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# *Staff Paper*

ANNUAL AGRICULTURAL OUTLOOK  
DEPARTMENT OF AGRICULTURAL ECONOMICS  
MICHIGAN STATE UNIVERSITY

Coordinated by  
Jim Hilker and Nancy Creed

Staff Paper #97-2

January 1997



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**DEPARTMENT OF AGRICULTURAL ECONOMICS**  
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## **THE GENERAL ECONOMY IN 1997**

### **Lester V. Manderscheid**

Dull. Ho hum. Those words are used by many to describe the outlook for the U.S. economy for the next year. The choice of words reflects a belief that the economy will continue to grow at a 2.2% to 2.5% rate. Unemployment will be near current levels and inflation will remain near current levels.

Interest rates are expected to vary little from 1996 levels with some downward drift more likely than an upward movement. Month-to-month variations will continue, but will probably be smaller than during the past year. Introduction of the indexed Treasury bond will introduce an element of uncertainty until the market is established. Most economists do not expect the introduction to significantly affect other interest rates such as mortgage rates or operating loans.

What are some of the risks that might cause the economy to behave differently than outlined above? One concern is the behavior of the economies of other major countries. For example, the Japanese Prime Minister announced a reduced role for the government in the economy and that no money would be available to prop up the Japanese financial markets. As a result, prices on the Tokyo Stock Exchange, as measured by the Nikkei Index (similar to the Dow Jones Index for the U.S.), fell 19% in 6 weeks. Will this and future events affect other economies?

Another risk concerns productivity in the U.S. Over the past 2 years, productivity grew at an annual rate of 0.6%. The outlook reported above assumes a productivity increase of about 1.7% per year. If productivity remains at current rates, unemployment would fall, overtime would increase, there would be upward pressure on prices and the Federal Reserve Board might increase interest rates to slow inflation and economic growth.

A number of economists believe that the problem is in how we measure productivity. How does one measure productivity in the entertainment industry? Other areas where productivity is hard to measure include construction, wholesale and retail trade, insurance, finance and other services. The Federal Reserve Bank of St. Louis estimates that we can reasonably estimate productivity in 29% of the economy; in other words, we have no reasonable measure of productivity for over 70% of the economy. Their calculation is that we had reasonable measures for 43% of the economy in 1959. The increased importance of services and the failure to invest in better statistical measures has substantially reduced the accuracy of the reported productivity measure. If the reported measure is accurate, there may be problems ahead for the economy.

A demographic factor affects the economic outlook for 1997 and later years. Consumer expenditures vary with the age profile of the population. Expenditures tend to increase significantly for those starting households. One convenient measure used by economic demographers is the number of persons becoming 25 years of age in a given year. In the U.S., this number will drop from 1996 to 1997 and will continue to decline for several years. This is mirrored by similar movements in other developed countries. Thus, the slowdown in demand will affect many countries. By way of contrast, Latin American countries are experiencing growth in this portion of the population. One argument for expanding NAFTA is to gain access to the expanding Latin American markets.

## **AGRICULTURAL CREDIT**

**Mike Kelsey and Steve Hanson**

The last few years have seen major fluctuations in interest rates with a gradual 3-year decline from 1990 through 1993, and a dramatic increase in 1994, as the Federal Reserve attempted to slow down the economy into a "soft landing." Apparently, they were successful--the discount and prime rates stabilized in 1995 and started a gradual decline late in the year. The expectation is for the Federal Reserve to continue to decrease rates by 1/4-1/2% early in 1997 and, depending on the trend in economic growth, perhaps more later in the year.

Overall, loan demand in Michigan was essentially unchanged from a year earlier. A Federal Reserve Bank of Chicago survey of agricultural bankers found the average loan-to-deposit ratio in the Seventh District had increased to 67.3%, the highest level since 1979. Despite recent declines, interest rates for farm loans remained above levels in the previous year. In Michigan, the real estate loan rate during 1996 averaged 9.73%, while the average operating loan rate was 10.69%. The Michigan rates were the highest among all states in the Seventh District.

Look for interest rates in the upcoming year to remain steady or decline slightly on operating and real estate loans provided by Farm Credit and commercial banks. There are funds available from commercial banks and the Farm Credit Service centers for borrowers who represent sound financial risks. Because of regulatory requirements on credit quality, banks are reluctant to add any marginal loans to portfolios. Potential borrowers need to "sell themselves" to their lender by providing a sound business plan along with clear documentation of the firm's financial health and repayment capacity. The Farm Credit Service centers continue to be aggressive in seeking out and negotiating farm loans with borrowers who are financially sound.

## **TRADE AND POLICY OUTLOOK**

**David Schweikhardt, Associate Professor and**

**Sandra Batie, Elton R. Smith Professor of Food and Agricultural Policy**

### 1997 Trade Outlook

U.S. agricultural exports are expected to reach \$55.5 billion in 1997, a decrease of \$4.3 billion compared to the record year of 1996. Export volumes are expected to remain strong in most product categories, but lower prices for wheat and feed grains and a lower volume of wheat export are expected to reduce the export value of those products. 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 \$700 million to \$8.7 billion in 1997. Within the livestock category, only dairy exports, at \$700 million, are expected to remain unchanged in 1997. Fruit and vegetable exports are expected to again set a new record for both the volume and value of exports, reaching \$10.5 billion, or \$500 million more than in 1996. Wheat and flour exports are expected to decrease from \$7 billion in 1996 to \$3.9 billion in 1997. U.S. agricultural imports are expected to reach \$34 billion in 1997, or \$1.8 billion greater than in 1996. Increased imports of horticultural products will account for most of this increase, with imports increasing by \$900 million to a projected \$12.5 billion.

Asia will remain the largest regional market for U.S. exports, accounting for \$24 billion of U.S. agricultural exports. Japan remains the largest customer for U.S. agricultural exports, purchasing a projected \$11.5 billion from the U.S. in 1997. Canada will continue as the second largest customer at \$6.1 billion, and Mexico will continue as the U.S.'s third largest export market at \$5.1 billion. 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 begun to recover, reaching \$5 billion in 1996.

### Trade Policy Outlook

International trade will remain a visible policy issue as the implementation of the GATT agreement and the North American Free Trade Agreement continue to reduce some trade barriers. Trade disputes between the U.S. and Mexico on avocados, peaches and cherries may be resolved during 1997, but the major issue may be the question of whether NAFTA will be expanded to include additional countries from Central or South America. The Canadian government has indicated a willingness to negotiate a free trade agreement with Chile, and the Chilean government has expressed a desire to join NAFTA. While the U.S. has not yet reached a position of whether NAFTA should be expanded or how additional members should be added to the agreement, the potential for an agreement between the Canadian and Chilean governments may force the U.S. to develop a position on these issues during the coming year.

U.S. agricultural trade with Chile is relatively small, with total U.S. exports reaching \$130 million in 1996. Wheat and feed grains represented half of all U.S. agricultural exports to Chile. U.S. agricultural imports from Chile were \$695 million in 1996, with grapes accounting for over half of all imports. Though Chile does not represent a large export market or a large source of imports for the U.S., the terms on which Chile is admitted to

NAFTA would set an important precedent for all future expansions of NAFTA. The U.S.'s insistence that all agricultural commodities and all tariffs be included in the original NAFTA agreement with Mexico set an important precedent that negotiators may want to preserve in negotiating the entry of Chile into the agreement.

Preparations are also beginning for the next round of negotiations under the World Trade Organization scheduled to begin in 1999. By that time, the U.S. must begin to develop its negotiating strategy for that agreement. Agriculture is expected to be a major topic in the negotiations, with export subsidies and import tariff reductions continuing to be a key issue. The problems of non-tariff trade barriers--including such issues as food safety, packaging, inspection, and phytosanitary regulations--are expected to be a major new topic for negotiators.

