Staff Paper

2000 ANNUAL AGRICULTURAL OUTLOOK

DEPARTMENT OF AGRICULTURAL ECONOMICS
MICHIGAN STATE UNIVERSITY

Coordinated by
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Abstract or Summary

Compilation of 2000 outlook articles written by faculty in the Department of Agricultural Economics at Michigan State University covering issues such as the economy, farm policy, commodity prices and production, farm income, and farm input supplies.

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THE GENERAL ECONOMY IN 2000
Lester V. Manderscheid and Robert J. Myers

February 2000 is month 107 of the expansion that began in March 1991. The current economic expansion has now eclipsed the 106 month expansion from February 1961 through December 1969. Over 20 million jobs were created in the current expansion that has survived the Asian financial crisis, a meltdown of the Russian economy and the mad cow disease scare. Stock market prices have skyrocketed, welfare reform was implemented and the federal government is running a budget surplus. While there are many items of good news, there are still people in poverty or homeless, layoffs still occur and consumer debt is high.

Where do we go from here? Most economists are optimistic when discussing the future direction of the U.S. economy. The typical forecast is about 3% growth rate after adjusting for inflation. Some economists point to a number of factors that could result in slower or no growth. These factors include a stock market collapse, an increase in wage growth, and another international financial crisis. For the longer-run, say five to ten years, some worry that the anti-free trade attitude exhibited by the protestors at the World Trade Organization meeting in Seattle could lead to higher tariffs and a 1930's style depression.

This is being written as the Federal Reserve Board's Open Market Committee is meeting. In light of the rapid economic growth in the second half of 1999, most analysts expect an increase in interest rates. Short-term rates will likely by increased by 1/4%, but a rise of 1/2% would not be a surprise. We believe that the increase in short-term rates has been anticipated by the market. Interest rates on 30-year U.S. Treasury bonds probably will not rise from current levels. Interest rates on consumer debt and operating loans will probably increase. Credit should remain available, but at a higher cost. The stock market showed signs of weakness in January and may show further weakness if profits shrink because operating loans carry a higher cost. However, the stock market is also influenced by international capital flows and will react to the changing value of the dollar relative to other currencies. The stock market is truly international and cannot be analyzed by looking at U.S. trends alone.

On October 28, 1999, the U.S. Department of Commerce released a comprehensive revision of the national income and product accounts. The revisions required significant time and expenditures to assure that the results were as accurate as possible. Two major changes dominated the many minor revisions.

Expenditures for computer software are now classified as a fixed investment with a depreciation schedule. Previously, software was treated as a purchased input that was used in the period of purchase. While the data were revised back to 1959, the major changes occur in the 1980's and 1990's.

The second major change was a technical or statistical change from an arithmetic averaging of prices to a geometric averaging. This change is consistent with other calculations of total output.

What effect did these two major changes and the minor changes have on the published numbers? The average growth rate of the Real Gross Domestic Product (inflation adjusted) increased by 0.04% in the 1960's and by 0.06% in the 1970's. However, in the 1980's the new growth rate is 0.31% higher and the 1990's it is 0.46% higher. In other words, a growth rate of 2.5% before revision is now measured as a rate of almost 3%.

Has the real economy changed as a result of these revisions? NO! All that has changed is the measurement system. The revisions more accurately measure what is happening and help explain why labor productivity was low. It was a problem of the measurements, and the revisions give us a better or more accurate understanding of the economy.

FARM LOAN RATES MAY INCREASE IN 2000
Steve Hanson

The sustained run of historically low inflation levels helped interest rates for farm loans remain at relatively low levels during 1999. However, the robust general economy and concerns about inflation may exert additional upward pressure on interest rates, especially short-term rates, during the upcoming year. Table 1 shows the September rates for operating, feeder cattle, and real estate loans from commercial banks in the Seventh Federal Reserve District (Illinois, Indiana, Iowa, Michigan and Wisconsin). The average rate charged for operating loans in the District at the end of September 1999 dropped slightly from the previous year's rate to 9.32% ,while the rate charged for real estate loans rose slightly to 8.42%. The average interest rate for operating loans in Michigan jumped over 0.5% during the year to 9.9%; while rates for real estate loans in Michigan remained essentially unchanged at 8.9%. Interest rates charged for farm loans in Michigan during 1999 remained above the comparable rates charged in the other states included in the Seventh District.

Interest rates in the general economy also increased during the year. Table 2 shows a number of key interest rates for the general economy. The federal funds rate, the interest rate the Federal Reserve Bank charges member banks to borrow funds, rose nearly 0.7% during the year to 5.31%; while the prime rate, the loan rate banks charge their best customers, showed a modest increase to 7.80%. Both the federal funds and the prime rate are short-term borrowing rates.

The 90-day T-bill rate, the rate at which the U.S. government can borrow funds for 90 days, increased nearly 1% during the year to 5.24%. The borrowing rates for longer-term government securities (notes and bonds) showed similar increases during the year. The largest increase in interest rates on government securities occurred in the 10-year T-bonds which rose by nearly 2% from the previous year’s rate.

The interest rates on government securities are important “benchmarks” because they represent the borrowing rate for loans with different maturity lengths when repayment of the loans is essentially guaranteed. In particular, the T-bill rate is often cited as the “risk-free” borrowing rate. Because there is little risk of default, a major cause of differences between the rates on government loans with different maturity lengths is the expected level of inflation over time. If you compare the short-term rates on 90-day T-bill (5.24%), the intermediate-term rates on the 1-year T-note (5.71%), and the long-term rates on the 10-year T-bond (6.60%), we see that “yield curve” has steepened relative to the previous year. This suggests that investors (lenders) believe inflation and interest rates will increase during the year and show further increases in future years. Although the expected increases in inflation appear to be larger than they were a year ago, the expected changes are still somewhat modest.

A survey of bankers, conducted by the Federal Reserve bank of Chicago, provides some additional information on lending conditions in the Seventh District each quarter. The survey results indicate that loan demand in Michigan was fairly stable in the third quarter of 1999 compared to the same quarter in the previous year. The survey suggests loan volume in Michigan over the winter is expected to remain steady for operating loans and steady to slightly declining

for real estate loans. Bankers responding to the survey suggested loan repayment rates remained steady or dropped relative to the previous year, underscoring the continuing financial difficulties faced by the agriculture banks and their customers as a result the general economic decline in the farm sector. Finally, the survey suggested we will see an increase in the liquidation of capital assets among financially stressed farms in the District relative to the previous year.

Expect interest rates in the general economy to increase slightly if inflation rises as anticipated during the year. In the farm sector, continued financial stress in some areas will likely result in an increased demand for operating loans and stable, or slightly declining, demand for real estate loans. With the relatively high level of repayment risk and likely increases in interest rates in the general economy, expect borrowing rates for farm loans in Michigan to rise slightly again this year. If rates in the general economy make an unexpectedly large upward movement, the potential increases in borrowing rates in the farm sector could be significant.

Table 1. Interest Rates for Farm Loans

Loan Type	End of September 1998	End of September 1999
Seventh Federal Reserve District		
Operating Loans	9.43%	9.32%
Feeder Cattle	9.41	9.28
Real Estate	8.33	8.42
Michigan		
Operating Loans	9.38	9.90
Real Estate	8.87	8.90

Source: Federal Reserve Bank of Chicago.

Table 2. Key U.S. Interest Rates

Rate Type	January 1999	January 2000
Federal Funds Rate	4.63%	5.31%
Prime Rate	7.75	7.80
90-Day CD	4.89	5.94
90-Day T-Bill	4.34	5.24
1-year T-Note	4.51	5.71
10-year T-Note	4.72	6.60
30-year T-Bond	5.16	6.62
Corporate Bonds (Aaa)	6.24	7.80
Conventional Mortgages	6.79	8.06

Sources: Federal Reserve Bank of Chicago and Federal Reserve Bank of Kansas City.

TRADE AND POLICY OUTLOOK

David B. Schweikhardt, Associate Professor and Sandra S. Batie, Elton R. Smith Professor of Food and Agricultural Policy

The slow recovery of the Asian economies, combined with continuing high levels of world output for many commodities, will dominate the outlook for U.S. agricultural exports in 2000. As the economic situation in these countries has eroded in 1997 and 1998, U.S. exports to the region declined sharply. Though some countries did begin to experience slow growth in their economies in the last half of 1999, analysts do not expect a major increase in U.S. exports to the region in 2000.

