A Turning Point in the Farm Recovery?

By Mark Drabenstott and Alan D. Barkema

U.S. agriculture began the 1990s with a bang. Net cash income hit a record high in 1990—the third record in four years—as crops were big and livestock profits high. The strong earnings extended the farm recovery through its fourth year. Throughout the recovery, farm incomes adjusted for inflation have been the best since the mid-1970s and have erased many of the financial problems that plagued the industry in the mid-1980s.

Although farm income was high, concerns for the 1991 outlook began to accumulate in the last half of 1990. The jump in oil prices boosted farm costs and made many farmers cautious about making capital investments. Crop prices fell sharply in the second half of the year as the harvest of large crops weighed heavily on crop markets. The breakdown of talks in the Uruguay Round of GATT (General Agreement on Tariffs and Trade) negotiations raised concerns about weaker world farm trade in coming years. And as 1990 ended, fears of recession in the United States increased, posing unknown consequences for agricultural markets.

Can U.S. agriculture keep its lengthy recovery going in 1991? The answer appears to be, yes. Strong livestock prices and resilient demand will keep livestock profits high. Crop producers probably will not do as well in 1991 as in 1990, but prices may not drop much below current levels. Farm exports, which rose markedly the past three years, will moderate somewhat in the coming year, but will still be high compared with the slump of the mid-1980s. Overall, the farm recovery will slow in 1991 but will still continue.

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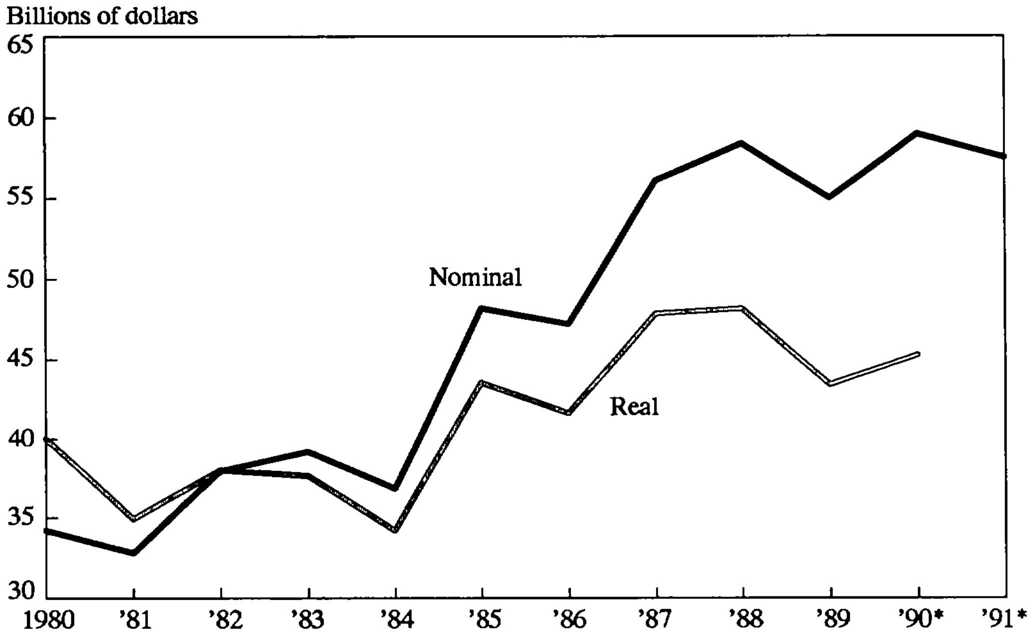
1990–A Good Year for Agriculture

The year 1990 was strong in nearly every respect for U.S. agriculture. Income reached a new record high, crops rebounded from two years of at least partial drought, and livestock

Chart 1
Net Cash Farm Income



* Forecast.
Source: U.S. Department of Agriculture, *Agricultural Outlook.*

producers enjoyed continued high prices despite record meat production. The year's financial success, in turn, bolstered the industry's overall balance sheet.

