



Spring 2017

from CBI Bank & Trust

## Message from our Bank President

We've served many of the local farms and agricultural enterprises that have been part of our community for generations. And we're working with the next generation of farmers to help launch their exciting ideas and bring our community into the future. This exemplifies local money at work as we celebrate Community Banking Month during April.



Bob Howard

CBI Bank & Trust is committed to meeting the financial needs of our ag customers. Our team of advisors extends beyond lenders to cash managers, and financial and estate planners. We are here to help farmers grow and prosper. Whether you need financing for daily operations or to fund growth and expansion, we have loans and programs that can help.

Your feedback is always important to us, so please call or stop in if we can be of assistance. Thank you for your business and we look forward to serving you for years to come.

Sincerely,

Robert J. Howard  
President  
CBI Bank & Trust

## Farmland Values Show Historic Third Year of Decline

### ISU Land Value Survey shows 5.9% decrease statewide since 2015

Average Iowa farmland value has shown a decline for the third year in a row—the first time this has happened since the 1980s farm crisis—and is now estimated to be \$7,183 per acre. The statewide per acre value declined \$450, or 5.9 percent, since November, 2015. Farmland values hit a historic high in 2013, but have steadily declined since then. The statewide average value for an acre of farmland is now about 17.5 percent lower than 2013 values.

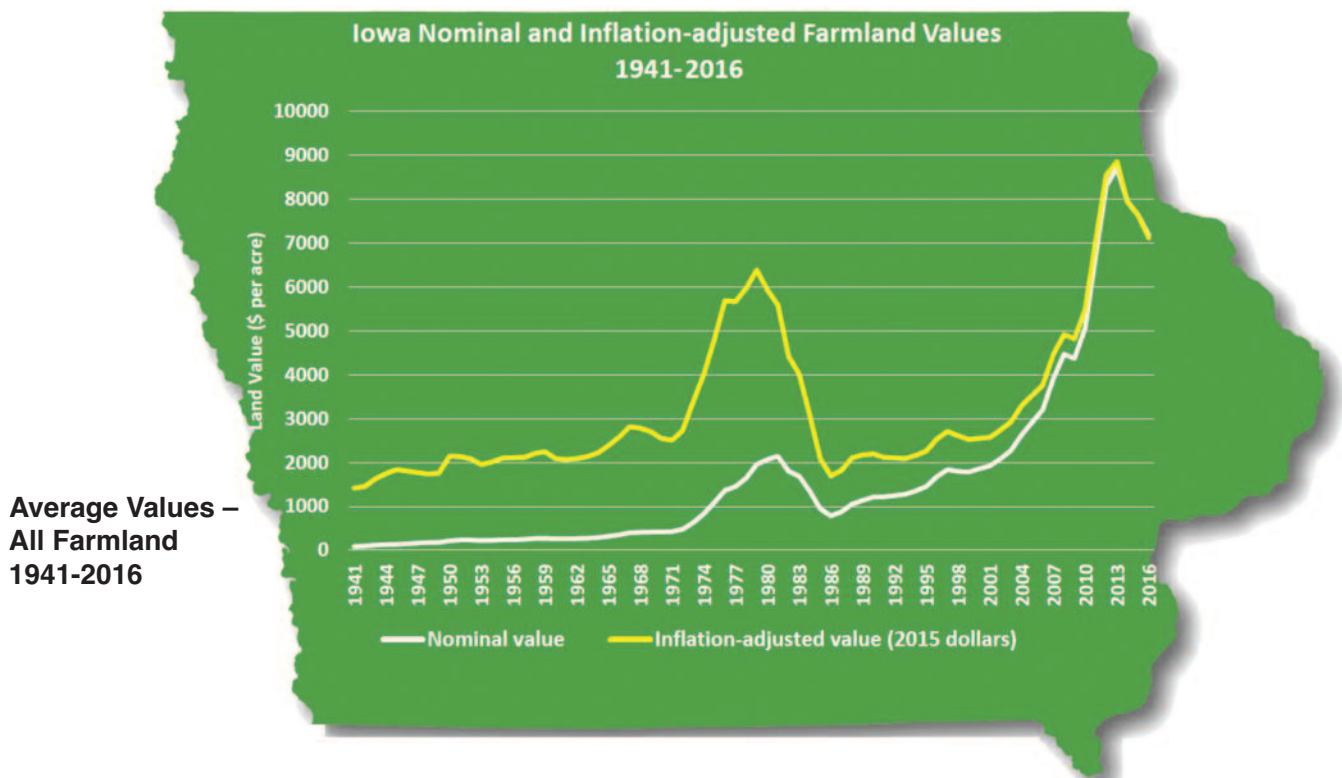
Land values were determined by the 2016 Iowa State University Land Value Survey, which was conducted in November by the Center for Agricultural and Rural Development (CARD) at Iowa State University and Iowa State University Extension and Outreach. Results from the survey are consistent with results by the Federal Reserve Bank of Chicago, the Realtors Land Institute, and the US Department of Agriculture. Dr. Wendong Zhang, Assistant Professor of Economics at Iowa State University, led the annual survey.

