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## THE GENERAL ECONOMY

Robert Myers

The U.S. economy expanded steadily in 2013 with annual GDP growth at about 2.5%, up from the 2% rate experienced during 2012 and 2013. On the surface, this suggests acceleration in the pace of economic recovery. However, much of the improved performance was due to a jump in inventories in the third quarter and there are recent signs that sales have not followed through as well as expected. This has led many economists to drop their GDP growth forecasts for 2014 back to the 2%-2.5% range, considerably less than the Federal Reserve forecast of 2.8%-3.2%. The Fed forecast is important because they have announced they would like to begin “tapering” their monthly bond purchases, which have been boosting the money supply and keeping interest rates artificially low, but only if the economy is on solid enough ground. So it seems that the performance of the economy in the first few quarters of 2014 will be critical in determining whether the Fed will begin tapering this year. The stock market decline of about 3% over the first three weeks of January has added to the uncertainty, because stock market declines are often a key indicator of future reductions in economic growth.

All of these factors point to a continuing modest recovery in the U.S., but still without convincing signs of the rapid expansion in economic activity that has typically followed past recessions. An additional complication is that slower growth appears to be a global phenomenon with lots of other world economies also experiencing tepid growth or, in some cases, contraction. Even the Chinese economy, which has been estimated to have grown by 7.7% in 2013, is showing signs of a slow-down. This has important implications for the U.S. because we rely on exports to other countries to boost economic growth and performance.

One of the most troubling aspects of the slow recovery has been the stubbornly high U.S. unemployment rate. Employment numbers just released for December 2013 show that the unemployment rate fell to 6.7%, the lowest in more than five years. But most of the decline was due to people that have stopped looking for work, rather than to new job creation. Nationwide, only 74,000 jobs were added in December, the fewest in any month over the past three years, and much lower than the average 214,000 jobs added each of the previous four months. There is a growing group of more than 1.3 million Americans classified as “long-term unemployed” (longer than six months) who are no longer receiving unemployment benefits. The effects on family welfare can be devastating and there are spillover effects to the general economy in terms of reduced expenditures and reduced income growth. Slow job creation has been one of the hallmarks of this recovery, and that is unlikely to change until economic growth really takes off.

The good news is that inflation has remained subdued and both consumer confidence and stock prices rose steadily in 2013. The just-released January 2014 Conference Board Consumer Confidence Index rose to 80.7, up from 77.5 in December. The S&P 500, a broad measure of stock market performance, rose 30% in 2013. However, the bull market in stocks is likely to be challenged moving forward for at least two reasons. First, economic growth forecasts for 2014 are appearing much less rosy than they were even a month ago. Second, stock prices have risen much faster than company earnings during 2013, leading to expansion in the price/earnings ratio. The PE ratio for U.S. stocks is now at about its average level over the past 25 years, considerably higher than it has been for many years. This suggests further stock price increases will be hard to come by unless earnings increase dramatically, which seems unlikely given current economic conditions. The keys are going to be the rate of economic growth and

the level of interest rates. If growth can accelerate then company earnings can also grow. And if interest rates remain relatively low then those earnings will translate into higher stock prices. But a decline in economic growth, or even continuation of the current tepid growth rate, and/or a pick-up in interest rates (which is expected to happen when the Fed begins tapering its bond purchases) will be likely to pressure stock prices.

The Michigan economy continues to improve with GDP growth forecasts for 2014 in the 2.5%-3% range, slightly higher than that for the U.S as a whole. Michigan is now in its fourth year of economic recovery. The performance of the manufacturing sector, and particularly autos, is expected to continue its upward trend of recent years. Total job growth in 2013 is expected to come in at around 76,000 jobs and the unemployment rate is forecast to decline to 8.2% in 2014. This is still higher than the U.S. as a whole but moving in the right direction. The state budget situation is better than it has been in years, with current discussion turning to how to use a projected surplus. So all in all, general economic conditions in Michigan are much improved and trending in the right direction although, similar to the U.S. as a whole, the unemployment rate remains stubbornly high.

## **POLICY OUTLOOK**

**David B. Schweikhardt**

On January 27, the conference committee of the U.S. Senate and House of Representatives announced the completion of the Agricultural Act of 2014. This legislation includes major changes in U.S. commodity programs that will affect crop and dairy producers in Michigan for the 2014 to 2018 crop years. As of this writing, the House has approved the final bill and the Senate appears likely to approve the bill. This general overview of the bill's provisions is intended to provide input for general planning purposes. The analysis of specific provisions of the bill will be examined in a future issue.

### **Changes for Program Crop Producers**

The 2014 farm bill eliminates the Direct and Countercyclical Payments (DCP) program that has been in use since the 2002 farm bill. The bill also eliminates the Average Crop Revenue Election (ACRE) program contained in the 2008 farm bill. These payments were available for Michigan producers of corn, wheat and soybeans.

The DCP program is replaced by two programs that will be available to producers of these crops. Producers of corn, wheat, and soybeans will be permitted to choose from one of two programs. The first program, the Agricultural Risk Coverage (ARC) program, is a revenue-based program that will make payments based on a comparison of actual and benchmark revenue. The second program, the Price Loss Coverage (PLC) program, is a price-based program that will make payments based on the comparison of the annual market price to a guaranteed reference (target) price.

Under the Price Loss Coverage (PLC) program, a reference price is established for each program crop (\$3.70 per bushel for corn, \$8.40 for soybeans, and \$5.50 for wheat). Producers would be eligible for payments whenever the national average market price for the crop is less than the reference price for the crop, with the payment rate equaling the reference price minus the national average market price. Long-time participants in commodity programs might recognize this payment mechanism as being similar to target price program that existed before 1996 (the reference price was called the target price at that time). The total payment received by producers would equal 85% times the payment rate, times the base acres on the farm, times the program yield on the farm. Participants in the PLC program can also purchase additional margin protection under a Supplemental Coverage Option (SCO) program.

Under the ARC program, producers will be eligible for program payments when the actual revenue of a farm is less than the benchmark revenue (called the ARC Coverage Guarantee). The actual revenue for the farm will be calculated as the average yield for the farm times the national average market price for the crop. The producer will have a choice of using the average county yield or the individual farm yield to determine the actual revenue. The ARC Coverage Guarantee will equal 86% of the benchmark revenue, where the benchmark revenue will equal the five-year average historical yield (excluding the high and low years) times the five-year historical national average market price (excluding the high and low years) for the crop. Producers will be permitted to choose a county yield or an individual farm yield for calculating the benchmark revenue. When the actual revenue falls below the ARC Coverage Guarantee, the payment rate per acre will equal the ARC Coverage Guarantee minus the actual revenue.

ARC program participants are not eligible for the Supplemental Coverage Option available to participants in the PLC program. ARC program participants who choose the county coverage option will receive payment on 85% of base acres. ARC program participants who choose the individual county coverage option will receive payment on 65% of base acres. Non-recourse marketing loans will be available for participants in both the ARC and the PLC programs (with loan rates of \$1.95 for corn, \$5.00 for soybeans, and \$2.94 for wheat).

Analysis comparing these two alternatives is beyond the scope of this article. Some general observations, however, can be made at this time. First, the ARC program does provide some protection against yield risk. The PLC program provides no protection against yield risk. Second, the reference prices in the PLC program provide price risk protection for prices that fall below the reference prices contained in PLC. Because these programs provide different types and levels of risk protection, producers' selection of either the PLC program or the ARC program should be determined within a producer's overall risk management plan.

Finally, producers should be aware of several key decisions that will need to be made during 2014. First, producers will be required to make an irrevocable decision to enroll in either the ARC or PLC program for the duration of the 2014 farm bill (i.e., the 2014 to 2018 crop years). Second, producers will have a one-time opportunity to update program yields used for the PLC program. This update will be equal to 90% of the farm's average yield per planted acre for the 2008 through 2012 crop years. Third, producers will have a one-time opportunity to reallocate a farm's base acreage using the farm's actual crop plantings at any time during 2009 to 2012. The legislation requires that each of these be done in 2014. Consequently, producers will need to work closely with local Farm Service Agency staff to learn about the timing and details of these decisions.

### **Changes for Dairy Producers**

Michigan dairy producers will also see major changes in dairy programs in 2014. First, the 2014 farm bill eliminates the dairy price support program, the Milk Income Loss Contract (MILC) program, and the Dairy Export Incentive Program (DEIP). The Dairy Indemnity Program, the Dairy Forward Pricing Program, and the Dairy Promotion and Research Program will be continued. In place of the price support and MILC programs, the 2014 Act introduces new programs as the dairy Margin Protection Program (MPP) and the Dairy Product Donation Program. The MPP will be available for all dairy producers in the U.S.

The MPP will provide eligible dairy producers with an MPP payment for the difference between the actual dairy production margin and the margin coverage level threshold chosen by the producer. The actual dairy production margin will be calculated as the national all-milk price minus the average feed cost (the average feed cost will be a weighted average of corn, soybean, and alfalfa prices). The minimum margin protection coverage threshold is \$4.00 per cwt. for all producers.