Farm financial conditions

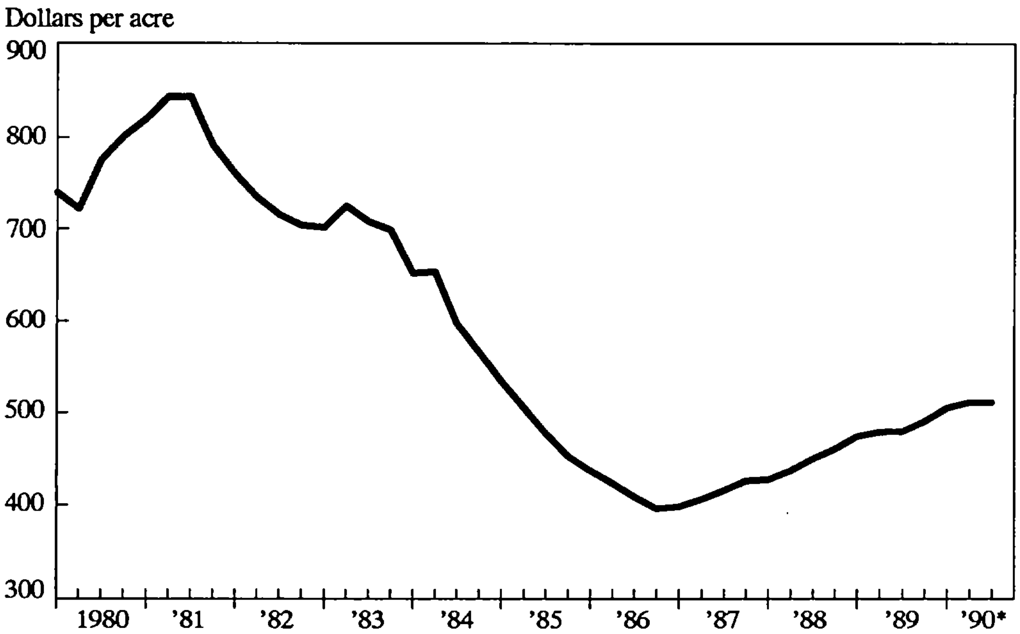
The leading farm story in 1990 was another record high for farm income. With record highs in 1987, 1988, and 1990, the farm recovery is proving to be one of the sharpest financial turnarounds in U.S. agriculture's history. Net cash income—gross receipts for the sector less gross cash expenses—hit a forecast $59 billion (Chart 1). Net farm income, which includes changes in farm inventories and capital depreciation, also set a new record at a forecast $49 billion.

In a pattern that now characterizes this farm recovery, livestock profits led the way to record farm incomes. Cattle prices reached new record highs in 1990, and hog and poultry prices were strong.

Crop producers enjoyed big crops, a welcome switch from the previous two years when drought held down output. Crop prices generally fell throughout 1990, so crop profits hinged importantly on when farmers marketed their crops.

Farm asset values moved higher in 1990, but at a slower pace than the year before (Chart 2). Farmland values in the Tenth District increased 5 percent from the start of the year through the third quarter (the last quarter for which data are available). Gains in value slowed

Chart 2
Tenth District Farmland Values



Sources: U.S. Department of Agriculture, *Agricultural Resources: Agricultural Land Values and Markets, Situation and Outlook Report;* Federal Reserve Bank of Kansas City, Agricultural Credit Survey.

throughout the year, however, and land values edged up only 0.6 percent in the third quarter. Nevertheless, at the end of the third quarter, values were 31 percent higher than when they bottomed out in the fourth quarter of 1986.

Despite the slowdown in asset value gains, the farm balance sheet remains strong. Nationwide, farm assets rose 3 percent, and farm debt declined slightly as farmers again avoided debt-financed expansion (Table 1). The industry's debt-asset ratio now stands at 15.7 percent, the lowest since the mid-1970s. Farm equity increased slightly, but fell slightly after adjusting for inflation. Notwithstanding the slight erosion in real farm equity, agriculture remains in better financial condition than in the past decade.

Crops

U.S. farmers harvested big crops in 1990 due to favorable weather in most parts of the country. The large U.S. production met with big output from other major producing countries, resulting in record world grain production. Even though U.S. grain stocks were low when the year began, crop prices sank throughout the year as a big crop became more and more likely.

Wheat prices fell throughout 1990, as production rebounded sharply from the drought-reduced crop of 1989. With favorable weather, U.S. wheat production jumped more than a third to 2.7 billion bushels, the largest one-year boost in output in U.S. history (Table 2). The world's other main wheat producers

Table 1
Farm Balance Sheet Excluding Operator Households and CCC Loans
(Billions of dollars)

	1988	1989	1990	1991*
Assets	764	794	818	825-835
Liabilities	138	136	134	133-137
Proprietor's equity	626	658	684	695-705

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

(Canada, the European Community, Argentina, and Australia) also had big crops. Wheat prices began to fall in the spring, in anticipation of larger supplies, and continued to fall through the remainder of the year. Average farm prices for the 1989-90 marketing year, which ended June 30, held up well at $3.72 a bushel, equal to the previous year (Table 3). Prices in the 1990-91 marketing year, however, will be much lower due to the abundant 1990 crop.

Feedgrain production also was large in 1990 under almost ideal growing conditions. U.S. producers harvested nearly 8 billion bushels of corn, the first time in four years output approached that level. Foreign feedgrain production was record large in 1990. Export demand remained relatively strong, however, providing some support to prices. As with wheat, corn prices generally fell from late spring through the rest of the year. For the 1989-90 marketing year, ended August 31, farm-level corn prices averaged $2.36 a bushel, down slightly from the year before.

Soybean production declined slightly in 1990, holding production below levels reached in the mid-1980s. High yields more than offset a slight drop in planted acres to bring production to 1.9 billion bushels, down 1 percent from the year before. Export demand remained fairly weak, and competing supplies were large. Apart from some seasonal strength in the spring, soybean prices were much lower than the previous year. For the 1989-90 marketing year, ended August 31, farm prices averaged $5.70 a bushel, down nearly a quarter from the year before.

Livestock

Livestock was again the star performer in agriculture's lineup in 1990. Despite record meat supplies, livestock prices remained at high levels throughout the year. Cattle prices set record highs in 1990 and hog prices stayed near the record high, as producers kept a brake on expansion. Tight supplies of calves and yearlings kept feeder cattle prices exceptionally strong all year long. Robust meat demand in 1990 pushed per capita meat consumption to a new record of 220 pounds. Falling feedgrain prices in the second half widened profit margins for all livestock feeders.