#### Agricultural Policy Outlook: Research and Extension Issues on the Agenda

With the Federal Agriculture Improvement and Reform (FAIR) Act of 1996 in place for the coming year, domestic agricultural policy debates are expected to focus on other issues in 1997. The FAIR Act did not include a reauthorization of USDA research and extension programs, and the House and Senate Agriculture committees must address these issues in 1997. Senator Richard Lugar, Chairman of the Senate Agriculture Committee, recently issued a list of questions about agricultural research and extension programs that he hopes will frame the debate on these programs. His questions include:

How should our research system structure and delivery system be changed to be prepared to meet the challenges of the agriculture sector in the next century?

Is there a need for a college of agriculture in every state or should there be greater effort to regionalize agricultural research (such as development of regional centers of excellence that link researchers from various states to work on research of regional importance)?

Are special grants or research earmarked by the appropriations committee worthy investments? Do they serve national interests? Should federal funding for research only be awarded for research of national priority? Does the President's new line item veto authority enable him to veto special research grants?

Should the formulas by which food and agricultural research and extension funds are allocated (now based on farm and rural populations) within the land grant system be revised to better reflect changing state demographics and the increasingly diverse food and agricultural research community?

In the absence of federal funds for the Extension Service, would states and localities continue to provide the service? Could the federal funding role be replaced with a memorandum of agreement to guarantee information sharing from federal and other research agencies into the hands of extension personnel?

How does the U.S. stack up against the rest of the world in agricultural research investments?

The movement toward a market-oriented farm policy under FAIR suggests that the competitiveness of U.S. agriculture will be a major determinant of the future success of farmers. The answers to these questions about the role of agricultural research and extension programs in maintaining competitiveness, and the best structure for delivering these programs, will be a central issue that deserves the attention of farmers as the debate on these programs unfolds.



## 1997 OUTLOOK FOR PRODUCTION INPUTS

Chris Peterson

### Fertilizer

Unlike 1995 and 1996 when the big news was tight nitrogen supplies and rapidly accelerating prices, the 1997 fertilizer outlook is good news for producers. Nitrogen supply difficulties appear to be behind us with supply and demand roughly in balance. As a result, nitrogen prices have been stable for a number of months with recent prices actually moving downward. One would expect prices to firm as we move closer to the planting season, but the overall outlook should be for stable to lower prices versus the last 2 years. Phosphate and potash supplies are also good with expectations for stable prices.

On the demand side, the absence of government set asides under "freedom to farm" means that nationally a substantial increase in acres planted occurred last year with any substantial additional increase in acres planted unlikely for this year. Demand will thus be historical high, but the pressure of rapidly increasing demand will not be present as it was last year.

### Chemicals

Chemical demand will also be little changed from last year, although the introduction of bio-engineered crops makes this a more difficult prediction than in the past. In its first year, Bt corn has shown mixed yield results around the state, but its broader adoption will decrease chemical demand in the longer run. On the other hand, Round-up Ready soybeans will increase chemical use for that product.

Chemical supplies are more than adequate with likely downward pressure on prices. There have been a number of new product registrations recently with older products still readily available. As these new products attempt to buy initial market share, chemical prices should be held in check.

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.

### Seeds

Generally, traditional corn and soybean seed supplies should be good, with prices slightly up. Last year, seed prices nationally did increase rather dramatically by an average 6.4%. Some of this increase was clearly fueled by the 10% increase in seed use because of acreage expansion. This increased demand pressure will not be a key factor this year. Bio-tech seed will remain in tight supply with some uncertainty about demand and price. For producers who had a successful year with these seeds, repurchase is strong with supplies largely committed. 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. Dry edible bean seed supplies should be adequate this year with perhaps some specific variety shortages depending upon planting decisions that appear more uncertain this year than in the past.

### The Convergence of Fertilizer, Chemical and Seed Markets

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. Demand for all three inputs has certainly been highly correlated in the past, but purchasers have traditionally made independent decisions about their suppliers for each input. Agribusiness dealers and retailers are increasingly offering and seeing demand for unified programs that combine fertilizer, chemical and seed purchases into a package. These packages include not just the inputs themselves, but customer application, full-line agronomy advice and, at times, services related to precision (site-specific) agriculture. 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.

### Energy

Nationally and locally, fuel supplies should be good this year. Prices have unfortunately been volatile, moving upward in balance. For 1997, the Department of Energy forecasts an average crude oil price below the 1996 level which should bode well for retail prices. However, domestic production of crude will be down sharply (5.5%) from last year. The result will be a rise in imported crude to a 50% share of the market. This contrasts with a average 44% import share through the early years of this decade. This increased dependence on foreign oil will probably add to the volatility of supply and price.

### Equipment

Continuing strength in farm incomes and expectations for strong commodity prices made 1996 a strong year for agricultural equipment sales nationally. In Michigan, the mixed crop year resulted in relatively weak demand with many dealers not doing as well with sales as in 1995. Expectations for 1997 equipment sales are not that much more positive in Michigan. Equipment supplies should be adequate while prices are likely to be up with the cost of inflation.

**LAND MARKET PRICES ACCELERATE**  
**Steve Hanson and Ralph Hepp**

Michigan land prices increased at a faster rate during 1996 than previous years. A study conducted by Michigan State University last spring found that above average grain-hay land in the southern lower peninsula showed gains of 8.1% and below average ground increased 6.8%. Irrigated land rose at a rate of 7.3%, while land capable of growing sugarbeets saw a strong gain of 8.4%. The survey respondents reported higher quality grain land had an average price of \$1,206 per acre and lower quality land had an average price of \$818 per acre. Sugarbeet land averaged \$1,659 per acre and irrigated land averaged \$1,422 per acre. Clearly, the characteristics of land, which determine its production use, has a significant impact on its value.

Rental rates in the southern lower peninsula averaged \$73, up from \$66, per acre for high quality grain land and \$47, up from \$41, per acre for low quality grain land. Sugarbeet and irrigated land had average rental rates of \$117 and \$129 per acre. Cash rents were \$113 and \$115 per acre in the previous year for sugarbeet and irrigated land.

The survey respondents report increasing prices of land due to strong commodity prices and demand for non-agricultural uses. They reported that lower interest rates on land mortgages had a minor impact on prices. While land prices are increasing, the supply of land offered for sale is decreasing, causing further upward pressure on prices.

Other surveys also showed that land prices are increasing in the Midwest. An October 1996 survey by the Chicago Federal Reserve Bank found average land of good farmland increased an averaged of 12% in the Seventh District over the last year. Michigan was excluded from the average because of insufficient response to the last survey. The previous bank survey in July 1996 reported a 14% increase in land prices in Michigan during the last year. The bankers expect the up trend in land values to continue into the fall and winter months.

Expect farmland prices to show a strong increase during the year, but at a lower rate than reported in 1996 on the Federal Reserve survey. Most businesses enter the year with a reduced inventory of crops due to lower yields and reduced prices, so the value of inventory liquidation will cause a tighter cash flow during the year, and greater borrowing for the purchase of production inputs. Stronger balance sheets and returns during the last few years have allowed larger debt repayment capacity and more optimism about the future. But the poor crop yields in most areas of the state, and sharply lower commodity prices will put a damper on the ability of most operations to purchase land. Stronger upward pressure on cash rents will be more common than increases in land prices.

