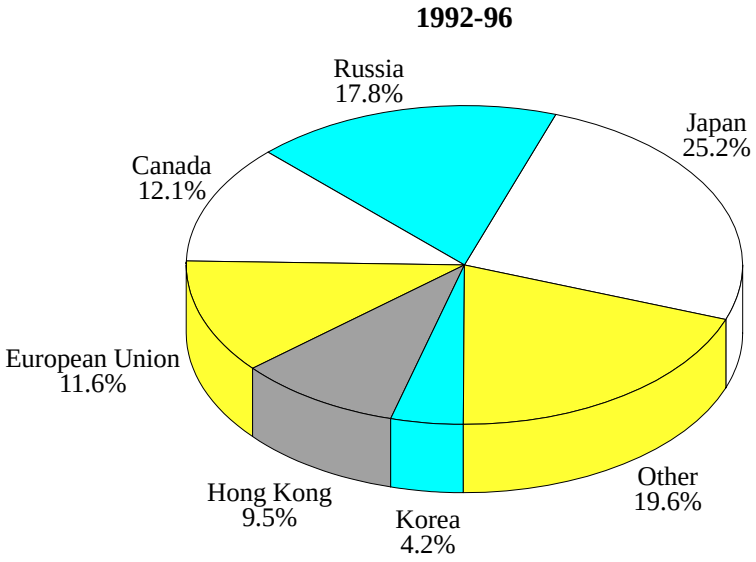
Source: U.S. Department of Agriculture.

in 1998 will be Asian economic developments. South Korea's financial problems could have an impact on U.S. food sales, since it is an important market for U.S. farmers. But the impact of currency crises in Thailand, Malaysia, and Indonesia on U.S. agricultural exports is likely to be limited, since these countries are not major importers of our agricultural products.[2] Most of U.S. agricultural exports to Asia go to Japan, which has not been impacted severely by the crisis to date (Chart 5). Moreover, U.S. food exports have grown rapidly in recent years despite a weak Japanese economy. The growth has been driven by an opening of the Japanese market to U.S. products, coupled with reductions in domestic farm subsidies in Japan. Overall, Asian financial problems will lead to a modest decline in U.S. agricultural exports to Asia in 1998.

The financial retrenchment underway in countries throughout the region will slow growth in food imports from the United States and other countries. Countries like South Korea and Indonesia, which previously offered substantial growth in food consumption and food imports, will likely experience slower economic growth than previously thought. How long this period of slow growth persists is unknown. Much will depend on how policymakers in the region respond to current difficulties. Overall, U.S. exports will grow more slowly than the industry had expected over the next two to four years. Once this period is past, however, the long-term fundamentals still point to vast potential for the United States to sell substantially more food and agricultural products in Asia.

The outlook for 1998 exports of bulk commodities, which include grains and oilseeds, is promising, although exports are likely to remain

Chart 6
SOURCE OF VALUE-ADDED EXPORT GROWTH



below the record levels (in value terms) set in 1996. Bulk exports dropped back about 12 percent in 1997, largely reflecting the decline in prices for grains at home and the improved harvests in other parts of the world. However, exports of bulk commodities could recover some of that ground in 1998. Bulk exports are expected to rise 2 percent to about $23.5 billion in 1998. A large U.S. wheat crop, coupled with smaller exportable supplies from Canada, Australia, and Argentina, should account for a sharp rise in U.S. exports of wheat and flour. Total exports of wheat and flour are expected to gain 8 percent, held back a bit by a decline in prices. The surge in U.S. soybean production last year will help boost exports of oilseeds and their products in 1998 as well, although lower world prices arising from greater international production will likely dampen the impact in value terms. Lower exports from China to other Asian countries and strong growth in global feed demand will boost coarse grain exports. Exports of coarse grain are expected to rise to $7.5 billion, an increase of almost 10 percent, but still below 1996 levels.