Beef production fell 1 percent as cattle numbers stayed at a 30-year low. Despite the wide profit margins of recent years, cattle producers again resisted expansion. With more favorable weather and forage conditions in 1990 than in the year before, cattle producers shipped fewer cows to slaughter, resulting in a decline in nonfed beef production. But strong prices for finished cattle led to bigger fed-beef supplies.

Cattle prices were very strong in 1990.

Table 2

U. S. Agricultural Supply and Demand Estimates on December 11, 1990

(Millions of bushels, bales, or metric tons)

	Corn (bu.) (Sept. 1 - Aug. 31)			Feedgrains (mt.) (June 1 - May 31)		
	1988-89	1989-90	1990-91	1988-89	1989-90	1990-91
Supply						
Beginning stocks	4,259	1,930	1,344	133.6	65.9	45.5
Production and imports	4,932	7,529	7,937	150.5	222.5	231.3
Total supply	9,191	9,460	9,281	284.2	288.4	276.9
Demand						
Domestic	5,232	5,748	6,020	157.1	173.0	178.8
Exports	2,028	2,367	2,025	61.1	69.9	59.0
Total demand	7,260	8,115	8,045	218.3	242.9	237.9
Ending stocks	1,930	1,344	1,236	65.9	45.5	39.0
Stocks-to-use ratio	26.58	16.56	15.36	30.19	18.73	16.39

	Soybeans (bu.) (Sept. 1 - Aug. 31)			Wheat (bu.) (June 1 - May 31)		
	1988-89	1989-90	1990-91	1988-89	1989-90	1990-91
Supply						
Beginning stocks	302	182	239	1,261	702	536
Production and imports	1,553	1,927	1,906	1,812	2,037	2,744
Total supply	1,855	2,109	2,145	3,096	2,762	3,305
Demand						
Domestic	1,146	1,247	1,290	975	992	1,293
Exports	527	623	590	1,419	1,233	1,075
Total demand	1,673	1,870	1,880	2,394	2,225	2,368
Ending stocks	182	239	265	702	536	937
Stocks-to-use ratio	10.88	12.78	14.10	29.32	24.09	39.57

Source: U. S. Department of Agriculture, Foreign Agricultural Service, World Agricultural Supply and Demand Estimates.

Table 3
U. S. Farm Product Price Projections

	Marketing Years		
Crops	1989-90*	1990-91†	Percent change
Wheat	$3.72/bu.	$2.50-2.70/bu.	-30.11
Corn	$2.36/bu.	$2.20-2.50/bu.	-.42
Soybeans	$5.70/bu.	$5.25-6.25/bu.	.88
	Calendar Years		
Livestock	1990*	1991†	Percent change
Choice Steers	$77-78/cwt.	$75-81/cwt.	.65
Barrows & Gilts	$54-55/cwt.	$50-56/cwt.	-2.75
Broilers	$.54-.55/lb.	$.51-.57/lb.	-.92
Turkeys	$.63-.64/lb.	$.61/.67/lb.	.79

* Estimated.
† Projected.

Prices for choice steers at Omaha averaged $77 a hundredweight, up more than $4 from the year before. Despite the high prices for finished cattle, cattle feeding profits were held down by record prices for feeder cattle. Cattle ranchers, meanwhile, had one of their best years ever in 1990. The low cattle inventory kept feeder cattle prices at record levels for most of the year. Prices for feeder steers at Kansas City averaged $90 a hundredweight, up $4 from 1989.

Pork production fell 3 percent in 1990 as producers retained some hogs for breeding stock rather than slaughtering them, a sign of cautious expansion in the pork industry. Producers began to retain breeding stock only in the past six months. Many analysts expected producers to increase output much earlier because pork profits have been wide for the past couple of years. Pork producers again enjoyed healthy profits in 1990, with prices for barrows and gilts at the seven major markets averaging $55 in 1990 compared with $44 the year before.

Poultry production and consumption hit record highs in 1990, as U.S. consumers continued to show strong demand for the expanding array of poultry products. Total poultry production increased 7 percent, with broilers up 7 percent and turkeys up 9 percent. Despite the big increase in supplies, prices remained favorable due to the strong demand. Broiler prices averaged 54.5 cents a pound at the 12 city markets in 1990, down from 59.0 cents the year before. Even though prices fell, most producers still earned profits of about 8 cents a pound. Turkey prices averaged 64.0 cents in 1990, down modestly from the year before. Most turkey producers broke even for the year as a whole.

Overall, agriculture closed out another excellent year in 1990. Livestock producers did somewhat better than crop producers, but crop income was high for those producers that marketed early in the year. Additional gains in agriculture's financial health underscored that the current farm recovery has been a dramatic reversal of the deep recession of the mid-1980s.

Another Good Year Ahead

Agriculture stands at a turning point as 1991 begins. Grain stocks are headed higher after three years of drawdown. Following three years of exceptional strength, livestock prices could edge down under the pressure of larger supplies and weaker consumer demand. The new farm bill cuts farm payments from the generous levels of the previous legislation. And world grain exporters appear headed toward greater confrontation following unsuccessful efforts to sign a new accord to reduce trade-distorting agricultural subsidies. Despite the adverse effects these factors could have on the industry, U.S. agriculture appears likely to have another good year in 1991. But concerns for the longer run outlook will remain.