The purchase of land for residential and/or recreation land uses has been significant in many areas. The strong Michigan economy will continue to put upward pressure on the land demand for residential and commercial uses in the southern part of the state; while the demands for land to be used for recreational purposes will continue to be strong in the northern lower peninsula.

**CROPS**  
**Jim Hilker**

Corn

When we look at expected corn prices for the first 8 months of 1997 we see an above average price year for corn. But when we look back at 1995-96 corn prices, \$2.65 doesn't seem very high, especially given Michigan's 1996 average corn yield of 94 bushels per acre, over 20 bushels below trend. And, the 1996 corn harvest accounts for much of the corn that will be sold in 1997. But, of course, 1997 corn sales also include part of the 1997 corn crop. If the country, as a whole, achieves a trend yield, it is likely that we will see 1997-98 corn prices average around \$2.35, which was the 5-year average before the 1995-96 corn crop. Hopefully, we will see a good 1997 corn yield in Michigan and thank goodness we had a good crop to sell at the high 1995-96 crop year price.

The Supply/Demand Balance Sheet for corn, shown below in Table 1, summarizes the expected fundamentals for the 1996-97 crop which runs through August 31, and the 1997-98 crop year which begins September 1. As shown, the supply available for the 1996-97 marketing year is significantly above the previous year as the increase in acres and yield more than made up for the lower beginning stocks. It is somewhat amazing to me that after all the problems last spring the country ended up with the trend yield.

On the demand picture, there is both a bright and a dark side. The bright side is it appears 1996-97 feed use will bounce back strongly despite only a few more animal units. It also appears ethanol production will return to near 1994-95 levels. The dark side is the rest of the world had good feed grain crops and exports will be down sharply. The other part of the dark side is hog numbers will be lower than they would have been if not for extremely high corn prices last year.

As shown at the bottom of column 2, ending stocks are expected to grow as demand growth is not expected to keep up with the extra supply. Ending stocks as a percent of use is projected to be 10.9%. While this number is not burdensome, it is sufficient and should give us an average weighted corn price of about \$2.65 for the 1996-97 marketing year.

The next question is, what are the 1997-98 expectations? We will discuss the most likely scenario here, but given 1996-97 ending stocks are merely adequate, there is significant room for movement in both directions depending mostly on the 1997 corn yield. My expectations are that producers will try and plant the number of corn acres they wanted to last year before the wet spring pushed a couple million acres to soybeans or sorghum. And, as shown below in column 3 of Table 1, the trend yield for 1997 is 129 bushels per acre, the record U.S. yield is 138.6. This would give us a corn crop of nearly 9.7 billion bushels, which added to the expected beginning stocks, would give us a total supply near a billion bushels higher than this year.

Feed use should grow marginally as hog numbers will likely increase as we go into 1998 and cattle numbers will decrease as the past two years disastrous calf prices will cut the 1997 calf crop. Expectation are that with corn prices back down to a longer term average food, seed, and industrial use will again begin to grow with ethanol leading the way. The export projection shown assumes an average world feed grain crop and continued worldwide economic growth.

The above scenario shows how quickly the huge agricultural resources we have in the U.S. can recover from a short situation. Ending stocks are expected to grow and an ending stocks to use ratio of 15.3% indicates an average annual price of around \$2.35.

## Wheat

Michigan's 1996 wheat yield of 38 bushels per acre almost made the corn yield look good. This was down from 60 bushels per acre in 1995 and 53 bushels per acre in 1994. While wheat prices were quite good last summer, they were not good enough to make up for low yields and discounts for quality.

The U.S. situation for the 1996-97 wheat crop is summed up in column 2 of Table 2. Supply is just below the previous year's level with total production up, but beginning stocks down. Domestic use has been running fairly strong up to this point, with feed use up last summer, and with high corn prices and food use making gains as well. However, exports are a whole different story. World wheat production was up sharply for the rest of the world. This means U.S. exports will be down sharply as shown.

The bottom line is that ending stocks will grow. The \$4.20 weighted average annual price projection seems high given the 20.7% stocks to use ratio. This is due to a lot of wheat being priced before the size of the rest of the world's wheat crop was known.

The drop-off in prices we saw by fall and, to some extent, the late harvest of soybeans, lowered winter wheat acres seeded for 1997 harvest by almost 3.8 million acres, or 7%. This trend was seen to even a greater extent in Michigan as a 120,000 fewer acres, 17%, were planted this past fall. What this means for the U.S. wheat supply/demand picture is shown in Table 2, column 3.

The 1997-98 wheat planted estimate uses the actual 1997 winter wheat seedings and assumes the same amount of spring wheat acres as last year. The number of acres harvested should not be down as sharply as the planted acres number because an average abandonment and grazed number of 9.5 million acres is used versus last year's 12.7 million acres. With a trend yield of 38 bushels an acre, the total U.S. supply is expected to be up due to a combination of larger carry-in and higher production.

Wheat use is expected to pick up in the 1997-98 crop year in total as exports should make some gains assuming a normal rest of the world crop. However, a likely decrease in feeding this next summer from the high levels last summer will temper growth. Overall, ending stocks are expected to grow and this means lower prices.

## Soybeans

Part of the story for soybeans in Michigan is the same as for corn and wheat, poor yields. After averaging 37.2 bushels per acre the previous 5 years, typically higher than the U.S. average, Michigan's 1996 soybean yield dropped to 28.5 bushels per acre. The U.S. yield tied for the second highest on record and was close to trend.

The 1996-97 soybean supply/demand situation is shown in Table 3. We came in with low enough stocks that even given the sharp increase in production, total supply was up only 54 million bushels, 2.4%. From this point on is where the picture for soybean prices changes from that of corn and wheat.

Total use is expected to not only grow by the extra supply, but then some, leaving even lower ending stocks. While we may not see prices as high as periods of last year, the average weighted price will likely be higher. Crushings will continue to be high with equal to growing animal units. And, with a lower oil content, more will need to be crushed to get the same amount of oil. Exports continue to be strong despite a good crop in South America last year and a bigger crop projected for this year.

As we look forward to the 1997-98 soybean marketing year, the picture stays bright. While I expect prices to be down, they should stay over \$6.00 per bushel and may average close to \$6.50 as shown in column 3 of Table 3. I expect soybean planted acres to be about the same as last year despite the projected gain in corn acres. Between new CRP ground being released, fewer winter wheat acres, some pick-up of acres in the South, and the expected good soybean prices, there will be enough acres for both the soybeans and corn acreage projections. And, perhaps I am being too conservative.

The slight decrease in beginning stocks will be offset by an increase in trend yield and total supply is projected to be about the same. On the demand side, the picture is not expected to change a lot other than a big crop in South America this spring which may cut into our exports next year. And, as shown, exports are still expected to be strong. While expected 1997-98 ending stocks may grow, they are still expected to be relatively tight.

TABLE 1  
SUPPLY/DEMAND BALANCE SHEET FOR CORN

	Est. 1995-96	Proj. 1996-97	Hilker 1997-98
(Million Acres)			
Acres Set-Aside and Diverted	6.2	0.0	0.0
Acres Planted	71.2	79.5	81.5
Acres Harvested	65.0	73.1	75.0
Bu./Harvested Acre	113.5	127.1	129.0
(Million Bushels)			
Beginning Stocks	1558	426	959
Production	7374	9293	9675
Imports	<u>16</u>	<u>10</u>	<u>6</u>
Total Supply	8948	9729	10,640
Use:			
Feed and Residual	4711	5200	5250
Food, Seed and			
Ind. Uses	<u>1583</u>	<u>1670</u>	<u>1780</u>
Total Domestic	6294	6870	7030
Exports	<u>2228</u>	<u>1900</u>	<u>2200</u>
Total Use	8522	8770	9230
Ending Stocks	426	959	1410
Ending Stocks, % of Use	5.0	10.9	15.3
Regular Loan Rate	\$1.89	\$1.89	\$1.89
U.S. Season Average Farm Price, \$/Bu.	\$3.24	\$2.65	\$2.35

Source: USDA and Jim Hilker.

