Staff Paper

ANNUAL AGRICULTURAL OUTLOOK

Coordinated by:
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THE GENERAL ECONOMY IN 1998
Lester V. Manderscheid and Robert J. Myers

Most economists expect the U.S. economy will continue to grow with the output of goods and services expanding about 2.2 to 2.4% for 1998 over 1997. Unemployment will be near current levels, but may move up in the latter part of the year. The Consumer Price Index will increase about 2.2 to 2.4%.

Interest rates are expected to vary little from recent levels, but economists differ sharply on this forecast. Some believe that the Federal Reserve system will increase interest rates by as much as 1.5 points during 1998 in an attempt to insure price stability. Others believe that the economic crisis in Asia will reduce demand for U.S. exports and make imports less expensive putting enough downward pressure on prices to achieve price stability without increasing interest rates.

Stock market prices increased by more than 20% for the third consecutive year in 1997. Despite the pullback in the last quarter of the year, stocks still appear overvalued based on historical price-earning and price-dividend ratios. A continuation of low interest rates may allow the stock market to post modest gains in 1998, but few analysts expect 20% gains to continue. Rather, there appears to be a downside risk since either an interest rate rise or unexpected economic slowdown could send stock prices significantly lower.

Consumer confidence was at record highs at the end of 1997. While this confidence bodes well for the economic outlook, a swift stock market correction, interest rate increase, or economic slowdown could severely test consumer optimism. Pessimists are saying that, psychologically, the economy cannot continue expanding in spite of the fact that almost no market analysts expect a recession in 1998.

The economic crisis in Asia has brought massive intervention by the International Monetary Fund. An indication of the crisis is the decline in Asian stock markets. For 1997, the decline was 55% in Thailand, 52% in Malaysia, 42% in South Korea, and 37% in Indonesia. These declines are in terms of local currencies. A major concern is how many additional countries might be affected. It now appears that the basic cause of the crisis was a major use of short-term loans to invest in long-term projects. For example, an office building constructed using money borrowed for three years on the assumption that the loan could be refinanced. However, if offices are being built faster than the demand for space, the lender may be unwilling to refinance on the same terms.

A further problem was that many of the loans were written in dollar amounts. When the local currency was devalued, it required more local currency per dollar to be repaid.

What is very uncertain is the effect on the Asian banks that made the loans. Little is known publicly about the terms of refinancing. For example, are loans being partially forgiven? What is happening to bank reserves and the soundness of the banking systems in various countries? The massive intervention by the International Monetary Fund to fund the countries

and to require changes in economic policies was important to reduce the spread of the crisis. In 1998, we could see other countries in trouble and the U.S. may become even more involved in helping to "bail out" some countries to avoid a major financial collapse that might spread into a world-wide recession. Such a recession could have major implications for the U.S. economy in 1999 and beyond.

FARM LOAN RATES TO REMAIN STABLE IN 1998

Steve Hanson

Interest rates in the general economy were mixed during 1997, while rates on farm loans remained stable during the year. Table 1 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, increased nearly 1/2% during 1997; while the prime rate, the loan rate banks charge their best customers, increased 1/4% during the year. Both of these rates are for short-term borrowing. The 90-day CD rate increased slightly during the year and the 90-day T-bill rate has remained essentially unchanged from a year ago. In contrast, interest rates on three-year corporate bonds fell by nearly 1%, and 10-year and 30-year T-bond rates each fell by more than 1% during the year. The pattern during the year is that short-term interest rates remained stable or increased slightly, while longer-term rates saw relatively large decreases.

Comparing the 90-day T-bill rate (5.03%), the 10-year T-bond rate (5.49%), the 30-year T-bond rate (5.75%) shows us the current "term structure" for government securities. The current term structure is very flat, suggesting that investors in the market believe interest rates will remain stable in the future. Because government securities are typically thought of as containing little or no default risk inflation expectations are a key factor in determining the term structure. The relatively flat term structure suggests the market believes inflation will remain steady in the foreseeable future.

Interest rates for farm loans have remained stable during 1997. Table 2 reports the September rates for operating loans, feeder cattle loans, and real estate loans from commercial banks in the Seventh Federal Reserve District Banks (Illinois, Indiana, Iowa, Michigan, and Wisconsin).

The average rate charged by commercial banks for operating loans at the end of September was 9.71%, while the rate charged for real estate loans averaged 8.76%. Both rates were essentially unchanged from the rates in the previous year. The rates in Michigan were the highest reported in the Seventh District, averaging 10% for operating loans and 9.39% for real estate loans at the end of the third quarter in 1997. Based on a survey of bankers, the Federal Reserve Bank of Chicago reports that the demand for farm loans in Michigan remained generally stable during the third quarter of 1997. In addition, bankers in Michigan report some tightening of available funds for farm loans in the third quarter. Relatively tight credit conditions in the State may offset the downward influence interest rates in the general economy have on farm loan rates. Look for interest rates on farm loans in 1998 to remain steady, or decline slightly if long-term rates in the general economy continue to remain low throughout the year.

Table 1. Key U.S. Interest Rates

Rate Type	Week Ending January 9, 1997	Week Ending January 9, 1998
Federal Funds Rate	5.28%	5.74%
Prime Rate	8.25%	8.50%
90-day CD	5.43%	5.58%
90-day T-bill	5.03%	5.04%
Corp. AAA Bonds (3 yr.)	7.42%	6.55%
10-year T-bonds	6.57%	5.49%
30-year T-bonds	6.80%	5.75%

Source: Indiana Business Bulletin.

Table 2. Interest Rates for Farm Loans in the Seventh Federal Reserve District

Loan Type	End of September 1996	End of September 1997
Operating Loans	9.70%	9.71%
Feeder Cattle	9.68%	9.69%
Real Estate	8.80%	8.76%

Source: Federal Reserve Bank of Chicago.

TRADE AND POLICY OUTLOOK

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

Though the outlook for U.S. agricultural exports remains positive, particularly for high-value food products, there is increasing uncertainty about the potential impact of the Asian financial crisis on U.S. agricultural exports. With the situation changing daily, recent estimates suggest that U.S. agricultural exports to the region will at best remain steady. As the outcome and dimensions of the crisis unfold later this year, the uncertainty associated with Asian markets is likely to dominate an otherwise strong international outlook for U.S. agricultural exports. Consequently, this outlook report, based on the most recent USDA projections released in December 1997, contains a greater degree of uncertainly than in most years. We will continue our analysis of the impact of the Asian financial crisis in futures issues of the *Michigan Farm News*.

U.S. Agricultural Trade Outlook

U.S. agricultural exports are expected to reach $58.5 billion in 1998, an increase of $1.2 billion over 1997. Export volumes are expected to remain strong in most product categories, with increased exports of wheat, meats, and horticultural products contributing most of the growth in exports. The export volume of soybeans and soybean meal is expected to remain strong, but lower prices are expected to leave the export value of these products unchanged. Exports in several product categories are expected to increase in 1997. Livestock exports, led by an increase in meat exports, are expected to increase by $400 million to $8.2 billion in 1998. Within the livestock category, only dairy exports, at $800 million, are expected to remain unchanged in 1998. Fruit and vegetable exports are expected to set a new record for both the volume and value of exports, reaching $11.2 billion, or $600 million more than in 1997. U.S. agricultural imports are expected to reach $38 billion in 1997, or $2.2 billion greater than in 1997. Increased imports of horticultural products will account for most of this increase, with fruit and vegetable imports increasing by $1.7 billion to a projected $14.4 billion. Canada ($7.7 billion) and Mexico ($4.2 billion) are projected to continue as the two largest suppliers of U.S. agricultural imports.