Producers can obtain a higher level of margin protection (up to \$8.00 per cwt.) by paying a premium. On the first 4.0 million pounds of production, producers can obtain a higher level of margin coverage at a premium cost ranging from 1 cent per cwt. (for protection at \$4.50 per cwt.) to 47.5 cents per cwt. (for protection at \$8.00 per cwt.). Premiums will be reduced by 25% for the transition years 2014 and 2015. For producers with production in excess of 4.0 million pounds, the premium cost of additional margin protection would range from 2 cents per cwt. (for protection at \$4.50 per cwt.) to \$1.36 per cwt. (for protection at \$8.00 per cwt.). Historical

production will be established as the highest annual milk marketings of the dairy operation during the years 2011 to 2013.

The Dairy Product Donation Program provides authority for the Secretary of Agriculture to purchase dairy products whenever the actual dairy production margin has been \$4.00 per cwt. or less for two months. Such purchases will be donated to provide nutritional assistance for low income individuals. The Secretary is permitted to purchase, but not store, such products for distribution to public and private non-profit organizations.

### **Miscellaneous Provisions**

The 2014 Act also includes a variety of provisions that will affect other producers in Michigan. First, the bill continues the existing sugar program. Second, crop insurance program funding is increased by \$5.7 billion (over 10 years) and pilot programs are provided to increase the range of crop insurance products provided. Third, the bill provides a permanent natural disaster assistance program for livestock producers. Fourth, the existing 23 conservation programs are consolidated into 13 programs. Funding for conservation programs is reduced by \$3.9 billion (over 10 years).

### **Conclusions**

The Agricultural Act of 2014 continues the evolution of farm policy that has been ongoing since 1996. In particular, during the past decade funding has been shifted from commodity programs toward funding a variety of insurance products. The 2014 Act continues this evolution, including its introduction of insurance-style products for dairy producers. These trends are likely to continue into the foreseeable future.

At the same time, the changing price outlook for crop markets suggests that producers should carefully consider the new risk management tools available in the 2014 Act. These programs require several decisions in 2014 and deserve attention as the year proceeds.

## **2014 INPUT COSTS**

**Bill Knudson**

Commodity prices have declined from 2013. Fortunately, many input costs have declined as well. Fertilizer prices have declined across the board. Seed prices for corn and soybeans are up about 2.5 to 3.0%; wheat seed prices are up more than 7%. Current diesel prices are stable, and overall there appears to be more potential for a reduction in diesel prices than an increase. Interest rates will remain low, and are likely to remain low although access to credit may be difficult for some farmers.

### **Fertilizer**

Fertilizer prices appear to be stable. According to the USDA, the price of anhydrous ammonia in Illinois averages \$648.00 per ton, and the price of urea is \$439.00 per ton. MAP is \$520.00 per ton, and potash is \$448.00 per ton. Prices appear to be holding steady or declining slightly.

There are two other things to consider when analyzing these figures. The first is that prices are likely to rise as farmers make their purchases as planting season approaches. The second is that these figures are Iowa figures. Prices in Michigan may vary somewhat and could be higher due to higher transportation costs.

### **Seed**

Corn and soybean seed prices have increased, while the price wheat seed appears to be stable. In December 2013, Purdue University estimated the per acre cost of soybean seed to be \$71.00, an increase of 2.9% over the 2013 estimate; the per acre cost of corn seed is estimated to be \$118.00, a 2.6% increase over the 2012 estimate; and the per acre cost of wheat seed is estimated to be \$44.00, which is an increase of 7.3% from 2013.

It appears that there will be adequate seed supplies this year. There may be some shortages of extremely popular soybean and corn varieties, but overall the situation in 2014 is better than it was in 2013.

### **Fuel**

Diesel fuel prices also appear to be stable. According to the U.S. Energy Information Administration, the retail price of diesel was \$3.85 per gallon in the Midwest in January of 2013. This is 3 cents a gallon higher than the previous year. Demand for petroleum products in the U.S. continues to decline, while domestic production continues to increase. These factors could put downward pressure on diesel prices. Alternatively, if the global economic activity begins to accelerate, the demand for petroleum products will put upward pressure on prices. While there is a great deal of uncertainty with respect to diesel prices, they are most likely to remain relatively stable in 2014.

### **Interest Rates**

Interest rates remained low throughout 2013 and will likely remain low in 2014, although there may be some upward pressure on interest rates. According to the Federal Reserve Bank

of Chicago, interest rates in the region, which includes the Lower Peninsula, most of Indiana and Illinois, Iowa and the southern and western part of Wisconsin, 4.94% for operating loans and 4.68% for real estate loans in the third quarter of 2013. Interest rates for farm loans have declined by 0.2% to 0.3% from 2013.

Interest rates are likely to remain fairly stable in 2014. The economic recovery is slowly beginning to gain momentum. The Federal Reserve will continue to increase the money supply, but the rate of increase may decline which could put upward pressure on interest rates. Additional regulations enacted by the Dodd-Frank Act may credit slightly more difficult to obtain.



**MICHIGN FARMLAND VALUES  
STILL HOT OR IS A CORRECTION IN ORDER?  
Eric Wittenberg and Steve Hanson**

Michigan farmland values saw another year of continued growth pushing upward again in 2013. Michigan State University’s annual land value survey has been conducted in the spring of each year since 1992 by the Department of Agricultural, Food, and Resource Economics. It collects information on the value of different types of land across the state of Michigan. The 2013 survey reported that, on average, land values increased around 13% statewide over the previous year. The growth in the market was strong across cropland, sugar beet land, irrigated land, and land with fruit bearing trees (ranging from 11.1% to 18.1%, respectively). Average farmland values in spring 2013 were reported to be:

	<b>Southern Lower Peninsula</b>	<b>Michigan</b>
Tiled field crop land	\$4,843	\$4,429
Non-Tiled field crop land	\$4,089	\$3,702
Sugar Beet land	\$6,576	\$6,204
Irrigated land	\$5,613	\$5,294
Land with fruit trees	\$7,950	\$7,761

The USDA, in its “Land Values and Cash Rents 2013 Summary”, reported that Michigan’s agricultural cropland prices increased 15% to an average price of \$4,600 per acre for the calendar year 2013. The most recent data on land prices from the Federal Reserve Bank of Chicago found that Michigan land prices increased about 17 % from October 1, 2012 to October 1, 2013. All other states in the Federal Reserve’s Seventh District (Iowa, Wisconsin, Illinois, and Indiana) showed strong increases, ranging from 9% to 18%, during this same reporting period, with Indiana showing the largest increase.

Leasing continues to grow as a tool to control farmland. Last year, 70% of the crop acres were controlled through leasing arrangements compared to 48% a decade ago. Of the leased land, 88% was leased on a cash rent basis. According to the 2013 MSU survey, cash rent rates increased significantly across tiled cropland, non-tiled cropland, sugar beet, and irrigated cropland. Cash rents for land in the southern Lower Peninsula and across the entire state averaged double-digit percentage increases over the previous year. Average Michigan cash rent levels in spring 2013 were:

	<b>Southern Lower Peninsula</b>	<b>Michigan</b>
Tiled field crop land	\$164 per acre	\$154 per acre
Non-Tiled field crop land	\$121 per acre	\$ 110 per acre
Sugar Beet land	\$251 per acre	\$239 per acre
Irrigated land	\$239 per acre	\$233 per acre

These are average rents and they can vary significantly with location, competition, and expected yield.

Additional details on land values and cash rents across the state are reported in the Department of Agricultural, Food, and Resource Economics Selected Agricultural Economics Reports that can be found on the web at <http://ageconsearch.umn.edu/>.

Michigan farmland values are influenced by both the agriculture and non-agriculture sectors. Land values are affected by a combination of factors including the renewable energy industry, commodity markets, interest rates, commercial and residential development, and increasingly- nonfarm investors. Proximity demand (the desire for land based on its location), the need to obtain land for animal waste management, the need to obtain land to capture economies of scale with respect to farm machinery, and the increasing use of irrigation also impact land values in many local markets. While Michigan agriculture is very diverse, major commodity crops, along with livestock, continue to play an important role in determining the value of farmland in many areas of the state. In 2013, the outlook for crop prices was strong and milk prices were good, which helped push farmland values up.

Energy and oil prices have become a major factor impacting agricultural profitability and are affecting land prices in complex ways. The actual impacts remain difficult to predict because, while higher energy costs increase the cost of production, they also increase the demand for bio-based fuel alternatives such as ethanol and bio-diesel. This has increased demand for some agricultural outputs (e.g., corn for ethanol production). At the same time, increased demand for corn and soybeans increases the cost to dairy and livestock producers. While energy prices have dropped from record 2007-2008 levels, they will likely stay steady in 2014. Currently the price is hovering around \$100 barrel or more.

The Federal Reserve has continued to hold the Federal Funds Rate (the interest rate banks charge each other for overnight loans) constant at 0.25%. This action has been one factor helping to keep short-term interest rates low. The Wall Street Journal Prime Rate (the base rate on corporate loans posted by at least 75% of the nation's 30 largest banks) typically runs 3% above the Federal Funds Rate, and is currently at 3.25%. This is the fourth year at this rate. The linkage between long-term and short-term interest rates seems to have strengthened as today's financial markets have moved to relatively lower long-term lending rates. Interest rates for farm real estate loans have continued to remain at historically low levels. The Federal Reserve Bank of Chicago reports third quarter 2013 real estate loan rates averaged 4.68%. GreenStone Farm Credit Services reports current agricultural real estate loan rates starting at 6.105% for 20-year fixed rate, and 4.25% for one-year adjustable rate loans. While the cost to finance land purchases has increased slightly from last year, it remains relatively low.