TABLE 2  
SUPPLY/DEMAND BALANCE SHEET FOR WHEAT

	Est. 1995-96	Proj. 1996-97	Hilker 1997-98
(Million Acres)			
Acres Set-Aside and Diverted	5.2	0.0	0.0
Acres Planted	69.2	75.6	71.8
Acres Harvested	61.0	63.1	62.3
Bu./Harvested Acre	35.8	36.3	38.0
(Million Bushels)			
Beginning Stocks	507	376	469
Production	2182	2282	2367
Imports	<u>68</u>	<u>75</u>	<u>74</u>
Total Supply	2757	2733	2910
Use:			
Food	884	910	920
Seed	104	104	105
Feed	<u>152</u>	<u>300</u>	<u>260</u>
Total Domestic	1140	1314	1285
Exports	<u>1241</u>	<u>950</u>	<u>1100</u>
Total Use	2381	2264	2385
Ending Stocks	376	469	525
Ending Stocks, % of Use	15.8	20.7	22.0
Regular Loan Rate	\$2.58	\$2.58	\$2.58
U.S. Season Average Farm Price, \$/Bu.	\$4.50	\$4.20	\$3.40

Source: USDA and Jim Hilker.



TABLE 3  
SUPPLY/DEMAND BALANCE SHEET FOR SOYBEANS

	Est. 1995-96	Proj. 1996-97	Hilker 1997-98
(Million Acres)			
Acres Planted	62.6	64.3	64.5
Acres Harvested	61.6	63.4	63.5
Bu./Harvested Acre	35.3	37.6	38.0
(Million Bushels)			
Beginning Stocks	335	183	155
Production	2176	2383	2413
Imports	<u>5</u>	<u>4</u>	<u>7</u>
Total Supply	2516	2570	2575
Use:			
Crushings	1370	1400	1410
Exports	851	900	850
Seed, Feed and Residuals	<u>112</u>	<u>115</u>	<u>115</u>
Total Use	2333	2415	2375
Ending Stocks	183	155	200
Ending Stocks, % of Use	7.8	6.4	8.4
Regular Loan Rate	\$4.92	\$4.97	\$4.97
U.S. Season Average Farm Price, \$/Bu.	\$6.77	\$6.85	\$6.50

Source: USDA and Jim Hilker.

## **MICHIGAN SUGARBEET OUTLOOK**

### **John (Jake) Ferris**

The Michigan sugarbeet industry has been facing some difficult times. In only a couple of years since the 1960's (1961 and 1972) did gross margins per acre over direct cash costs fall to or below that of competing enterprises--that is before 1995. In 1995, declining prices and yields on sugarbeets, in combination with sharply higher prices on corn and soybeans, brought gross margins down to very competitive levels with the other enterprises. As a result of 1995's lowest real margins since the 1960's and the cool, wet weather at planting time in 1996, the area planted to sugarbeets dropped to 153 thousand acres.

The area harvested in 1996 was only 130 thousand acres because of weather problems. Only in 1986, the year of the flood, were more acres left unharvested. Yields per acre were down again in 1996, following a trend that has set in since the mid 1980's. Total sugarbeet production, at just over 2 million tons, was the lowest since 1983. The prospect for a reduction in production forced the industry to contract with Ontario producers in 1996. In 1997, sugarbeets grown in Ontario for processing in Michigan could expand to about 3,000 acres.

However, for those who did grow sugarbeets in Michigan in 1996, gross margins per acre were up sharply from 1995. Not only have sugar prices increased, but the quality of the crop has improved. Sugar content of 270 pounds per ton of beets has been reported, compared with 250 pounds in 1995. These higher returns, in combination with declining prices on competing crops and the prospect of more normal weather in 1997, should result in a recovery in acreage. Those who were prevented by weather in growing sugarbeets in 1996 will have more opportunity to work beets into their rotation in 1997.

Over the years, sugarbeets have earned Michigan farmers substantially higher returns per acre than from other crops. With the new farm program introducing more flexibility in planting decisions, but also more profit risk, more of a premium will be placed on diversification of enterprises as a way to manage these risks. Having sugarbeets as an alternative is an advantage for Michigan farmers. The challenge will be to reverse the downtrend in yields and overcome some of the higher level of physical energy involved with sugarbeets compared with other crops.

Under the new farm program, the Federal Agricultural Improvement and Reform (FAIR) Act, the refined beet sugar loan rate was frozen at 22.9 cents per pound. This is the same level of support in effect on the 1995 crop. Certain modifications apply to whether the loans will be recourse or non-recourse. Authority for the USDA to control surplus sugar supplies by imposing domestic allotments on U.S. sugar processors was eliminated.

Since the sugar program does not involve federal budget expenditures, pressures to reduce sugar supports have been muted. Being a major importer of sugar, the U.S. has kept sugar prices near the loan rate by restricting imports. This has kept domestic prices above the world level. However, 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**

**Ralph Hepp**

The financial return on crop farms the past year is mixed depending on the yields of major crops. Most businesses should have had very good cash flows during the past year due to higher prices and a relatively high level of inventories entering 1996. However, profit levels the past year were depressed for crop operations experiencing poor yields due to the late spring and excess water early in the year. Reduced inventory carryover and lower commodity prices result in less cash available in the spring of 1997. The smaller amount of working capital for these businesses will require more financing of production inputs until revenue is generated from the new crop.

Even though the state average corn yields were 94 bushels in 1996 compared to 115 and 117 bushels in 1995 and 1994, some areas of the state were not hurt by the late spring and excess water problems, and yields were very good. These operations had very high profits, excellent cash flows, high income taxes and an opportunity to prepaid production expenses for 1997. They enter the year with a good level of inventories to market, but at lower prices.

But all cash grain producers will experience tighter cash flows during 1997 than the previous 3 years. For many operations, a reduction in free cash flow means less capital purchases, and slower rates of expansion and higher levels of operating credit needs during the year. If the yields on Michigan grain farms return to normal levels, the businesses will be profitable, but not at an outstanding profit level, since commodity prices have returned to more modest levels. It is expected that net farm income will be about \$55 per acre, near the \$53 average for the 1990-94 period. The net farm income per acre increased to \$105 per acre in 1995, but returned to the mid \$50's in 1996.

Increasing production costs can be a serious problem on many operations, not only for crop supplies, but also cash rents and other overhead expenses unless steps are taken to control costs. Greater management attention to prices being paid and input levels being used for production inputs can pay high dividends during the year. Review the recommended technical practices and proven financial management strategies for the operation and follow them. Purchase capital items if the expenditure will pay back a higher amount than it costs. Repair machinery rather than purchase, unless expansion requires larger equipment or more equipment.

Wide variation in commodity prices and crop yields puts considerable pressure on the financial outcomes of the business. Financial management strategies to reduce the variation such as purchasing crop insurance, maintaining higher levels of financial reserves, slower rate of expansion, using less credit and diversifying the family income sources can reduce the risks of modern farming. The financial position of the operation determines the types of strategies to use for the next few years, so evaluate your options for financial stability, not what others should be doing.

Although the outlook for cash grain farms in 1997 is average income, operations in good financial position can pursue appropriate technology to improve productivity and efficiency of the business. Top producers can continue the growth and development of the business, and apply technical inputs and expand size to levels set by the management team's mission and objective statements. In 1997, monitor the financial conditions of the business during the growing season and make changes in marketing, production and financial areas of the operation as they become necessary.