Despite the impact of the Asian financial crisis, Asia will remain the largest regional market for U.S. exports, accounting for $23.6 billion of U.S. agricultural exports. Japan remains the largest customer for U.S. agricultural exports, purchasing a projected $11 billion from the U.S. in 1998. Canada will continue as the second largest customer at $6.6 billion, and Mexico will continue as the United States' third largest export market at $5.8 billion, nearly $700 million higher than in 1997. U.S. agricultural exports to Mexico have shown a strong recovery from the 1994 devaluation of the Mexican peso. Exports to Mexico were $3.6 billion in 1993, the year prior to the approval of the North American Free Trade Agreement, and then increased to $4.5 billion during the first year of the agreement. Following the devaluation of the Mexican peso in November of 1994, which made U.S. products more expensive for Mexican consumers and reduced the incomes of many consumers, U.S. exports declined to $3.7 billion. As the Mexican

economy has shown signs of recovery, and as Mexico has changed its domestic agricultural policies, U.S. exports have recovered, reaching $5.1 billion in 1997.

Trade Policy Outlook

With last year's defeat of President Clinton's request for "fast track" trade negotiating authority, no major progress is expected on new trade agreements in 1998. A variety of other trade issues will remain visible on the policy agenda in 1998. This year will mark the tenth and final year for the implementation of the U.S.-Canadian Free Trade Agreement signed in 1988. With its implementation complete, all tariffs, except those on dairy and poultry products (which were not included in the agreement) have been eliminated. Trade issues relating to phytosanitary issues, wheat products, and some livestock products will continue to arise and must be resolved on a case-by-case basis.

The major issue facing agricultural trade this year will be the continuing financial crisis in Asia and the impact of the crisis on those countries' demand for U.S. agricultural exports. The management of this financial problem could be the most important determinant of U.S. agricultural export growth during the coming decade. A 1996 study by the USDA projected that a majority of the growth in world food markets by the year 2005 would occur in Asian markets. Is some cases, particularly in meats, there is little growth in demand projected in countries outside of Asia. For example, Asian countries were projected to account for 63% of growth in world beef demand, 87% of growth in world pork demand, and 93% of growth in world poultry meat demand (Table 1). Asian countries dominate the list of the 20 fastest growing markets for U.S. exports (Table 2).

With this heavy reliance on Asia as a source of growth in food demand, the Asian financial crisis is particularly troublesome for U.S. agriculture. The crisis can be expected to affect U.S. agricultural exports in at least two ways. First, if the crisis leads to an on-going recession in several Asian countries, slower income growth will ultimately lead to slower growth in the demand for food. This outcome will be particularly true for meat products and other higher-value food products.

The second effect of the crisis will be felt in the devaluation of the currencies of some Asian countries. The value of some Asian countries' currencies have fallen over 50% against the U.S. dollar in the past year. This depreciation of their exchange rate with the U.S. dollar will make U.S. exports to the region more expensive for Asian consumers, once again reducing the export growth potential for U.S. agriculture. While the projected levels of U.S. agricultural exports to Asia reported above for 1998 did account for some of the impact of the financial crisis, the continuing evolution of the problem and worsening depths in some countries may have a larger impact on exports than previously expected. Thus, the projected imports to the Asian region may be adjusted downward if he situation worsens later this year.

Table 1. Annual Import Demand for Grains, Soybeans, Meats and Cotton, World Total and Asian Region, 1992-1995 Average and 2005 Projected (1000 tons)

	1992-1995 Average	2005 Projected	Increase, 1995-2005	Southeast Asia Share of World Increase 1995-2005
Wheat				
World	99,063	121,352	22,289	
Southeast Asia	27,678	40,859	13,181	59%
Coarse grains				
World	87,383	117,364	29,981	
Southeast Asia	42,343	63,050	20,707	69%
Rice				
World	15,679	19,638	3,959	
Southeast Asia	5,738	5,551	-187	-5%
Soybeans				
World	30,501	36,240	5,919	
Southeast Asia	10,271	13,979	3,708	63%
Soybean meal				
World	29,973	37,397	7,424	
Southeast Asia	4,206	6,857	2,651	36%
Beef				
World	3,011	3,938	927	
Southeast Asia	1,036	1,620	584	63%
Pork				
World	1,690	2,181	491	
Southeast Asia	1,012	1,437	425	87%
Poultry meat				
World	2,559	5,021	2,462	
Southeast Asia	1,277	3,556	2,279	93%
Cotton				
World	6,190	7,206	1,016	
Southeast Asia	2,607	3,255	647	64%

Source: U.S. Department of Agriculture.

Table 2. Twenty Fastest Growing Markets for U.S. Food and Agricultural Exports, 1995 to 2000[1]

Asian Region	**Western Hemisphere**
Australia	Canada
China	Brazil
Hong Kong	Mexico
Indonesia	
Malaysia	**Middle East**
Japan	Algeria
Philippines	Egypt
Republic of Korea	Saudi Arabia
Singapore	
Taiwan	**Europe**
Thailand	European Union
	Russia
	Turkey

[1]Countries listed in alphabetical order by region.
Source: U.S. Department of Agriculture.

1998 OUTLOOK FOR PRODUCTION INPUTS

Chris Peterson

Across the range of production inputs, the news is as good as it has been for a number of years. Fertilizer, agri-chemicals, and petroleum all appear to have stable to slightly downward price trends, and seed prices look flat over last year.

Fertilizer

With no anticipated supply difficulties on the horizon, nitrogen supplies are strong and prices are flat to soft. These may be the most reasonable nitrogen markets in a decade. Phosphates are also in good supply with prices expected to be flat.

Only potash appears to be a concern this year. A number of older mines have shut down and supply is held in the hands of a very few firms. Some suppliers are allocating supplies to dealers with some expectation that spot shortages may occur. Prices will likely be up.

Chemicals

Chemical supplies are more than adequate with likely flat to downward moving prices. The price pressure will probably be most intense for those products trying to keep market share again producers converting to Round-up Ready crops.

Chemical demand is becoming more difficult to predict with the introduction of bio-engineered crops. Such crops have shown some mixed yield results, yet producers appear to be making selective use of Bt corn and Round-up Ready crops, especially soybeans.

Longer-term forces are still at work in the chemical sector. Continued downward pressure on demand will come from environmental regulations as more lower-use cultivation practices continue to increase. Many manufacturers continue expensive biotechnology research. Chemical firms are increasingly moving into seed markets as they perceive their traditional markets declining.

With increasing environmental concerns about fertilizers and chemicals, and the convergence of the chemical and seed industries through biotechnology, it will become increasingly difficult to view the outlook for fertilizers, chemicals, and seed as distinct issues. Agribusiness dealers and retailers are increasingly offering and seeing demand for unified programs that combine fertilizer, chemicals, seeds, custom application, and full-line agronomy advice into a package. Producer movement toward precision (site-specific) agricultural practices and more use of post-emergent agri-chemical applications have increased the demand for custom application services rather dramatically. Producers need to increasingly weigh the advantages of independent input decisions versus the potential advantages of working with a specific dealer who can provide a full range of services tailored to producer need.

Seeds

Generally, traditional corn and soybean seed supplies should be adequate with prices rather flat. There may be some tightness in the supply of specific bio-tech seeds, but supplies appear to be adequate generally. The bio-tech seeds do carry higher prices than traditional seed with premiums similar to last year. The full impact of Bt corn and Round-up Ready soybeans will take several years to determine, and their adoption will be among the most closely watched trends in the seed industry. In Michigan, producer adoption appears to be advancing at a steady, but cautious rate.

Energy

Nationally and locally, fuel supplies should be good this year. Inventories appear to be at very high levels with refineries operating near capacity. Crude prices are at their lowest levels in a number of years. Fuel prices should be down this year versus last by 5 to 8 cents a gallon. The situation in the Middle East is the wild card in fuel markets. OPEC production is up but the situation in Iraq remains uncertain.

FARMLAND VALUES PROJECTED TO CONTINUE UPWARD TREND

Steve Hanson

Michigan farmland values extended their string of consecutive increases to over a decade with another strong showing in 1997. The annual land value survey conducted through the Department of Agricultural Economics at Michigan State University last spring found high quality corn-soybean-hay land averaged $1,300 per acre (up 8.1%), while low quality corn-soybean-hay land averaged $917 per acre (up 8.4%) in the southern half of the lower peninsula. Sugarbeet land averaged $1,758 per acre (up 5.3%) and irrigated land averaged $1,414 per acre (up 10%). The November Federal Reserve Bank of Chicago survey of agriculture bankers found that Michigan farmland prices were up 7% for the period October 1, 1996 to October 1, 1997 in the southeast part of the lower peninsula. The study also found farmland prices increased by 1% in the third quarter of 1997. Last year's jump in farmland prices marks the 11th consecutive year of price increases in the State. According to USDA statistics, the last time farmland values in Michigan experienced a year-to-year decline was January 1, 1987.