Value-added exports, such as meat products and further-processed food items, have been a source of steady growth over the past decade, reflecting both the competitiveness of the U.S. food industry and economic growth abroad. In 1997, value-added exports gained 3 percent, and much of the growth occurred in exports of value-added products to developed countries, including Japan and Russia. From 1992 and 1996, for example, Japan accounted for one-quarter of the growth in value-added exports, the Russian Federation accounted for about one-sixth, and the European Union accounted for over one-tenth (Chart 6). Many of these economies are quite stable and have not been affected by the turmoil

in currency markets nearly as much as the Asian tiger countries. Consequently, the impact of the recent currency problems on value-added agricultural exports should be moderate.

The outlook for exports of value-added agricultural products in 1998 is bright. Value-added exports are expected to rise another 4 percent in 1998, to roughly $35 billion. U.S. meat exports are projected to rise substantially in 1998, with exports of red meat products rising 14 percent to $4.8 billion. Exports of meat products to Mexico are expected to jump by roughly 40 percent, while exports to Japan are expected to decline 10 to 15 percent. In addition, exports of horticultural products are expected to set another record in 1998, reaching $11 billion next year. One segment of the industry not expected to post further export gains is poultry, which is expected to remain stable at $3 billion. Russia is expected to continue to impose tariffs on U.S. poultry exports. The stagnation in poultry exports could be troublesome since supplies are expected to rise next year.

Lower prices for crop producers

Crop producers look forward to a reasonably good year in 1998, although not as bountiful as the past two years. After large harvests in 1997, U.S. grain bins are fuller than they have been for three years. All else equal, that should keep a lid on prices. However, two things may not be equal in 1998. First, the current El Niño weather phenomenon increases the uncertainty surrounding 1998 crops, and in particular raises the odds of a small crop. And second, while U.S. grain stocks have risen, stocks remain lean throughout the world, which will provide some support for U.S. prices. Overall, crop producers will probably earn solid profits, and if weather events prove abnormal, markets could rise substantially, providing farmers with good opportunities for selling crops at favorable prices.

Crop markets will play close attention to El Niño in coming months (see box). Most analysts believe the current El Niño event will likely continue through the summer of 1998. If so, it will be the second largest El Niño this century after the 1982-83 event. Forecasters, however, expect the current El Niño to wane more slowly than the 1982-83 event. If that forecast holds true, growing conditions in 1998 may be normal, with any negative impacts from the waning El Niño forestalled until 1999.

Weather is always important to the crop outlook, but it will be especially important in 1998 due to low grain stocks worldwide. Notwithstanding good crops in the United States last year, grain stocks around the world are extremely low due to strong demand and poor crops in some other growing regions of the world. As shown in Chart 7, world grain stocks are near 30-year lows. Since 1970, only in 1996 were stocks lower than current levels. Weather scares in 1996 resulted in sharp advances in grain prices. Similarly, stocks were also quite low in the early 1970s. That period also witnessed sharp price run-ups when adverse weather hit. In short, the stage is set for volatile grain prices next year if adverse weather results in smaller than expected crops in the United States or other major growing regions of the world.

Wheat producers will probably earn smaller profits in 1998 than a year ago. Prices have fallen in the wake of the big 1997 crop and, if weather is normal for the 1998 crop, prices will probably not return to 1997 levels. However, prices could move higher if El Niño ends early or if export demand proves more robust than expected.

U.S. wheat exports should rise modestly in the coming year. U.S. wheat competes mainly with production from Argentina, Australia, Canada, and the European Union. Wheat production in 1997 fell in each of these areas but Canada,

EL NIÑO AND U.S. CROP PRODUCTION

El Niño describes an anomaly in weather across the equatorial Pacific Ocean. This weather event is named for a warming of Pacific surface temperatures off the coast of Peru that often develops in late December near Christmas. In most years, the prevailing westerly winds from the Atlantic blow the warm water back out into the central Pacific. But every two to seven years, the winds weaken and are replaced by high pressure systems which move eastward across the Pacific. The net effect of these weather changes is that the moisture which normally stays in the western Pacific (bringing beneficial monsoon rains to Southeast Asia) instead brings rains and stormy weather to western Latin America and the southwestern and southern parts of the United States.