## MANAGEMENT IMPLICATIONS FOR LIVESTOCK ENTREPRENEURS

### Gerald Schwab and Laura Martin

How to manage in a world of change? The fortunes of livestock feeders were affected adversely by prices of feed ingredients that were high and highly volatile during 1996. Both cattle and swine producers had to contend with corn and soybean meal prices that were much higher than expected. Feeding high-cost feed to cattle entering a historically down market with finished cattle prices ranging in the low to mid \$60 per hundredweight (cwt.) resulted in a rational and expected depression in prices paid for feeder cattle. Most cow-calf enterprises rarely if ever had good pricing opportunities in 1996. Swine producers experienced a mid \$50 per cwt. price in 1996 which provided a profitable year for many enterprises. However, numbers of Michigan hog farms and of hogs continued to decline in 1996. From these capsule observations, let us briefly discuss opportunities for producers in each of these meat sectors.

#### Beef Enterprises

Farmers in the beef sector were hit hard this year at both ends--high feed prices coupled with a lengthy trough in the cattle cycle. Earning a profit in 1996 has been a challenge for cow-calf enterprises, although there were opportunities to improve their cow herds during this low in the cycle. Focus must continue on cost control where feed remains one of the major factors, improvement in genetic quality, and efficiency of the cow herd.

Is there hope for a turnaround in the fortunes of the cow-calf enterprise? We believe that there is some basis for profitability for those cost-efficient cow-calf producers who can provide a uniform set of calves that have potential for being resource-efficient in the feedlot and who can deliver a carcass that meets the demands of today's consumers. With corn (feed) prices expected to be lower in 1997 relative to 1996, cattle feedlots will be chasing fewer available calves from the smaller national cow herd to put into their lots. This combination of events is expected to result in modest upward pressure on feeder calf prices.

If the cattle price cycle has indeed started to turn partially as a result of more cows culled from the national herd, then the next question is, whether heifer calves from the 1996 crop should be retained for expansion of the herd? This question is too late for the producer who has sold title to those heifers, but may be relevant for those who are wintering over their calves. Although there is no guarantee, the odds are improving that the 1996 heifer calves brought into production will earn more profits than any heifer retained in the previous 5 or 6 years.

The high feed prices and low beef prices also have been difficult for the cattle feedlots. The feedlot decision-makers have three key questions to answer for their operations-- whether cattle are fed and, if so, in what numbers, and how much will be paid for the feeders? As producers determine their break-even feeder prices, they will want to consider which market to target with that set of cattle.

Lately, there has been increasing talk in the industry concerning price premiums for finished cattle that meet market quality specifications. Careful scrutiny of the quality of feeder calves and their potential to grade high Choice and provide a premium will add intriguing dimensions to the cattle feeder's decisions. The feedlot operator who has enterprise records on performance of previous cattle by source and type, break-even calculations, and expected feed costs will be in the best position to determine the maximum bid price for feeder cattle. For producers who have not kept good records, what better year to start than 1997?

#### Swine Enterprises

For many pork producers, 1996 appears to have been a profitable year. Average prices in the low to mid 50's took a big bite out of the high feed prices. However, it looks like some of the state's pork producers viewed the historically high corn and soybean prices in 1996 as an opportunity to exit the industry. The most recent USDA Hogs and Pigs Report, in December 1996, suggests that about 300 Michigan hog operations have left the industry, most of these in the 100-499 head category. Operations with more than 2,000 head now account for 53% of our state's hogs, up from 46% in 1995. Obviously, the structural change, almost a revolution, that is occurring nationally is affecting Michigan pork producers as well.

This spring, Michigan State University will be conducting a survey of the state's pork producers with the objective of gathering information on the nature and structure of the state's changing industry. This information should help farmers, leaders and educators better address the long-run growth, profitability and viability of the state's pork industry. We strongly encourage producers to take the time to fill out this important questionnaire when they receive it. Without this information, it will be increasingly difficult to adjust to the evolving changes.

Producers should remember however, that with change comes opportunity. As some pork producers expand in size to capture the benefits of new technologies, opportunities also exist for farmers of all sizes to work together to capture these same benefits. Pooling resources, specializing in various production phases and sharing information and management expertise are but a few of the ways individual farmers can capture some of the same production and marketing advantages of the very large-scale operations. Opportunities are occurring as well for new entrants into pork production in the form of contractual arrangements. We strongly encourage all parties considering any coordinated arrangements to not only evaluate closely the potential for profit, but also the obligation for managing the resource mix associated with pork production.

Michigan State University Extension has recently enhanced its capacity to deliver education and information through its Area of Expertise (AoE) people in the field and on campus. If you would like some assistance in evaluating your business and production opportunities, please contact your local Extension office to determine the Livestock AoE resource person in your area.

**DAIRY SITUATION & ANNUAL OUTLOOK**  
**Larry G. Hamm and Sherrill B. Nott**

The year of 1997 will be another challenging year for Michigan dairy producers. Dairy margins will be squeezed by lower milk prices combined with higher input costs. The situation will be further compounded by difficulties in obtaining adequate quantities and qualities of forages, particularly hay.

1996 Sets Price Record

In 1996, milk production actually decreased over 1995 levels. Continued strong commercial demand in face of declining milk production resulted in record level milk prices. For 1996, the average Basic Formula Price (BFP) was \$13.39. The average Michigan all-milk price (price of milk before any deductions) in 1996 was \$14.85 per hundredweight (cwt.). Unfortunately, the wholesale dairy product markets turned sharply during the last quarter of 1996 assuring that farm milk prices in the beginning of 1997 will be substantially below 1996 levels. The year 1996 was the first year that many of the new and expanded dry-lot dairy herd operations experienced a dramatic increase in feed cost and availabilities. The passage of the 1996 FAIR Act with the increased flexibility in cropping patterns assures that large scale dairy operators will likely face more years of feed price and supply uncertainty.

Constrained Milk Production in 1997

In 1997, we anticipate sharply lower milk prices in the first part of the year. This, combined with increased dairy costs--particularly fuels and hay, will constrain milk production. Milk cow numbers in the U.S. dairy herd are anticipated to decline and are expected to be 1% lower in 1997 over 1996. The increase productivity per cow in 1997 will be constrained by the lack of available supplies of quality forages; at least for the first half of 1997. Consequently, total milk production for 1997 is anticipated to be level or 1% higher than 1997 levels.

Continued general economic growth and strong employment suggest that commercial demand for dairy products will continue to be strong in 1997. As in 1996, there may be times of the year that demand for milk in specific markets will exceed available milk supplies. It is likely that overall commercial demand will more than adequately absorb the limited milk supply in 1997. World milk supplies are also somewhat constrained to the point where significant dairy product imports beyond those allowed by the current GATT provisions are not likely. Because of the sub-normal prices to U.S. dairy farmers in early 1997, USDA activities to accelerate domestic food program purchases and to push for maximum use of the Dairy Export Incentive Program (DEIP) will add further to the demand for tight U.S. milk supplies.

### Higher Prices on the Way

The lowest prices for the year will be in the first quarter. Milk prices should rise fairly steadily throughout the last 9 months of 1997. For all of 1997, the BFP should average in the range of \$12.30 to \$12.60 about \$.70 to \$1.00 lower than the record 1996 levels. The all-milk price for Michigan could range between \$13.50 to \$14.00 per cwt. for 1997. Although 1997 milk prices will not equal those of 1996, 1997 could see the second highest average annual milk price. There is likely only going to be a modest recovery in the cull cow and calf markets. Dairy farm incomes will likely trail 1996 levels.