The continued climb in farmland values has been driven by record farm income leading to strong steady expansion. Strong commodity prices have helped drive up both profits and land values. But what does this mean for the return on land investments? One way to peek at land return is by looking at the rent-to-value ratio which is a simple way to measure the current rate of return to land. We can use the MSU survey data to get an idea what the current return to Michigan farmland has been over time. The figure below shows the rent-to-value ratio for tiled cropland in the southern Lower Peninsula since the MSU survey began in 1992. You can see the current return to land has fallen from around 6% in the early 1990s to around 3% today. So in recent years, land prices have moved with cash rents so that the current rate of return has hovered right around 3%.

We also know that the return to land is linked to interest rates. Let's look at what has happened to interest rates over time and see how this compares to changes we've seen in the

current return to land. The figure below also shows the Chicago Federal Reserve interest rates for farm loans on real estate since 1992. During the early 1990s, farm real estate interest rates held in the 8-10% range. Like the current return to land, these rates have declined over time and are now slightly below 5%. It's worth noting that the gap between the current return to land and farm real estate interest rates has narrowed some in recent years, which may be a signal that expected future land returns are still relatively strong.



The value for non-farm agricultural land increased slightly in 2013 as the Michigan economy shows signs of strengthening. The 2013 MSU survey found the average non-agricultural-use value for undeveloped land in Michigan to be \$6,201 per acre for residential development, \$16,088 per acre for commercial/industrial development, and \$3,157 per acre for recreational development land, all three types increasing slightly over 2012 values.

Where are land prices heading this year? Farm income is expected to show some weakness due to commodity prices trending below the cost of production in 2014. However, most farmers have strong liquidity positions (cash) which should help to service debt. Also, farm operations have the ability to lock in low fixed interest rates. Commodity prices will decrease this year from the highs of 2013. At some point, the land value climb will level off, but unless we experience some surprises in farm income or interest rates Michigan agricultural land values are likely to remain generally steady during 2014. However, the value of quality land in good locations will likely continue its upward movement in most markets. Agricultural producers and outside investors will likely continue to focus on the quality and location factors continuing to put upward pressure on “good” farm land in prime locations.

## **2014 ANNUAL CROPS OUTLOOK**

**Jim Hilker**

### **CORN**

The 2014 annual Corn Outlook presented here will include the 2013-14 and 2014-15 corn marketing years; the baseline numbers are presented in Table 1. By baseline, I mean, given what I know and expect to date, we all know a lot can and will happen to change these expectations. How the world debt is continues to play out, world GDP growth, oil/gas prices, U.S. and world weather crisis, etc., etc., will all play a role, as, to a large degree, as they are all unknowns.

While I still expect price volatility to be much higher than pre-2007, due to the fairly large U.S. carryover expected for 2013-14, the rest of the world having a record 2013-14 corn crop, and the even larger expected U.S. carryover expected for 2014-15, I do expect volatility to be down relative to the past six years, and the market is reflecting this.

At this point, the market is projecting a 54% chance that December 2014 corn futures will be below today's \$4.50 per bushel, and an 80% chance that December 2014 corn futures will be between \$3.45 and \$5.65 per bushel at harvest. Or, to put another way, there is a 10% chance December 2014 corn futures will be below \$3.45 per bushel, and a 10% chance the December 2014 corn futures could be above \$5.65 per bushel come harvest time. To get to your expected fall cash price you need to subtract off your expected basis. Depending on where you are located and next fall's local supply and demand, probably in the range of 30-70 cents below futures. This would indicate that the market is projecting about a 10% chance cash corn prices could be below \$3.00 per bushel at harvest.

### **2013-14**

U.S. Corn producers planted 95.4 million acres of corn for the 2013 crop, about 2 million less acres than intended due to a wet planting season, and down 1.8 million acres relative to 2012. But then the weather turned fairly good for much of the Corn Belt. Acres harvested for grain came in at 87.7 million acres, up 300,000 acres from the drought stricken 2012 season.

In the end, average corn yield for the U.S. was 158.8 bushels per acre, near the trend yield using the 1978-2012 period. Yields in the eastern Corn Belt were trend and higher, with Indiana setting a new record, but yields in Iowa were below trend as they were hit by hot and dry weather mid-summer. Multiplying the 158.8 bushel per acre yield by the 87.7 million harvested acres set a new U.S. record for total corn production of 13,925 million bushels. When you add beginning stocks, production, and imports, total supply is projected to be 14,781 million bushels, about the same as the previous record supply in 2009-10.

Michigan planted 2.6 million acres of corn in 2013, 50,000 acres less than 2012, near Michigan March planting intentions, but 200,000 acres below the June planted and intended to be planted acres report. Much of the difference between the actual planted and the June report was due to prevented plantings. Michigan harvested for grain corn acres were 2.25 million, down 140,000 acres from the previous year. Michigan's average 2013 state yield was a record 155 bushels per acre, two bushels higher than the record 2011 yield, but 22 bushels per acre above last year's poor yield. Michigan corn for grain production was a record 348.75 million

bushels, beating the 2011 record by over 13 million bushels. However, Michigan corn yields varied significantly from trend depending where you were located in Michigan.

U.S. feed use and residual is expected to be 5,250 million bushels, 21% above last year's low level due to drought. Beef production will be down about 6%, pork production is expected to be up nearly 2%, poultry production is expected to be up 3%, and dairy cow numbers will be about the same, with milk production up about 2% for 2014. At first glance this does not appear to add up. Just looking at animal units it would seem feed use would be up marginally. However, the number is feed use AND residual, and unfortunately it would be very difficult to survey for feed use, so feed use and residual is basically what is not accounted for elsewhere. History tells us to use both projected animal units and the size of the crop (this year a record crop), to estimate feed use and residual, and that works pretty well.

Food, seed, and all industrial uses are projected at 6,435 million bushels. Seed use is expected to be down several million bushels as fewer acres of corn will be planted this spring. Corn used for food and industrial uses, other than ethanol, is expected to return to and grow a bit from the 2011-12 level after last year's short supply. Corn projected to be used for ethanol and DDG's is 5,000 million bushels; again a return to the 2011-12 level. While this will be more than is mandated, by a little or a lot depending on some final rulings by the EPA, it will be up sharply from last year due to more corn available at a much lower price, especially relative to oil. In some sense, we have outgrown the "ethanol mandates;" ethanol growth has pretty much stalled and we are back to ample ending stocks. This is not to say that total use of corn for ethanol will decrease, but rather it will start to shrink as a percent of total use.

Exports in 2013-14 are expected to almost double last year's exports, but we are still expected to be below 2011-12's fairly low level. Last year we had very little corn to export, and while this year we have plenty, the rest of the world had a record crop, the second record crop in a row. Rest of the world demand is pretty strong; it is just that there is plenty of corn.

Total use is expected to be a record at 13,150 million bushels; pretty much all due to the strength of the domestic market, but the projected increase in exports doesn't hurt. When we subtract total use from total supply we end up with ample ending stocks of 1,631 million bushels. Ending stocks as a percent of use would be 12.4%, compared to 7-9% the previous three years, giving us a projected weighted average season price of \$4.25 for 2013-14.

## **2014-15**

My baseline projections for the 2014-15 corn marketing year are shown in Table 1 as well. I am projecting planted 2014 corn acres at 92.5 million acres, down about 3 million acres from last year, and down close to 5 million from what farmers intended to plant in 2013. I am projecting 84.8 million acres to be harvested for grain. This would still be the fifth highest total acres planted in the modern era. I am projecting fewer acres for several reasons; lower projected prices, a lower relative price to soybeans, and so many farmers have planted continuous corn for so long that this would be a good time for more crop rotation, especially when they are giving up less short term returns.

I am using the 1978-2013 period to project the trend yield 159.2 bushels per acre used in my analysis, for a projected 2014 U.S. corn crop of 13,510 million bushels; this would be second in size only to 2013. When we add the projected production to the beginning stocks of

1,636 million bushels, and the 15 million bushels of projected imports, we would have a record projected total supply of 15,162 million bushels.

I am projecting total 2014-15 use to be 13,390 million bushels, which would be the highest on record. I expect feed use to increase marginally to 5,300 million bushels as the pork and broiler sectors continue to grow going into 2015, but the beef sector continues to shrink, and about the same size corn crop. I expect corn used for ethanol and DDG's to grow about 25 million bushels as returns will continue to be good due to projected low corn prices versus oil/gas prices. But being close to the blend wall, unless E-85 becomes economical for motorists, will limit ethanol growth. I expect U.S. corn exports will return to the very low end of a normal range at 1,600 million bushels, given a "trend" world coarse grain yield, a few less rest of world corn acres planted, and a continued growth in world demand. World beginning stocks are expected to be relatively large.

As shown in Table 1, this story would give us projected ending stocks of 1,772 million bushels, 13.2% of use, and an average price around \$3.80. While \$3.80 is my median price projection for 2014-15, there are still a lot of risks as we have seen of the past.