Farm income and financial conditions

Farm income will probably decline in 1991, but will remain high by recent standards. Higher prices for oil-derived inputs could increase farm expenses as much as $2 billion next year. Total expenses may increase 3 to 6 percent due to higher input costs generally. Farm receipts may increase slightly next year, with increased crop marketings and steady livestock sales. Implementation of the new farm bill will mean a cut of 10 to 15 percent in direct government payments to farmers. Altogether, higher expenses, only slightly higher farm receipts, and reduced government payments will lead to a drop in net cash income of at least 5 percent.

Farm asset values may increase only modestly in the coming year. As 1990 ended, asset values were increasing at a very slow pace. Farmers appeared more cautious due to higher oil prices, smaller government payments, and a weakening economy generally. With farm incomes likely to fall in 1991, farmers will not be aggressive buyers of farmland. As a result, land values will trend higher, but may not keep pace with inflation.

Agricultural lenders appear to be in good shape, heading into 1991 with strong portfolios. Loanable funds will be readily available to creditworthy farm borrowers, as loan-deposit ratios remain low at agricultural banks. And farm loan interest rates may decline into the heavy spring borrowing season. Declining interest rates in national money markets in the fourth quarter suggest some parallel declines in farm loan rates in coming months.

In short, the farm recovery may slow down in financial terms in 1991. But with considerable financial strength amassed over the past four years of recovery, farmers will remain in strong condition.

Food prices outlook

A combination of weaker consumer demand and larger food supplies will push down food price inflation in 1991. Consumer food demand could be dampened by slower growth in consumer incomes in a sluggish national economy. At the same time, supplies of the foods most responsible for faster food inflation in recent years will be larger. Fruit and vegetable production has recovered from the December 1989 freeze that drove fruit and vegetable prices skyward. The recent harvest of large grain crops will ease pressure on cereal and bakery product prices. And larger supplies of red meat, poultry, and dairy products will limit price increases at the meat and dairy counters. In sum, food price inflation could ease to a range of 2 to 5 percent in 1991, down from about 6 percent per year the past two years.

Farm policy outlook

Two extraordinary farm policy events in late 1990 could set the stage for farm policy debate in the coming decade. In a White House ceremony on November 28, President Bush signed into law the Food, Agriculture, Conservation, and Trade Act of 1990—the nation's farm policy for the next five years. And in Brussels on December 6, the Uruguay Round of the GATT collapsed, leaving only a glimmer of hope that an agreement can be salvaged after more than four years of negotiation. These two events are tightly linked, because the United States has made reducing global farm subsidies a key goal of the Uruguay Round.

The Food, Agriculture, Conservation, and Trade Act of 1990. The last farm bill, the Food Security Act of 1985, is credited with spurring a rebound in the U.S. farm economy from the depths of the mid-1980s farm recession. But that feat did not come cheap. The 1985 farm bill cost taxpayers about $80 billion during its five-year life.

The new farm bill was written in an entirely new setting. The 1985 bill was written when agriculture was near the bottom of its deep recession. The new bill was written when agriculture was back on its feet. In the new policy setting, Congress identified two primary objectives: 1) to control the costs of farm spending, consistent with efforts to reduce the federal budget deficit, and 2) to make farmers' planting decisions more responsive to market forces rather than government subsidies.

At first blush, reducing the costs of farm spending appeared to be a cinch. Due to the marked improvement in agricultural markets, simply maintaining the 1985 law would cost less than before. Accordingly, Congress's initial blueprint for the new five-year farm bill, which kept most of the provisions of the expiring law in place, was projected to cost $54 billion, one-third less than the 1985 farm law.

But the status quo was not a viable option for lawmakers. The Agricultural Reconciliation Act of 1990, part of the effort to reduce the federal budget deficit, required that farm policymakers trim $13.6 billion from the projected cost of the new farm bill. Thus, after the required cuts, the 1990 farm bill is expected to cost taxpayers $41 billion during its five-year life, about half the cost of the 1985 farm bill.

To achieve the budget cuts, lawmakers turned to a new, ingenious method of cutting spending. In many respects, the 1990 farm bill resembles the 1985 farm bill, but with an important twist. The new twist is called "triple base," a change that reduces the acreage covered by a crop price guarantee by at least 15 percent. The loss of the crop price guarantee is partially offset by allowing farmers to earn income by growing new crops on the affected acres. In short, the change met both of Congress's objectives: cut costs and allow market forces to have more effect.

Under the 1985 farm bill, farmers who chose to participate in the government's program received a minimum crop-price guarantee called the "target price." Whenever the market price fell below the target price—as was the case in much of the 1980s—the government simply made up the difference with a cash payment. In exchange for the price guarantee, farmers were required to leave a portion of their land unplanted, curtailing excess production.