El Niño has an important bearing on U.S. crop markets because Midwest crop yields often fall as El Niño conditions wane. Climatologists are uncertain what atmospheric relationships are responsible for the linkage. However, research does show that in years when El Niño is in decline, the odds of drought across the Corn Belt increase substantially. An examination of corn yields shows that yields have fallen in years following an El Niño weather event. As shown in the accompanying table, there have now been five El Niños since 1970, including the current one. A bad corn crop has followed in every case, either in the year in which the El Niño ends or the following year. The timing of this connection seems to depend on the time of year when the El Niño conditions begin to wane, and how fast they wane. In the case of 1982-83, the El Niño event that seems most like the current one, sea surface temperatures dropped rapidly beginning in July 1983, and drought in the Midwest followed quickly, cutting corn yields substantially. On the other hand, sea surface temperatures faded more slowly in the 1972-73 episode. Corn yields were good in 1973 but fell sharply in 1974.

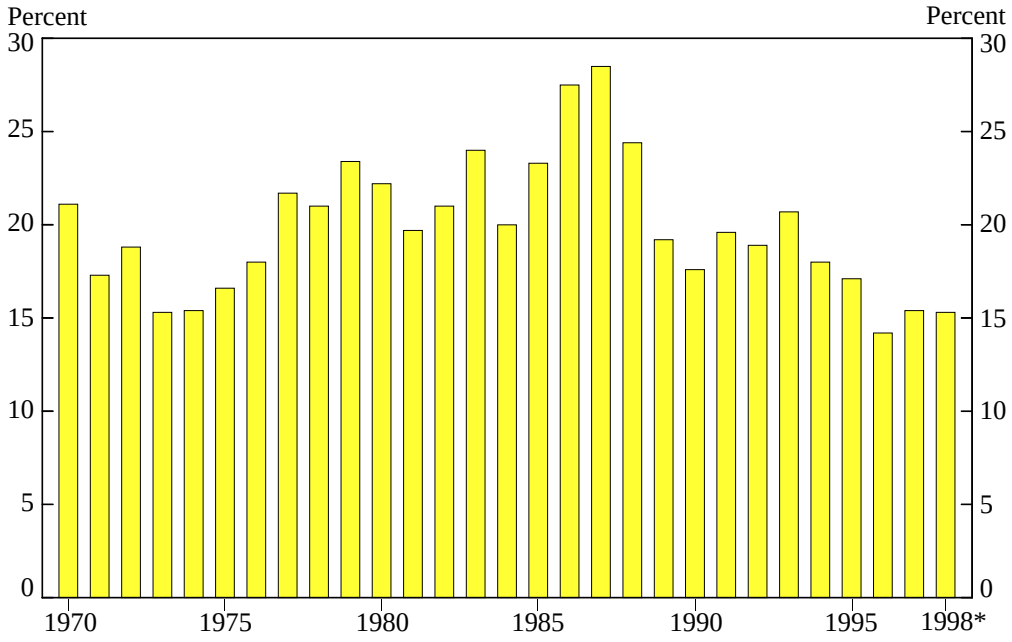
Table A-1

EL NIÑO AND U.S. CORN YIELDS

Year	% Deviation of yield from trend
1970	-11.37
1971	6.59
1972*	13.38
1973	6.03
1974	-21.82
1975	-3.39
1976	-3.50
1977	-2.15
1978	6.43
1979	12.06
1980	-7.73
1981	8.47
1982	10.41
1983*	-27.30
1984	1.65
1985	9.60
1986	9.10
1987*	8.01
1988	-32.34
1989	2.24
1990	2.60
1991	-7.85
1992*	9.51
1993	-19.85
1994	11.68
1995	-9.46
1996	.84
1997	-1.94

Shaded areas indicate El Niño events.
Peak years are noted by *.