The \$7,183 per acre, and 5.9 percent drop in value, represents a statewide average of low-, medium-, and high-quality farmland. The survey also reports values for each land quality type, crop reporting district (district hereafter), and all 99 counties individually. All 99 counties reported a drop in average land values this year.

Average farmland values hit a historic peak of \$8,716 per acre in 2013, but declined 8.9 percent in 2014, 3.9 percent in 2015, and have now fallen an additional 5.9 percent. “The golden era of phenomenal, yet abnormal, growth in farm income and land values, as we saw from 2006 to 2013, is already behind us. The land market is going through an orderly adjustment while the US agricultural sector, a competitive industry, is trying to adjust to the old normal of zero industry-wide net profits,” said Dr. Zhang. “For a pessimist, there are reasons to worry, especially for landowners and/or producers who are over-leveraged. For an optimist, this decline is still modest, and the probability of a replay of the 1980s



(continued inside)



farm crisis is low.” Zhang said the likelihood of another farm crisis is low due to steady farm income accumulation before the downturn, a stronger government safety net, and an overall lower debt level in the agriculture sector.

Starting in 2004, several factors, including the ethanol boom and historically low interest rates, drove five consecutive years of double-digit growth in average farmland values. By 2008, average values were almost 70 percent higher than 2004, and by 2013, average values were over 230 percent higher than 2004 values. While they have declined three years in a row now, average values are still 173 percent higher than 2004.

The decline didn’t come as a surprise for some—in November 2015, over 75 percent of ISU Land Value Survey respondents thought land values in their territory would continue to decline in 2016. The majority predicted the decline would be either less than 5 percent or between 5 and 10 percent, which is consistent with the 5.9% decrease reported by the 2016 ISU survey.

“Looking ahead, land values might continue to adjust downwards in the next year or two,” said Dr. Zhang. “This is consistent with the stagnant corn and soybean futures prices and potential rise in interest rates; however, many respondents to the ISU survey are hoping for the market to rebound in 3 or 4 years.”

## Factors Influencing Land Values

The most common positive factors influencing land

prices noted by survey respondents were low interest rates, strong crop yields, limited land supply, and strong demand. The most commonly cited negative influences were lower commodity prices, high input prices, livestock losses, weak cash rental rates, and a weakening global economy and stock market returns.

The ISU Land Value Survey is based on reports by agricultural professionals knowledgeable of land market conditions such as appraisers, farm managers, agricultural lenders, and actual land sales. It is intended to provide information on general land value trends, geographical land price relationships, and factors influencing the Iowa land market. The 2016 survey is based on 518 usable responses providing 711 county land values estimates. Forty-eight percent of respondents answered the survey online.

*Iowa State University Extension and Outreach. (2016) Farmland Values Show Historic Third Year of Decline [Press release]. Retrieved from <http://www.card.iastate.edu/land-value/2016/2016-Iowa-Land-Value-Survey-News-Release.pdf>*



## Rising Interest Rates and Farmland Prices

Since the U.S. election on November 8th, interest rates on many financial instruments have increased. Interest rate increases since November 8th likely are not large enough to put much downward pressure on farmland prices. However, farmland prices could decline if interest rate increases continue.

### Ten-year Treasury Note Yields

Ten-year Treasury yields reached highs of over 15% in 1981. Since the 1981 highs, Treasury yields have been on a general downward trend, reaching a low of 1.37% on July 5, 2016.

Yields exhibited a notable increase after the U.S. national election on November 8, 2016. On November 7th, the day before the election, the ten-year yield was 1.83%. Yields increased to 2.07% on November 9th, the day after the election. Yields have increased since November 8th, reaching 2.60% on December 15, 2016.