Under the 1990 farm bill, the target-price program is retained and, in a move favored by both farmers and lawmakers, target prices are frozen at current levels. But the number of acres eligible for target price protection is cut 15 percent. In the technical language of the bill, that 15 percent is called the triple base. As in the

1985 bill, farmers are required to leave a portion of their land unplanted in the "Acreage Reduction Program." Removing the target-price guarantee from an extra 15 percent of each farmer's land reduces the exposure of the federal budget to farm spending.

The virtue of the triple base scheme for farmers is that they can grow other crops on the 15 percent triple base. As a result, more planting decisions will be made on the basis of market price signals rather than government subsidies. Many corn and wheat farmers may shift land previously planted to corn or wheat into soybean or sunflower production, depending on growing conditions and price relationships among the crops. Current estimates suggest soybean plantings could increase nearly 2 million acres in 1991. By allowing market forces to guide planting decisions, therefore, the new program will help restore oilseed production, which has been crowded out in recent years by heavily subsidized corn and wheat production.

In sum, the 1990 farm bill simultaneously cuts farm program spending while reducing the influence of subsidies on planting decisions. In addition, the budget-induced cuts in farm spending projected in the 1990 farm bill provide a model for the subsidy reductions the United States has asked the rest of the world to make in the Uruguay Round of negotiations on international trade issues.

The Uruguay Round. The Uruguay Round, named after the country where the current round of negotiations was launched more than four years ago, is widely regarded as the most ambitious negotiation in the 40-year history of the GATT. The Round assembled representatives from 107 nations to pry open trade in 15 key areas, including agriculture, textiles, services, and intellectual property, such as copyrights and patents.

Before the Uruguay Round, agriculture was largely excluded from the GATT negotiations. In early rounds after World War II, the United States wanted no interference with its domestic farm policy. Later, the United States winked at the development of the EC's farm subsidy scheme, choosing to subordinate free trade in agriculture to a broader geopolitical goal of promoting stability in Europe. With almost no discipline under the GATT, farm subsidies around the world proliferated and now stand at more than $200 billion per year. Huge subsidies and steady gains in farm productivity through advancing technology, in turn, encouraged waves of excess farm production.

At the opening of the Uruguay Round four years ago, the United States led the call for an end to subsidized farm surpluses. The United States initially proposed a global phase-out of all trade-distorting farm subsidies by the year 2000. Before entering the final week of negotiations in Brussels, however, the United States toned down its proposal, calling for a 90 percent reduction in export subsidies and a 75 percent reduction in domestic price supports. In response, the EC reluctantly proposed to effectively cut farm price supports by 15 percent, with no cuts in export subsidies.

The U.S. position was strongly supported by the Cairns Group of nations, a loose confederation of 13 agricultural producing nations including Canada, Australia, New Zealand, Brazil, Argentina, and several developing countries. These nations provide little or no support to their farmers, thus leaving them frequent victims in the farm trade war between the EC and the United States. The support of the Cairns nations was critical to the overall success of the Uruguay Round, because they refused to make concessions on trade in services and intellectual property unless they received relief in farm trade.

The final round of farm trade negotiations was convened on December 6 by Mats Hellstrom, the Swedish Agricultural Minister. In an attempt to strike a compromise between the United States and the EC, Hellstrom proposed a 30 percent cut in both domestic price supports and export subsidies. But the EC rejected the compromise. With progress in farm trade reform stymied by the EC's position, the Cairns Group walked out of talks in all 15 subject areas. Thus, failure in the farm arena triggered the collapse of the entire Uruguay Round.

At this writing, two outcomes appear possible. The Uruguay Round may be reconvened after a brief cooling-off period. Arthur Dunkel, Director General of the GATT, has scheduled a January 15 meeting in Geneva. Even if the Round is revived, however, time is rapidly running out. The expiration of "fast-track" authority in June 1991 may be the most serious time constraint. When the Uruguay Round began, Congress agreed to limit itself to a thumbs-up or thumbs-down vote on any GATT agreement that the trade representative negotiated. In short, the fast-track authority prevents Congress from adding numerous amendments that might kill the overall package. Any further negotiations in the Uruguay Round probably would have to be concluded by February if Congress is to approve the new accord before the expiration of fast-track authority.

Alternatively, the Uruguay Round may fail. In that case, the door would be open for additional protectionist measures. Such failure also may encourage more regional trade accords that could damage global trade in agriculture and other goods. In that event, the farm trade war between the EC and the United States could escalate again, much to the chagrin of other producing nations.

Congress seems prepared to combat agricultural subsidies in Europe. The new farm bill includes a "GATT trigger" that would reverse the farm spending cuts included in the 1990 farm bill. The GATT trigger would boost U.S. farm production and export subsidies one notch if no GATT agreement is signed by June 30, 1992, and another notch if no agreement is signed by June 30, 1993. In the absence of a GATT accord, the United States and the world appear to be girding for yet another round in a very costly farm trade war.