The last several years have seen particularly strong gains in farmland prices. Look for solid demand for farmland again in 1998 and a modest-to-strong rise in farmland prices during the year. Several years of strong returns to crop producers and hog farms should put many producers in a financial position to expand if the opportunity arises. Some of the demand may be dampened by recent weakness in corn, soybean, and hog prices which may lead some farmers to lower estimates of expected future returns. Typically the value of farmland in Michigan is more directly impacted by crop returns than livestock returns, but the recent poor returns to dairy and cattle operations may also weaken the demand for farmland in some areas. In the November Federal Reserve study, surveyed bankers anticipated the demand for farmland and the number of transactions would increase over the winter months throughout the Seventh Federal Reserve District (Illinois, Indiana, Iowa, Michigan, Wisconsin).

An increasing concern in many areas is the impact of development pressures on farmland prices. Pressure to develop farmland for residential, commercial, recreation purposes continues to push the price of land above its agriculture-use value in some areas. The Michigan State University survey last spring found that the non-agricultural-use value of undeveloped land in the southern lower peninsula was $2,096 per acre for recreational development, $4,568 per acre for residential development, and $10,897 per acre for commercial development. Even when there is no intention of immediately developing land in a particular area, the possibility of future development can drive the price of farmland above levels that can be justified by agriculture-use valuation.

Look for development pressures, particularly for residential purposes, to continue to intensify in a number areas, causing upward pressure on surrounding land values. Other factors having significant impacts on prices in particular areas include: premiums paid for land by consolidating farm businesses attempting to expand; premiums for land used to produce specialty crops; premiums paid for irrigated or tiled land; and premiums paid for fields based on proximity or size.

As land prices continue to rise, investors may need to become more selective in their farmland transactions. Before buying or selling farmland, be sure to determine the land's economic value. In determining the economic value of farmland, it is important to *capitalize* the future cash flows expected to be generated by the land. A starting point is to estimate the future cash flows the land will generate in its designated agricultural use. This can be done using expected cash rental rates for the land or by projecting cash flows from farming the land. These expected cash flows should then be *discounted* to today's dollars using the appropriate discount rate. The discount rate should reflect the rate of return you could earn elsewhere on investments of the same "risk" level. This will give you the "present value" of the land or the amount it is worth in today's dollars. In principal, you should not pay more than the present value of the land. However, in some cases there may be economic justification for paying more than the simple present value of the land. For example, if you have the option to develop the land at a future date, or switch production practices on the land in the future, the present value of the land may actually be higher than calculated for a particular agricultural use.

ANNUAL CROP OUTLOOK
Jim Hilker

Corn

The 1998 corn price outlook looks good from a longer-run historical standpoint, but will likely be lower than the last two years. However, there are a number of undecided factors that could create large swings in the market. As we look at the corn outlook for 1998, we have to look at two crop marketing years, 1997-98 and 1998-99. The numbers for the analysis are shown in Table 1, the Supply/Demand Balance Sheet for Corn.

We started the 1997-98 crop with about a half-billion more bushels of supply than the previous year. This was due to slightly higher production and larger beginning stocks. What happens now depends on demand. The first USDA quarterly Stocks Report showed very high feed use. It appears livestock producers will feed around 9%, 490 million bushels, more corn this marketing year than last. Approximately 140 bushels is due to lower use of other feed grains, but this still means an extra 6-7% more feed grains being fed.

The extra need for feed grains is fairly easy to explain. We expect pork production to be up 8-9% in 1998, and it was up 6-7% this past fall. Cattle-on-feed has been up 10-11% since the marketing year began. While we expect to drop off soon for the remainder of the year, a lot of extra corn will have already been fed. Poultry production will be up 5-6% over the period.

Food, seed, and industrial use is another strong use area for corn this year. After taking a real hit in 1995-96 when corn went over $5.00, the ethanol market is back on the mend. And, the HFCS sweetener market keeps growing at a 5% clip. We also will use a bit more for food.

The export market is the weak link in this equation, as it was last year. We started off with high hopes due to the rest of the world's coarse grain production being down and animal numbers being up. Corn exports are running sharply below last year, and while we expect exports to pick up the second half of the year, it is unlikely that they will reach last year's level. It appears that much of the world's feed needs will be met by the large world wheat crop. Another important factor is the economic problems in the Pacific Rim, our biggest taker of corn.

The bottom line is larger use than last year and slightly lower ending stocks. Typically, an ending stocks-to-use ratio of 9.3% would mean annual average prices of about $2.75. However, due to the large amounts of corn already sold for less than that, the weighted average will be closer to $2.65, if these numbers hold.

This level of stocks is right on the border of tight. If it appears we could have a crop shortfall this summer; prices could jump sharply and vice-versa.

In column three of Table 1 is a projection of the 1998-99 corn crop year. Corn acreage is expected to grow a bit this spring and the 1998-99 production projection assumes a trend yield. As shown, this will give us a larger supply. Feed use will likely drop off some. Returns to hog

producers will have remained low for an extended period and production will likely drop off. Cattle numbers will still be dropping. The only expansion will be poultry.

Food, seed and industrial use is expected to continue to grow. The biggest unknown is whether exports will rebound. The expectation is they will grow modest from this year, but not return to their previous high.

This analysis then suggests that the 1998-99 ending stocks-to-use ratio will grow slightly and therefore corn prices will drop off some. The big question is, will El Niño have an effect on yields, and will that effect be positive or negative? Or, in other words, the weather, both in the U.S. and the world, still rules. However, we still have to plan and make decisions on the best available information.

Wheat

A large U.S. wheat crop, along with a large world wheat crop, is not a good scenario for wheat prices. Yet that is where we are, and without some unforseen change, it is not likely to change much over the next year. We began the year last June with healthy beginning stocks and will end the marketing year with 50% more. The numbers that match this analysis are shown in Table 2, the Supply/Demand Balance Sheet for Wheat.

The 1997 U.S. wheat yield at 39.7 was slightly higher than the previous high of 39.5 in 1990, and was 3.4 bushels, 9%, higher than 1996. Michigan's wheat yield was a record 62 bushels per acre. The strong U.S. yields, along with a few more acres, gave us a crop 10% larger than last year. It was the highest production since 1990 and the fifth highest on record.

Domestic use for 1997-98 will be about the same as the previous year. Exports are expected to be up from last year, but will still be tied for the second lowest level since 1986-87. The weak export situation is directly linked to the fact the world wheat crop is up 4% over last year and up over 9% from two years ago.

Ending stocks are expected to be 28.5% of use. The annual average weighted price is expected to be about $3.45. The reason it will be even that high is better prices earlier in the year before the world knew how much wheat there was.

The 1998-99 wheat supply/demand analysis in column three of Table 2 does not show an improvement, but does show what might be a bottom. The low returns dropped winter wheat seedings last fall by 1.7 million acres, 3.5%. Without an increase in prices, spring wheat acreage will likely remain the same or decrease. Combine that with a trend yield, and production is expected to be down by almost as much as beginning stocks will be up. This means total supply will be up marginally.

Total 1998-99 use is expected to be about the same with domestic use up a little and exports still weak. A 690 bushel carryover will keep prices in the low $3.00 range.

Soybeans

The 1997-98 soybean marketing year has been one of both large supplies and strong demand. And, without weather problems, 1998-99 will likely be the same. However, with weather being a year-round concern due to South America, and the economic concerns in the Pacific Rim countries, the picture is all but clear.

Last fall the U.S. harvested a record soybean crop, over 14% larger than last year and close to 9% larger than the 1994 record. This came from huge acreage and the second highest yield recorded. This gave us record supplies even with very small beginning stocks.

Demand for crush has very strong. Soybean oil prices have been good and meal demand both domestically and for exports has taken off. The increase in domestic use is due to the increase in livestock units. The increase in exports has been due to both growing demand and South America being out of beans, although they have been importing ours and exporting meal.