**TABLE 1  
SUPPLY/DEMAND BALANCE SHEET FOR CORN**

	2002- 2003	2003- 2004	2004- 2005	2005- 2006	2006- 2007	2007- 2008	2008- 2009	2009- 2010	2010- 2011	2011- 2012	Est. 2012- 2013	Hilker 2013- 2014	Hilker 2014- 2015
<b>(million acres)</b>													
Acres Planted	78.9	78.6	80.9	81.8	78.3	93.5	86.0	86.4	88.2	91.9	97.2	95.4	92.5
Acres Harvested	69.3	70.9	73.6	75.1	70.6	86.5	78.6	79.5	81.4	84.0	87.4	87.7	84.8
Yield/Bushels	129.3	142.2	160.4	148	149.1	150.7	153.9	164.7	152.8	147.2	123.4	158.8	159.2
<b>(million bushels)</b>													
Beginning Stocks	1596	1087	958	2114	1967	1304	1624	1673	1708	1128	989	821	1636
Production	8967	10089	11807	11114	10531	13038	12092	13092	12447	12360	10780	13925	13510
Imports	14	14	11	9	12	20	14	8	28	29	162	35	15
<b>Total Supply</b>	<b>10578</b>	<b>11190</b>	<b>12776</b>	<b>13237</b>	<b>12510</b>	<b>14362</b>	<b>13729</b>	<b>14774</b>	<b>14182</b>	<b>13517</b>	<b>11932</b>	<b>14781</b>	<b>15162</b>
<b>Use:</b>													
Feed & Residual	5563	5798	6158	6155	5591	5913	5182	5125	4795	4557	4335	5250	5300
Food, Seed & Ind	2340	2537	2686	2981	3490	4387	5025	5961	6426	6428	6044	6435	6490
Ethanol for fuel	996	1168	1323	1603	2119	3049	3709	4591	5019	5000	4648	5000	5025
<b>Total Domestic</b>	<b>7903</b>	<b>8335</b>	<b>8844</b>	<b>9136</b>	<b>9081</b>	<b>10300</b>	<b>10207</b>	<b>11086</b>	<b>11221</b>	<b>10985</b>	<b>10379</b>	<b>11685</b>	<b>11790</b>
Exports	1588	1897	1818	2134	2125	2437	1849	1980	1834	1543	731	1460	1600
<b>Total Use</b>	<b>9491</b>	<b>10232</b>	<b>10662</b>	<b>11270</b>	<b>11206</b>	<b>12737</b>	<b>12056</b>	<b>13066</b>	<b>13055</b>	<b>12528</b>	<b>11110</b>	<b>13145</b>	<b>13390</b>
Ending Stocks	1087	958	2114	1967	1304	1624	1673	1708	1128	989	821	1636	1772
Ending Stocks, %of Use	11.5	9.4	19.8	17.5	11.6	12.8	13.9	13.1	8.6	7.9	7.4	12.4	13.2
U.S. Loan Rate	\$1.98	\$1.98	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95
U.S. Season Ave													
Farm Price, \$/Bu.	\$2.32	\$2.42	\$2.06	\$2.00	\$3.04	\$4.20	\$4.06	\$3.55	\$5.18	\$6.22	\$6.89	\$4.25	\$3.80

Source: USDA/WASDE and Jim Hilker. (2 - 3 - 14)

## **WHEAT**

The 2013-14 U.S wheat marketing years is eight months in, and while we will discuss the projections, it appears the present projections will hold for the most part. The more interesting part is discussing the 2014-15 prospects. The wheat story is a bit like corn, ample supplies in the U.S. and the world.

### **2013-14**

We planted 56.2 million acres of wheat for the 2013 wheat crop, up a half million acres from 2012. Winter wheat accounted for 43.1 million of those acres, up 1.9 million acres. Spring wheat planted acres were down 700,000 acres at 11.6 million acres, and durum wheat planted acres were off nearly 700,000 acres at 1.47 million acres as they had a wet planting season.

Harvested acres came in at 45.2 million acres, down 7%. A lot of hard red winter wheat acres were not harvested due to drought, but the acres that were harvested were pretty decent. That, along with good soft red winter wheat yields, and we ended up with the second highest winter wheat yield on record at 47.4 bushels per acre. Remember the yield is only for harvested acres. However, they harvested a record spring wheat yield at 47.1 bushels per acre. This gave us a record all wheat yield of 47.2 bushels per acre. This put 2013 total wheat production at 2,269 million bushels, down 6% from 2012 due to the fewer harvested acres.

Michigan planted 630,000 acres of wheat for 2013, up 60,000 acres from 2012. Michigan harvested 600,000 acres for grain. Michigan's 2013 wheat yield was 75 bushels per acre, 1 bushel per acre below the 2012 record wheat yield, and equal to the 2011 wheat yield.

While beginning stocks were still large at 718 million bushels, they were a bit smaller than the previous year, which was smaller than the previous year. Total 2013-14 wheat supplies were 3,007 million bushels when 160 million bushels of imports and beginning stocks are added to production. This is down 4% from 2012-13.

Domestic use of wheat in the U.S. for 2013-14 is projected to be down 132 million bushels from 2012-13 at 1,274 million bushels. Feed use is where the decrease in use came from, as it dropped 138 million bushels to 250 million bushels as corn became relatively cheaper after the first quarter of the wheat marketing year. Exports are projected to be up 118 million bushels from last year at 1,125 million bushels. This isn't too bad given the rest of the world had a record wheat crop.

Projected 2013-14 U.S. ending stocks are 608 million bushels, 25.3% of use. While down from last year's 29.7% of use, it is still more than adequate. The 2013-14 average weighted wheat price is expected to be \$6.80 per bushel. Check out Table 2.

### **2014-15**

The winter wheat seedings report showed 41.9 million acres of winter wheat planted for 2013, down from 43.1 million acres last year. Assuming spring and durum wheat acres return to a more normal 14 million acres versus this year's 13.1 acres, I expect total wheat planted acres to be 55.9 million acres for 2014-15 as shown in Table 2. I am projecting a normal percent harvested, which would put harvested acres at 47.9 million acres. Michigan planted 650,000 winter wheat acres, up 20,000.



Using a trend yield of 45.3 bushels per acre, expected 2014 U.S. wheat production would be 2,172 million bushels. When added to beginning stocks and expected imports, total 2014-15 supplies are expected to be 2.905 billion bushels, down about 102 million bushels from 2013-14.

I expect domestic use to fall off in 2014-15 as feed use drops back to normal levels, given a decent corn crop. Food use may grow some with the population. I expect a normal world crop, and for world use to be up some as well. Therefore, I have raised my 2014-15 wheat exports marginally.

This scenario would leave us with total ending stocks of 557 million bushels. The projected stocks-to-use ratio would be 23.7%. But wheat will be priced a food versus feed crop, as corn is projected to drop to \$3.85. I am projecting the average 2014-15 wheat price at \$5.75, lower than last year, even with a tighter stocks to use ratio, but significantly above the corn price. See Table 2.

At this point, the market is projecting a 52% chance that July 2014 soft red wheat futures will be below today's \$5.60 per bushel, and an 80% chance that July 2014 SRW wheat futures will be between \$4.95 and \$6.25 per bushel at harvest. Or, to put another way, there is a 10% chance the July 2014 wheat futures will be below \$4.95 per bushel, and a 10% chance the July 2014 wheat futures could be above \$6.25 per bushel come harvest time. One would then need to adjust for the basis. The all wheat price would be about 50 cents higher as HRW and HRS wheat varieties are more valuable.

TABLE 2												
SUPPLY/DEMAND BALANCE SHEET FOR WHEAT												
	2003- 2004	2004- 2005	2005- 2006	2006- 2007	2007- 2008	2008- 2009	2009- 2010	2010- 2011	2011- 2012	Est. 2012- 2013	Proj. 2013- 2014	Hilker 2014- 2015
<b>(Million Acres)</b>												
Acres Planted	62.1	59.7	57.2	57.3	60.5	63.2	59.2	53.6	54.4	55.7	56.2	55.9
Acres Harvested	53.1	50.0	50.1	46.8	51.0	55.7	49.9	47.6	45.7	48.9	45.2	47.9
Bu./Harvested Acre	44.2	43.2	42.0	38.6	40.2	44.9	44.5	46.3	43.7	46.3	47.2	45.3
<b>(Million Bushels)</b>												
Beginning Stocks	491	546	540	571	456	306	657	976	862	743	718	608
Production	2345	2158	2105	1808	2051	2499	2218	2207	1999	2266	2130	2172
Imports	68	71	82	122	113	127	119	97	112	123	160	125
<b>Total Supply</b>	<b>2904</b>	<b>2775</b>	<b>2727</b>	<b>2501</b>	<b>2620</b>	<b>2932</b>	<b>2993</b>	<b>3279</b>	<b>2974</b>	<b>3131</b>	<b>3007</b>	<b>2905</b>
<b>Use:</b>												
Food	907	910	915	938	948	927	919	926	941	945	950	965
Seed	80	78	78	82	88	78	69	71	76	73	74	73
Feed and Residual	212	182	160	117	16	255	150	132	162	388	250	160
<b>Total Domestic</b>	<b>1194</b>	<b>1169</b>	<b>1152</b>	<b>1137</b>	<b>1051</b>	<b>1260</b>	<b>1138</b>	<b>1128</b>	<b>1180</b>	<b>1406</b>	<b>1274</b>	<b>1198</b>
Exports	1159	1066	1003	908	1263	1015	879	1289	1051	1007	1125	1150
<b>Total Use</b>	<b>2353</b>	<b>2235</b>	<b>2155</b>	<b>2045</b>	<b>2314</b>	<b>2275</b>	<b>2018</b>	<b>2417</b>	<b>2231</b>	<b>2414</b>	<b>2399</b>	<b>2348</b>
Ending Stocks	546	540	571	456	306	657	976	862	743	718	608	557
Ending Stocks, %of Use	23.2	24.2	26.5	22.3	13.2	28.9	48.3	35.7	33.3	29.7	25.3	23.7
U.S. Loan Rate	\$2.80	\$2.75	\$2.75	\$2.75	\$2.75	\$2.75	\$2.75	\$2.75	\$2.75	\$2.75	\$2.75	\$2.75
<b>U.S. Season Ave</b>												
U.S. \$/Bu.	\$3.40	\$3.40	\$3.42	\$4.26	\$6.48	\$6.78	\$4.87	\$5.70	\$7.24	\$7.77	\$6.80	\$5.75
Michigan \$/Bu.	\$3.35	\$3.01	\$3.13	\$3.41	\$5.01	\$5.63	\$4.25	\$5.72	\$6.70	\$7.75	\$6.70	\$5.45
Source: USDA/WASDE and Jim Hilker. (2 - 3 - 2014)												