Export outlook

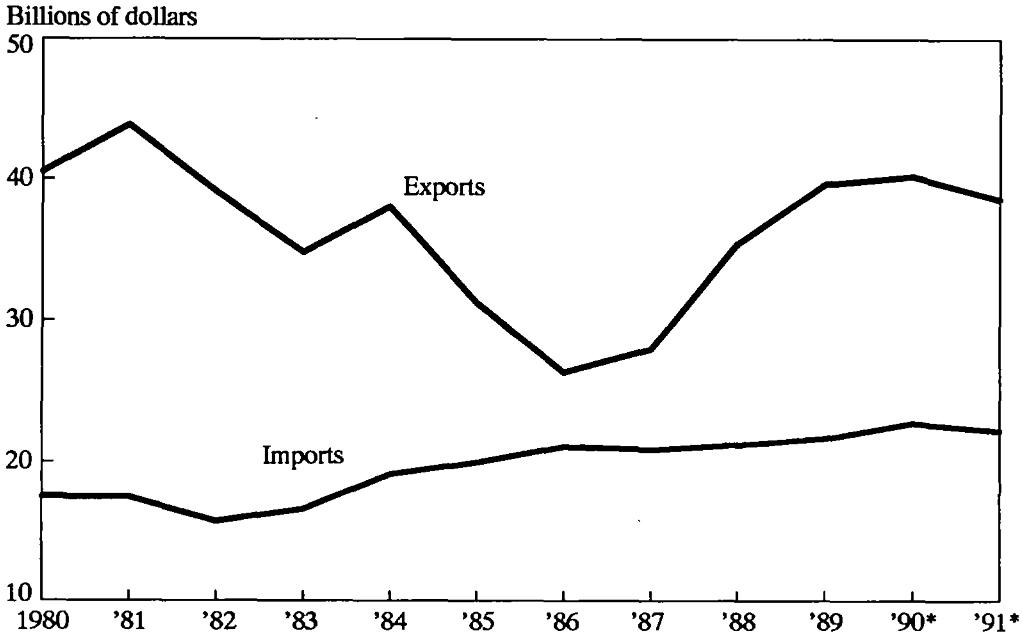
U.S. agricultural exports may decline in both volume and value in 1991 after surprising strength in 1990. Big crops in traditional importing countries, especially the Soviet Union and China, will curtail their grain imports. Moreover, other exporters, especially Canada and the EC, also had big crops in 1990 that will compete directly with U.S. farm exports.

The ongoing economic changes in the Soviet Union and the crisis in the Persian Gulf may reduce U.S. grain exports. The uncertain financial environment in the Soviet Union, usually the leading buyer of U.S. grain, could constrain its purchases of U.S. grain. The United States recently extended $1 billion in credit guarantees to the Soviet Union. But that step will probably boost U.S. sales only modestly, given the ready availability of both grain and credit from other exporters.

Allied trade sanctions have shut off the flow of U.S. farm products to Iraq. Iraq was previously the largest buyer of U.S. rice and a large buyer of U.S. wheat. Prior to the invasion of Kuwait, Iraq was generally expected to import about $800 to $900 million of U.S. farm products in 1990.

Despite a weak outlook for grain exports, record-setting exports of livestock, dairy, poultry, and horticultural products will help shore up the U.S. farm trade balance in 1991. Still, a forecast 6 percent decline in export volume to 139.5 million tons and a forecast 4 percent decline in export value to $38.5 billion reflect fairly weak grain sales. After subtracting expected farm imports of $22 billion, the U.S. farm trade balance is projected to be $16.5

Chart 3
Agricultural Trade Balance



* Forecast.
Source: U.S. Department of Agriculture, *Agricultural Outlook.*

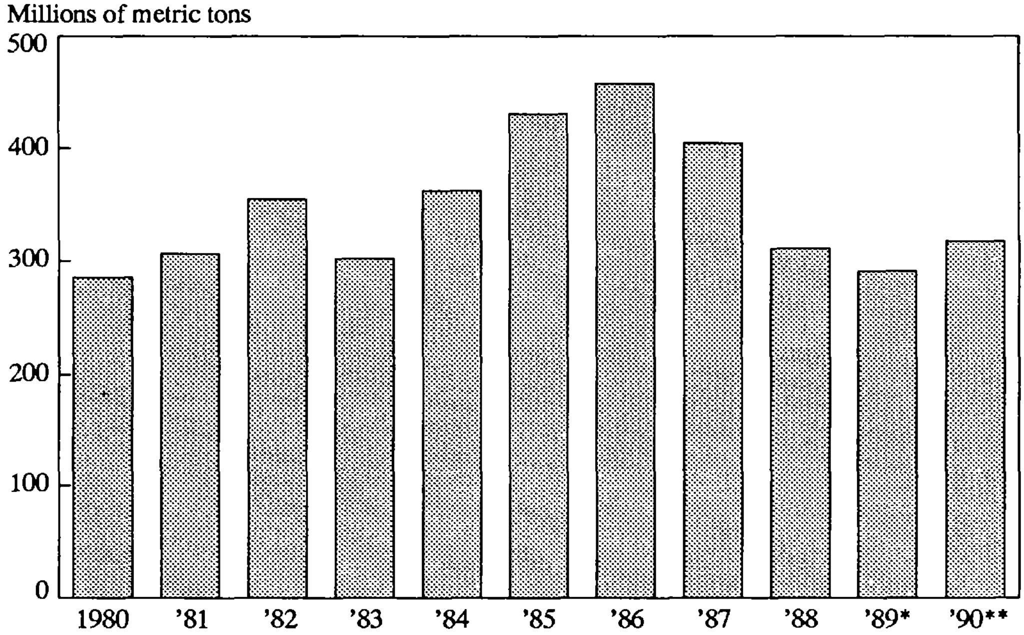
billion in 1991, down about $1.1 billion from a year ago (Chart 3).