Exports of whole soybeans has also been very strong. Up to this point, demand has been growing despite the Pacific Rim problems. Exports are expected to be up over 10% from last year which was around record levels. And, this projection comes in the face of expected record crops out of South America which will be competing against us come spring. The large supplies that will be coming on before the Pacific Rim crisis is over does cause some caution. Overall, projected use for 1997-98 will be up nearly 7% over the high use figure for 1996-97.

This would leave 255 million bushels in ending stocks, 9.8% of use. While this is higher than the past two years, as shown in Table 3, historically it would be considered just barely adequate. This would leave us with an annual average price of around $6.50.

The relative price of corn versus soybeans does not suggest large acreage changes in 1998-99. As I raised corn acreage a bit, I have lowered soybean acreage a bit. This is due to the sharp increases in soybeans last year. There is still the question of where the 1.7 million acres of wheat ground will go. My guess is mostly sorghum, with some to corn and soybeans. This is enough acreage that with trend yields, and the larger beginning stocks, total supply will go up as shown in column three of Table 3.

My reading of next year's use is that foreign demand will keep growing, but with continued competition from South of the Equator, our exports of soybeans will remain about the same with exports of meal growing. However, domestic meal demand may drop off marginally as the cattle industry goes through a liquidation phase and hog production levels off.

If this scenario holds, ending stocks will marginally grow again. The annual average price will be in the $6.25 range. Even though projected ending stocks will be larger, they are tight enough that a bushel or two swing in yield in either direction could move prices significantly.

TABLE 1
SUPPLY/DEMAND BALANCE SHEET FOR CORN

	1996-1997	Est. 1997-98	Hilker Proj 1998-99
		(Million Acres)	
Acres Planted	79.5	80.2	81.2
Acres Harvested	73.1	73.7	74.8
Bu./Harvested Acres	127.1	127.0	130.0
		(Million Bushels)	
Beginning Stocks	426	883	869
Production	9293	9366	9724
Imports	13	10	7
Total Supply	9732	10,259	10,600
Use:			
Feed and Residual	5362	5850	5750
Food, Seed and Ind. Uses	1692	1815	1875
Total Domestic	7054	7665	7625
Exports	1795	1725	1975
Total Use	8849	9390	9600
Ending Stocks	883	869	1000
Ending Stocks, % of Use	10.0	9.3	10.6
Regular Loan Rate	$1.89	$1.89	$1.89
U.S. Season Average Farm Price, $/Bu.	$2.71	$2.65	$2.55

Source: USDA and Jim Hilker.

TABLE 2
SUPPLY/DEMAND BALANCE SHEET FOR WHEAT

	1996-1997	Est. 1997-98	Hilker Proj 1998-99
		(Million Acres)	
Acres Planted	75.6	70.8	68.8
Acres Harvested	62.9	63.5	60.0
Bu./Harvested Acres	36.3	39.7	38.8
		(Million Bushels)	
Beginning Stocks	376	444	679
Production	2285	2527	2328
Imports	92	89	83
Total Supply	2753	3060	3090
Use:			
Food	891	910	930
Seed	103	96	95
Feed	314	300	325
Total Domestic	1308	1306	1350
Exports	1001	1075	1050
Total Use	2309	2381	2400
Ending Stocks	444	679	690
Ending Stocks, % of Use	19.2	28.5	28.8
Regular Loan Rate	$2.58	$2.58	$2.58
U.S. Season Average Farm Price, $/Bu.	$4.30	$3.45	$3.35

Source: USDA and Jim Hilker.

TABLE 3
SUPPLY/DEMAND BALANCE SHEET FOR SOYBEANS

	1996-1997	Est. 1997-98	Hilker Proj 1998-99
		(Million Acres)	
Acres Planted	64.2	70.9	70.0
Acres Harvested	63.4	69.9	69.0
Bu./Harvested Acres	37.6	39.0	38.5
		(Million Bushels)	
Beginning Stocks	183	132	255
Production	2383	2727	2656
Imports	9	4	4
Total Supply	2575	2863	2915
Use:			
Crushings	1436	910	930
Exports	882	96	95
Seed, Feed and Residuals	125	138	140
Total Use	2443	2608	2625
Ending Stocks	132	255	290
Ending Stocks, % of Use	5.4	9.8	11.0
Regular Loan Rate	$4.97	$5.26	$5.26
U.S. Season Average Farm Price, $/Bu.	$7.38	$6.50	$6.35

Source: USDA and Jim Hilker.

MICHIGAN SUGARBEET OUTLOOK

John (Jake) Ferris

Improved returns from the 1996 sugarbeet crop, attributed to substantially higher prices, prompted Michigan sugarbeet producers to increase plantings from a low of 153,000 acres in 1996 to 163,000 acres in 1997. While weather problems prevented harvesting 23,000 acres of those planted in 1996, nearly all (160,000) of the planted acres in 1997 were harvested. In addition, about 3,000 acres were contracted in Ontario. Some beets originated in Ohio as, the factory in northwest Ohio owned by the Michigan Sugar Company again did not operate in 1997.

Very early planting and emergence, plus excellent harvest conditions, vaulted sugarbeet yields to 19 tons per acre, compared to 15.1 tons in 1996. Yields were the highest since 20.8 tons were produced in 1990. Sugar content is higher than in 1996 which will help to offset lower beet sugar prices likely for the season. In December 1997, Midwest beet sugar prices (f.o.b., plant) were about 26.5 cents per pound, compared with 29.0 cents per pound the year earlier.

With net returns to sugar beets for the 1997-98 crop year substantially higher than in recent years, and relative to competing crops, acreage is likely to expand in 1998. Under the 1996 Farm Bill, the refined beet sugar loan was frozen at 22.9 cents per pound, in effect through 2002. The Secretary of Agriculture will be required to reduce the loan rates if other nations which export sugar reduce their subsidies beyond the reductions required under GATT.

FARM MANAGEMENT IMPLICATIONS FOR CROP PRODUCERS

Gerry Schwab

It appears to this observer that historically normal years are a rare find and the year 1997 was abnormal in many respects. Although the 1997 planting season may have been on schedule, seedling emergence of spring planted crops was quite slow as Michigan endured its coldest May on record. Still, the resiliency of Michigan growers planting improved seed varieties, combined with warm fall weather in late September into early October, provided some pleasant yield results. Average yields for three main cash crop commodities in recent years are presented in Table 1.

Profitability is the bottom line that enables farm businesses to grow with their retained earnings and increase their net worth over time. Published results for 1996 for farms on the MSU TelFarm/Finan data base indicated mid-sized farms on the average broke even but the profitability range was from a negative $57,610 to a positive $50,897.[1] For the farms of over 1,000 acres, average net farm income (profit) level was $25,293 that produced a very modest 1.8% return on investment. These returns were earned with average prices received in 1996 of $2.95, $6.64, and $4.36 per bushel of corn, soybeans, and wheat, respectively. As indicated in Table 1, the crop yields in 1997 are higher than in 1996, but as to whether that translates into higher profits will depend on the marketing plan implemented on purchase of inputs and pricing of products produced. Preliminary results suggest very modest profits in 1997 as prices received are significantly lower for both corn and wheat, while soybean prices have been maintained.

The year 1998 will provide some unanticipated events. How best to plan for the future in such a risky environment? A very general recommendation is to have a plan for 1998 rather than let the unfolding of future events in 1998 provide your plan for you. This plan ought to involve production, marketing, and financing activities with risk management considerations in each of these activity areas. Crops to be planted on your farm in 1998 may be limited by soil rotation needs and livestock feed needs, but no longer does government policy restrict plantings to your crop acreage base for the respective crops. Profitability considerations should be paramount in determining what crops ought to be planted on your flexible acreage.