Chart 7
WORLD ENDING STOCKS-TO-USE RATIOS FOR GRAINS



*Forecast.
Source: U.S. Department of Agriculture.

falling a total of 11 percent. Partially offsetting this drop in exportable supplies was a production gain by the biggest importer, China. Overall, however, steady gains in foreign demand are expected to boost U.S. wheat exports to just under 1.1 billion bushels in 1998. Though well under the record level set five years ago, the current export pace compares favorably with the average for the 1990s.

Domestic demand should continue its steady growth in 1998. Feed use is projected to remain strong due to relatively firm corn prices. With U.S. consumers continuing to expand the consumption of cereal grains in their diet, food use is projected to post another gain, aided by somewhat lower wheat prices than in the past two years.

Taken together, total demand for wheat may rise to about 2.41 billion bushels in 1998, roughly 90 million bushels higher than the year before. The increase in demand, however, will not use up the additional supplies from the bumper crop in 1997. Carryover supplies are projected to climb to 655 million bushels, a 50 percent jump from a year ago and the biggest in seven years. The swollen stocks should weigh down prices. Barring a weather shock, farm-level wheat prices are forecast to average $3.40 to $3.70 a bushel in the 1997-98 marketing year, nearly a fifth lower than the previous year.

The corn market may be somewhat stronger in 1998 due to tighter supplies. Global corn production fell in 1997, despite a big crop in the United States. As a result, world stocks of corn are still very tight. The large U.S. crop lifted stock levels above the dangerously low levels of 1996, but stocks are still near their low point for the past 30 years.

Due to production shortfalls in other parts of the world, U.S. corn exports are expected to increase significantly in the year ahead. China suffered a sharp drop in its corn crop last year, and while financial turmoil in Asia may curb demand somewhat, most analysts expect China to be a net importer of corn in 1998. Argentina also had a poor crop in 1997, providing less competition for U.S. exports. Overall, U.S. corn exports could run 1.925 billion bushels in the 1997-98 marketing year, a 7 percent gain.

Domestic corn consumption, meanwhile, could set a new record in 1998 at 7.4 billion bushels. Corn use was curtailed the past two years as livestock producers sought substitutes for corn in their feed rations due to exceptionally strong corn prices. With prices returning to more normal levels, feed use of corn is expected to jump 5 percent. Animal feed remains the primary use of corn in the United States, but industrial uses for corn, such as ethanol, are also expected to rise in the coming year. Given relatively tight stocks and growing demand, corn prices should remain near 1997 levels. For the 1997-98 marketing year, farm-level corn prices are expected to average $2.45 to $2.85 a bushel, unchanged from the previous year.

After a stellar year in 1997, soybean producers may revert to more normal profits in 1998. Export demand is expected to be brisk, especially in China and the European Union. Offsetting the strong demand, however, are abundant foreign supplies. Foreign soybean production hit a record high in 1997, with Argentina posting especially strong production. On balance, U.S. soybean exports are expected to rise to a new record of just under 1 billion bushels. Domestic demand for soybeans will also be strong in 1998. Soymeal is a key feed ingredient in livestock production, which continues to grow to new record levels. Food and industrial use of soy products and soy oils also continue to grow. Overall, domestic use is pegged at 1.5 billion bushels in 1998.

Overall, total demand for soybeans will be a near-record 2.6 billion bushels. Notwithstanding that strength, demand will still not be strong enough to use up the big 1997 crop. Carryover stocks of soybeans are projected to jump to 255 million bushels, nearly double the stocks held in the previous year. With bigger stocks weighing on the market, prices are expected to drop. For the 1997-98 marketing year, prices are forecast to average $5.90 to $6.90 a bushel, about a fifth lower than the year before.