While yields have increased, the 2.60% yield on December 15th is not a high yield. Nor is the increase between November 7th and December 15th the only period of increases in recent times. For example, yields increased from 2.51% on October 23, 2013 to 3.04% on December 31, 2013, after which rates fell. In and of itself, the late 2016 yield increase does not suggest a significant adjustment down in farmland prices.

However, this increase could be important if it signals continuing rate increases. In the popular press, reasons for the yield increase include anticipated increases in Federal government infrastructure spending and anticipations of increases in economic growth. If these expectations are realized, sustained increases in interest rates could occur.

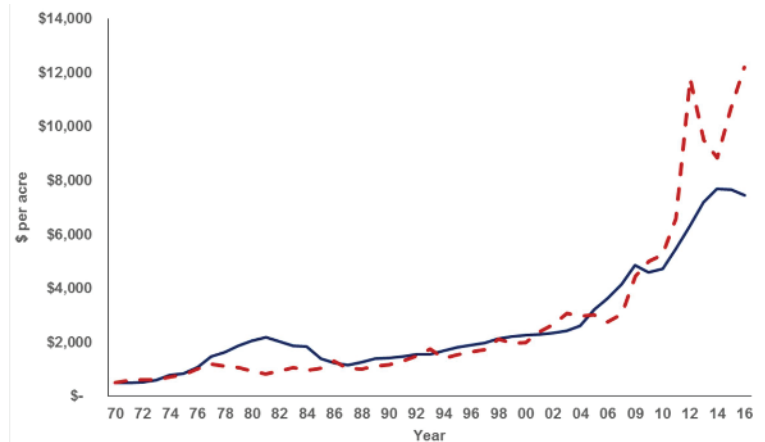
## Interest Rate Increases Impacts on Farmland Prices

Rising interest rates put downward pressures on farmland prices for two reasons. First, higher interest rates increase the financing costs of land purchases, making it more expensive to debt finance farmland. Second, higher rates signal higher returns on alternative investments, thereby making alternative investments more attractive than farmland.

A straight-forward way of evaluating the impacts of both cash rents and interest rates on farmland prices is the following capitalization formula: Capitalized value = cash rent / ten-year Treasury yield.

The red line in the following graph shows the capitalized values for Illinois. Also shown are average farmland prices for Illinois.

**Farmland Prices and Capitalized Values, Illinois**



The relationship between capitalized values and farmland prices is important. When farmland price is above the capitalized value, the fundamental return and rate drivers of farmland prices suggest that either farmland prices are too high or that there are expectations for future increases in returns or lower

rates. An extended period with prices well above implied capitalized values occurred in the 1980s, prior to the fall in farmland prices during the agricultural financial crisis. Between 1984 through 2006, farmland prices and capitalized values tracked each other closely. Since 2006 however, the capitalized values have been above actual farmland prices. An



*(Rising Interest Rates continued)*

interpretation is that capitalized values are not suggesting that farmland prices are overvalued, or that the income experienced in that period was not viewed as totally permanent. Application of the formula resulted in the capitalized value increasing from \$9,213 in 2014 to \$12,210 in 2016. This occurred because the ten-year rate decreased from 2.54% in 2014 to 1.78%—a greater percentage decline than the percentage decline in cash rents. Importantly, at low interest rate levels, capitalized values are very sensitive to rate changes.

The 2016 capitalized value of \$12,210 per acre is based on a \$221 per acre cash rent and 1.81% ten-year yield. The \$12,210 is \$4,760 higher than the 2016 average land price of \$7,450. The 2.51% ten-year yield on December 15 results in a \$8,805 capitalized value, still above the \$7,450 farmland price, but only by \$1,335 per acre. A ten-year yield of 2.96% results in the same capitalized value as the farmland price.

The Federal Open Market Committee (FOMC) is a branch of the Federal Reserve Board that determines the direction of U.S. monetary policy. In its December 2016 projections release, most FOMC participants

suggest a Federal fund rate near 3.0% would be appropriate in the long-run. Since 1962, the ten-year Treasury yield has average 1.06% higher than the Federal fund rate, suggesting a 4.0% ten-year Treasury yield if a 3.0% Federal fund rate target is obtained. Given the 2016 cash rent of \$221 per acre, a 4.0% yield results in a \$5,525 per acre capitalized value, \$1,925 below the 2016 farmland price. If those rates occur, the above capitalization formula suggests that farmland prices could face significant downward pressures.