To illustrate, consider the economic evaluation of soybeans challenging for acreage with corn. Expected yields and variable costs to grow the crop must be considered. For our example, corn is expected to yield 120 bushel per acre with an expected price of $2.60 per bushel, providing a gross income of $312 per acre. Planting and harvest expenses to produce an acre of corn are estimated to be $192 per acre. Thus, corn would produce $120 per acre Gross Margin (GM) return above the costs considered. The crop competing for acreage is soybeans. Assume that the planting and harvest cost to produce an acre of soybeans is $123. By doing some break-even analysis, a range of yield/price combinations for soybeans can be generated that compete with corn and for this example are presented in Table 2.

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[1]Hepp, R. and S. Nott. "Business Analysis Summary for Cash Grain Farm", Ag Econ Staff Paper 97-27, Aug 1997.

The break-even (BE) formula that can be used is:

BE Price Challenger = (Production Cost Challenger + GM Defender) / Yield Challenger
BE Price Soybeans ($6.07/bu) = ($123 + $120) / 40 bushels per acre soybeans

Reading from the table above for this example, 40 bushel soybeans @ $6.07 per bushel compete equally with 120 bushel per acre corn @ $2.60 per bushel. Plug in your own numbers for your own situation to help determine your crop mix in 1998.

Overlaying the production and pricing considerations for your respective crops are the financial risks being borne. Risks can be transferred to a third party for some established cost called an insurance premium. Crop insurance is a risk management tool that is available in Michigan for many crops. There are several multi-peril crop insurance products including Crop Revenue Coverage (CRC) and Group Risk Plan (GRP). Crop insurance is available for most but not all crops grown in Michigan. Insurance agents and some MSU Extension agents can provide more details for your situation. However the date deadline for sign-up for spring planted crops is March 15, 1998.

Yes, we do not know with certainty what 1998 has in store for you and me. But without some plan for managing our future, the future will manage us.

Table 1. Michigan Yields

		1997	**1996**	**1995**
Corn	bu/acre	117	94	115
Soybeans	bu/acre	38.5	28.5	40
Wheat	bu/acre	62	38	60

Table 2. BREAK-EVEN Soybean PRICE
(CHALLENGER)

Corn	**Price**	**Soybean YIELD, Bushel/Acre**						
$2.60 / Bushel		32	38.0	40.0	42.0	44.0	46.0	52.00
		$ / Bushel						
Corn Yield, Bushel/Acre	100.0	6.13	5.18	4.92	4.70	4.49	4.30	3.81
	110.0	6.85	5.78	5.50	5.24	5.01	4.80	4.25
	120.0	7.57	6.39	6.07	5.79	5.53	5.30	4.70
	130.0	8.29	6.99	6.65	6.34	6.05	5.80	5.14
	140.0	9.01	7.60	7.22	6.89	6.58	6.30	5.58

ANNUAL LIVESTOCK OUTLOOK
Jim Hilker

Hogs

The expansion phase of the hog cycle we are now in may better be described as an explosion. We saw a 22% year-to-year increase in hogs coming to slaughter the first week of January, and while that was probably somewhat of an aberration, it is still amazing. Pork production in 1998 is expected to be up over 8% for the year and annual average hog prices down $10-13 from the $51.33 in 1997.

Pork production is expected to be up over 8% in the first quarter of 1998. This alone would drop expected prices $8-10 per hundredweight (cwt.) from last year's $51. Unfortunately we don't stop there. Larger beef and poultry production will drop another $2-4 off prices. On top of that, retail prices have been sticky downwards. We are just beginning to see pork features at the retail level to help move product. People buy more at lower prices, but they must see it at the counter, and I think that is coming.

The second quarter will bring even more of the same as pork production is expected to be up over 10%. Prices are expected to be in the $38-41 area if demand holds, down from $56.41 in 1997. There will be less competition from the beef side, but the constant 5% increases in broiler production will continue.

The third quarter is projected to bring nearly 11% more pork. This, as in the other quarters, is a combination of more farrowings, higher pigs saved per litter, and higher slaughter weights. Prices are expected to average in the $40-45 range, compared to $54.45 last year.

The fourth quarter is expected to "only" bring a 4% increase in year-to-year production. The problem is fourth quarter 1997 production was already huge. Prices are expected to be in the upper $30's, down from $43.40. Competition from beef will be down significantly.

Are these prices ranges set in stone? Obviously not. Retail demand is hard to determine normally, and we are now seeing a sharp increase in availability. It will be interesting to see how retailers will react on the pricing side, and then how consumers will react to those prices. The economic situation in the Pacific Rim countries is hitting pork exports. The U.S. now expects to export 5% less pork this year, versus a 5% increase previously expected.

Cattle

Beef production in 1997 was close to the same as 1996, and the average annual price of choice steers rose about a dollar per cwt. to $66.32. Beef production in 1998 is expected to be down about 2% and prices are expected to average in the $66-71 range. However, the production decreases and price increases will come after the first quarter.

The large feedlot placements last summer and early fall will mean a year-to-year 3% increase in first quarter beef production. Choice steer prices will average about $64-67 compared to last year's $66.40. Like hogs, there will be plenty of competing meats. The approach retail stores take in their pricing will greatly affect movement.

Production in the second and third quarters will be down 2-3%. This is a reflection of the lower number of calves born the last two years, which is being reflected in lower feedlot placements. Prices over the two quarters should average in the $66-71 range. Last year, second quarter choice steer prices averaged $66.63 and third quarter prices were $65.65.

Fourth quarter production is expected to be down 5%. This should push average prices over $70 and could mean prices in the mid 70's. Throughout the year feeder prices should be up relative to last year's feeder prices by an amount corresponding to the increases expected in fed prices.

Beef imports are projected to be up, and beef exports are projected to be down for 1998. This will put some extra pressure on prices. The returns to cow-calf producers improved last year, but not by enough, or soon enough, to stop further liquidation. Beef production will be down again in 1999 and probably in 2000 as well.

FARM MANAGEMENT IMPLICATIONS FOR LIVESTOCK PRODUCERS

Laura Martin and Gerald Schwab

Many assorted events beyond the farm gate impacted Michigan farms and the livestock industries in 1997. A sampling of these events, including the outbreak of foot and mouth disease in Taiwan, the meltdown of the Southeast Asian financial markets, the temporary closing and subsequent selling of Hudson Foods, and the lingering effects of mad cow disease, provide connective evidence of what it means to operate in a global economy. Toss in the speculative and real effects of El Niño and it's easy to see that demand and supply shocks occurring around the world have repercussions here at home that affect the profitability of Michigan livestock producers. More than ever, livestock producers are faced with the challenge of competing in a world where:

- nutrition and food safety are preeminent concerns to all consumers, but can be translated to hysteria as demonstrated by Oprah Winfrey's alleged question about the safety of beef and her willingness to consume a hamburger;
- environmental concerns raise relevant issues about confinement facilities and manure management;
- economic downturn in the Pacific rim countries dampens export demand; and still
- mega-farms utilizing vertical coordination continue to expand.

In the end, however, the story remains the same — those producers who are the most efficient, whether in terms of low-cost producer or by filling a market niche, are the ones who will be in it for the long haul and can best weather the swings in the market.

Hog production has been quite profitable since recovering from the depressingly low prices of fall 1994. Potential profits have attracted capital investments for new entrees and expansion for on-going hog operations. For many pork production businesses, 1997 should have been a fairly profitable year with live-weight prices in the high 40's to mid 50's for much of the year while feed costs declined from 1996 levels. Looking forward to 1998, it appears that the hog cycle is alive and well as prices retreat to the mid to low 40's this year. Live hog prices are expected to average around $42-44 in 1998, down from the $60 prices in 1996 and the $50 prices in 1997. In early 1998, pork producers have marketed hogs in the mid to upper 30's and are asking how low and how long can hog prices head this direction?

Why the lower prices? The USDA December Hogs & Pigs Report indicated that the U.S. hog inventory on December 1, 1997 was up 7% from a year earlier. The increase in hogs supplied to the market can account for some, but not all of the price decrease. On the export side, the anticipated increase in exports to Japan in the wake of the Taiwanese foot and mouth disease did not materialize. The downturn in the Asian economies has led to a devaluation of their currency relative to the dollar and makes U.S. pork relatively more expensive than previously. Coupled with the fact that devaluation of the Danish currency has kept the real price of Danish pork unchanged to Japanese consumers, U.S. pork exports didn't grow at the rates anticipated.