### Production Costs to Rise

Production costs, as indicated by the index of prices paid by U.S. farmers, were up less than 2% during 1996. With a base point of 1990-92 = 100, the index in December was 112 in 1995 and 114 in 1996. This is a slower rate of cost inflation than existed in the two decades before 1990. Costs could be poised to rise faster in 1997 due to a strong economy and labor unemployment rates at unusually low levels. Individual cost items were not as docile as the overall index indicated.

Fuel. Of all the individual farm cost items published by the USDA, fuel jumped the most. In December 1995, the index was 95; a year later, it was 110. LP gas went up 59 points, ending 1996 at 155. Gasoline was up 17, but diesel was up only 6. For those that used LP gas for crop drying or space heating, the increase hurt. However, many do not use any. Diesel, a predominant tractor fuel, increased the least, but the 6% rise was more than the rise in the average of all costs. Worldwide there are indications that energy markets may see rising prices, especially for petroleum products. This will cause increases of prices in many products dairy farmers use. If this continues, it will renew the interest in minimum tillage for cropping. It will tend to encourage more use of alfalfa and less of other forage crops.

Labor. The index for wage rates went from 114 to 120 comparing December 1995 and 1996. This is up nearly 6%. The recent change in federal minimum wage law called for a two-stage increase. The first occurred in 1996. For those dairy farmers paying minimum wage, this forced a direct increase in labor costs. A rise in minimum wage tends to cause all labor costs to go up even if actual wages paid are above minimum. If full employment continues, farmers will be forced into paying even higher wages. And, labor of any quality will be hard to find.

Fertilizer. Compared to the index base of 100 in 1990-92, fertilizer and farm machinery are currently at 127, the highest of all the major cost categories. Fertilizer rose 4 index points in 1996, but farm machinery was up only 2 points. Potash and potassium dropped 3 points, but nitrogen was up 6 index points. This upward trend in fertilizer prices has provided dairy farmers an incentive to more carefully manage the quality and placement of livestock manures. Purchased fertilizer has been used more sparingly. Expect to see soil nutrient management given a higher priority because of nitrogen prices as well as environmental regulations.

Seed. The index of seed costs rose 8 points for field crops, but only 1 index point for grasses and legumes. Dairy farmers have shown an interest in brown midrib corn silage varieties and appear to have bid up those seed prices. Other crop varieties that have been genetically engineered for built-in tolerance to certain weed control chemicals and outright resistance to some diseases come at a higher price. The unknown is how far yield increases and reduced needs for crop chemicals will go towards offsetting higher seed costs.

Feeds. For the country as a whole, the cost index for all feeds went from 121 in December 1995, to 113 in December 1996, a drop of 8 index points. The five components of all feeds follow with their change from December-to-December given in parentheses: Complete feeds (-4); Feed grains (-23); Hay/forages (+18); Concentrates (-2) and Supplements (-25). A year ago, corn prices were higher than now, and influenced ration costs until well into the summer of 1996.

Hay. In a special report on the U.S. hay situation, the National Outlook Board stated that hay is one of the most widely grown crops in the country, third in harvested area behind corn and wheat. The following is quoted from their report AO-236, dated November 25, 1996.

The average U.S. hay price is expected to hit a record in 1996-97 -- around \$90 per ton, up from \$85 in 1995-96 -- due mostly to a lower hay supply as well as higher grain prices earlier in the season.

This year's lower hay production, a result of reduced yields in several states, reflects generally unfavorable growing and harvesting conditions. In the northern half of the U.S., wet weather kept producers from harvesting the first cutting on time, reportedly reducing hay quality. Second and third cutting alfalfa output and quality were curtailed by dry conditions and insects.

The report goes on to say high grain prices created a demand for hay as livestock feeders looked for alternative feeds. As grain prices are expected stay above long-term average levels for much of the coming year, they may lead hay prices to stay high, also. With hay being in relatively short supply across a wide area of the U.S., plus being bulky and relatively high cost to transport, Michigan dairy farmers will likely get hay price relief only when the 1997 crop harvest starts.

Dairy farm costs may rise more in 1997 than they did in 1996. When linked to lower dairy operation income, managers will need cash flow projections to show the net impact of milk prices received and expected costs. More than ever, there will be continuing need for enterprise or cost accounting records.



## **1997 OUTLOOK FOR EGGS AND POULTRY**

### **Henry Larzelere**

#### Eggs

The number of eggs and pullets on January 1, 1997 will likely be 2% or 3% above a year earlier. Egg production in most of 1997 will probably also be 2% or 3% above 1996. This increased production will largely be the response of favorable egg prices and feed ingredient prices at the end of 1996 and early 1997. The egg-type chick hatch during the major hatch season of March, April and May 1997, will probably be 3% or 4% above the same period of 1996. Likewise, feed ingredient costs will probably continue their recent decline, depending on 1997 crop production conditions. These expected increases in egg production will likely mean New York wholesale prices for Grade A large white eggs in cartons will average in the 80's or 90's. Egg prices in 1997 most likely will be below 1996.

#### Broilers

Broiler production in pounds of meat in 1996 was more than 5% above 1995. Wholesale broiler prices, fresh ice packed at Midwestern cities in 1996, averaged 5 cents a pound above 1995.

Broiler production in 1997 is expected to be 6% above 1996 levels. This factor, coupled with pork production being about the same, will likely mean average broiler prices in 1997 will be about 2.5 cents a pound below 1996, or 59 cents a pound.

#### Turkeys

The 1996 turkey crop was about 6.5% above the 1995 crop with prices for frozen whole turkeys about the same in both years.

The 1997 turkey crop is expected to be 2% above 1996. Turkey prices in 1997 will probably average about 2 cents a pound above the previous year. The consumption of turkey continues to grow throughout the year because more uses of turkey are found. However, prices in the last quarter of the year will be 5 to 10 cents a pound above the first three quarters.

**LIVESTOCK**  
**Jim Hilker**

Cattle

While 1997 probably won't be a great year for the cattle sector, it will certainly be better than 1996, which was a disaster for cow-calf producers and also for feedlots other than the last quarter. The one slightly bright spot for Michigan is the continuing premiums for many of our fed cattle versus the High Plains. This is due to both the type and condition of our cattle and the strong East Coast demand versus Eastern Corn Belt cattle numbers.

Two poor years of calf prices following a break-even year will lead to a smaller 1997 calf crop. Cow slaughter has been up for the past year. How much smaller will be reported in the Cattle Inventory Report released January 31. My expectations are for a 1-3% decrease in the size of the beef herd. This should allow calf prices this fall to make it back into the \$70 range. If the cutback is on the high side, 3+%, and corn prices are near or below present expectations, \$2.30, we may see calves near \$80 this fall.

Choice steer prices are expected to average \$66-68 per cwt. for 1997, up from the 1996 average price of \$65.11, which was helped greatly by the \$70 prices last fall. Annual beef production is expected to be nearly the same as last year, but with an ever-growing population, economic growth and a continued growth in exports, prices should edge up as suggested. This, along with lower feed prices, should lead to longer periods in the black for feedlots, however, this will lead to a bidding up of feeder cattle prices which will keep a lid on net returns.

First quarter beef production will be about the same as last year and steer prices should average in the \$64-66 range, but as mentioned earlier, Michigan will probably continue to receive a \$1-2 premium on many of our cattle. Beef production in the second quarter is expected to be down 2% relative to 1996 and U.S. prices should average \$63-67, up from the poor, \$60.26, 1996 average for the same period.