### Summary

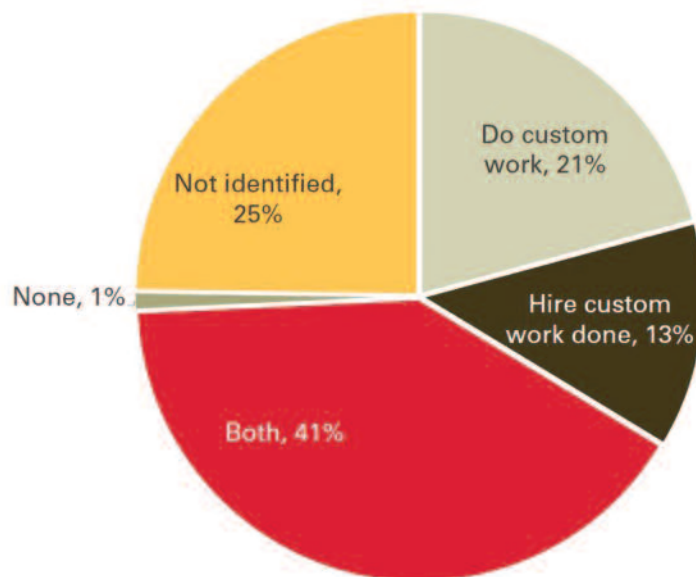
Recent increases in interest rates are not large enough to suggest that decreases in farmland prices need to occur. However, farmland prices could face downward pressure if interest rates continue to increase.

*Schnitkey, G. "Rising Interest Rates and Farmland Prices." farmdoc daily (6):236, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, December 20, 2016. <http://farmdocdaily.illinois.edu/2016/12/rising-interest-rates-and-farmland-prices.html>*

## 2017 Iowa Farm Custom Rate Survey

Iowa State University Extension and Outreach conducts the annual Iowa Farm Custom Rate Survey. The chart at right is based on a survey of 152 responses from Iowa farmers, custom operators, and farm managers.

For complete rate details, visit:  
<https://store.extension.iastate.edu/Product/1792>



## Should Sweat Equity be Used to Compensate a Returning Family Member?

The term “sweat equity” is used frequently in discussions of the contributions of an off-farm heir to the value of the family owned business. Sweat equity arises in part when an on-farm heir is paid less than their true opportunity cost to work for the business. The term also arises in situations where the business has grown substantially in value due to the managerial ability and efforts of the on-farm heir. This article describes why sweat equity is commonly used on farms that include multiple generations, and discusses how to measure sweat equity.

### Why Does Sweat Equity Occur?

As noted above, sweat equity may arise when an on-farm heir is paid less than their true opportunity cost to work for the business and/or the business has grown substantially due to the abilities and efforts of the on-farm heir. Let us look at these two items one at a time. Suppose a returning family member has the opportunity to work for a local employer that with benefits would pay them \$75,000 per year. The farm is currently not able to match this offer. Instead of a \$75,000 salary with benefits, the farm is willing to pay the returning family member a salary and benefit package of \$50,000 per year. Benefits are widely defined here and may include; but are not necessarily limited to; insurance, housing, and vehicle use. In this instance, sweat equity can be computed by examining the difference between the agribusiness and farm opportunities.

Sweat equity also occurs when the business has grown substantially, at least partially as a result of, the abilities and efforts of the returning family member. Let's assume that the farm purchased and rented additional land when the family member returned to the farm. Owned land is a major asset of U.S. farms accounting for approximately 84 percent of total assets. The returns to land include operating income and appreciation. To capture appreciation the land would have to be sold. Obviously, this is often not feasible or prudent. Sweat equity can be used to capture land value appreciation that occurs when land is purchased to accommodate the returning family member. If the older generations helped purchase the land, not all of the land value appreciation would accrue to the returning family member.

The above discussion assumed that the farm was profitable and could afford to add one or more returning family members. What if the farm is in general not profitable and the farm's equity decreases instead of increasing with the addition of the family member. In this case, sweat equity may be zero. This is why it is sometimes argued that if a farm cannot afford to fully

compensate an individual returning to the farm (i.e., pay the family member his or her full opportunity cost), the farm should not encourage the family member to return to the farm.