U.S. Agricultural Trade Outlook

U.S. agricultural exports are expected to remain at $49 billion in 2000, the same level recorded in 1999 (Figure 1). Export volumes are expected to remain steady for several commodities compared to 1999, but still remaining far less than the record levels recorded in 1996. The export volume of wheat is expected to decrease from 28.8 million tons in 1999 to 27.9 million tons in 2000. Corn exports are expected to decrease to 47.5 million tons for 2000, compared to 51.9 million tons in 1999 and below the 52.6 million tons shipped in 1996. Soybean and soybean meal exports are expected to remain steady compared to levels recorded in 1999.

Exports in other product categories are expected to have a mixed outlook for 2000. Beef and pork exports are expected to increase by $400 million to $4.5 billion in 2000. Poultry exports, at $1.7 billion, and dairy exports, at $900 million, are expected to remain unchanged in 2000. Fruit and vegetable exports are expected to increase by $300 million to $10.5 billion. The volume of horticultural exports is expected to reach 7.6 million tons in 2000, compared to 7.3 million tons in 1999. United States agricultural imports are expected to reach $38 billion in 2000, or $600 million greater than in 1999. Increased imports of horticultural products will account for most of this increase, with fruit and vegetable imports increasing by $400 million to a projected $15.7 billion. Canada ($7.9 billion) and Mexico ($4.9 billion) are projected to continue as the two largest suppliers of U.S. agricultural imports.

The Asian financial crisis contributed to the decline in the value of U.S. agricultural exports after 1997. Despite the lingering effects of the crisis, Asia ($18.3 billion) is projected to retain a slight edge over the Western Hemisphere ($17.6 billion) as the largest regional market for U.S. exports. The value of U.S. agricultural exports to the Asian region declined from $26 billion in 1996 to a projected $18 billion in 1999, accounting for nearly two-thirds of the decline in total U.S. agricultural exports experienced during this period.

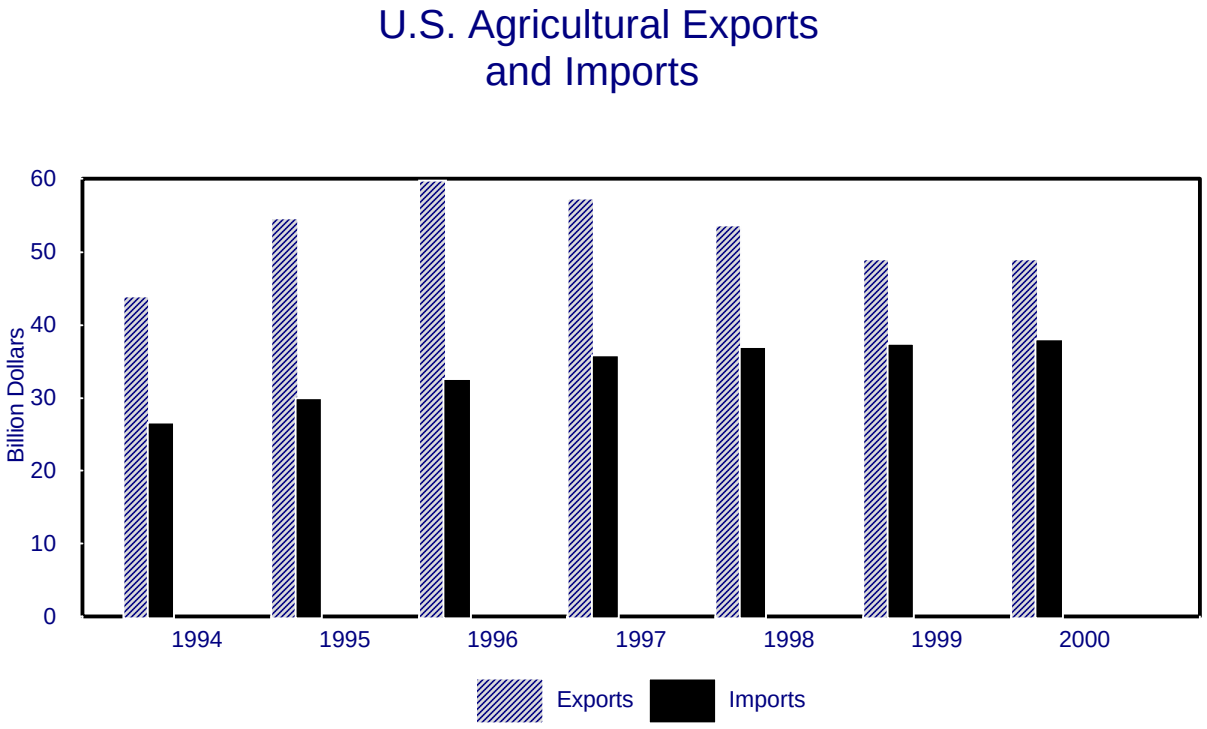
Japan remains the largest customer for U.S. agricultural exports, purchasing a projected $9 billion from the U.S. in 2000. Canada will continue as the second largest customer at $7 billion, and Mexico will continue as the U.S.'s third largest export market at $5.9 billion, or $300 million greater than in 1999. This trend continues the growth of U.S. agricultural exports to Mexico since the implementation of the North American Free Trade Agreement (NAFTA). United States exports were $3.6 billion in 1993, the year prior to the approval of NAFTA.

Trade and Domestic Policy Outlook

A new round of multilateral trade negotiations began under the auspices of the World Trade Organization with the ministerial planning meeting in Seattle in November 1999. The purpose of the meeting -- to establish an agenda for the next round of negotiations -- was not fulfilled because the negotiators could not reach agreement on the language defining the agenda for many issues, including agriculture. Negotiators disagreed about the size and speed of further reductions in agricultural export subsidies and trade barriers, the role of environmental issues in trade negotiations, and whether to include all commodities in the negotiations or to focus on selected commodities.

With low prices for farm products expected to continue pressuring farm income, and little reason to export rapid improvements in the export outlook, Congress can be expected to continue modifying the payment structure for U.S. farm programs. In 1999, following a debate on whether to increase loan rates, Congress increased the scheduled payments on Production Flexibility Contracts (PFC) by 100% and provided other emergency measures in an effort to support farm income. With PFC payments scheduled to decrease in 2000 under the original Freedom to Farm legislation (corn payments are scheduled to decrease from 35 cents per bushel in 1999 to 32 cents per bushel in 2000, and wheat payments are scheduled to decrease from 63 cents per bushel in 1999 to 57 cents per bushel in 2000), Congress is likely to take additional emergency measures in 2000. There is likely to be renewed debate over the question of whether loan rates should be increased or whether payments should be provided as increased PFC payments. While the outcome of that debate is uncertain, it is reasonable to expect that Congress will provide an increase in payments that is at least as large as the emergency payments made in 1999.

Figure 1


U.S. Agricultural Exports
and Imports
Billion Dollars
60
50
40
30
20
10
0
1994
1995
1996
1997
1998
1999
2000
Exports
Imports

2000 OUTLOOK FOR PRODUCTION INPUTS

Chris Peterson

The good news for farmers in the 2000 outlook is that, except for energy prices and some supply issues with traditional seed stocks, the supplies of production inputs (fertilizer, chemicals and seed) appear to be adequate and prices are mostly stable to soft. The bigger news of interest is the growing controversy surrounding biotechnology, specifically genetically modified organisms (GMO) in crops.

Fertilizer

Nitrogen supplies appear adequate as long as planting season progresses through a normal cycle. However, industry production capacity has been tending downward, particularly in relation to capacity in Michigan. If demand were to create a bottleneck in the spring, the system would be hard pressed to respond. Therefore, expect prices to rise as the season approaches and take care to be sure your dealer has adequate supplies on hand. Phosphates and potash are in good supply with prices expected to be flat.

Chemicals

Chemical supplies are more than adequate with intense competition among suppliers likely to keep downward pressure on prices for corn and soybean chemicals. The rapid adoption of GMO crops has reduced demand for some traditional chemicals while making Round-Up more attractive. The more traditional crop protection products have dramatically cut price in order to stem the loss of market share to GMO's, most especially Round-Up Ready soybeans. Later this year, Round-Up comes off patent, and further downward pressure on all chemical prices would be an expected result. Another source of downward price movement has been the emergence of Internet sales of agricultural chemicals. Larger producers may be able to bypass dealers altogether and secure favorable prices; however, service after the sale is not likely and logistical issues within season may make Internet purchases problematic.

The exceptions to downward price movement are in those chemicals used on specialty crops (dry beans, sugar beets, fruits and vegetables). Where there are few if any alternative chemicals expect upward price pressure.