## **SOYBEANS**

### **2013-14**

Soybean producers planted 76.5 million acres for 2013, down 700,000 acres from 2012, and 1.2 million below what producers intended to plant as of June 1, 2013. As with corn, there was a lot of prevented planting. Harvested acres were a pretty high percentage at 75.9 million acres. After the wet and late planting season, soybeans did not have quite as good a growing season as corn, but better than it started off. The 2013 U.S. soybean yield came in at 43.3 bushels per acre, about a half bushel below trend. This put soybean production for 2013 at 3,289 million bushels. Total supply for 2013-14 is 3,454 when beginning stocks and imports were added to production, 6.6% greater than drought stricken 2012-13.

Michigan planted 1.9 million acres of soybeans in 2013, and harvested 1.89 million acres. Michigan's 2013 soybean yield was 44 bushels per acre, up 1 bushel per acre from last year and the same as 2011. This put 2013 Michigan soybean production at 83.2 million acres, down over 2 million bushels relative to 2012 and 2011 due to fewer acres.

U.S. 2013-14 total use is expected to be 3,304 million bushels, up 6.6% from last year. Crush at 1,700 will be close to the last two years, with domestic use of soy oil and soy meal gaining a bit relative to exports. Exports are expected to be 1,495 million bushels, up 13.2% from 2012-13. Most of the exports and pretty much all the export sales will take place before the massive and record South American soybean crop harvest is completed.

This will put projected 2013-14 soybean ending stocks at a tight 150 million bushels, only 5.4% of projected use. While this is tight, and has really helped soybean prices through the first half of the marketing year, large world supplies will keep driving soybean prices down for the remainder of the marketing year if we have a normal 2014 soybean growing season. The projected U.S. 2013-14 average price is expected to be \$12.50 after all is said and done, even though soybean prices have pretty much been higher than that to date.

### **2014-15**

As discussed in corn, there are several reasons for a shift of some corn acres to soybean acres, mainly relative prices today for the 2014 crops, and the need for more crop rotation. I expected 78.5 million acres to be planted to soybeans, up 2 million acres from last year, and even 700,000 more than last June's intended soybean plantings. I project 2014 harvested acres to be a normal percentage of planted acres which would be 77.5 million acres. Using a trend yield of 44.3 bushels per acre, 2014 U.S. soybean production would be 3,434 million bushels, which would be a new record; beating the present record set in 2009 at 3,359 million bushels.

I expect crush and exports to be up marginally as shown in Table 3. And, while 2014-15 U.S. soybeans exports may set a new record, barely, I expect it will be held back despite expected very strong world demand, by the huge South American soybean crop this year and a normal South American soybean crop, still large, next year. Total U.S. disappearance is expected to be 3,351 million bushels, second only to 2009-10 total use. However, despite the large disappearance, projected 2014-15 ending stocks are projected to be 248 million bushels, 7.4% of use. This is far from tight stocks and I project the average U.S. 2014-15 soybean price will be \$9.85.

At this point, the futures markets are expecting a marginally higher price. The market is projecting a 53% chance that November 2014 soybean futures will be below today's \$11.00 per bushel, and an 80% chance that November 2014 soybean futures will be between \$9.05 and \$13.00 per bushel at harvest. Or, to put another way, there is a 10% chance the November 2014 soybean futures will be below \$9.05 per bushel per bushel, and a 10% chance the November 2014 soybean futures could be above \$13.00 per bushel come harvest time. Remember, you still need to subtract a 40-80 cent basis from those numbers, which still puts the market higher than my forecast, and that is one reason soybean will get acres from corn.

**TABLE 3  
SUPPLY/DEMAND BALANCE SHEET FOR SOYBEANS**

	2002- 2003	2003- 2004	2004- 2005	2005- 2006	2006- 2007	2007- 2008	2008- 2009	2009- 2010	2010- 2011	2011- 2012	Est. 2012- 2013	Hilker 2013- 2014	Hilker 2014- 2015
<b>(Million Acres)</b>													
Acres Planted	74	73.4	75.2	72	75.5	64.7	75.7	77.5	77.4	75.0	77.2	76.5	78.5
Acres Harvested	72.5	72.3	74.0	71.3	74.6	64.1	74.7	76.4	76.6	73.8	76.2	75.9	77.5
Yield/Bushels	38.0	33.9	42.2	43.0	42.9	41.7	39.7	44.0	43.5	41.9	39.8	43.3	44.3
<b>(Million Bushels)</b>													
Beginning Stocks	208	178	112	256	449	574	205	138	151	215	169	141	150
Production	2756	2454	3124	3063	3197	2677	2967	3359	3329	3094	3034	3289	3434
Imports	5	6	6	3	9	10	13	15	14	16	36	25	15
<b>Total Supply</b>	<b>2969</b>	<b>2638</b>	<b>3242</b>	<b>3322</b>	<b>3656</b>	<b>3261</b>	<b>3185</b>	<b>3512</b>	<b>3495</b>	<b>3325</b>	<b>3239</b>	<b>3454</b>	<b>3599</b>
<b>Use:</b>													
Crushings	1615	1530	1696	1739	1808	1803	1662	1752	1648	1703	1689	1700	1710
Exports	1045	885	1097	940	1116	1159	1279	1499	1501	1365	1320	1495	1525
Seed	89	92	88	93	80	93	90	90	87	90	89	89	88
Residual	41	19	105	101	77	0	16	20	43	-2	1	20	28
<b>Total Use</b>	<b>2791</b>	<b>2526</b>	<b>2986</b>	<b>2873</b>	<b>3081</b>	<b>3056</b>	<b>3047</b>	<b>3361</b>	<b>3280</b>	<b>3155</b>	<b>3099</b>	<b>3304</b>	<b>3351</b>
Ending Stocks	178	112	256	449	574	205	138	151	215	169	141	150	248
Ending Stocks, %of Use	6.4	4.4	8.6	15.6	18.6	6.7	4.5	4.5	6.5	5.4	4.5	4.5	7.4
U.S. Loan Rate	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00
<b>U.S. Season Ave</b>													
Farm Price, \$/Bu.	\$5.53	\$7.34	\$5.74	\$5.66	\$6.43	\$10.10	\$9.97	\$9.59	\$11.30	\$12.50	\$14.40	\$12.50	\$9.85
Source: USDA/WASDE and Jim Hilker. (2 - 3 - 14)													

## 2014 ANNUAL LIVESTOCK OUTLOOK

Jim Hilker

### Cattle

The numbers show feedlots may have made an economic profit on the fed cattle they sold October 2013, for the first time since early 2011. And, as we all know, economic losses were huge for feedlots between those two dates. With fed cattle prices at record levels and corn way down, I suspect we will see some more economic profits some of the first few months of 2014. However, I suspect that will not last as feeder prices have jumped even higher in response to the high fed prices and lower corn prices. The two biggest things the cattle sector needs now are no droughts or other bad events in the cow calf areas, and at least trend 2014 corn yields.

Cow calf returns, on average, were positive for a fourth year in a row in 2013, after being negative in 2008 and 2009. However, the returns varied tremendously as you might guess. In the drought stricken cow calf areas in parts of the High Plains the losses were large and liquidation of parts of many herds occurred; and, as we saw this past summer, many of the heifers that they planned to keep for replacement were sent to feedlots. Where they had grass and hay, cow calf returns were good. Very good cow calf returns are expected in 2014 where grass and hay are available/normal; returns may be at record levels, at least since my data begins in 1985.

The January 1, 2014, Cattle Inventory Report reported the U.S. had 87.73 million head of cattle and calves as of January 1, 1.8% below a year ago, and the smallest since the 82.1 million in 1951. USDA estimated the total U.S. cow herd, including dairy, at 38.25 million head, 0.7% smaller than a year ago. The beef cow herd was estimated at 29.04 million head, 0.9% smaller than a year ago.