A mixed outlook for livestock producers

Livestock producers face a mixed outlook for 1998. Prospects for cattle ranchers and feeders are generally bright, while hog and poultry producers could face lower profit margins. Feed costs should generally hold steady in 1998, which will help livestock producers across the board. Cattle prices are likely to rise, reflecting leaner supplies, pushing up profits for both ranchers and feeders alike. The expansion in hog production will result in lower prices for pork and tighter profit margins. Poultry producers could see growth in their exports slow and supplies expand, pushing prices down further.

The sell-off in the cattle herd that began in 1996 will lead to tighter supplies and higher prices for cattle in 1998. The January 1 cattle inventory, perhaps the most-followed piece of data in the cattle sector, is likely to show a further

decline in the breeding herd of up to 3 percent. After suffering some rough years, ranchers are likely to be reluctant to expand herds in response to just one year of profits. The decline in cattle numbers will show up in smaller beef supplies in 1998. Beef production is expected to decline an estimated 2.2 percent next year.

Demand for beef is likely to be remain strong next year, although consumption could pull back a bit. Higher retail prices for beef relative to pork and poultry may dampen domestic demand, although the steady rise in population may offset some of the loss. Overseas demand will also be hurt by the higher prices for U.S. beef. Moreover, a strong U.S. dollar will boost the price of U.S. beef to foreign buyers. However, the dollar has not appreciated dramatically against the Japanese yen, and Japan is a very important export market for beef. Moreover, exports to Mexico—another important market for U.S. beef—could rise in response to strong growth. Overall, exports of U.S. beef are expected to rise roughly 6 percent in 1998.

Tighter supplies and steady demand for U.S. beef will lead to higher prices for cattle next year, boosting prices of both feeder cattle and slaughter cattle. Prices for fat cattle should rise steadily throughout the year. Prices for finished steers in Nebraska are expected to average about $73.50 a hundredweight in 1998, an increase of about $7, or roughly 10 percent, from 1997. Feeder cattle prices are also expected to rise steadily next year, boosted by high prices for fat cattle, smaller quantities of calves in 1997, and stable corn prices. Of course, prices for feeder cattle are hostage to corn prices, which play a large role in determining profitability for feeders. If corn prices jump in 1998 as much as they did in 1996, feeder cattle prices would suffer. Nonetheless, ranchers are expected to enjoy another year of profitability in 1998.

Pork producers may earn weaker profits in 1998, reflecting larger supplies of pork on the market. Pork producers expanded the breeding herd in the last half of 1997. Moreover, producers reported in the fall of 1997 that they intend to boost farrowings further in 1998, raising hog numbers. Combined, these factors are expected to boost pork supplies by roughly 8 percent in 1998.

Demand for pork products should be quite strong in 1998. Domestic demand for pork will benefit from the decline in prices relative to beef next year. In addition, advances in developing more consumer-friendly pork products for the grocery, combined with further marketing advances in fast food restaurants, will help boost demand. Pork exports are expected to expand in 1998 by roughly 8 percent. Although U.S. producers have not boosted exports to Japan as much as they had hoped, that market could be a source of additional demand in 1998. Moreover, exports to Russia and other parts of Eastern Europe could expand further as well.

Increased demand for pork will probably not be enough to offset the increase in production in 1998 however, and hog prices are expected to decline further in 1998. For the year as a whole, prices are expected to average $49 a hundredweight, a decline from 1997's average of $52. Nonetheless, lower corn prices will help producers remain profitable in 1998, although at lower levels than in 1997.

Poultry producers could also see profits decline in 1998. In 1998, total poultry production is projected to rise 6.5 percent, a much slower rate of increase than the 10 or 12 percent expansions seen in the late 1980s and early 1990s. Most of the expansion is likely to be in broilers. Broiler production is expected to rise about 7 percent in 1998. Turkey production is expected to edge up next year as well, but increases will be limited.