Worldwide, 1999 was a challenging year for the emerging life science industry. Strong opposition to GMO crops arose in Europe and in some Asian markets, most notably Japan. In addition, many life science companies announced desires to sell off agricultural divisions to devote energy and capital to pharmaceuticals. For example, Novartis and AstraZeneca are planning to combine and spin off their agricultural divisions. Keeping track of the players, their names and their product programs is an increasingly difficult job. The impact of all this change hits most strongly in the seed markets.

Seeds

With one exception, all categories of seed appear to be in ample supply with little change in prices. The one exception is likely to be traditional soybeans, i.e. non-GMO soybeans. The life science companies that now command the seed markets have put their research and development efforts into GMO seed. As a result, they have probably given limited attention to non-GMO seeds and their supply may thus be tight. In addition, some concerns have been raised about the difficulty of getting certification that a seed is truly non-GMO may in itself be difficult.

Should you plant GMO or non-GMO? This is the question that has been asked at an unusually large number of producer and agribusiness meetings over the last several months. Here is the best interpretation I can give on what has emerged.

First, GMO seeds are so pervasive that putting the genie back in the bottle may be very difficult. That does not mean however that it could not happen. Frito-Lay, a major snack food producer, has just recently asked its growers not to plant GMO corn. This adds to the list of food firms worried about consumer reaction.

Second, livestock feed use (the end use for most of Michigan's grains) has not been seriously affected by the GMO controversy, and domestically the impact on human food uses has not reached beyond a relatively small share of the market. As a result, there appear to be ample markets for GMO crops this year.

Third, for all the talk over the last several years about seed-to-table control and tighter vertical integration of the food system, the grain handling system was not and is not prepared to segregate massive amounts of GMO and non-GMO crops. Process and transport innovations are needed from seed production through farm and elevator operations to storage and transfer within food processing facilities to truly accomplish segregation. Segregation of value-enhanced crops will be critical in the future, but the system is not there yet.

Fourth, for those producers and elevators selling in European and Japanese markets where grains and oilseeds are destined for human use, maintaining non-GMO production may be essential. The full system may not be ready to segregate, but that does not mean that certain elevators and farmers in close working relationship with each other can not serve the demands of the emerging niche markets for non-GMO. Serving this market will not be easy. At the very least, written certification of procedures and controls that maintain non-GMO status will have to be made at each link in the supply chain, and the price of contamination will be high if rejection occurs at the food processing end. Segregation of fields on the farm and equipment throughout the system will need to occur. Whether or not premiums emerge for non-GMO remains to be seen. In some instances, non-GMO will simply be required.

Biotechnology offers immense promise for feeding a rapidly growing world population and feeding it with higher nutritional quality than ever before; for example, vitamin A bio-engineered into rice. But consumers will have their say on whether or not they view the risks of the new technology as worth it to them. The future of biotechnology remains less certain than we

would like in the long run, even if GMO crops appear to have more than adequate markets in the short run.

Energy

Petroleum prices have shot out of sight over the last several months as OPEC has finally regained its bite through the control of production. Prices are likely at their peak as they attract other sources into production, but any roll back of prices is far from certain. The high prices will likely assure adequacy of supply for farm uses.

FARMLAND VALUES PROJECTED TO RISE SLIGHTLY IN 2000
Steve Hanson and Gerry Schwab

Michigan farmland values continued their string of year-to-year increases by posting strong gains again in 1999. The annual land value survey conducted in Spring 1999 by the Department of Agricultural Economics at Michigan State University found the average farmland values to be:

Tiled field crop land	$1,595 per acre (up 7.5% from pervious year);
Untiled field crop land	$1,269 per acre (up 7.7%);
Sugarbeet land	$1,835 per acre (up 2.9%); and
Irrigated land	$1,797 per acre (up 8.6%).

Consistent with the Michigan State study, a Federal Reserve Bank of Chicago survey of agricultural bankers found the average value of Michigan farmland rose 8% over the period October 1, 1998 to October 1, 1999. Last year's strong showing marked the 13th straight year of increases in the average value of Michigan farmland. According to USDA statistics, the last time farmland values in Michigan experienced a year-to-year decline was January 1, 1987.

Confounding economic conditions between Michigan's agricultural sector and non-agricultural sectors provide mixed signals about expected changes in land prices in Michigan. Combining low unemployment rates with low interest rates provides a stimulus to demand for land from investors who derive their income from the non-agricultural sector. Low commodity prices for corn, soybeans, wheat and hogs will dampen the price that these farmers can pay for land while some growers who experienced record high crop yields is 1999 will have a more optimistic attitude towards land purchases. Across the Seventh Federal Reserve District (Illinois, Indiana, Iowa, Michigan and Wisconsin) for the third quarter of 1999 compared to the same quarter in 1998, farmland prices have been quite stable. Both Iowa and Illinois actually experienced declines in farmland values during this period. Michigan's diverse agriculture has historically helped shield its farmland values from the relatively large swings that less diversified states, such as Iowa, Indiana and Illinois, have experienced in the past. This diversification and reasonable returns to Michigan's dairy farms have helped stabilize farmland values in the state while a number regions experienced declines in the latter part of 1999.

Given the current economic conditions in the state and an expectation for normal trend yields (not record-setting), look for farmland prices in Michigan to rise at a more modest level this year. Some regional variation in farmland prices can be expected across the state depending on which commodity or product provides the major source of gross farm income in the region. For example, areas where farm receipts are derived primarily from corn, soybeans and wheat will likely see a weaker land market than areas that experienced a very profitable year; e.g. sugar beets, dry beans or dairy. While the expectation is for average farmland values to increase slightly during the year, there is some chance that average farmland values could decline slightly for the first time this decade. A key variable that will impact farmland values in 2000 is what happens to farm incomes and interest rates during the upcoming year. If farmers generally realize solid farm incomes in 2000, then the farmland market should improve in the latter part of the year. If some

combination occurs of low crop commodity prices, a down trend in the milk price and increased interest rates, then the demand for land by farm growers will likely show further weakness.

Another factor that continues to have significant impacts on farmland values in some areas is the potential development value of the land for residential, commercial or recreational purposes. The development value of land can be significantly above the agriculture-use value in some areas. For example, the Michigan State survey found the average value of developing land in 1999 was $2,213 per acre for recreational purposes, $7,272 per acre for residential purposes and $22,658 per acre for commercial/industrial purposes in the southern lower peninsula. Even if there is no immediate plan to develop land in a particular area, the possibility of receiving a high sales price at some point in the future by allowing the land to be developed can drive the current value of farmland used in agricultural production above it agriculture-use value. A striking feature of the Michigan State study was the wide spread impact that residential development is having in nearly every area of the state. Look for these development pressures to continue with the largest impacts in regions on the fringe of urban population centers and/or areas that experience heavy recreational use.

2000 ANNUAL CROP OUTLOOK
Jim Hilker

Corn

Is there light at the end of the tunnel for corn prices? I think the answer is probably yes, but it is very dim, and the odds are it will be in the 2001-02 crop year. Why the guarded long-term optimism for corn prices? Demand for corn is strong, it appears corn acreage won't grow, and my estimated ending stocks for 2000-01 of 1.56 billion bushels is low enough that marginal growing weather this summer would have a much more positive impact on prices than the two billion bushels we thought we were facing for the end of the 1999-00 marketing year. Of course the January Production, Stocks and Supply/Demand Reports lowered that to 1.7 billion, and we all saw the positive market reaction.

My outlook now through the 2000-01 marketing year is summed up in the Supply/Demand Balance Sheet for Corn (Table 1). It now appears feed demand is quite strong, both in terms of disappearance and feeding rates per animal unit; heavier weights are a big part of this. As cattle and hog numbers fall somewhat over the next year, feed use may dip a little in 2000-01, however, increasing poultry numbers, low corn prices and continued heavy weights will limit this decrease. Food, Seed, and Industrial Use are expected to grow 4% this year and nearly the same next year. My 80 million bushel increase for 2000-01 does not build in a more rapid growth in ethanol use due to the MBTE fiasco. If ethanol is added to a significant amount of gasoline on the East and West Coasts for pollution control, this number could be significantly higher. However, it is not clear how soon ethanol production expansion could take place.

Exports this year will be near last year's level, but that is not bad considering ample world supplies. I expect exports to grow next year, but that is given some very risky assumptions. One assumption is that China will join the WTO by then, which limits their ability to subsidize corn exports. Another assumption is that world yields will be near trend. And, the last assumption is the most critical for the longer-term, and that is, will the world economy continue to expand? Increased incomes drive meat demand, higher meat prices drive increases in meat production, and increased meat production drives increases in feed consumption.