Michigan swine inventory levels are reported to have increased 3% in the last year, slightly lower than the 7% national growth rate, and possibly reversed the declining numbers of previous

years. With a larger breeding herd and more hogs moving to market, both nationally and within the state, this increased supply will pressure hog prices down over the next 18 months. Swine producers should anticipate smaller profits in 1998 than in the last two years and possibly negative returns as we move into the spring and summer months and the last half of 1998.

So what does this all mean for pork producers in 1998? As one producer recently shared, it would make no sense to suggest that now is the time to buckle down on being efficient and paying more attention to the bottom line — livestock managers should always do that, whether profits margins are large, small, or negative. What it does mean is that we could be preparing for another transition in the industry. According to USDA figures, between 1996 and 1997 Michigan lost 300 operations with hogs. While some farms could be classified as operations that mainly had 4-H or hobby hogs and decided not to keep a hog on the farm in 1997, the other part of the story is that some hog operators are choosing to not go through the current downturn in the pork cycle. Now may be the time for producers to do some long-range strategic planning — what are the opportunities in the hog industry and where do you want your operation to be in five years? Ten years? The trend in the U.S. swine industry is towards fewer farms, increased numbers of hogs in confinement facilities with the phases of production separated by location and, oftentimes, by ownership as well. Michigan swine production operations have also participated in these changes but have retained their family base while increasing their business acumen. Only by continuing to sharpen our managerial capacity by those producing and marketing a high quality carcass can we plan on being successful in an increasingly competitive and global market.

Michigan's beef industry continues to face challenging times as we move into 1998. Fortunately, relative to 1996, the lower feed prices in 1997 and those projected for 1998 help to alleviate some of the discomfort of cattle prices that rarely moved out of the low 60's during the course of 1997. As we move into the upswing of the cattle cycle, projections for 1998 are slightly higher, possibly reaching the mid 70's by the second half of the year. Cattle feeders must carefully evaluate the economics of their feeding alternatives. The increased meat supply in 1998 will limit beef price increases but ration energy costs should decline relative to recent years. In a break-even analysis, the biggest variable remaining is the price paid for feeder cattle. Only by marketing inputs - gathering price data and negotiating - can some control be exercised on this very important variable. Conducting a financial analysis for your situation can determine the potential profitability of the available alternatives. For those farm situations with a large forage supply, cow-calf or stocker enterprises provide alternatives for marketing of these forages. An Integrated Resource Management (IRM) Program is being offered to Michigan cow-calf producers by Michigan State University Extension (MSUE) as one approach to monitor, control, and improve the performance of your beef cow herd. Contact your local MSUE Livestock Area of Expertise Agent for more details of this program.

On the demand side, while domestic beef demand has remained relatively stable, beef exports have been dealing with two opposing forces. First, both perceived and real food safety concerns are still lingering from bovine spongiform encephalopathy (commonly called mad cow disease or (BSE), and the beef recall, temporary plant closing and then sale of Hudson Foods. Second, on a more positive note, the more recent movement of low-priced beef to export markets has the potential to create long-term markets as foreign consumers grow accustomed to U.S. beef

in their diets. Consequently, a key challenge for the industry and producers remains the assurance to domestic and foreign consumers of the safety and traceability of cattle and beef as it moves through the beef system. Add to that the continued need for consistency and reliability, and you can see that beef management *systems* are becoming more and more important. Industry analysts predict that as the beef industry becomes more consumer-oriented, the movement to beef systems that provide value-added and branded products will accelerate. While there will always be a place for commodity beef, according to the National Cattlemen and Beef Association (NCBA), within the next ten years, approximately 85% of all cattle will be marketed in some form of an alliance, including branded products and niche marketing. As a result, the genetic base in the cattle industry is likely to narrow in order to provide this consistency. An important strategy for Michigan producers is to determine where their beef operations will fit best, commodity or within a coordinated "system". What works best for you will depend on both your management style and your resource base as transformed into production costs for the resultant beef product or commodity.

Along these lines of a beef system, exciting opportunities lie ahead for cattle producers as the Eastern Corn Belt cattle industry works toward developing a model for a regional beef production system. In 1996, the *Five State Beef Initiative* was formed by agricultural leaders in Michigan, Indiana, Illinois and Indiana and Ohio to work toward improving the economic and environmental sustainability of the beef industry in the Eastern Corn Belt (see the October 1997 issue of the MSU Cattle Call for further information). Currently in the planning stages, this effort has great potential to help Michigan producers profitably and consistently meet consumer demands for high-quality beef.

DAIRY SITUATION AND OUTLOOK

Larry G. Hamm and Sherrill B. Nott

The 1998 dairy outlook for Michigan looks remarkedly like the outlook for the past several years except for 1996. Milk prices will likely be slightly higher than 1997 with production cost increases being somewhat modest. The profitably outlook for individual producers will be dependent on their forage supply situation during 1998, and how producers are able to cope with continued labor market problems, and the challenges of increased machinery costs.

A Return to Normal?

In retrospect, 1996 was a very unusual dairy year with milk prices reaching historic levels. The year 1997 was a more normal year. For the year, the Basic Formula Price (BFP) averaged $12.05 and the all milk price (gross milk price before deductions) averaged $13.43. These price levels were slightly above the average milk prices between 1991 to 1995. Unfortunately, 1997 was anything but an average year. Significant feed price increases and forage shortages coincided with dramatically lower milk prices during the summer. The resulting severe cash flow problems hurt many Michigan dairy operations and damaged the Michigan dairy industry. In 1997, Michigan lost 11,000 dairy cows from its milking herd and over 270 (6.5%) of its licensed dairy farms. Milk production was about 5.43 billion pounds, equal to 1996's depressed level, but below the production in 1994 and 1995.

1998 To Be Similar to 1997?

The fundamentals for the 1998 dairy market outlook appear to be somewhat positive. The supply and demand situation for dairy continues to be on a razor's edge balance. The end of the year's strength in the dairy market reflected the lack of excessive inventories of either cheese or butter. Only nonfat dry milk (NFDM) appears to be over-hanging the dairy markets. However, with only a moderate milk price increase, USDA projects 1998 milk production to be just barely larger than in 1997. Continued financial stress, coupled with significant changes in the structure of milk production, suggest that, as a whole, U.S. milk production will be barely increased. Production per cow is expected to increase from 1.5 to 2%. The milking herd will likely decrease by another 1%.

Economic growth is expected to continue. Retail prices of dairy products moderated in the latter part of 1997, are also projected to remain relatively stable. As a consequence, commercial use in 1998 is expected to grow 1 to 2% when measured on a skim solids basis. Overall demand, however, will not significantly exceed the growth in milk production so as to put significant upward pressure on farm level milk prices.

For 1998, the average Basic Formula Price (BFP) is expected to average between $11.70 and $12.30. The average all-milk price for Michigan will likely exceed $13.00 for the year, but will have trouble averaging more than $13.60. Individual dairy farm profitability will be determined how individual operations are able to manage their cost of production and whether they are able to acquire feedstocks at reasonable costs for 1998. (See below.)

A Critical Policy Year

The year of 1998 may be one of the most critical policy years for the Michigan dairy industry. The FAIR Act for 1996 prescribed that by December 31, 1998, the Secretary of Agriculture must have implemented a reform of the Federal Milk Marketing Order (FMMO) system. The FMMO system is currently under a U.S. District Court ruling which expires February 15, 1998. It is unclear what the future of the FMMO system is. The year of 1998 will be characterized by countless press discussions and dairy industry debate about the future of the FMMO system.

In addition, Michigan's long standing (since 1956) over-order pricing structure is in jeopardy. Unless there is an agreed on equitable sharing of the benefits of order-pricing, either through a voluntarily program or through a state milk marketing order mechanism, additional significant income stress will visit the Michigan dairy industry. Losing both the FMMO system and the over order pricing structure would cost Michigan producers approximately $6 million per month in dairy farm revenue and would result in $1.00 to $1.30 per hundredweight (cwt.) off the price forecast made above.