Third quarter beef production should recover 1-2% from last year's levels and prices are projected to be in the \$64-69 arena. Fourth quarter may be slightly lower than this year which will once again help prices stay in a range of \$68-74. As we go into 1998, I expect steer prices to average over \$70.

Hogs

If we look at just hog prices in 1996, it was a very good year as prices averaged \$53.45 per cwt., compared to 1995's \$42.35. Of course, when we adjust the returns for the high feed prices the picture is not quite as bright, but the hog industry weathered the storm, as a whole, much better than the cattle industry.

As we have seen for years, different size producers react to conditions differently. Small farm feeders continued to flee the hog sector. Whether it was due to small or negative returns, or the unwillingness to make new investments at a later point in their life-cycle, or because the return to selling their feed grains was better or nearly as good as putting it through hogs, varies by the operation. The large operations continued to grow, but not by as much as the small one's decreased.

Overall, pork production is expected to be nearly the same in 1997 as 1996, and this points to a very good year for hog producers in 1997. Feed prices are down and hog prices are expected to average \$54-57 per cwt. for

1997. U.S. per capita production is expected to be down 1.7 pounds to 47.8 as population continues to increase slowly and exports continue to explode.

First quarter pork production will be 4% below a year ago and therefore prices will average \$7-8 higher at \$53-55 per cwt. Second quarter production will be about the same as a year ago and this should allow prices to average between \$54-58, somewhat above a year ago. Third quarter production is expected to rebound and be 4-5% above 1996 with prices averaging \$54-58, somewhat lower expectations than the \$57.75 seen the year before. Fourth quarter production is projected to be off 1-2% from this past fall which should keep prices in the same range, \$54-57.

Just like very low prices in 1994-95 cured the low prices, I expect very strong prices in 1996-97 to cure the high prices. Remember, the large hog units can raise hogs profitably at \$40 per cwt. with long-run average corn prices. We in Michigan need to be making the correct investment and management decisions in 1997 so that we are in a competitive position in 1998 and beyond.

## MICHIGAN FRUIT INDUSTRY OUTLOOK

Don Ricks

### Apples

Michigan apple production in 1997 is likely to be up considerably, since the 1996 crop was the shortest in 6 years. Although the exact crop size for any given year will, of course, depend upon weather conditions, especially during the spring, Michigan apple production is expected to continue to trend upward. Thus, during the next 3-5 years, Michigan is likely to have some additional substantial crops in the 25-29 million bushel range.

Market volumes and demand for Michigan apples have experienced growth for fresh, applesauce, slices and juice. Despite the temporary dip in sales this year due to Michigan's short crop, demand for both fresh and processing apples is expected to continue to trend upward in the future. Demand for fresh apple exports from Michigan is also expected to rebound and continue to grow during future years.

Acreage of Michigan's leading apple varieties, with Red Delicious in the top spot, are shown in Figure 1. Golden Delicious and Empire top the list of most recently planted varieties according to the latest orchard survey (Figure 2). The relatively new varieties of Jonagold, Gala and Fuji have also had considerable new plantings, along with moderate amounts of Red Delicious, Jonathan, Rome and Spy.

According to a recent survey, a majority of Michigan apple shippers expect that Michigan's top 5 varieties for fresh market demand in the future will be Red Delicious, Gala, Golden Delicious, Jonagold and Jonathan. A majority of the shippers expect Michigan's future fresh demand to increase for each of these varieties, except Jonathan, along with increasing demand for the additional newer varieties of Gingergold, Fuji and Braeburn.

In a recently completed survey of Michigan processors, the varieties rated most suitable for sauce processing include Golden Delicious on top, followed by Jonagold, Mutsu, Spy, Ida Red, Winesap and Rome. Processors rated Spy as continuing to be the variety best suited for processing into slices, followed by Mutsu, Jonathan, Golden Delicious, Ida Red and Rome.

For continued growth in fresh markets, it is important to serve consumer wants and preferences in a high performance fashion. In our recent consumer surveys and focus groups, consumers ranked the characteristics of crispness, flavor, unbruised and unblemished as the most important to them for their fresh apple purchase decisions. The characteristics of color, size and price were rated as moderately important by consumers. Surveyed consumers also said that they like information on apple varieties and the specific characteristics of the different varieties.

A number of Michigan apple industry leaders have, during recent years, been involved in visioning and planning for the future with the Michigan Apple Industry Strategic Planning Task Force. This has involved analyzing major market trends, industry opportunities and needed strategies for a successful, competitive and growing apple industry in the future. Some of the priority areas which have been considered by the Task Force include changing markets, competing industries, consumer preferences, varieties, industry modernization needs, promotion and market expansion strategies, performance needs on quality, export expansion, research and extension priorities, pest management and pesticide availability issues, food safety issues and other strategies for a dynamic high performance Michigan industry. The Task Force is continuing to grapple with these kinds of issues as a part

of a continual process by the apple industry of adjusting and gearing up for the future in an overall pro-active manner.

### Tart Cherries

It is expected that the new tart cherry federal marketing order program will be operational for the 1997 crop if it is needed. This industry-developed program was recently approved in a referendum of growers and processors throughout the industry. A main goal of the marketing order is to help manage surplus supplies when these occur, so that extremely low prices, such as were experienced in 1995, can be avoided. Other goals of the marketing order include helping to expand long-run cherry markets with greater stability of supplies and prices, along with possible encouragement of certain new or expandable market uses. The industry board for the new federal marketing order had its initial formation meeting just this month, and they are working on the many steps necessary for implementing the new program.

The tart cherry industry is also working on a number of on-going programs to aid the expansion of demand for cherries through the efforts of the Cherry Marketing Institute, the Michigan Cherry Committee, processors and cherry marketers. In addition to the continuing markets for traditional cherry usages, there seems to be good prospects for substantial market expansion for dried cherries, cherries in hamburger and cherry exports in future years. Several other ideas are also being discussed in the cherry industry to aid the effectiveness of tart cherry marketing and to help avoid a repeat of the very low prices as occurred in 1995.

In order to focus on a number of the important issues related to the future performance of the cherry industry, a U.S. Tart Cherry Industry Council was formed this fall. The goal of this Council is to analyze and discuss future industry needs, opportunities and strategies for a competitive and successful industry in future years.

Michigan Tree Fruits

The concentration of the Michigan tree fruit industry on the two major crops of apples and tart cherries continues. The 1995 orchard survey shows that apples have 52% of Michigan's tree fruit acreage and tart cherries make up 32%. Thus, these two main crops together constitute 84% of the total tree fruit acreage in Michigan. This can be contrasted to earlier times, such as shown by the earlier 1973 orchard survey, when apples and tart cherries together comprised a smaller 68% of Michigan's tree fruit acreage. At that time, peaches, pears and plums together had 23% of the state's tree fruit acreage, while the latest (1995) survey shows that these three crops now have fallen to a collective 9% of Michigan's acreage.

## MICHIGAN FARM INCOME OUTLOOK FOR 1997

John (Jake) Ferris

Tracking and forecasting Michigan farm income is a particularly complex task because of the large number of livestock and crop enterprises and wide swings in production and price. Converting crop income to a calendar year presents an additional challenge because farmers change how they allocate sales from year-to-year. Estimates for calendar year 1996 and forecasts for 1997 are based on traditional sales patterns. As is necessary, normal weather is assumed in forecasting production of 1997 crops.

### 1996

The variability in sales, prices and gross income from year-to-year is illustrated in Table 1 which shows percent changes from 1995 to 1996. Crop sales for 1996 represent a combination of 1995 and 1996 crops. Milk sales in 1996 were down slightly from 1995, but with tight U.S. supplies, Michigan dairy farmers averaged \$15 per hundredweight (cwt.) in 1996, 15% above 1995. This increased gross income 14%. Both sales and prices on cattle and calves were down in 1996, resulting in a gross income decline of nearly 10%. Higher prices more than offset a reduction in hog sales to boost the gross by 12%. Similarly, gross income to egg producers increased substantially as higher prices more than offset a reduction in sales.