On the supply side for 2000-01, I expect U.S. corn acreage to decrease marginally as the guaranteed returns to soybeans remain higher than corn on a per acre basis due to the relative loan rates. I use a trend for U.S. corn yield, despite reported evidence that two consecutive years of La Niña increase the odds of a Corn Belt drought. As can be seen in the Supply/Demand table, this keeps production at the same level as 1999. Total supply is expected to drop as beginning stocks drop off relative to this year. Smaller total supplies and larger use adds up to smaller ending stocks for 2000-01.

Unless a huge crop starts shaping up this summer, corn prices should stay above loan for the remainder of this marketing year. As we go into the 2000 harvest, corn prices are forecast to dip toward the loan rate before recovering and averaging $2.10 for the 2000-01 marketing year.

Wheat

Wheat prices are forecast to be higher in 2000-01 than 1999-00, but it will take prices being higher than 15 cents over the loan rate to turn around the continuing reduction in wheat acreage. Winter wheat producers cut planted acres by a half million this past fall, but if harvested acres turn out to be the five-year average of percent planted, we may end up with more acres harvested than last year, as shown in the Wheat Supply/Demand Balance Sheet (Table 2). However, I am still forecasting total production to be down on the assumption we will return to trend yields. The last two years have been exceptional, especially given the fact the country had never averaged more than 40 bushels an acre before.

Use this year is running somewhat below last year due to lower feed use compared to the extremely high feed use in 1998-99. However, at 300 million bushels, wheat for feed use is running higher than most analysts, including myself, had expected, and is running a little higher than the historical average. This makes sense given the relative wheat/corn prices in the High Plains this past summer and fall. I suspect that this trend will continue through 2000-01 as projected in the Wheat Balance Sheet. Food use is expected to grow at a trend rate both this year and next. Exports are forecast to grow 3% this year and push to 5% next year. The export projections are based on continued growth in the world economy and world trend yields.

Wheat prices are expected to remain below the loan rate through harvest before gradually working their way up to average $2.75 for the U.S. for the 2000-01 crop year. However, if relative wheat prices stay the same as they have over the past couple of years, Michigan prices will average $0.25-35 below $2.75. For example, soft red wheat futures for next summer are running $0.25 below hard red wheat futures, and $0.55 below spring wheat futures. Hard red winter wheat accounts for 46% of the total wheat crop, while soft red and spring wheat each make up about 19% of the total wheat production. The remainder is made up of soft white at 11-12% , and durum at 4-5%.

Soybeans

I hope the "Market" continues to be more optimistic about soybean prices than I am through 2000-01. As can be seen in the Supply/Demand Balance Sheet for Soybeans, my projections for the 2000-01 soybean marketing year would put the average soybean price at $4.50 per bushel, and the market is now offering over $5.00 per bushel. Some may say, what difference does it make -- both prices are below the loan rate. However, the $5.00 price indicates stronger demand and much lower ending stocks. And, if the "Market" is right, there is light at the end of the tunnel, unlike my forecast.

My analysis leaves 2000 soybean acreage the same as 1999, with a few less acres harvested. Many analysts suggest acreage will increase. I use a trend yield that is lower than the one used by USDA in their first forecasts for the1999 crop. This conservative production estimate gives us 200 million more bushels of production than last year. And, we are expected to start out with at least as many beginning stocks.

Now, for the demand side. I use a projection of 1,650 million bushels for crush, 45 million bushels higher than this year's forecast. This is based on continued strong feed use in the U.S. as well as a sharp increase in meal exports as the world economy continues to grow. I increase my export projection by 65 million bushels, the same increase as this past year, to 930 million bushels. We have never exported more than 882 million bushels before. Contrary to some wishes to the Tooth Fairy, I do not believe South American production next year, 2000-01, will decline from the last several years and is more likely to grow. These are the numbers I use to forecast ending stocks of 470 million bushels and a $4.50 price. In order to average $5.00 a bushel we would need to increase use (U.S. disappearance) by another 100 million bushels.

Table 1
Supply/Demand Balance Sheet for Corn

	Est. 1998-99	Proj. 1999-00	Hilker 2000-01
		(Million Acres)	
Acres Planted	80.2	77.4	76.8
Acres Harvested	72.6	70.5	70.0
Bu./Harvested Acres	134.4	133.8	134.9
		(Million Bushels)	
Beginning Stocks	1308	1787	1714
Production	9759	9437	9443
Imports	19	15	13
Total Supply	11,086	11,239	11,170
Use:			
Feed and Residual	5496	5650	5625
Food, Seed and Ind. Uses	1822	1900	1980
Total Domestic	7318	7550	7605
Exports	1981	1975	2025
Total Use	9299	9525	9630
Ending Stocks	1787	1714	1540
Ending Stocks, % of Use	19.2	18.0	16.0
Regular Loan Rate	$1.89	$1.89	$1.89
U.S. Season Average Farm Price, $/Bu.	$1.94	$1.90	$2.10

Source: USDA and Jim Hilker.

Table 2
Supply/Demand Balance Sheet for Wheat

	Est. 1998-99	Proj. 1999-00	Hilker 2000-01
		(Million Acres)	
Acres Planted	65.8	62.8	62.2
Acres Harvested	59.0	53.9	54.3
Bu./Harvested Acres	43.2	42.7	40.6
		(Million Bushels)	
Beginning Stocks	722	946	972
Production	2548	2302	2205
Imports	103	100	103
Total Supply	3373	3348	3280
Use:			
Food	903	910	920
Seed	81	91	90
Feed	401	300	300
Total Domestic	1385	1301	1310
Exports	1042	1075	1125
Total Use	2427	2376	2435
Ending Stocks	946	972	845
Ending Stocks, % of Use	38.9	41.0	34.7
Regular Loan Rate	$2.58	$2.58	$2.58
U.S. Season Average Farm Price, $/Bu.	$2.65	$2.50	$2.75

Source: USDA and Jim Hilker.

Table 3
Supply/Demand Balance Sheet for Soybeans

	Est. 1998-99	Proj. 1999-00	Hilker 2000-01
		(Million Acres)	
Acres Planted	72.0	73.8	73.8
Acres Harvested	70.4	72.8	72.5
Bu./Harvested Acres	38.9	36.5	39.2
		(Million Bushels)	
Beginning Stocks	200	348	365
Production	2741	2643	2842
Imports	3	3	3
Total Supply	2944	2994	3210
Use:			
Crushings	1590	1605	1650
Exports	801	865	930
Seed, Feed and Residuals	205	159	160
Total Use	2596	2629	2740
Ending Stocks	348	365	470
Ending Stocks, % of Use	13.4	13.9	17.2
Regular Loan Rate	$5.26	$5.26	$5.26
U.S. Season Average Farm Price, $/Bu.	$4.93	$4.75	$4.50

Source: USDA and Jim Hilker.

MICHIGAN SUGARBEET OUTLOOK
John (Jake) Ferris

The National Agricultural Statistics Service estimated the U.S. sugarbeet crop at 33.3 million tons, 2% above the previous record set in 1998. The sugar cane crop, at 35.7 million tons, is also a record and 3% above the previous record in 1998. Increased acreage was responsible for the records as yields nationally were off somewhat from the previous year. Generally favorable growing and harvesting conditions contributed to a clean crop, with beets having higher sugar content than last year. Converted to short tons, raw value (STRV), beet sugar production is estimated at a record 4.725 million tons and cane sugar at a record 4.025 million tons.

These large crops have been depressing the domestic sugar market. In early January, Midwest beet sugar prices were quoted at 24-25 cents per pound, compared with 27 cents the year before. The raw sugar tariff-rate quota was set at 1.5 million STRV. This is expected to keep the ending carryover at 16% of use, about the same as the year before.

The Michigan sugarbeet crop was also a record at 3.534 million tons, 8% above the previous record in 1990. The Michigan Agricultural Statistics Service estimated the yield at 18.6 tons per acre. This was not a record, but the 190 thousand acres harvested did exceed the previous record of 188 thousand in 1995. Weather was favorable and nearly all of the crop was harvested within a two-week period. The storage period has been much more conducive to quality than in the warm winter of 1998-99. The higher sugar content should offset some of the reduced sugar prices for growers. In addition, the beet pulp market is holding up well.

Monitor Sugar has opened a new molasses desugarization facility. Robert Hetzler, CEO, reports that they are recovering 700 pounds of sugar per ton of molasses processed. This process also provides two new co-products, concentrated molasses solids (CMS) and betaine. Betaine is used in poultry feed, aquaculture and other feed applications. CMS can go into animal feeds, but other markets are being explored.

