



Then and Now – Machinery Values

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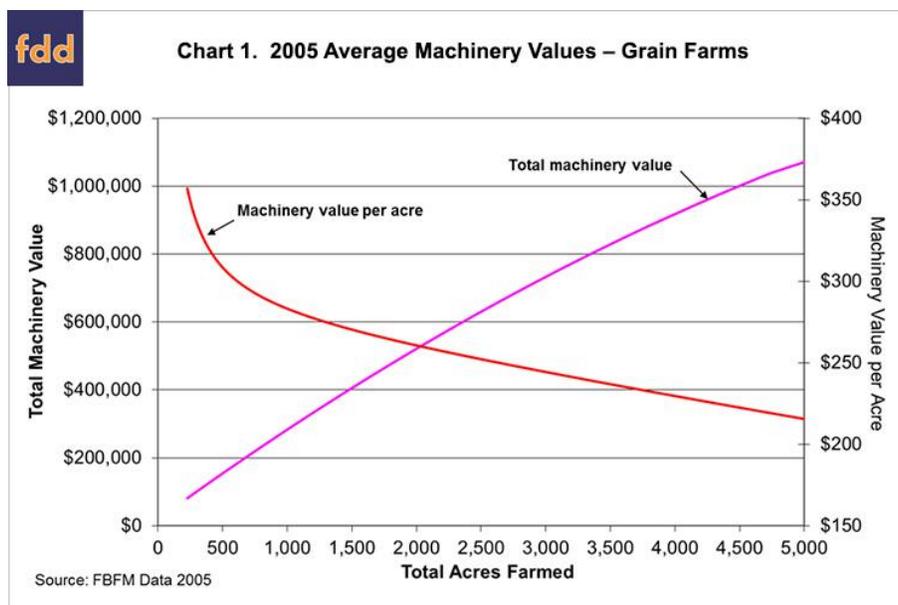
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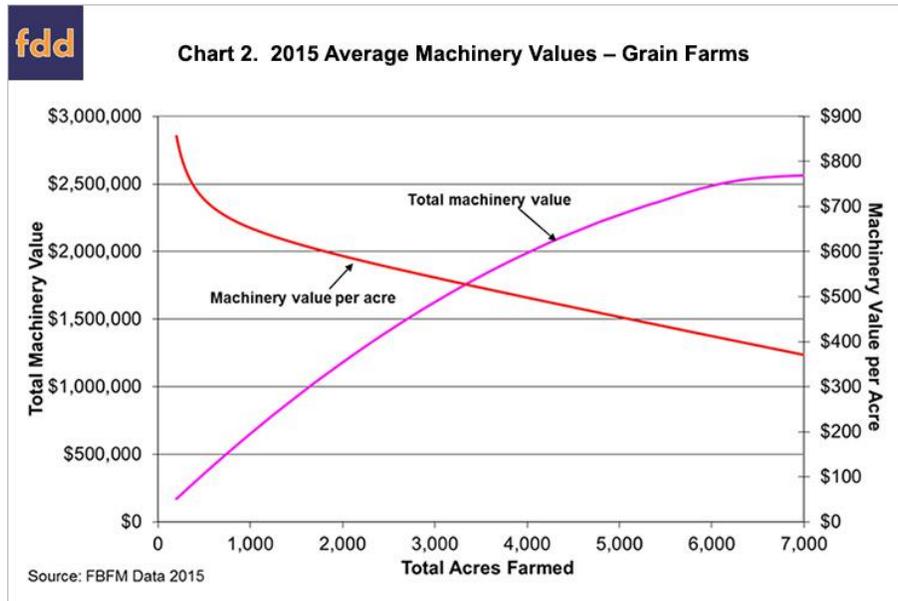
This article reviews machinery values from a group of Illinois grain farms at two points in time. Total machinery value and machinery value per acre are reviewed from periods that are ten years different in time.

The two accompanying charts represent a snapshot of the value of machinery present on a group farms in an Illinois FBFM dataset at two different points in time (2005 and 2015). The influences on agriculture from the outside, such as finance, policy and economics are many in this time period. For example, the ethanol mandate was in its infancy in 2005. The changes in the design of machinery and the application of technology in that design are manifold making machinery more efficient. The size of Illinois FBFM farms increased from an average of 977 acres to an average of 1131 acres from 2005 to 2015. Crop returns of \$997 per acre were at a record high (2012) in this interval while 2005 crop returns were \$407 per acre and 2015 crop returns were \$670 per acre.



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The general shape of the total machinery value curve is not surprising. One would expect that as farm size in acres increase, the value of machinery needed to operate those acres also increases. The 2015 curve begins to flatten at the upper end of the acre range; this is not quite so apparent in the 2005 total machinery curve. The surprise is the extent of the shift of the curve upwards. Total machinery value is read from the left hand axis on the chart. To interpret the chart, consider that a 1,000 acre farm had a complement of machinery of just under \$300,000 in 2005. That same 1,000 acre farm in 2015 had complement of machinery valued at approximately \$600,000. Similarly, a 2,000 acre farm had a complement of machinery of approximately \$550,000 in 2005 and approximately \$1,100,000 in 2015. A 3,000 acre farm had a complement of machinery of \$700,000 in 2005. That same 3,000 acre farm in 2015 had complement of machinery valued at approximately \$1,600,000.



The general shape of the machinery value per acre curve is expected. As farm size in acres increase, the per acre value of machinery complement decreases. The 2005 and 2015 curves show much the same shape. Again, the surprise is the extent of the shift of the upward movement of the curve. Total machinery value is read from the right hand axis on the chart. A 1,000 acre farm had a \$280 per acre machinery value in 2005. That same 1,000 acre farm in 2015 had a \$640 machinery value per acre. A 2,000 acre farm had a \$260 per acre machinery value in 2005 and \$590 machinery value per acre in 2015. A 3,000 acre farm had a \$240 per acre machinery value in 2005. That same 3,000 acre farm in 2015 had a \$540 machinery value per acre.

Summary

The two charts reveal the magnitude of the change in the value of machinery used to operate farms in Illinois that occurred between 2005 and 2015. This change is significant and makes very real the increasing amount of capital that is required and the associated financial risk.

The authors 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 5,700 plus farmers and 64 professional field staff, is a not-for-profit organization available to all farm operators in Illinois. FBFM staff provide counsel along with 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.