Beef cow replacements on January 1, 2014, were 5.47 million, up a marginal 1.7% over last year's low number. This increase is only 3/10's of 1.0% of the beef cow herd. It is hard for me to see a real increase in the size of the beef cow herd by next January 1. We would be lucky to hold even. However, I would expect the herd to start growing quickly as we go through 2015.

USDA reported the 2013 calf crop at 33.93 million head, 1.0% smaller than 2012, and the smallest calf crop in my data, so pre-1950. This is the 19<sup>th</sup> year in a row the calf crop has decreased in numbers! As of January 1, the calculated available supply of feeder cattle outside feedlots was 24.74 million head, 2.7% lower than 2013 year, 2.0% smaller than 2012, but 8.2% lower than 2011, and way lower than any prior year.

Cattle on Feed in all feedlots January 1, 2014, were 12.7 million head, down 5.5% relative to last January 1. The January 1 Cattle on Feed Report for feedlots over 1,000 head showed 11.19 million cattle on feed, down 5.4%.

All cattle and calves in Michigan on January 1, 2014, were at 1,120,000 head, even with last year. All cows that had calved were at 495,000 head, up 1.0%. Beef cows were up 1.0%, at 114,000. Dairy cows numbers were at 381,000, up 1.0%. Beef cow replacements were up 1,000 at 29,000, while dairy cow replacements were up 2,000 head at 159,000 head. Michigan's 2013 calf crop was 395,000, up 3.0% from the previous year. The survey does not

distinguish between beef and dairy calves. Michigan had 150,000 cattle on feed January 1, down 3.0% from last year.

The following estimates for cattle and hogs are made in conjunction with the Livestock Marketing Information Center - which I belong to. It's a group supported by Universities to provide efficiencies, ie, less duplication of work by folks such as myself. U.S. beef production is expected to be down 6.4% for 2014, as slaughter is expected to be down 6.8%, with dressed weights being up 0.4%. Steer prices are expected to average in the \$137-\$140 per cwt. range for all of 2014, up 10%, after averaging \$125.88 for 2013. The 700-800# feeder steers are expected to average \$169-\$175 per cwt. in 2014, up from \$150.69 for 2012; with 500-600# feeder calves averaging \$199-\$208 per cwt., versus \$172.15 in 2012.

In the first quarter of 2014, beef production is expected to be down 6.1%. Steer prices are expected to average \$139-\$142 per cwt., with feeder steers averaging \$169-\$172 per cwt., and feeder calves averaging \$200-\$205 per cwt. In the second quarter, production is expected to be down 7.0%, with steer prices averaging \$138-\$141 per cwt., feeder steers averaging \$170-\$175 per cwt., and feeder calves averaging \$205-\$212 per cwt.

In the third quarter, beef production is expected to be down 6.5%, with steer prices averaging \$133-\$137, feeder steers averaging \$171-\$177, and feeder calves averaging \$199-\$207. In the fourth quarter, beef production is expected to be down 5.9%, with steer prices averaging \$136-\$141, feeder prices averaging \$168-\$175, and feeder calves averaging \$195-\$204, all per cwt..

## **Hogs**

Farrow-to-finish hog operations had a decent second half in 2013, with regards to profits, versus poor returns in 2012, and mixed in 2011 and 2010, and taking a beating in 2009 and 2008. Returns should be okay in 2014, as long as corn prices are in the expected range. The rate of spread of the PED virus could be a wild card.

All hogs and pigs on December 1, 2013, were 99.3% of 2012. The breeding herd December 1, 2013, was 98.9% of December 1, 2012. Hogs kept for marketing, were 99.4% of the previous year. The fall September-November farrowings, this spring's production, were 99.9%, with the fall pig crop and pigs per litter about the same as a year ago. The continuous climb in pigs per litter stalling is a significant change, and may have to do with the PED virus. December-February winter farrowing intentions, next summer's production, were up 1.0% and March-May farrowing intentions, next fall's production, were up 1.0%.

The Michigan breeding herd stayed even at 110,000 head, the same as December 1, 2012, 2011, and 2010. Our hogs kept for market, at 950,000 head, were 3% lower than last year. Pigs saved per litter for Michigan, December 2012-November 2013, were 10.17, up from 10.08, up 1.6%.

Pork production is expected to be up 2.0% in 2014 versus 2013 as slaughter is expected to be up 0.2%, with weights being up 1.2%. Carcass prices, National Weighted Average Base (multiply by .76 to have live price projections) are expected to average in the \$88-\$91 per cwt. range for all of 2014, up 2.9% relative to 2013.

In the first quarter of 2014, pork production is expected to be up 2.5%, with carcass prices averaging \$83-\$85 per cwt., up 3.6%. In the second quarter, production is expected to be up 0.9%, with carcass prices averaging \$92-\$95 per cwt., up 4.7%. In the third quarter, production is expected to be up 2.0%, with carcass prices averaging \$94-\$98 per cwt., up 0.8%. In the fourth quarter, production is expected to be up 2.7%, with carcass prices averaging \$82-\$87 per cwt., up 1.8%.



## 2014 DAIRY SITUATION AND OUTLOOK

Christopher Wolf

After exceeding 200 billion pounds for the first time in 2012, U.S. milk production grew modestly to a total of 201.2 billion pounds in 2013. As of December 2013, there were 9.206 million milk cows in the U.S.; 16,000 less cows than to begin the year. U.S. Class III (milk for cheese) price averaged \$17.99 per cwt. in 2013. U.S. All-milk price averaged \$19.99 per cwt. That relatively high nominal milk price did not mean high profits for many farms as cash feed prices were high following a short crop year in 2012.

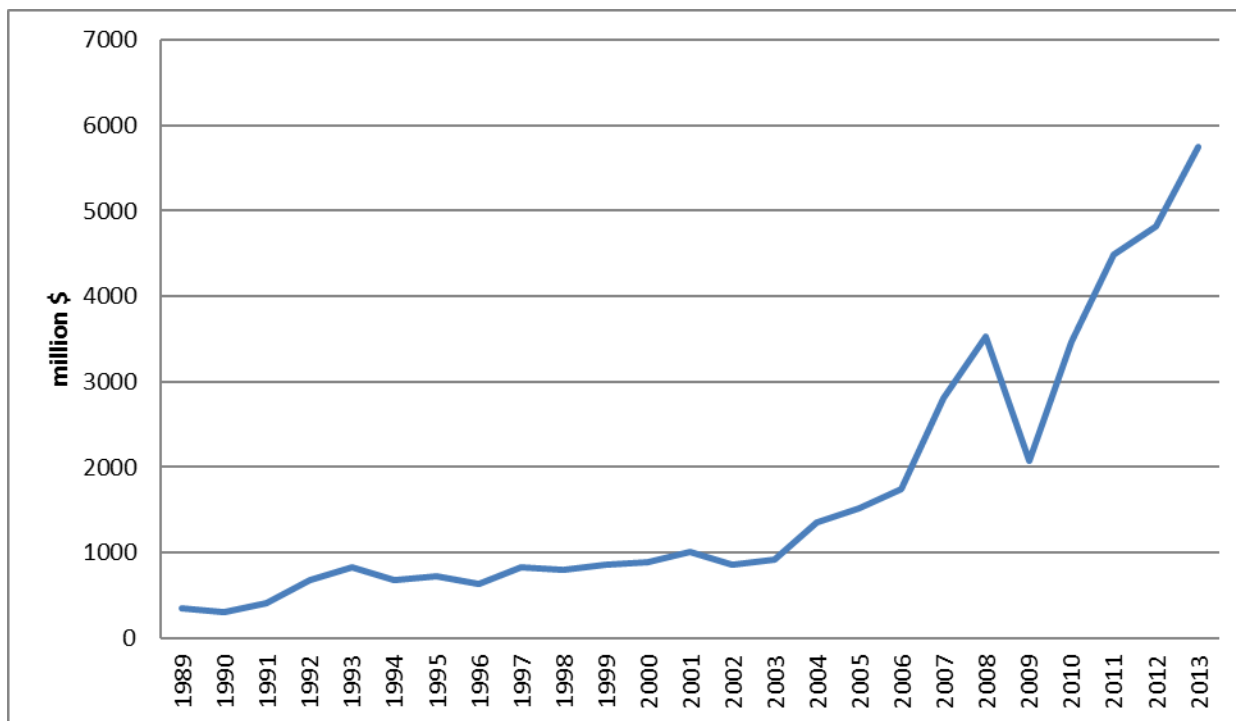
Michigan mailbox price averaged \$19.41 per cwt. in 2013. Michigan dairy farmers had 381,000 milk cows to end the year, an increase of 4,000 over January 2013. Michigan milk production exceeded 9 billion pounds of annual production (9.11 billion pounds; an increase of 2.5% over 2012). Michigan has been a state with consistent growth in milk production for many years. The availability of water, forage production, high quality management, location relative to population centers, investment in processing capacity, and other factors have allowed steady growth in milk production. Table 1 displays selected Michigan dairy statistics from 2013 as well as 5 and 10 years earlier. As the table indicates, Michigan had about 26% more milk cows with about 14% higher milk per cow for an increase of more than 40% in milk production in 2013 as compared to 10 years earlier. The growth in milk price primarily reflects the new regime of higher feed costs that has been in place since 2007. In contrast, other regions have been challenged by water availability, weather, and feed production in recent years. For example, at the current time a drought in California has reached critical levels for many dairy farmers.