While prices realized on the 1999 sugarbeet crop will be lower than 1998, acreage will likely continue to increase in 2000. With normal weather, yields nationally and in Michigan could be off some, but prospective returns should remain favorable relative to competing crops.

FARM MANAGEMENT IMPLICATIONS FOR GRAIN PRODUCERS

Gerry Schwab

The year 1999 was a very unique year. The year 2000 will also be a very unique year. For many regions in Michigan, we can remember 1999 as a year of excellent yields that were reaped during an abnormally long dry autumn. Corn growers in Michigan set a record corn yield of 130 bushels per acre. Soybean growers tied the previous record high of 40 bushel per acre. Wheat growers and dry bean producers also had record yields. These record yields helped make 1999 a very unique year. What will be unique about the year 2000 is not known at this time. It will almost certainly be different from 1999. We do not know what the future beholds yet we must make decisions in this uncertain environment.

Farm business people need to be continually aware of the external world beyond the farm gate. The business world including agribusiness is experiencing rapid change as businesses continue to ascertain, but also channel what it is that consumers want to buy in our consumer-driven economy. New alliances of business firms form more vertical integration linkages as they get closer to the consumer. Farm businesses can not view the need for knowledge about consumer desires as foreign to their economic well-being. Farm businesses need to be aware of the opportunities and threats that are being created in this dynamic new millennium. These external changes translate into the need for farm decisions such as: which crops to grow, which technology to use and whether a contractual alliance will be entered.

Farm management decisions can be categorized into ***strategic*** decisions and ***tactical*** decisions. Strategic decisions can be thought of as deciding upon the right thing to do; e.g. what is your desired size of farm, type of farm, machinery technology to employ, etc. These are decisions that are infrequently made, but have long- term consequences. With the low grain commodity prices currently being projected for 2000 and beyond, a strategic decision might ask whether the commodity game should be the chosen field upon which to compete. Commodity growers producing a non-differentiated crop need to compete on "cost of production." Land prices, discussed elsewhere in this edition, can be a significant factor in determining whether your "cost of production" allows you to compete in the commodity game. As machinery investment costs continue to escalate, the chosen "strategy" might be to increase acreage to distribute the investment costs over more units of production. The warning label here is to evaluate on paper the impact of alternative strategies on the profitability of your farm operation. Profitability is the key that permits the farm business to grow and to cash flow. Controlling land by long-term land rental agreements might be more profitable and easier on your cash flow than buying land. Similarly, there might be alternatives other than sole ownership that could be explored to control machinery services.

Tactical decisions address how to do things right. Decisions on what to produce, which production inputs to use, how to finance the inputs and pricing of that which is produced all need to be addressed. The general process is know where you are, know where you want to be, and determine how to get there. Step number one in this process is to know your own situation as described by a recent Balance Sheet that describes the assets owned and liabilities owed. From this description, a picture of your farm business is created and a managerial tool for decision-

making is made available for your use. Conducting farm business analysis and evaluating farm business scenarios from this balance sheet are the focus of two educational initiatives currently being conducted by Michigan State University Extension (MSUE) and the Agricultural Economics Department.

A three-day "Farm Financial Management" educational workshop that is jointly sponsored by MSUE and Michigan Farm Bureau (MFB) provides an opportunity for you to analyze your own farm business and explore alternatives. A schedule for these workshops can be found at this web address http://www.msu.edu/~schwab/schedule.htm or by contacting your local MSU Extension Office.

A one-day "Risk Management" workshop jointly sponsored and presented by MSUE, MFB, and Michigan agribusinesses is also being offered. This workshop addresses the need for a marketing plan in conjunction with farm financial management and risk management decisions including crop insurance. A schedule for these workshops can be found at the following web address http://www.aec.msu.edu/agecon/blackj/NERRisk.html or by contacting your local MSU Extension Office. It is the intent of these workshops to increase your knowledge and ability in farm decision-making in this dynamic world of uncertainty.

2000 ANNUAL LIVESTOCK OUTLOOK
Jim Hilker

Cattle

Beef demand was the big story for cattle in 1999. After 20 years of declining beef demand, given other factors constant, beef demand appears to have increased in 1999. Or, in other words, people were willing to pay more for beef even though more beef came to market in 1999 versus 1998. While it is not completely clear to me what all happened, people's willingness to spend a greater percentage of the strong increase in incomes on beef appears to have been an important contributing factor. The below price forecasts assume that beef demand will continue to increase in 2000, although at a slower rate than 1999.

The January Cattle Inventory Report showed, after revisions of last year's data, that the calf crop for the past three years has only decreased slightly. This helps explain why placements remain large. There are significant differences in beef production forecasts for 2000. The differences have to do with when cattle will come to market, the weights that they will come to market at, and placements over the remainder of the year. My production projections in the next paragraph tend to be a little higher than the USDA, but my price projections tend to be o the high side of their range.

First quarter beef production is expected to be about even with a year ago. This should translate into prices in the $68-70 range relative to last's year's $62.43. Beef production in the second quarter is projected to be down 1-2 %, with prices moving into the low $70's -- a nice increase from 1999's $65.04. As we move into the third quarter, production is likely to drop off 4-5%, with prices moving into the $70-73 range versus last year's $65. Fourth quarter beef production is expected to fall off sharply, perhaps 4-8 %. This should keep prices in the $70-73 range.

Feeder steer prices are expected to stay strong as supply will likely drop off a bit. Corn prices will remain relatively low, and steer prices will be the highest in several years. I expect yearly steer prices to be in the $82-87 range and calves to bring in the high $90's to over $100, depending on weights and quality.

Hogs

Given the past two years, it is better to look forward than backwards when you are looking at the pork sector, so that is what we will do. I expect that hog prices to average around $40 per cwt. for 2000. This should be slightly above break-even for most producers as long as this summer's weather keeps corn prices low. As with beef, pork demand put in a good showing for 1999. The average price for 1999 was about the same as 1998, but production was up 1.6% and we consumed 3% more as we drew down stocks and net imports went up. I expect demand will at least hold its own for 2000. For the first time in several years, total meat available for consumption in 2000 will be lower than the previous year.

These production estimates include a forecast that weights will be up in 2000 relative to 1999. First quarter pork production is expected to be down 3 % with prices averaging in the upper $30's, relative to $28.83 in 1999. The second quarter will see much of the same, production down 3% with prices continuing in the upper $30's, still nicer than last year's $35.18. As we move into the third quarter, the drop-off is expected to be over 3%, and prices should move over $40 and perhaps average as much as $44 for the quarter. Prices averaged $35.70 for the third quarter of 1999. Fourth quarter production will increase from the third quarter, but drop off 5-6% from the last quarter of 1999. This should put prices in the $39-42 arena this fall versus $36 last fall.

The next question is, when will the production cutbacks turn around? Previous hog herd liquidations have averaged seven quarters since 1973. This means the breeding herd could start to increase in the second half of 2000. However, losses have been greater in this cycle versus previous cycles. It also depends on feed prices remaining cheap. I don't expect to see year-to-year production increases before at least the second half of 2001.

FARM MANAGEMENT ISSUES FOR LIVESTOCK PRODUCERS

Laura Cheney

It's a good news-bad news story in the livestock industry these days. The good news is that the U.S. economy is strong, inflation is low, livestock prices are finally on the rise, feed prices are expected to remain relatively low, and, with strong per capita meat consumption numbers, consumers are eating their way into the new century. On the bad news side, there are fewer swine and cattle operations today than there were last year; the terms consolidation and concentration are here to stay and producers everywhere are scrambling to determine which market channels and supply chain systems will prevail in today's very dynamic livestock sector.

Even with the record large supplies of meat in 1999, livestock prices are showing signs of recovery. One of the bright spots of 1999 was that although we had large supplies, domestic consumption of beef and pork were strong. On the demand side, some beef industry experts have suggested that for the first time in 20 years, beef demand may have stabilized. In addition, beef's share of the consumer's spending dollar has remained at around 40%. Both of these points suggest that the beef industry is making strides toward meeting its biggest challenge: to stabilize falling consumer demand. On the supply side, four consecutive years of lower cattle inventories have helped prices to recover as well. Based on January 2000 numbers, current cattle inventories are down approximately 5% from their 1996 peak, yet just 1% less than 1999.