### How Can We Measure Sweat Equity?

Let's use an example to illustrate a few key points. Mom and Dad want to keep the farm in the family. The youngest of three children, Michael, came back to the farm in 1990. Unfortunately, if the farm business was divided into three equal pieces, it would not be of an adequate size to create a viable farm business for Dad, Mom, and Michael. When Michael came back to the family farm in 1990, the fair market value of the business (i.e., owner's equity) was \$420,000. At that time, Mom and Dad agreed that the contribution of each child up to 1990 was equal. Dividing the \$420,000 by three results in a contribution of each child of \$140,000. Today's fair market value of the business is \$1,680,000. If we divide by three, \$560,000 would be left to each child. However, the contributions of the three children have not been equal since 1990. There were very few promises made to Michael when he returned to the farm. However, decisions were made because he came back (e.g., land was rented and purchased). Mom, Dad, and Michael know that his contribution to the family farm has resulted in Michael developing a sizable investment in “sweat equity” in the farm business.

There are two potential dilemmas present in the example outlined above: treating each child fairly and farm equity has increased dramatically. With regard to the first dilemma, Mom and Dad do not want the non-farm heirs to feel that they have been mistreated or slighted. A couple of questions come to mind. If you were divide the farm business into three equal pieces, would each slice be large enough to create a viable business? What about the contribution of the on-farm heir to the growth or success of the business? With regard to the second dilemma, Michael has likely not earned enough since 1990 to pay for the increased value of the land and other assets. For Michael to be successful, both the income the business generates and the market value of the farm assets has to be considered.

Let's examine one possible resolution of the two dilemmas noted above. After careful consideration, Mom and Dad decided that they would equally divide the 1990 value of the farm business between the three



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children. They also decided that Michael was responsible for 50 percent of the farm growth since 1990 (value of business grew from \$420,000 to \$1,680,000 or \$1,260,000). Table 1 outlines the resulting equity distribution in the estate plan. At this point, Mom and Dad want to establish procedures for how the equity would be split. The amounts presented will likely be changed to reflect future changes to the farm's equity position. A couple caveats should be noted. First, it is often difficult to determine how much "sweat equity" contributed to the increase in the value of the business. Second, the level of Michael's annual compensation is an important consideration when valuing "sweat equity". If Michael was paid something close to his opportunity cost when he returned to the farm, the computations in table 1 would likely be different.

### Table 1. Equity Distribution in Estate Plan

Michael receives \$980,000:

- \$140,000 (1/3 of 1990 value)
- \$630,000 (50% of growth from 1990 to today)
- \$210,000 (1/3 of parent's contribution to growth from 1990 to today)

Non-farm siblings receive \$350,000 each:

- \$140,000 (1/3 of 1990 value)
- \$210,000 (1/3 of parent's contribution to growth from 1990 to today)

What is missing from the example above? The answer could be quite a bit. For example, should the compensation for the three family members presented in table 1 be changed if one of the family members has had a big hand in taking care of Mom and/or Dad? Usually, but not necessarily, these services are provided by the on-farm heir. It is also important to note that Mom and Dad may be able to stay on the farm longer because one of the family members is close by. For some parents, this is extremely valuable. As another example, what if Mom and Dad made it more feasible for Michael's spouse to work off the farm? Should this fact be accounted for? Obviously, valuing sweat equity and determining an equity distribution plan can be complicated. Having an outline of a plan is preferable to no plan.

### Concluding Comments

This article described why sweat equity is commonly used on farms that involve multiple generations, and discussed how to measure sweat equity. The answer to the question in the title of this paper, should sweat equity be used to compensate a returning family member, is "it depends". On profitable farms with an increasing owner's equity over time, using sweat equity to recognize the contributions of a returning family member has a place. However, if a farm is not profitable or large enough to compensate someone returning to the farm, the use of sweat equity is extremely problematic.

For questions about estate planning, or any other trust-related matter, call Jon Holthe at (563) 262-3124 and he will be happy to visit with you.

Langemeier, M. "Should Sweat Equity be Used to Compensate a Returning Family Member?" *farmdoc daily* (7):6, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, January 13, 2017. <http://farmdocdaily.illinois.edu/2017/01/should-sweat-equity-be-used-compensate-family.html>

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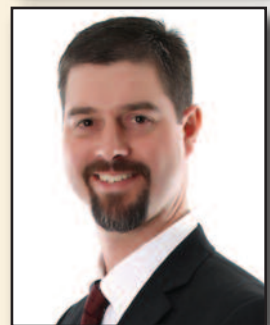
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Bank at any of our nine area locations in Coralville, Davenport, Kalona, Muscatine, Washington and Wilton, Iowa and Buffalo Prairie, Illinois

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