Crop outlook

The crop outlook is for big supplies and weak prices, although adverse weather could move prices higher. A sharp rebound in world grain production from the ravages of the 1988-89 drought has begun to replenish the world's granaries (Chart 4). As a result, exporting nations will compete aggressively to sell their huge crops. But importing nations also harvested large crops and will buy smaller amounts of the exporters' surplus. Economic problems in the Soviet Union, the best grain customer of the United States, and the worldwide boycott of Iraq will reduce world grain trade further. Feed demand from large domestic livestock herds and poultry flocks will increase in 1991, but will not be large enough to fully offset sluggish export sales. As a result, larger inventories will keep crop prices weak. Still, inventories will remain far smaller than in the mid-1980s, and thus adverse weather could drive prices higher than expected.

The wheat outlook for the year ahead differs dramatically from the experience over the past few years. A record world wheat crop promises to exceed wheat consumption during the remainder of the 1990-91 marketing year, boosting world wheat inventories. In the United States, the huge 1990 crop (the second-largest on record) will swamp a surge in domestic feed

Chart 4
World Grain Inventory



* Estimated.
** Projected.

Source: U.S. Department of Agriculture, *World Agricultural Supply and Demand Estimates.*

use. Plentiful wheat supplies promise to hold prices relatively low compared with feedgrain prices. As a result, wheat fed to livestock could nearly triple, boosting total domestic wheat use to 1.3 billion bushels (Table 2).

Wheat export prospects, however, are bleak. Large crops in both exporting and importing countries have intensified export competition and flattened demand. Both Canada and the EC harvested near-record crops. The EC is marketing its large crop very aggressively, using the generous export subsidies of its Common Agricultural Policy to stimulate sales. At the same time, large crops in such traditional importing nations as the Soviet Union and China have shrunk the world wheat market. Thus, stiff competition in a much smaller market will shrink U.S. wheat exports to less than 1.1 billion bushels, down a fourth from two years ago.

With big supplies and weak demand, wheat inventories at the end of the marketing year will increase sharply. At the current rate of use, the projected ending inventory of 937 million bushels is nearly a five-month supply. Larger stocks, in turn, will weigh heavily on wheat prices. The average farm price during the 1990-91 marketing year is expected to be $2.50 to $2.70 a bushel, down nearly a third from a year ago and well below the $4.00 target price (Table 3).

The outlook is somewhat better for corn. Strong domestic demand will absorb much of the larger U.S. crop of corn. The nation's expanding livestock herds and poultry flocks will consume about 4.7 billion bushels—up 5 percent from a year ago. The gradual expansion in food and industrial uses of corn, primarily in the production of high-fructose corn syrup and alcohol, will continue. Total domestic corn use, at more than 6 billion bushels, will be nearly 5 percent larger than a year ago.

A drop in U.S. corn exports will partly offset gains in domestic corn use. Although the United States is expected to maintain its present share of the world corn market, corn exports could be down nearly 15 percent in a sluggish world market. The sluggish world corn market is caused by competition from plentiful supplies of low-cost wheat and a sharp decline in the Soviet Union's feedgrain imports. Soviet imports of corn and other coarse grains could fall by nearly a third.

But strong domestic corn use will more than offset sluggish corn exports, resulting in a modest further drawdown in the U.S. corn inventory. The corn inventory is expected to shrink about 8 percent to 1.2 billion bushels, less than a two-month supply. The inventory drawdown, however, will not be large enough to push prices higher unless adverse weather threatens the 1991 crop. With normal weather, the average farm price of corn during the 1990-91 marketing year is expected to range from \$2.20 to \$2.50, roughly matching last year's average price of \$2.36 and falling well short of the \$2.75 target price.

The soybean outlook also includes large supplies and fairly weak demand. World supplies of soybeans and other oilseeds are especially large; world oilseed production, led by rapeseed and cottonseed production, rose to a new record in 1990. The steady rise in world oilseed production limits exports of U.S. soybeans, the dominant oilseed grown in the nation.

Export demand for U.S. soybeans will be weak in 1991. In recent years, growth in world soybean demand has been fueled by increased use in the Soviet Union and the EC. While protein meal use continues to climb in both areas, the Soviet Union's ongoing economic difficulties may limit its soybean imports. And in the EC, internally produced sunflower and rapeseed are gradually displacing soybean imports from the United States. As a result, U.S. soybean exports could dip to only 590 million bushels next year, down more than 5 percent from a year ago and more than a fourth since 1987-88.

One bright spot in the overall picture of soybean demand is the continued, gradual expansion in domestic demand. Strong profit margins in the livestock and poultry industries will continue to boost demand for soybean meal and, in turn, boost the domestic crush to nearly 1.2 billion bushels. Soybean meal stocks will be drawn down slightly. Stocks of soybean oil will increase slightly, due to relatively sluggish domestic use and exports.