Part of the cost to the beef industry of several years of tough prices has been a continued decline in the number of cattle operations and increased consolidation further up the market channel. These trends are shaping the future of the beef industry and producers' production and marketing strategies. The structure of the U.S. beef industry is becoming increasingly funnel-shaped with a large, but declining, base of dispersed cow operations and a shrinking number of feedlots, packers and processors. Nationally, the number of cattle and calves operations (an operation having one or more head of cattle on the farm at any time during the year) fell from 1.210 million to 1.095 million between 1996 and 2000, a decrease of nearly 10%. In Michigan, this number fell from 19,000 to 16,000, or approximately 16%. For beef cows, the number of operations in the U.S. fell by 6% between 1996 and 2000, but in Michigan the decline was more dramatic, a 15% decline from 8,500 operations to 7,200. In the feedlot sector, there continues to be a trend toward fewer and larger operations. Feedlots with 16,000 head or more capacity market approximately 60% of the fed cattle; three packers process roughly 75% of steer and heifer slaughter.

What does the changing structure of the beef industry mean for producers and how does it impact their management strategies? Doing all that you can to maximize profits by minimizing costs continues to be a critical component of any management strategy, but determining which supply chain your operation best fits into will become an increasingly important production and marketing strategy. Can you compete strictly on the basis of being a low-cost producer in a ***commodity*** business? Or, does the long-term viability of your operation require that your animals fit into a *product-oriented* market, one where quality specific attributes are preserved through retail? Those quality attributes include not only variables like taste, texture and juiciness, but also include such things as genetics, grazing and feeding practices, use or non-use of GMO feeds,

environmental factors and traceability. Because traditional government grades and standards have lagged consumer preferences, specialized market channels that define the entire beef system are evolving to fill the gap. With 2000 bringing an anticipated price recovery and a little less financial stress, this may finally be the time to seriously develop a marketing strategy for the future. Start by answering some of the difficult questions that will determine the future of your operation (for example, "what would I do if non-gmo feed had to be used on my farm," or "how can I provide a traceable record for my animals, from birth to slaughter that tracks owners, practices and health status," or "how much information do I have on the carcass quality of my animals and am I using that to make management decisions?") Asking the tough questions now will make you better prepared to create or meet opportunities to fit into a more narrowly defined beef market channel. Improved prices will buy some time, but they do not mean the long-term trend toward a product-oriented, tightly coordinated beef system has disappeared.

Beef is not the only livestock sub-sector struggling with evolving market channels and supply chain systems. After record-breaking low prices in 1998 and a dismal 1999, the term "profit" is finally on the horizon for pork producers. For most producers, futures prices are predicting break-even and above prices for a good portion of 2000 and 2001. Based on the December Hogs and Pigs Report, most industry experts are predicting year-average prices in the $39-$42 per cwt./ liveweight, barring any further surprises, of course.

As is the case with beef, the adjustments in the hog price have had costs attached. The big news in the pork industry is the purchase of Murphy Family Farms by Smithfield Foods that was completed last month. Just as most Midwest farmers struggled with low hog prices, so did Murphy's. Their marketing contracts with Smithfield were primarily based on the market price and did not protect Murphy's from the drop in live prices. Smithfield's purchase of Murphy's is consistent with what industry experts have been saying for the last couple of years -- larger operations or those with specialized fixed investments won't exit the industry, they'll just change hands.

Smithfield's purchase of Murphy's is just one example of the declining number of decision makers in the pork industry. Another is the fact that due to the loss of more than 15,000 pork operations (3,000 of these in Iowa), 1999 was the first time the number of U.S. farms with hogs dropped below 100,000, to 98,460. This number is 14% below 1998 and 17% below 1997. Roughly 87% of the operations that exited from pork production had inventories of less than 500 head. In Michigan, USDA numbers reveal a total of 800 fewer operations, or 28% fewer than a year earlier. Although there were some slight increases and decreases in the over 1,000 head categories, such changes offset each other and the full 800 can be attributed to operations with less than 100 head.

It is not just the number of operations that are declining, but the size of the breeding herd in the Midwest continues to decline as well, particularly in the Eastern Corn Belt. Between December 1998 and 1999, the breeding herd in Illinois dropped by 21%, and Indiana and Ohio dropped by 18% and 15%, respectively. When the 24% decline in Wisconsin's breeding herd is tossed in, Dr. Chris Hurt at Purdue University estimates that this could mean over four million fewer hogs in the Eastern Corn Belt in 2000. While Michigan's breeding herd remained stable

between December 1998 and 1999, the loss in the region's breeding herd will mean tighter supplies and smaller margins for packers. If packer margins turn negative for an extended period of time, we could see an acceleration of the exodus of packing and production facilities out of the Midwest and to the fringe states in the southwest.

The good news from these structural changes is that for those pork producers who were able to weather the storm, there should be the opportunity to see above break-even prices in 2000 and 2001. Evaluate your debt situation and be realistic about expanding or remodeling. Keep in mind that those folks who were heavily leveraged had greater difficulty making it through the 1998-99 crisis. In addition, be realistic in what prices you choose for your long-range planning -- chances are we won't see $60 hogs again, and certainly not for extended periods of time. Likewise, a few years ago, you may have considered a five-year average price of $42 per cwt. With all of the restructuring and refinancing going on in the industry, be cautious in your estimates and look at how your plans would work out under, let's say, $40 per cwt. average prices. Use this profitable period to make marketing strategies a top priority. As hog supplies get tighter this summer and packer margins begin to thin, look for longer-term marketing opportunities and relationships. Chances are that the packers who you sell to are going to be searching for ways to compete with the pork systems of Smithfield and Premium Standard Farms. To do so, they need to be product-oriented and have a reliable, consistent supply of live hogs. The time may be right to further develop those producer-packer relationships and plan for your long-term viability.

DAIRY SITUATION AND OUTLOOK
Larry G. Hamm and Sherrill B. Nott

In the future, dairy farmers will likely look back at 1998 and 1999 with fond memories. Milk prices were the highest and third highest of the decade. Per unit production costs actually declined slightly. Income per cow was high and harvested crop yields were pretty good in many areas. These good times have put in place a milk production supply momentum that will lower milk prices and cut dairy farm profitability dramatically. Historically, one of several switches will need to be pulled to stop the strong increase in milk production. The switches include the level of milk prices, the cost of milk production, and\or reduced consumer demand.

Supply Momentum

In 1999, milk production increased 3.4% to an estimated 162.7 billion pounds. This is the largest percentage milk production increase since the post milk diversion program days in 1985. Relatively high milk prices, combined with inexpensive feed, has led to a record high milk-feed price ratio. As a result, not only has per cow productivity been increasing dramatically but so has the size of the U.S. milking herd. Since November 1998, the number of milk cows in the 20 leading dairy states has increased constantly for over a year. Not since the days of twice yearly price support increases during the early 1980's have milk cow numbers increased for this extended time.

January rains and snows in the West have eliminated the drought threat to Western dairy production regions. Considerable new investment in dairy facilities have been planned or is in the process of being built. In the past, production momentum was driven by tens of thousands of dairy farms adding a few cows each. Stopping the production momentum was the reverse, i.e. many farms increasing culling rates. Given the specialized nature of today's modern dairy facilities, once planned, they usually are built and used. In all likelihood, they will more than absorb these cows and milk production being lost by smaller dairies leading the industry. Also, given the need to manage tax obligations, many of the dairy operations in the traditional dairy regions have purchased feeds and supplies to continue production through the first half of 2000. It is therefore likely that milk production for the year 2000 will be 165.5 billion pounds, a 1.7% increase over 1999.

Demand Momentum

The growth in dairy demand over the last several years has been spectacular. For 1999, the estimated that commercial disappearance of dairy products will be around 3%. By historical standards, this, and the 2.5% increase for 1998 when pulling against stagnant milk production, generated the recent profitable dairy years. Dairy demand remained strong despite higher prices for milk products. This reaffirms the long observed dairy market characteristic where very large price swings result from small shifts in the supply-demand balance. The strong demand for dairy products appears to be a direct consequence of the strong U.S. economy. Economic growth has been a much more significant factor for dairy demand than has milk price levels.

In order to prevent a total collapse in milk prices, dairy demand must continue to grow. Current projections are for continued strong growth in the U.S. economy albeit somewhat lower rate than the past two years. Consequently, commercial disappearance for dairy products is estimated to increase 20% in 2000. Therefore, a large drop in dairy demand will not likely be the switch that turns off the current milk supply momentum.

Price Outlook

The flood of milk hit dairy prices very hard at the end of 1999. The price outlook for 2000 is not good. Currently, the wholesale price of cheese is nearly at the USDA's price support level. Nonfat dry milk powder is firmly resting on the price support level resulting in significant government surplus purchases. Only butter appears to be a holding its own under the current supply conditions. Inventory levels for both butter and cheese are increasing. In fact, the commercial carryover stocks going into 2000 were nearly 7.0 billion pounds. This is an all-time record level of carry-over and stocks for the dairy industry and reflects the shift of inventory obligations from the government to the industry.