Quantity sold of every major field crop declined in 1996, primarily due to poor yields on 1996 crops. A cool, wet spring delayed plantings and dry weather also hurt crop development. Sales of the 1995 corn crop in 1996 were also down from the previous year; for other 1995 crops, sales in 1996 were about the same or higher. Fruit crops were also substantially smaller in 1996 relative to 1995.

Acres planted for harvest in 1996 shifted from dry beans, hay, sugar beets and potatoes to corn, soybeans and wheat. Total planted acreage of these crops were actually 4.3% above 1995. Corn and soybean acreage was up 10% as the new farm program eliminated set-asides and allowed farmers more flexibility in allocating acreage. Yields, however, plummeted. Corn yields were 15% below trend and soybean yields were 25% below trend. About 10% of the acres planted to wheat were not harvested and yields were 25% under trend. Dry bean and hay yields were about 10% below trend and sugarbeet yields were at the lows of 1991, the lowest since the 1960's. Acreage harvested on sugarbeets was only 85% of plantings--also historically low.

Fortunately, prices were generally higher on crops sold in 1996, enough to increase gross income from corn, soybeans and hay (Table 1). Fruit prices were also higher, enough to increase gross from tart cherries, but not enough to offset a much smaller apple crop. Returns from wheat and sugarbeets were also down noticeably.

In total, gross receipts from farm marketings of crops in 1996 exceeded \$2.3 billion, up nearly \$140 million from 1995 (Table 2). Livestock products grossed about \$1.5 billion, more than \$100 million over the year before. Government payments to farmers declined to about \$100 million, primarily due to a reduction in disaster outlays (Table 3). Total cash income, including farm related income, in 1996 was about \$4.0 billion, more than \$200 million above 1995. However, cash expenses were up \$150 million, leaving net cash income just under \$850 million, \$60 million above 1995 (Table 3). Higher feed costs and increased expenses for the expanded plantings were major reasons total cash expenses increased to \$3.1-3.2 billion.

### 1997

The outlook for Michigan farm income in calendar year 1997 is mixed. Gross receipts will decline in the first half of 1997, considering the prospects that milk prices will be lower and that the reduced quantities sold from 1996 crops will bring lower prices than in the first half of 1996. With normal weather, gross income from 1997 crops sold in 1997 should be substantially above the last part of 1996. Adding it up, however, gross cash income may decline by about \$150 million in 1997, with only small reductions in expenses, (due primarily to lower feed costs) leaving net cash income at about \$750 million (Table 3). The net would be down about \$100 million from 1996.

Increased milk production in 1997 should offset part of the decline expected in prices (Table 2). While hog and cattle sales will likely continue to decline in 1997, higher prices should increase gross receipts slightly. Little change is expected in egg receipts as production increases and prices decline. Gross from livestock in 1997 should decline slightly from 1996 (Table 2).

While prices on 1997 crops are expected to average somewhat lower than on the 1996 crops, the levels should be high enough to encourage farmers to maintain acreages or even increase acreages in some crops. An exception is wheat, in that the USDA reported that seedings in the fall of 1996 were down 17% from the previous year. Even so, cash receipts from nearly every 1997 field crop sold in 1997 (including wheat) should be substantially higher than in 1996, a trend which should carry over into the first half of 1998. For the first half of 1997, however, gross from 1996 crops will be down enough to reduce total receipts for the year by over \$100 million (Table 2).

As a perspective on the impact of unfavorable weather in 1996 on 1996 and 1997 incomes, losses from corn, soybeans, wheat and sugarbeets alone amounted to about \$170 million in 1996 and will exceed \$100 million in 1997. This is based on applying trend yields on each crop and assuming the normal relationship between planted and harvested acreage (which affected 1996 wheat and sugarbeet crops).

Nearly all the base acreages (96%) of corn and wheat are in the new farm program which is in effect for 1996-2002. Contract payments on the 1996 corn crop amounted to \$54.3 million according to Michigan's Farm Service Agency. Payments on wheat were about \$22 million. Payments will increase to over \$100 million on the 1997 corn crop, but decline to about \$15 million on wheat. Some of the 1997 corn and wheat payments may be shifted to 1996, depending on how many farmers elected this advance payment option available by December 15, 1996. Payments under the Conservation Reserve Program will remain at about \$19 million. Payments in 1997 under the new Environmental Quality Incentive Program (EQIP) will be similar to the ACP program it replaces--about \$3 million.



Table 1

Changes in Sales, Prices and Gross Income from  
Major Livestock and Field Crop Enterprises  
in Michigan, 1995 to 1996 Calendar Years\*

Enterprise	Percent Change		Gross Income
	Quantity Sold	Price	
<u>Livestock</u>			
Dairy	-1	+15	+14
Cattle and calves	-2	-7	-9
Hogs	-13	+28	+12
Eggs	-5	+37	+31
<u>Crops</u>			
Corn	-7	+36	+29
Soybeans	-10	+20	+8
Wheat	-25	NC	-25
Dry beans	-8	+3	-5
Sugarbeets	-23	+9	-16
Potatoes	-6	-1	-7
Hay	-10	+25	+12

\*Based on data from the Michigan Agricultural Statistics Service,  
Michigan Department of Agriculture.

Table 2

Cash Receipts from Farm Marketings in Michigan,  
1995, Estimated 1996 and Forecast 1997\*

Enterprise	1995 mil. \$	1996 mil. \$	1997 mil. \$
<u>Livestock</u>			
Dairy	718	817	768
Cattle and calves	265	242	246
Hogs	185	207	209
Eggs	50	66	65
Other	<u>106</u>	<u>116</u>	<u>118</u>
Total	1324	1448	1406
<u>Field Crops and Vegetables</u>			
Corn	412	533	395
Soybeans	338	366	384
Wheat	138	104	91
Dry beans	130	123	114
Sugarbeets	112	94	103
Potatoes	91	85	76
Hay	74	83	85
Vegetables	204	215	210
Other	<u>15</u>	<u>16</u>	<u>16</u>
Total	1514	1619	1474
<u>Fruit</u>	204	215	210
<u>Other</u>	<u>479</u>	<u>500</u>	<u>514</u>
<u>Total Crops</u>	<u>2197</u>	<u>2334</u>	<u>2198</u>
<u>Grand Total</u>	3521	3782	3604

\*Data for 1995 obtained from the Michigan Agricultural Statistics Service, Michigan Department of Agriculture and the Economic Research Service, USDA.

Table 3

Cash Farm Income in Michigan, 1991-97  
(Million \$)

	1991	1992	1993	Year 1994	1995	1996*	1997*
Gross cash income							
Farm marketings							
Crops	1950	1902	1968	1992	2197	2334	2198
Livestock	1288	1310	1371	1389	1324	1448	1406
Government payments	124	142	241	102	151	103	147
Farm-related income	<u>137</u>	<u>108</u>	<u>124</u>	<u>119</u>	<u>106</u>	<u>110</u>	<u>110</u>
Total	3498	3462	3704	3602	3778	3995	3861
Cash expenses	2708	2685	2901	3059	2996	3155	3114
Net cash income							
Actual	790	777	804	543	782	840	747

\*Estimated for 1996 and forecast for 1997.

Source: Michigan Agricultural Statistics Service, Michigan Department of Agriculture, and Economic Research Service, USDA, for 1991-95.