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Machinery Values on Illinois Grain Farms

Brandy Krapf, Dwight Raab, and Bradley Zwilling

Illinois FBFM Association and Department of Agricultural and Consumer Economics
University of Illinois

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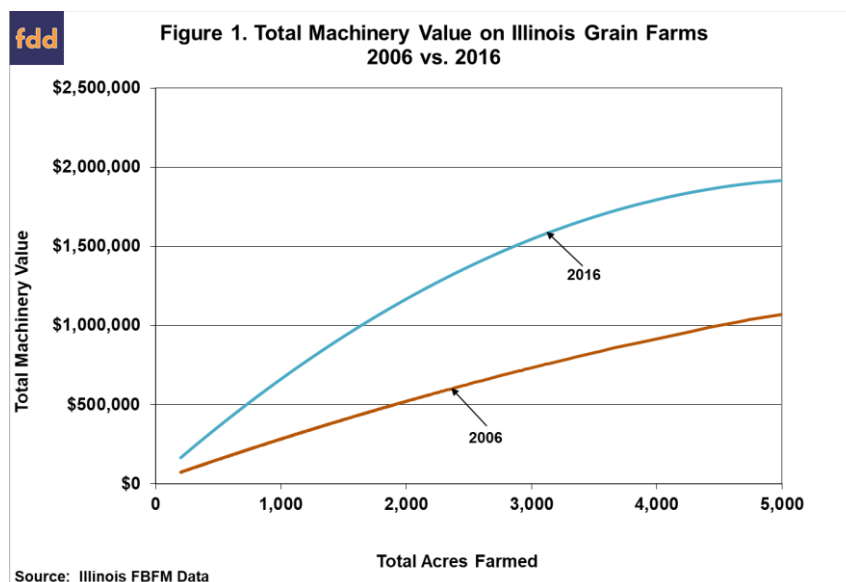
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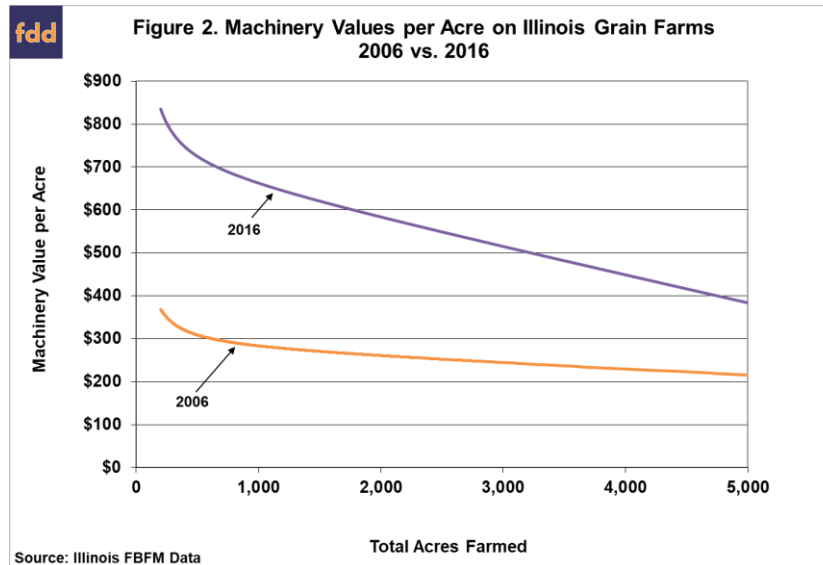
As farm incomes began to increase after 2006 due to higher grain prices, machinery values began to increase as well. There are many reason for this increase. We will compare 2006 to 2016 machinery values for different sized farms to analyze the increase as well as the magnitude.

Figure 1 shows total machinery values at different acre levels for Illinois grain farms and compares 2006 to 2016. Both years show that as acres in a farming operation increased, so did the total machinery value. In looking at 2006 (the bottom line), a farmer that had 1,000 acres would on average have about \$300,000 of machinery. In contrast, about \$650,000 would be the machinery value on average for a 1,000 acre farm in 2016 (the top line). This is about 124% increase in ten years. When we compare other acre numbers, the largest difference was at 2,000 acres when there was about a 140% increase from 2006 to 2016. This difference narrows on a percentage basis to 100% for the 3,000 and 4,000 acre groups and narrows to only a 73% increase for the 5,000 acre group. In 2006, the total value of machinery steadily increased as the acres increased, however for 2016, total machinery value increases rapidly at the lower acreage levels and then levels off.



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To look at the machinery value per acre farmed, we graphed these points in Figure 2 for Illinois grain farms. This figure shows the total machinery value per tillable acre farmed. For 2006 (the bottom line) and 2016 (the top line), machinery values per acre decreased as acres on the farm increased. As you can see, the smaller acreage farms had the largest increase in machinery value per acre going from about \$280 per acre for a 1,000 acre farm in 2006 to \$660 per acre for a 1,000 acre farm in 2016, or a 136% increase. 2006 machinery value on a per acre basis slowly decreased as the total acres on the farm increased. For 2016, the machinery value on a per acre basis decreased much more rapidly, going from about \$660 for 1,000 acres to \$380 for 5,000 acres. The difference between 2006 and 2016 was 96% for a 4,000 acre farm and only 73% on a 5,000 acre farm.



Conclusion

The dollar amount of machinery needed increases as more acres are added to the operation. When comparing this over a ten year period from 2006 to 2016, the 2016 year increase in value over the ten year period was much higher at lower acreage on a percentage basis. The increase in machinery values was not only due to the increase in actual value of machinery, but in addition, larger equipment and more technology. More machinery was also being purchased due to the increase in the federal expense election, allowing more of the capital purchase to be deducted as a current expense, if all of the qualifications of this tax law were met.

The author would like to acknowledge that data used in this study comes from the local Farm Business Farm Management (FBFM) Associations across the State of Illinois. Without their cooperation, information as comprehensive and accurate as this would not be available for educational purposes. FBFM, which consists of 5,600 plus farmers and 62 professional field staff, is a not-for-profit organization available to all farm operators in Illinois. FBFM field staff provide on-farm counsel with computerized recordkeeping, farm financial management, business entity planning and income tax management. For more information, please contact the State FBFM Office located at the University of Illinois Department of Agricultural and Consumer Economics at 217-333-5511 or visit the FBFM website at www.fbfm.org.