Production Costs To Moderate

Purchased feed expenses were about 25% of total cash expenses for a group of Michigan dairy Telfarmers in 1995. In 1996, that rose to 30% with higher grain prices and near failures in roughage production. Although the results aren't all in yet, 1997 will probably return closer to the 25% level for those dairy farmers that grow their own roughage and some of their corn grain.

Nationally, the index for prices paid for feed was 117 in December 1997, where 1990-92 = 100. In December 1996, the index was 121, indicating feed prices were about 3.3% lower at the start of 1998 than at the start of 1997. However, components of the feed group went their own way. Hay and forage plus concentrate prices went up a bit. Feed grains dropped over%. Supplements were down over 11%.

From a buyer's point of view, the feed situation for 1998 looks encouraging. Supplemental protein prices are influenced by the soybean market. Production south of the Equator is on track to be plentiful which would keep prices in line by late winter. Lower projected prices for meat products during early the first half imply lowered feed demands as 1998 unfolds. Most Michigan dairy farmers came into 1998 with more inventories of hay, corn silage and corn grain than they had a year earlier. However, hay prices remain higher than historical levels. A favorable growing season over much of Michigan during 1998 will be needed to further reduce feed costs.

Fuel prices ended 1997 on a lower level, and will likely stay that way during 1998 assuming peace prevails. Iraq's access to the world oil market will be an important indicator of petroleum price direction. From December 1996 to December 1997, diesel index numbers went from 113 down to 102. Gasoline dropped from 113 to 99. After sharply increasing during 1996, the index number for LP gas went from 141 down to 113, December to December.

Fertilizer indexes dropped from 124 to 116 in December 1996 and 1997, respectively. However, the nitrogen component went from 135 down to 116 during the same period. Oil prices have an impact on nitrogen costs. The index for potash and phosphate went up 3 index points during the period. Given the expectations for crop prices, fertilizer demand may moderate a bit keeping the price stable for the coming year.

No Relief on Labor and Machinery Costs

The national index for wage rates went from 120 to 126 in December 1996 and 1997, respectively. That's an increase of 5%, some being attributable to legislated increases in the minimum wage. Skilled labor for Michigan dairy farms will remain a problem in the coming year. Look for new experiments in training workers with few dairy skills in this tight labor market.

The overall index of prices paid for farm machinery went from 126 to 129, December 1996 and 1997, respectively. The tractor component went from 124 to 128, and the other machinery component went from 126 to 130. The third part, self-propelled machinery, went from 127 to 128. Machinery prices, like wage rates, have consistently gone up at a faster rate than the Consumer Price Index for the past several years. Dairy managers are big users of both these inputs. The struggle to keep them under control will continue in 1998.

Custom machinery operators are branching out in new directions to help dairy farmers. Hired haulers help empty manure pits. Arrangements are emerging to hire the use of self-propelled forage harvesters for hay crops, as well as corn silage. Expect to see more use of these hired services as the prices of big machinery items outstrip dairy farmers' ability to pay for them.

Labor needs are also eased by using the services of custom heifer growers. There is a small core of contract growers operating in Michigan. Expect to see their numbers increase as labor markets remain tight and building costs stay high.

Conclusions

With the exception of 1996, milk prices have been relatively flat and will likely continue for 1998. Financial stress has been acute and for many will continue. However, Michigan producers are adapting because producing milk in Michigan is done in lots of ways. There are ethnic groups that use mostly animal power. We have family farms, family partnerships and family corporations. We have several farmers who are honing their skills in management intensive grazing. We have a handful of farms with 1,000 plus cows. Another handful buy all their feed, letting others manage the crop growing side. Applaud this diversity of approaches. Encourage experimenting with new ideas. The outlook is that an increasing number of survivors will be using some these new and different strategies.

1998 OUTLOOK - TABLE EGGS, BROILERS AND TURKEYS

Henry Larzelere

Eggs

Egg prices in 1997 averaged about 7 cents a dozen below 1996. Feed ingredient prices averaged about 6 cents a dozen eggs below 1996.

New York wholesale U.S. Grade A large white eggs in cartons will likely average about 75 cents a dozen in 1998, the result of total egg production up 1 or 2% from 1997. The early data suggest the direction. The number of hens and pullets on farms on December 1, 1997 was up 3% from the year before. The egg-type chick hatch varies, some months up and some down, but with possible favorable feed ingredient costs, the trend may be for hatch increase. For example, in November 1997 the egg-type chick hatch was down 12% from the year before, but eggs in incubators on December 1, 1997 were up 7%.

Broilers

There were nearly 4% more pounds of broilers marketed in 1997 than in 1996. Prices were also about 4% less in 1997 than in 1996. It is expected 5% more broilers will be marketed in 1998 than in 1997. In most years in the past, broilers have increased by about 2% without any decline in price. In 1998, broiler prices are likely to be down 2-3% with the expected increase in supply. Of course, some variation from these annual prices will occur if seasonal changes in supply take place.

Turkeys

In 1997, turkey supplies were down slightly even though prices were 1 or 2 cents a pound below a year earlier. It is likely that low beef prices had some effect.

In 1998, it is expected now that turkey production will increase 5% over 1997. This may be the result of possible more favorable feed ingredient costs. Turkey prices in 1998 will likely be 2 or 3 cents lower per pound than in 1997. The projected lower beef supplies in 1998 will be favorable for turkey prices. The beef factor should not be over-emphasized because turkey supplies are only one-fifth of total beef supplies.

FRUIT INDUSTRY OUTLOOK
Donald J. Ricks

Apples

Michigan's apple production during the next several years is expected to continue its long-term upward trend. Although the Michigan apple crop was moderate in 1997, and unusually short due to adverse weather in 1996, it is estimated that Michigan has the capacity to produce considerably more, perhaps as much as 30+ million bushels, if weather is favorable for large production in the near future.

The size of the crop for a particular year such as 1998 will, of course, depend upon the weather conditions between now and next summer. The recent unusually warm weather for January could impact the size of next year's crop--especially if the warm weather were to continue during much of the winter.

On the demand side, Michigan has experienced an overall growth trend in market volume for both fresh and processing apples. The magnitudes of future trends are difficult to predict. World markets for apple juice concentrate are becoming increasingly challenging. Annual fluctuations will continue to occur.

Export markets have become increasingly important for apples, both for the U.S. as a whole and for Michigan. This trend is expected to continue, although export markets for individual countries can vary considerably from year-to-year as influenced by economic conditions and policies in these countries and by competing world apple supplies.

Varieties for the future are quite important for the apple industry. In a recent survey of Michigan apple shippers, they were asked which varieties they expect will be needed in volume in the future for fresh markets from Michigan. In response to this question the top two varieties were Red Delicious and Golden Delicious with 85-100% of the Michigan shippers expecting these varieties to continue to be needed in volume. Regarding some of the newer varieties, a number of shippers indicated that it is not yet clear to what extent a volume demand can be built for these varieties from Michigan.

Michigan processors were also surveyed regarding apple varieties for processing in the future. The top three varieties according to processors in their overall ratings for processing into applesauce or apple slices were Golden Delicious, Ida Red and Mutsu. The next three were Northern Spy, Rome and Jonathan.

Tart Cherries

Although bearing acres of tart cherries have been decreasing somewhat, the industry's overall production potential is likely to remain high for the next several years. This is because of the potential for high yields per acre as influenced by orchard age distribution, technology and grower management. The actual production for a specific year including 1998 will depend

substantially on weather conditions, especially during the spring frost season and perhaps during the winter.

Looking to the future, it appears that within a few years, bearing acreage will likely decrease at a faster rate than in recent years. This is related in part to the industry's orchard age distribution. Therefore, the industry's production potential after a few years can be expected to decrease, leading to a closer balance of supplies with demand. Annual fluctuations in supplies will likely continue.

The new orchard survey, which will be published by the Michigan Agricultural Statistics Service sometime in 1998, will provide an important update source of information on the state's orchard acreage and age distribution. This information will help to clarify the extent of likely future trends on bearing acreage and production potential.