**Table 1. Michigan Dairy Summary Statistics**

	2003	2008	2013	5 year % change	10 year % change
Milk cows (thousand)	302	353	380	+7.6	+25.8
Annual milk per cow	21,060	22,180	23,970	+8.1	+13.8
Total Milk Production (billion pounds)	6.36	7.76	9.11	+17.4	+43.2
Mailbox milk price (\$ per cwt.)	12.03	18.14	19.41	+7.0	+61.3

Source: USDA reports

The big story in the U.S. dairy industry continues to be exports. Figure 1 illustrates the remarkable rise in U.S. dairy export values most of which occurred in the past 10 years. With the notable exception of the severe economic recession in 2009, growth has been steady. All-time records were set each of the last three years. The 2013 value of \$5.74 billion pounds does not contain the December value and thus, the annual value will exceed \$6 billion when complete. For perspective, consider that in 2013 the average monthly value was greater than any of the annual values from 1989-1991. To further put this in perspective with 15.6% of milk production exported (through the first 11 months of 2013) the milk production of more than one day per week is now exported. Quality issues with domestic milk production in China coupled with drought and other weather events in New Zealand conspired to allow major U.S. expansion in dairy exports to China and Southeast Asia.



**Figure 1. Value of U.S. Dairy Exports. 1989-2013**

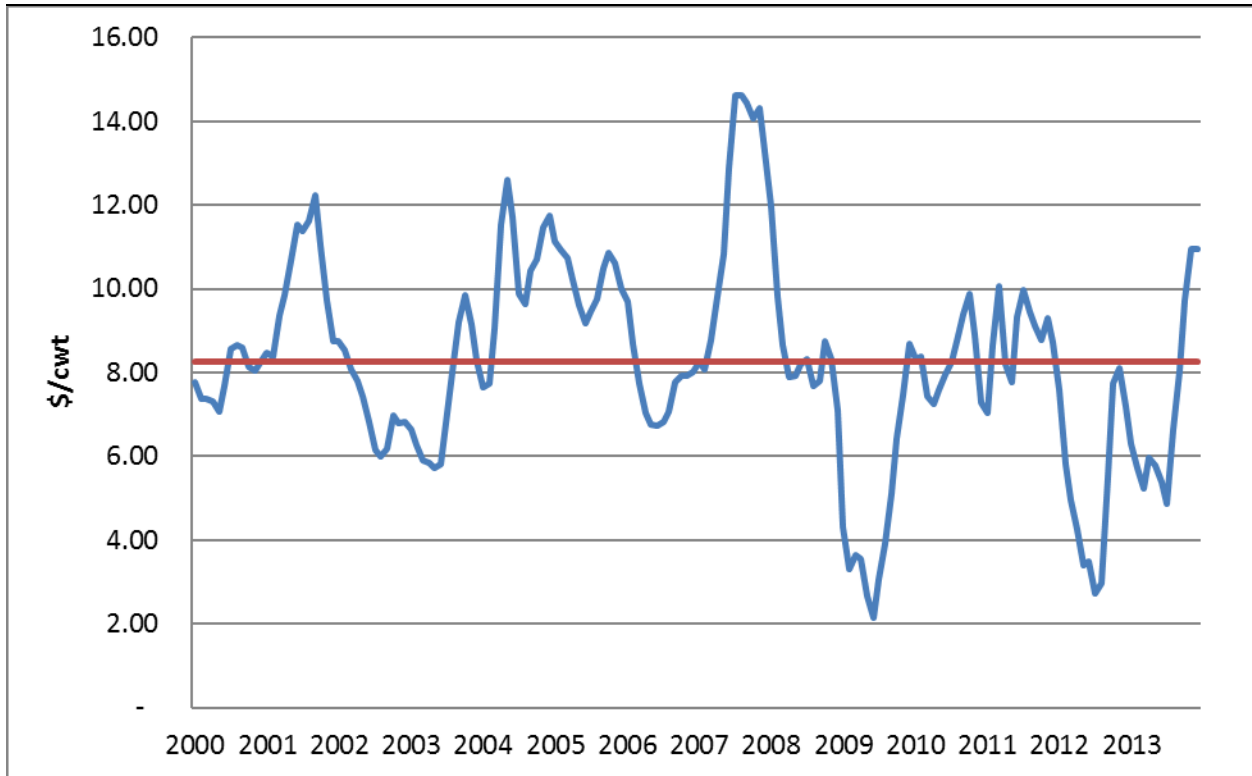
Dairy farmers have received increasingly volatile cash milk prices and paid higher and more volatile cash feed prices in recent years. A great deal of attention has been given to the increasing marketing and financial risks associated with this volatility. One illustration of the variation of milk and feed prices at the farm level is income over feed cost, a commonly used proxy for dairy farm profitability. The margin between milk price and feed cost is what remains to pay for all other expenses, including labor and returns to management, capital, and unpaid labor. Figure 2 displays income over feed cost (IOFC) calculated as is calculated by the draft dairy subtitle of the draft Farm Bill. Specifically, the IOFC for each month is defined as:

$$\text{IOFC} = \text{All-milk Price} - (1.0728 \times \text{Corn Price} + 0.00735 \times \text{Soybean Meal Price} + 0.0137 \times \text{Alfalfa Hay Price})$$

where the U.S. All-Milk is the average price received by dairy producers for all milk sold to plants and dealers in the U.S.; corn and alfalfa hay prices are taken from monthly U.S. Department of Agriculture *Agricultural Prices* reports; and the price of soybean meal is the central Illinois price for soybean meal as reported in the United States Department of Agriculture Market News-[Monthly Soybean Meal Price Report](#) (rail price).

Figure 2 displays the dairy IOFC margins in the U.S. over the 1980-2013 period. The average IOFC over the entire period was \$8.26 per cwt. The challenges of 2009 and 2012 are clear in the figure particularly for those producers that were purchasing cash feed which is implicitly assumed in this calculation. 2013 witnessed a recovery of the margin to profitable levels.

Figure 2 also reveals two distinct price periods. The first period from 2000 through 2013 was characterized by low feed prices and stable milk prices. Prior to 2006, the primary source of risk in the U.S. dairy sector originated with milk price. Since 2007, volatile milk prices were accompanied by rising and increasingly volatile feed prices. The coefficient of variation of IOFC margins increased from 0.20 from 2000 through 2006 to 0.37 from 2007 through 2013. Meaning that profit margin volatility on dairy farms essentially doubled. The increasing volatility in milk and feed prices led many to the conclusion that dairy policies aimed to support milk price—rather than the margin between milk and feed price—were insufficient.



**Figure 2. U.S. Income Over Feed Cost Margin, 2000-2013**

As of this writing, 2014 U.S. IOFC margins are projected to average about \$12.00 per cwt., with high margins to begin the year tailing off towards average values in the latter months. The combination of high milk prices—class III milk futures prices average \$19.30 per cwt. for 2014, which should translate to Michigan mailbox prices of around \$20.50 per cwt.—and relatively low feed prices—corn futures prices average \$4.42 per bushel for 2014. Obviously, feed crop yield risk means that feed prices end up rising. There are several examples in recent years when the average feed price projected in January was derailed by weather or other events. World and U.S. dairy product prices are aligned and indicate that demand for US dairy products should continue. Milk prices are at historically high levels to begin 2014 (not adjusting for inflation) so one would be inclined to think that there is more down-side risk at the current time. The projected margins should lead to a supply response but that may be constrained by water and forage issues in the drought-stricken west.

## **TAXES IN 2013 AND 2014**

**Larry Borton and John Jones**

Many income tax rules remain the same for 2014 as 2013 with minor increases for inflation. A couple items change between the years and particularly affect depreciation expenses. Finally, 2014 may bring some new rules that are not absolutely clear yet. First, look at the constant items between the years.

- Tax rates remain the same for federal income taxes and self-employment (SE). Ordinary income is taxed at 10, 15, 25, 28, 33, 35, and 39.6%, while long-term capital gain rates are at 0, 15, and 20%. SE tax remains at 15.3% until reaching the maximum Social Security contribution, then stays at 2.9% for Medicare with no upper limit.
- The domestic production activities deduction (DPAD) remains as an adjustment to gross income for those who have profitable production and hire some labor. If a cooperative declares a DPAD, then a farmer may use the coop DPAD without having any of its own hired labor. For a farmer whose cooperative normally or sometimes declares a DPAD, then income from other products not delivered to the coop may be used to calculate a separate farm DPAD. This adjustment to income will reduce taxable income, but does not normally affect self-employment taxes (Social Security and Medicare).
- Farm income (not including land and timber sales) is normally eligible for income averaging and enables a farm taxpayer with a higher income year to elect an amount of income, borrow brackets from the three previous years, and calculate the amount of income tax due. This doesn't change any other current or past taxes or credits, but is just another method to calculate the income tax due when electing to use averaging.
- The alternative minimum tax (AMT) has permanently higher exemption amounts, but must still be checked to see if it applies.
- The net investment income tax (NIIT) of 3.8% on investment income remains in place for modified adjusted gross incomes over \$200,000 for singles and \$250,000 for married, filing jointly. These are not indexed for inflation.
- Additional Medicare tax of 0.9% applies to earned income (wages and SE income) above the same threshold levels of \$200,000 single, and \$250,000 married, filing jointly, except that this is earned income while the NIIT thresholds are modified adjusted gross income.
- Farmers are qualified to avoid filing estimated taxes if two-thirds of their gross income was from farming in either 2013 or 2012. This allows a farmer taxpayer to not pay quarterly estimated taxes, but requires the income and self-employment taxes to be filed and paid by March 3, 2014 (normally March 1, however that is a Saturday in 2014).
- Personal exemptions of \$3,900 deduction per person in 2013 begin to phase out at adjusted gross income of \$250,000 for single filers, and \$300,000 for married, filing

jointly. This continues in the future, however, the exemption amount and threshold for phase-outs are adjusted for inflation.