Turkey producers recorded further losses in 1997 and are not eager to expand output further.

Demand for poultry products will continue to expand in 1998, albeit more slowly than in the past. Domestic demand is likely to continue its upward march, but at a slower pace. The slower growth in part reflects the substantial market penetration of poultry in the meat counter. Export demand for poultry products—an important factor in boosting demand in the past—will likely slow this year as well. Total exports are expected to rise only 2 percent this year. Exports to Russia declined in 1997 and are likely to recover only modestly in 1998.

Expanding supplies and moderating growth in demand will probably lead to a stable price outlook for poultry products in 1998. Broiler prices are expected to average about 60 cents per pound, roughly the same as in 1997. Turkey prices, on the other hand, could decline by as much as 3 percent, to 64.5 cents per pound. With feed costs stable and product prices stable or declining, poultry producers will face limited growth prospects for profits in 1998.

Consumer food prices calm in 1998

The good fall harvest in 1997 and healthy supplies of livestock products will contribute to a calm outlook for consumer food prices in 1998. After rising 2.2 percent over the 12 months of 1997, consumer food prices should increase 2 to 3 percent in 1998. Prices for several components of the Consumer Price Index for food will likely rise in the coming year. Beef may be a substantial contributor to price increases, although declines in the price of other meats will offset much of this increase. Moreover, the relatively stable inflationary environment in the general economy will help moderate inflationary pressures in the food sector.

The CPI for food largely reflects costs of further processing rather than prices of farm commodities. Thus, food costs benefit from a period of generally subdued overall inflation, which many analysts expect in 1998. That said, labor markets remain tight in many parts of the nation, and wage pressures may become more widespread in the coming year. Such factors would provide some upward pressure on food prices since labor accounts for close to three-fourths of total costs for food retailers.

Agricultural commodities are likely to have mixed effects on food prices in 1998. A decline in beef production in 1998 could lead to substantially higher prices for beef this year. On the other hand, production of both pork and poultry is expected to rise in 1998, likely pushing those prices down substantially. Similarly, declines are expected in the price of nonalcoholic beverages, as supplies increase markedly in 1998. Overall, consumer food prices are likely to rise between 2 and 3 percent, near their trend rate of increase for the 1990s.

III. SUMMARY

U.S. agriculture had another good year in 1997, with earnings more widely spread across crop and livestock producers. Grain prices moderated, while soybean producers saw prices soar early in the year in the face of tight world supplies. Most crop producers harvested large crops, owing to increased plantings, higher yields, or in some cases both. Livestock producers had a much better year, with cattle ranchers earning their first profits in three years. Pork and poultry producers remained highly profitable. The moderation in feed costs arising from the slide in grain prices helped livestock producers' bottom line. While farm income in the U.S. slipped somewhat in 1997, Tenth District farm income rose substantially.

Agriculture can look forward to another good year in 1998, although overall performance is likely to slacken somewhat, and there are more than the usual risks to the outlook. Nonetheless, most producers have reason for optimism. While crop producers will probably see prices pull back a bit in 1998, most producers will still earn solid profits. The outlook is more mixed in the livestock sector, with cattle ranchers likely to earn good profits, while hog producers could see profits disappear by year's end. Overall, farm income will likely slide a bit. Two risks to the outlook for U.S. farm exports are worth remembering. Developments in Asian financial markets make the outlook for agricultural exports more uncertain than usual. Moreover, El Niño is a wild card for U.S. and world producers, although current forecasts suggest little impact on 1998 U.S. crops. Notwithstanding these risks, the outlook for U.S. agriculture remains positive.

ENDNOTES

[1] Forecasts of prices and quantities in this article are drawn from various published USDA sources.

[2] Thailand, Malaysia, and Indonesia account for 0.9 percent, 1.0 percent, and 0.5 percent of total U.S. agricultural exports, respectively.