Total domestic and export demand will fall short of using all of 1990's large soybean harvest. As a result, soybean inventories at the end of the marketing year will increase about 10 percent to 265 million bushels, slightly more than a 1.5 month supply. Because the inventory increase will be small, soybean prices will be similar to last year's. The farm-level soybean price is expected to average between \$5.25 and \$6.25 a bushel, bracketing last year's average of \$5.70 a bushel. Similarly, the price of soybean meal is expected to average \$160 to \$185 a ton, bracketing last year's average of \$173.25 a ton. Slightly larger supplies of soybean oil, however, could push the average price of soybean oil down to 20 to 23 cents a pound, compared with an average of 22.3 cents a pound last year.

Livestock outlook

Livestock and poultry production will probably set another record in 1991. Despite the big supply, fairly resilient consumer demand and low feed costs will result in another year of relatively high prices and solid returns for the industry. The performance of the national economy in the year ahead is a key caveat in an otherwise optimistic livestock outlook. If the downturn in the national economy cuts consumer incomes sharply, consumers may reduce meat purchases just as larger meat supplies arrive at the grocery store. Still, downsized breeding herds and several years of strong net returns have left the livestock industry well-positioned to ride out a temporary economic downturn.

Livestock producers probably will have another year of solid returns in 1991, extending the industry's roll of the past three years. Cattle supplies should remain relatively scarce, keeping prices relatively high. At only 100 million head, the nation's cattle herd is a fourth smaller than in the mid-1970s, limiting the industry's capacity for expansion.

The long decline in the cattle herd, however, may have ended. Cow-calf operators have logged solid profits in recent years, setting in motion the slow process of rebuilding the cattle herd. At 40.5 million head, the 1991 calf-crop will be 500,000 bigger than a year ago, boosting the number of calves available for retention in breeding herds or for placement in feedlots. Still, strong feeder cattle prices will discourage breeding herd placements, holding the industry's expansion in check. Overall, beef production could increase 1.5 percent.

Strong consumer meat demand should maintain relatively high retail beef prices. At about 68 pounds, per capita beef consumption in 1991 is projected to be slightly larger than in 1990. The strength in demand is expected to keep retail beef prices nearly unchanged from last year's average of $2.79 a pound. Strong retail demand will, in turn, support cattle prices in the feedlot and on the range. The price of choice steers in Omaha could average $75 to $81 a hundredweight, little changed from $77 a hundredweight in 1990. Strong fed cattle prices will be bid into feeder steer prices, maintaining the average price of yearling feeder steers at or slightly above last year's record $90 a hundredweight.

The hog industry may expand in 1991 after a recent period of strong profits, but the increase probably will be modest. Due to lingering memories of the financial washout of the mid-1980s, pork producers and their lenders approach expansion with caution. Thus, the increase in pork production in 1991 is expected to be only 3.5 percent, a small gain compared with previous swings in the pork cycle.

Retail pork prices should be supported by slightly higher per capita pork consumption of 61.8 pounds, up about 2.5 percent from a year ago. Still, pork prices may gradually decline as more pork becomes available during the year. The average retail price of pork in 1991 may match the 1990 average of $2.11 a pound, although prices will decline through the year as larger supplies come to market. Farm-level prices could average $50 to $56 a hundredweight, compared with $54 to $55 in 1990.

Expansion in the poultry industry is also in prospect in 1991, continuing the industry's almost relentless growth since the early 1980s. A long string of profits, dating from the mid-1980s, is fueling further expansion by broiler producers. Broiler production could increase 5.5 percent in 1991, equal to the average rate of growth during the past ten years but below last year's 7 percent growth.

Turkey output also will rise in 1991. Turkey profits have been considerably more variable than broiler profits in recent years. But turkey returns improved to break even in 1990 and may improve slightly more in the year ahead. Even such limited optimism will probably be sufficient to coax turkey producers to boost output another 5 to 6 percent.

The seemingly perpetual expansion in the poultry industry is based on the industry's success in offering products that consumers want at prices they are willing to pay. In 1991, per capita poultry consumption could increase nearly 5 percent. That growth in consumption will bolster poultry prices despite the industry's ongoing expansion. Wholesale broiler prices are expected to average 51 to 57 cents a pound, and wholesale turkey prices are expected to average 61 to 67 cents a pound.

Conclusions

Following another year of record income in 1990, the farm economy faces several important hazards in the year ahead. Higher fuel and petrochemical prices could push up farm production costs. Weaker grain prices and smaller government payments promise to limit crop receipts. And a sluggish national economy could discourage consumer meat purchases, just as meat and poultry production rises to a new record. Taken together, these hazards pose a threat to the strong farm recovery now entering its fifth year.

Nonetheless, U.S. agriculture appears well-prepared to cope with the hazards that lie ahead and thus sustain the farm recovery. Agriculture's solid performance in recent years has shored up the industry's balance sheet, restoring its financial resilience. Livestock producers have expanded very cautiously, limiting their vulnerability to a downturn in the economy. And world grain inventories remain well below the burdensome levels of the mid-1980s.

Longer term, the hazards loom more ominous. The recent surge in world grain production sounds an early warning of possible surpluses in coming years. A new provision in the 1990 farm bill will make U.S. crop production more responsive to market signals, an important first step toward ensuring a balance between supply and demand. But the potential collapse of the Uruguay Round may reverse that provision. In that case, additional farm subsidies could result in a costly renewal of the farm trade war.