Given the Federal Milk Marketing Order (FMMO) reforms, producer milk checks are now directly linked to the wholesale markets for manufactured dairy products. It is unlikely that the wholesale price of nonfat dry milk will change during 2000. It is likely that both butter and cheese might see seasonal increases of up to $.30 per pound which will make them peak at levels substantially below their market highs in the past several years. It is important to follow the dairy product markets closely. Under the FMMO reforms, the basic price mover will now be the higher of the Class III (cheese market) or Class IV (butter – powder market) price for the month. Strength in any of the dairy product markets can now help increase milk prices on the farm. Even though every farm will receive a unique price based on the pounds of components shipped, price estimates are still being done on a per hundredweight basis in order to demonstrate the likely levels of milk prices.

The Chicago Mercantile Exchange (CME) is trading a Class III futures contract. Currently, traders are anticipating an average Class III price of $11.54 for the year. The consensus forecast from contributors to the Cornell University price forecast program is for an average Class III price of $11.53. Although there is considerable variation on the monthly price projections, the level of price predicted for 2000 is remarkably similar. The high-to-low price swing in 2000 will likely be around $2.50, substantially less than the $6.50 in 1998 and 1999. These price forecasts are nearly a dollar lower than the average Basic Formula Price (BFP) for 1999. Consequently, the average all milk price for Michigan will be somewhere around $13.00. Given the relatively good economic condition that many dairy operations entered in 2000, these price levels are not likely to be the switch that turns off the supply momentum this year. However, these price levels, combined with a significant increase in production costs, start a production pull back.

Production Cost Outlook

Expect to see unit costs increase during the year 2000. In the following, cost index numbers from the USDA's "Agricultural Prices" will be cited. The index base = 100 is for 1990-92. The index of prices paid by farmers for all items reached about 120 in late 1997 and stayed there during 1998, but dropped down to about 115 during 1999. By December 1999, the index reached 117 and appeared to be increasing.

Since mid-1998, the index for all purchased feed prices has stayed around 100, after peaking at 140 in 1996. For a variety of reasons, recent feed prices have been relatively low, but they may well move higher in 2000. In his January 24 release, Darrell Good (outlook economist at the University of Illinois) said "Several factors continue to provide support for corn, soybean and wheat prices .... the most important factor will be U.S. weather conditions." A crop seller will welcome this news of support, but feed buyers will not. Dairy farmers will need to include higher purchased feed prices when budgeting for the coming year. Other papers in this series will help indicate the magnitude and likelihood of the possible changes in crop/feed prices.

By December 1999, the index of wage rates was 135, and the index of farm machinery was 133. The wage index has been increasing faster than the machinery index since 1996. These relative levels continue to favor the substitution of machinery for labor on dairy farms. Both of these indexes are well above the index for all costs. Labor and machinery depreciation are often the second and third largest cost items on dairy farms, and as a result, will continue to require considerable management attention.

The fuel index of prices farmers paid was 68 in December 1998. By December 1999, it was up to 122, higher than it had been any time since 1992. This is indicative of the price for crude petroleum being experienced in early 2000. The Organization for Petroleum Exporting Countries (OPEC) has held down supplies as world demand increased. If OPEC continues to be successful in their production restraint, oil prices could go up some more. Although gas and diesel are a relatively small portion of total costs on most dairy farms, remember that many inputs to the agricultural economy depend on oil as a raw material. Electricity, nitrogen fertilizer and transportation of products come to mind. Forecasting OPEC actions may be as important as forecasting weather in the coming months.

Interest rates have been pretty stable since 1992, with the index reaching 110 in December 1999. Higher interest rates are a major tool the Federal Reserve may use in the coming months to fight what appears to be increasing forces of inflation. Interest rates could increase noticeably during 2000 causing farmers with higher debt levels to have increasing cash outflows even if loan balances stay the same.

The supply momentum will continue to support higher replacement animal prices through much of 2000. Replacement and other animal sales typically run about 15% of gross income from ordinary farms. The unfolding TB situation requires closer monitoring in the coming year.

Policy Issues

The past year was a momentous policy year for the dairy industry. The best FMMO reform was implemented. Two pieces of unfinished business will need to be resolved in 2000. First will be the requirement that the USDA implement a pilot program for individual producer production/price contracts within the context of the FFMO's. Second, national hearings will need to be held to discuss the level of the "make-allowance" for cheese and other changes to the Class III and Class IV formulas in the new FMMO pricing rules. Although Congress would like to avoid any more dairy policy debates in 2000, the income situation in the dairy industry will likely result in further discussions on dairy policy. The dairy price support program was extended one year from December 31, 1999 until December 31, 2000. That extension is currently saving dairy producers hundreds of millions of dollars by preventing even lower manufactured dairy product prices. Dairy farmers are also in the second year of direct government payments. It is likely that election year realities will result in the one or both of these issues being debated this year.

Conclusions

Michigan producers can look forward to a much lower net income in 2000. Significantly lower milk prices, combined with modestly higher input costs, will significantly impact dairy profitability. The current Outlook does not foresee a significant price improvement until sometime in late 2001. If the economic boom continues, dairy product demand should help keep dairy markets at levels which will keep enough milk coming to the market. However, any significant decline in the dairy consumption will result in the supply momentum overtaking the U.S. dairy industry. Michigan dairy producers will, therefore, have a large stake in the likely debate on the extension of the dairy price support program for another year(s).

TRENDS IN THE MICHIGAN FRUIT INDUSTRY
Donald J. Ricks

The two largest fruit crops in Michigan, apples and tart cherries, are shown by the latest fruit orchard survey to comprise 84% of Michigan's tree fruit acreage. The orchard survey data also show that the trend toward an increased concentration of Michigan's tree fruit industry into apples and tart cherries is continuing.

Tart Cherries

Michigan's bearing acres of tart cherries have been trending downward. Future projections indicate that Michigan's bearing acres are also likely to continue to decline during the next five years -- but probably at a somewhat slower rate than during recent years. Projections of acreage in other tart cherry producing states also show some continued future declines, but at slower rates than recently.

In addition to bearing acreage, yields per acre is also a very important factor which influences the industry's production and market supplies. While yields fluctuate considerably from year to year depending upon the impact of variable weather conditions, average yields in Michigan during most of the 1990's have been quite high. These relatively high yields per acre have been influenced by a number of factors including (1) an unusually high percentage of the orchards which are in their prime bearing ages, (2) a set of effective modern production technologies including the use of gibberellic acid, and (3) effective overall management practices by many top notch cherry growers. Some of these factors will likely continue to contribute to relatively high yields per acre in future years. On the other hand, as the existing orchards age, the age distribution factor may result in some reduction of average yields because more orchards will be in their advanced-age stages of their life.

The industry's production of tart cherries will likely continue to fluctuate from year to year depending upon the influence of the weather. Along with these annual fluctuations, the overall trend in industry production during the next five years will likely be downward somewhat because of the declining bearing acres. If average yields per acre remained relatively high, this yield factor may somewhat blunt the impact of the declining acreage. Because of the acreage trends, it seems likely that any huge industry production and market surpluses are less likely to occur during the next five years than during the last five to 10 years. Nevertheless, temporary surplus supplies may occur in certain years.

Overall demand for tart cherries has been trending upward during the 1990's. There seems to be good potential for continuing increases in demand for tart cherries during the next several years, particularly for some of the newer market segments. The overall demand growth potential for tart cherries is likely to be enhanced by the recent information on the healthful properties of this important Michigan fruit crop. It is important for the tart cherry industry to continue their progress in developing and implementing various demand expansion strategies in order to take advantage of the potentials for continued demand growth for the industry.

School lunch purchases by USDA have been a significant component of overall demand for tart cherries. It is important that this component of the market for tart cherries continues with substantial volumes. School lunch purchases are likely to be especially important for this year as well as during the next few years. Development of cherry products that are well adapted to the needs of schools and their children "customers" will be an important aspect of contributing to the future demand potential for this market segment.

Apples

Michigan's apple acreage has declined somewhat recently as growers have taken out some of their poorer blocks in response to low economic returns. Some continued decrease in bearing apple acreage may continue during the next several years. The trend toward increasing yields per acre on the existing acreage is likely to continue and perhaps will increase at a faster rate than during the last 10 years. Even with the somewhat smaller bearing acreage, Michigan produced a large crop of apples in 1999 because of high yields per acre. This illustrates the trend toward higher grower efficiency and larger yields per acre.