During 1997, several new programs and developments occurred which impact the cherry industry. These include the new marketing order program, the new federated marketing cooperative, CherrCo, unusually large exports, growth in some of the newer market segments and other market developments. Looking to the future for 1998 and beyond, the industry will need to give careful consideration and analysis to how to most effectively manage with these new developments with the objective of benefitting the industry.

MICHIGAN FARM INCOME OUTLOOK FOR 1998
John (Jake) Ferris

Over the years, cash receipts from farm marketings in Michigan have been increasing with an occasional retrenchment from year to year (Figure 1). In recent years, gross sales have been around $3.5 billion compared to about $1 billion in 1970. In real dollars, however, receipts have tended to decline or remain stable for a period of time. Put in terms of 1982-1984 dollars, gross sales were fairly flat in 1973-1980, then dropped to a lower plateau in the 1980's. Since 1987, sales were stable in real terms before a decline in 1997.

Another way to view trends in Michigan agriculture is to monitor the State's shares of total U.S. output. This is indicated in Figure 2 showing the percent that Michigan's farm cash receipts have been relative to totals in the U.S. From 1970 through the mid 1980's, Michigan's share increased significantly from about 1.8% of the U.S. total to 2.0-2.1%. In the late 1980's, Michigan's share dropped sharply back to the 1.8-1.9% level, and fell below that level in 1997.

This pattern can be attributed primarily to milk sales, by far the most important single source of Michigan farm income. Secondarily, corn production and sales contributed to this pattern with sharp rises into the early 1980's, followed by declines to a slightly lower level. Corn has been the No. 2 source of cash sales until 1997 when soybeans exceeded corn sales. Of course, the value of production of corn (including silage) far exceeds any other crop. Other commodities represented by the pattern for total sales would include beef cow numbers, egg production, dry beans, vegetables and fruit.

Production of some commodities have continued to increase throughout most of the 1970-1997 period. Included would be hogs, turkeys, soybeans, sugarbeets and greenhouse/nursery products. Hay production increased, but has been fairly flat since the early 1980's. Wheat production has varied substantially from year-to-year without displaying much trend. Other enterprises such as cattle on feed and potatoes have been more cyclical.

1997

With prices dropping about $1.40 per hundredweight (cwt.) in 1997, in combination with a slight decline in production, cash receipts from milk fell by nearly $80 million (Table 1). Higher cattle prices more than offset a reduction in marketing to post a small gain in receipts from cattle and calves. Hog prices were fairly well maintained until late 1997, but with lower marketings, cash income from hogs fell somewhat. Egg production was stable but prices declined over 10%.

Because of weather problems in 1996, marketings from major crops produced in 1996, but sold in 1997, were much lower. This was true with corn, soybeans, wheat, dry beans, oats, hay, sugarbeets and potatoes. Prices were also substantially lower in the first half of 1997 on corn, wheat and potatoes and slightly lower on dry beans. Prices were higher on soybeans, hay and sugarbeets. Only on hay, however, with prices averaging $123 per ton, did higher prices more than offset reduced marketings.

Generally, excellent weather in 1997 provided positive results for 1997 crops sold before the end of the calendar year. Marketings increased on all major crops except hay — enough to offset generally lower prices than the year before. The exception was dry beans which encountered prices nearly 30% below 1996. Hay receipts were maintained by $100 per ton prices.

The net effect of these developments on cash receipts from livestock and crops in calendar 1997 can be traced in Table 1. Receipts from both livestock and crops declined from 1996 by about $165 million, or 4.5%. Estimates and forecasts for vegetables, fruit and greenhouse/nursery are based on trends and not specific to the year.

While cash receipts from marketings provide the bulk of income to Michigan farmers, direct government payments and farm related income supplement receipts from marketings (Table 2). Government payments in 1997 are estimated at $143 million, mostly from the contracts on corn and wheat under the 1996 Farm Bill. About $20 million were paid out under the Conservation Reserve Program. In total, payments in 1997 increased about $20 million.

Adding an estimated $113 million from farm related employment, gross cash income is estimated at $3,736 million in 1997. This does not include off-farm income of farm households. Deducting about $3,000 million in cash expenses, net cash farm income in 1997 is estimated at about $730 million, nearly $200 million below 1996, a drop of about 20%.

1998

Two major developments of recent months cloud the outlook for 1998. One is the collapse in financial markets and exchange rates in Eastern and Southern Asia. This adds uncertainty to the U.S. export prospects into that region. The question is how quickly those nations can react and make necessary adjustments in their financial structures.

The second event that bears watching is El Niño (which is the warm phase and its counterpart, La Niña, the cold phase). This phenomenon of cyclical patterns in sea surface temperature in the equatorial Pacific west of Peru changes weather probabilities. Since its emergence in March 1997, El Niño reached one of its strongest levels in late 1997. Among the most significant relationships this author has established was a negative impact of El Niño on U.S. corn and soybean yields a year later — in this case 1998. However, El Niño and weather cycles could explain no more than about a third of the departure of corn and soybean yields from trends. Some areas of the world tend to benefit from El Niño a year later, but the net effect on world grain and oilseed production is negative.

Forecasts of cash sales from Michigan farms for 1998 are presented in Table 1. Dairy sales should be about steady as a modest price increase offsets slightly lower production. The same can be said for receipts from cattle and calves. Michigan farmers intend to farrow 10% more sows in the spring of 1998 adding to a 5% larger number farrowing in the fall of 1997. However, lower prices in 1998 will reduce the gross. Lower egg prices will also likely cut cash receipts in 1998.

Yields increased in 1997 on every major crop except hay. Sales of these crops in 1998 should boost dollar returns in the first half of the year on every crop except hay and possibly dry beans. Yields for 1998 crops are projected assuming normal weather and no impact from El Niño. Because 1997 yields were so favorable and above trend on wheat and sugar beets, lower yields are assumed in 1998. Because hay yields were abnormally low in 1997 (3.0 tons per acre), trend yields of 3.7 tons are projected for 1998.

For calendar 1998, cash receipts should increase on corn, soybeans, dry beans and sugar beets with other crops holding about steady. In total, for livestock and crops, cash receipts are forecast at about $3,550, $70 million above 1997 or an increase of about 2% (Table 1).

With cash receipts from other sources (government payments and farm related income) about steady in 1998, gross cash income is forecast at $3,800 million (Table 2). Cash expenses are projected to be about the same in 1998 as in 1997 as lower prices on feed, fertilizer and energy inputs offset high prices on other inputs. Net cash farm income at about $800 million would be $65-70 million, or 9% above 1997.

TABLE 1

**Cash Receipts from Farm Marketings in Michigan,
Calendar years 1996, Estimated 1997, Forecast 1998***

Enterprise	1996 mil. $	1997 mil. $	1998 mil. $
Livestock			
Dairy	808	729	728
Cattle and Calves	232	249	250
Hogs	214	204	180
Eggs	68	60	54
Other	125	120	120
Total Livestock	1,448	1,362	1,332
Field Crops and Vegetables			
Corn	477	365	400
Soybeans	351	419	457
Wheat	102	90	87
Dry Beans	117	80	90
Sugar beets	66	84	92
Potatoes	94	84	88
Hay	49	62	59
Vegetables	218	218	225
Other	70	70	70
Total	1,544	1,470	1,567
Fruit	223	223	223
Greenhouse/Nursery	422	425	430
Total Crops	2,195	2,118	2,220
GRAND TOTAL	3,643	3,480	3,552

*Data for 1996 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 1992-98*

	1992	1993	1994	1995	1996	1997	1998
	Million $						
Gross Cash Income							
Farm Marketings							
Crops	1901	1969	2016	2283	2195	2118	2220
Livestock	1310	1371	1399	1343	1448	1362	1332
Government Payments	143	241	102	151	123	143	141
Farm Related Income	96	97	104	98	113	113	113
TOTAL	3450	3678	3621	3875	3879	3736	3806
Cash Expenses	2677	2888	2975	2900	2953	3003	3004
Net Cash Income	773	790	646	975	926	733	802

*Data for 1992-96 obtained from Michigan Agricultural Statistics Service, Michigan Department of Agriculture, and the Economic Research Service, USDA. Values for 1997 are estimated and values for 1998 are forecast.