- The same adjusted gross income thresholds for personal exemption phase-outs apply to those who itemize deductions, with a maximum decrease of 80% for those who itemize. This would not affect most farmers who use the standard deduction rather than itemize. The exemption and itemized deduction phase-outs disappeared for a few years, but were brought back in 2013.
- The unified estate and gift tax credit is equal to the tax due on the applicable exclusion amount. This amount is \$5,250,000 for 2013, and increases to \$5,340,000 for 2014. This is separate from the \$14,000 annual gift per person allowed without using up any of the lifetime applicable exclusion amount.
- So far, Michigan taxes should be similar between years. Michigan legislators will be working on allocating the budget surplus. Some of it may affect tax rates or taxable income, but should not be a major change for most farm businesses.

Changes from 2013 to 2014 potentially have a high impact on depreciation or cost recovery expenses if a farmer desires to use these to reduce taxable income. In recent years, fast cost recovery options could offset some higher income. The following rules are current law unless congressional action changes them.

- Direct expensing is reduced to only \$25,000 in 2014 with the phase-out beginning at \$200,000 of qualified property placed into service. This represents a significant decrease from the \$500,000 with \$2 million phase-out that we had in 2012 and 2013.
- Bonus depreciation is over at the end of 2013. There are no 30, 50, or 100% additional depreciation options for 2014 on new property placed into service.

A couple other items may cause adjustments to your plans for 2014. These are the Affordable Care Act (Obamacare) and the final repair and capitalization regulations.

- Many farmers have been directly affected by the individual health care mandate and have had to get new health insurance because their previous policies were cancelled. While the penalty tax for not purchasing health insurance may not be too large in 2014, it increases significantly in future years if an individual fails to maintain a government prescribed minimum amount of health insurance coverage. The individual mandate affects everyone and the employer requirements may affect some. While the government postponed the penalty tax on employers for 2014, those with 50 or more full-time equivalent employees must provide acceptable health coverage or pay a penalty in the future. Fines and penalties are never deductible as a business expense and would not be deductible in this case either.
- A second, totally unrelated, change comes from an effort by the IRS to clarify what constitutes a repair or what must be capitalized subject to depreciation. Near the end of 2013, the IRS published *Guidance Regarding Deduction and Capitalization*

*of Expenditures Related to Tangible Property* and varying interpretations exist for what it means to farmers. While optimists think it affects farmers little, some interpretations limit prepaid expenses and require almost everything purchased to be depreciated if it costs more than a minimal amount. Like most new laws or rules this should get sorted out in a few months and some consensus will emerge.

## **FARM INCOME**

### **David Schweikhardt**

During the past decade, a large share of the variation in income across the farm sector has been determined by factors outside the agricultural sector. Unlike these past years, the 2014 farm income outlook appears likely to be dictated by factors inside the agricultural sector. In particular, the outlook for lower commodity prices, based on increasing carryover stocks, are likely to be the dominant factor in determining the income outlook in both the crop and livestock sectors in 2014.

### **2013 Farm Income Summary**

Net farm income in the U.S. is estimated to have been \$131 billion in 2013, compared to \$114 billion in 2012. The 2013 level of net farm income continued to be well above the 10-year average figure of \$74 billion. Gross farm income increased in 2013, primarily due to changes in cash crop receipts (-\$6 billion), livestock receipts (+\$10 billion), and an increase in the value of on-farm crop inventories (+\$20 billion). This net increase in revenue was offset by increases in several input cost categories. These increases included the cost of livestock feeds (+\$1.0 billion), seed (+\$1.0 billion), land rent (+\$1.0 billion), electricity (+\$400 million), repairs and maintenance (+600 million), interest (+\$500 million), and marketing, storage and transportation costs (+1.0 billion). The total cost of fertilizer and lime (-\$1.8 billion) and fuel and oils (-\$400 million) decreased.

### **2014 Farm Income Outlook**

Looking toward 2014, the outlook for commodity prices is likely to dominate the farm income picture. If yields are normal in 2014, and carryover stocks increase, commodity prices are likely to reduce revenues from crop production (see the price outlook article in this issue for more detail). At the same time, a relatively stable outlook for some input costs could provide optimism for the farm income outlook. First, energy costs could remain at or near existing levels. Producers purchased \$15.3 billion in fuels during 2013, a decrease of \$400 million compared to 2012. The U.S. Department of Energy is projecting that crude oil prices will average \$93.00 to \$105.00 per barrel in 2014, compared to \$97.00 to \$109.00 in 2013. This oil price would translate into an on-highway diesel fuel price of \$3.81 per gallon for the year. This stability of oil prices in 2014 is expected to result from increased production worldwide and continued sluggish growth in the demand for oil due to slow worldwide economic growth that will continue through 2014. As usual, events in the Middle East and other oil producing regions could create periods of instability in oil prices.

Similarly, natural gas and electricity prices are expected to remain relatively stable in 2014. The April 2014 futures price for natural gas averaged \$4.19 per MMBtu in December 2013, compared to a price of \$3.38 per MMBtu for April 2013. This price outlook is largely the result of a significant increase in the production of shale gas, which is unlikely to change in the near future. Thus, the outlook for fertilizer prices is likely to remain steady in 2014 (see the input cost outlook article in this issue for more detail). The DOE forecasts a price of electricity of 12.35 per KWH, compared to a price of \$12.12 in 2013. This trend is closely related to the outlook for natural gas prices.

Second, land rental costs continued their increase in 2013 and are likely to be a source of uncertainty in 2014. Farmers paid \$16.7 billion in land rent to non-operator landlords in 2013,

an increase of \$1.2 billion over the 2012 level. While expected lower net returns on crop production normally would be expected to result in lower cash rents, landlord expectations are often slow to adjust. Consequently, cash rents are likely to remain unchanged at best in 2014.

Third, the trend of increasing prices for crop seed is likely to continue in 2014, though at a more moderate rate. Farmers spent \$21 billion for seed in 2013, an increase of \$800 million over 2012. As seed genetics continue to become an increasingly critical component of crop production, the cost of seed is likely to continue increasing for the foreseeable future. Because seed costs are determined, in part, by the prior year's production conditions, the favorable crop conditions in 2013 are likely to help keep a lid on seed price increases (see the input cost outlook article in this issue for more detail).

Finally, the outlook for interest rates on production and asset loans is likely to remain relatively unchanged in 2014. In December 2012, the Federal Reserve issued its statement of "forward guidance" regarding its expected future policy direction. In that statement, it indicated that the existing low interest rate policy could be expected to continue so long as: (1) the unemployment rate remains above 6.5%; (2) the short-term (1 to 2 years) inflation rate is projected to be no more than 2.5%; and (3) the longer-term inflation rate is projected to remain stable. On both the unemployment front and the inflation front, existing conditions remain within this range. For example, the December 2013 employment report included an unemployment rate of 6.7%. This decrease in the unemployment rate, however, was not the result of increased job growth, but the result of discouraged workers leaving the workforce and terminating their job search. These weakened conditions in the labor market are expected to continue in 2014. As a result, the Federal Reserve is unlikely to increase its discount rate (interest rate for bank borrowings) in 2014.

Though interest rates on 3-month and 10-year U.S. Treasury bonds did increase in anticipation of and following the Federal Reserve's announcement of its policy of "tapering" (reducing) its purchases of securities in December 2013, rates on short-term and long-term Treasury bonds have decreased in recent weeks on additional news about continued economic weakness. As a result, interest increases are likely to remain limited in 2014. As noted last year in this article, lenders are likely to continue with increased scrutiny of borrowers' creditworthiness.

### **Industry Variability in the Farm Income Outlook**

In recent years, the total net farm income outlook has often obscured a highly variable situation across agricultural producers. Aggregate numbers such as "total net farm income" for the U.S. hide the differences in outlook across the crop and livestock industries. In particular, the difference in the income outlook for crop and livestock producers demonstrates the varying outlook within the aggregate farm sector. This has meant that higher grain and soybean prices and revenue for crop producers often meant higher feed input costs for livestock producers. In 2013, the 2012 drought resulted in higher prices for corn and soybeans that translated into higher feed costs for livestock producers (\$60.5 billion in 2013 compared to \$59.1 billion in 2012). If lower prices for corn and soybeans continue in 2014 (see the price outlook article in this issue for more detail), livestock producers are likely to have lower feed costs during the year.