The importance of producing and marketing high quality apples, especially for fresh market, will continue in future years. The Michigan apple industry has shown some excellent overall increases in performance in regard to fresh market quality during the last several years. This has resulted in increased customer satisfaction by both grocery retailers and consumers for Michigan apples. This contributes to increasing demand for Michigan apples. It is important for the Michigan industry to continue to have this kind of progress and high performance in supplying the market with high quality apples, especially in regard to fruit condition.

An important strength of the Michigan apple industry has been, and will continue to be, the combination of substantial markets for both fresh and processing apples. The markets for both processing and fresh apples from Michigan will continue to be influenced substantially by national and international supply and demand conditions and by the competition in other U.S. apple producing regions as well as internationally. The recently successful anti-dumping suit in regard to imported Chinese apple juice concentrate, which was accomplished by the U.S. apple industry, will likely continue to have a positive effect on markets for apple juice and processing apples during the next several years. The Michigan apple industry also needs to continue to develop and implement various strategies which will help to strengthen the economic position of Michigan growers, processors, fresh packers, and shippers.

MICHIGAN FARM INCOME OUTLOOK FOR 2000

John (Jake) Ferris

In reviewing my farm income outlook for 1999 published a year ago, I was a bit surprised that the forecasts for cash receipts from marketings were relatively close. Only on corn and hogs were the projections somewhat out of line and on the high side. However, one cannot take much satisfaction in knowing that behind the forecasts were offsetting errors. The price forecasts were uniformly too high on crops and the production forecasts were too low. The latter error can be explained by the excellent weather for growing and harvesting 1999 crops in Michigan. Cash receipts from farm marketings for major livestock and crop enterprises are presented in Table 1. The data for calendar 1998 were obtained from Michigan Agricultural Statistics Service (MASS) and the Economic Research Service of the U.S. Department of Agriculture. The receipts for 1999 and 2000 are my estimates and projections.

Yields on all the major field crops were above trend except on hay. MASS estimated the 1999 corn crop averaged a record 130 bushels per acre! This is 18 bushels above trend, exceeding the previous record of 117 bushels realized in 1994 and 1997. Yields of corn silage averaged 17.5 tons, well above the previous record of 15 tons in 1995. Wheat yields, at 69 bushels per acre, were also a record, and 15 bushels above trend. Dry bean yields, at a record 21 cwt. per acre, were 5 cwt. above trend. Soybean yields, at 40 bushels equaled a previous record. Yields on sugarbeets (18.6 tons) and potatoes (310 cwt.) were not records, but were still above their respective trends. Only with hay (3.4 tons) did yields average somewhat below trend.

Had Michigan crop yields been at their trend levels in 1999, gross cash receipts would have been more than $130 million lower than is currently being realized by farmers. The loan rates on corn, soybeans and wheat are effectively setting a lower bound on prices and, for the high proportion of farmers participating in the program, the large crops are not being offset by lower receipts per bushel. Parenthetically, the cash receipts from farm marketings for 1998 to 2000 in Table 1 do not include government payments and, because they are on a calendar year basis, represent the combination of sales from two crops. That is, the 1999 marketings include sales from both the 1998 and 1999 crops.

While large crops within the state weigh down on their respective markets, prices are primarily determined by the national and world supply-demand balances which have been the major contributors to the depressed markets. For this reason, prices on corn, wheat and soybeans dropped below their loan rates, providing farmers with opportunities to obtain loan deficiency payments. These payments, in addition to emergency programs (Market Loss Assistance and Crop Loss Disaster Assistance) and the ongoing payments under the Production Flexibility Contracts and Conservation Reserve, boosted this income source to $359 million in 1999 compared to $208 million in 1998 (Table 2). This was about $200 million more than was forecast in January 1999.

With normal weather and yields on crops in 2000, production is expected to decline relative to 1999. Taking into account projections for supply-demand balances in the national market, prices on 2000 crops would be expected to average higher than on the 1999 crops. Such

a combination will tend to be offsetting in calculations for cash receipts from farm marketings as shown in Table 1. However, loan deficiency payments would likely drop off and total government payments to farmers would decline sharply on 2000 crops. This would reduce the calendar year government payments by over $100 million as shown in Table 2, unless additional emergency assistance measures are passed by Congress.

The price received by farmers for milk declined in 1999 as forecast at the beginning of the year, but held about a dollar per cwt. higher than expected. Production fell short of anticipation, leaving total sales near the $800 million level projected. With the prospect of a drop in milk prices by around $2 per cwt. in 2000, cash receipts in dairy are projected to decline over $100 million. Somewhat offsetting should be higher returns from hogs. Michigan farmers intend to expand production in 2000 and prices should average noticeably higher than in 1999.

The perspective provided on cash receipts from marketings in Table 1 is that sales of both livestock and field crops declined in 1999 relative to 1998. Increased receipts from fruit and likely from greenhouses/nurseries (data yet unavailable) brought the total from crops to a level slightly above 1998. Prospects for the year 2000 are that receipts from livestock will decline by about 5% more than offsetting a 2% increase in crop sales.

The income data shown in Table 2 includes as receipts "gross imputed rental value of farm dwellings." The Economic Research Service of the U.S. Department of Agriculture no longer calculates a pure net cash income. Because some of the cash expenses relates to the farm dwelling, the imputed rental value of farm dwellings was added to cash receipts to properly account for those expenses.

With both cash marketing receipts and government payments increasing in 1999, gross income to Michigan farmers is estimated to have been about $4,330 million, 4-5% higher than in 1998. Prospects that these items will decline in 2000 translates to about a 3-4% drop in cash receipts, plus the imputed rental value of farm dwellings. Cash expenses, estimated at about $3,342 million for 1999, were up 2% from 1998. With accelerating energy prices and higher interest rates, a larger increase in cash expenses is seen for 2000, some 3-4% higher than in 1999.

Net cash farm income (including imputed rental value of farm dwellings) in Michigan for 1999 is estimated at $988 million, about $125 million, or 15% higher than in 1998 (Table2). Note that the $359 million in government payments represented about 8% of gross income and 36% of net cash income in 1999. With declines in cash receipts from both marketings and government payments, in combination with accelerating expenses, a noticeable decline in net cash income is in prospect for 2000 -- by nearly a quarter of a billion dollars, or 25%! This, of course, assumes normal weather and no emergency farm legislation.

Table 1. Cash Receipts from Farm Marketings in Michigan, Calendar Years 1998, Estimated 1999, Forecast 2000*

Enterprise	1998 mil. $	1999 mil. $	2000 mil. $
Livestock			
Dairy	821	802	685
Cattle and Calves	197	215	214
Hogs	141	136	185
Eggs	58	52	46
Other	106	87	91
Total Livestock	1,323	1,292	1,221
Field Crops, Vegetables and Other			
Corn	354	302	311
Soybeans	376	348	363
Wheat	75	85	81
Dry Beans	97	109	101
Sugarbeets	107	144	152
Potatoes	88	84	94
Hay	37	35	45
Vegetables	262	257	261
Other	73	74	75
Total	1,469	1,438	1,483
Fruit	214	264	241
Greenhouse/Nursery	475	506	525
Total Crops	2,158	2,208	2,249
GRAND TOTAL	3,481	3,500	3,470

*Data for 1998 obtained from the Michigan Agricultural Statistics Service, Michigan Department of Agriculture, and the Economic Research Service, USDA.

Table 2. Cash Farm Income in Michigan, Calendar Years 1994-2000*

	1994	1995	1996	1997	1998	1999	2000
			Million $				
Gross Cash Income							
Farm Marketings							
Crops	2,003	2,262	2,152	2,234	2,158	2,20	2,24
Livestock	1,400	1,353	1,466	1,365	1,323	8	9
Government Payments	102	151	110	121	208	1,29	1,22
Farm Related Income	112	117	121	154	140	2	1
Dwelling Rental Value	226	258	275	294	309	359	225
						147	155
						324	339
Total	3,843	4,141	4,124	4,168	4,138	4,33	4,18
						0	9
Cash Expenses	3,019	2,966	3,019	3,312	3,276	3,34	3,44
						2	9
Net Cash Income**	824	1,175	1,102	856	862	988	740

*Data for 1994-98 obtained from Michigan Agricultural Statistics Service, Michigan Department of Agriculture, and the Economic Research Service, USDA. Values for 1999 are estimated and values for 2000 are forecast.

**Including imputed rental value of farm dwellings.