



## Corn Seed Costs from 1995 to 2014

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Of the direct costs for corn, per acre seed costs on a percentage basis increased the most between 2006 and 2014, increasing by 164% percent (*farmdoc daily* September 1, 2015). This article provides perspective on these seed cost increases, indicating that higher than usual cost increases occurred from 2006 to 2009. Perspectives also are provided based on seed costs per bushel produced and seed costs as a percent of corn revenue. Commentary on potential seed costs decreases and impacts on seed companies then is provided.

### Seed Costs per Acre

Figure 1 shows per acre seed costs for corn from two sources:

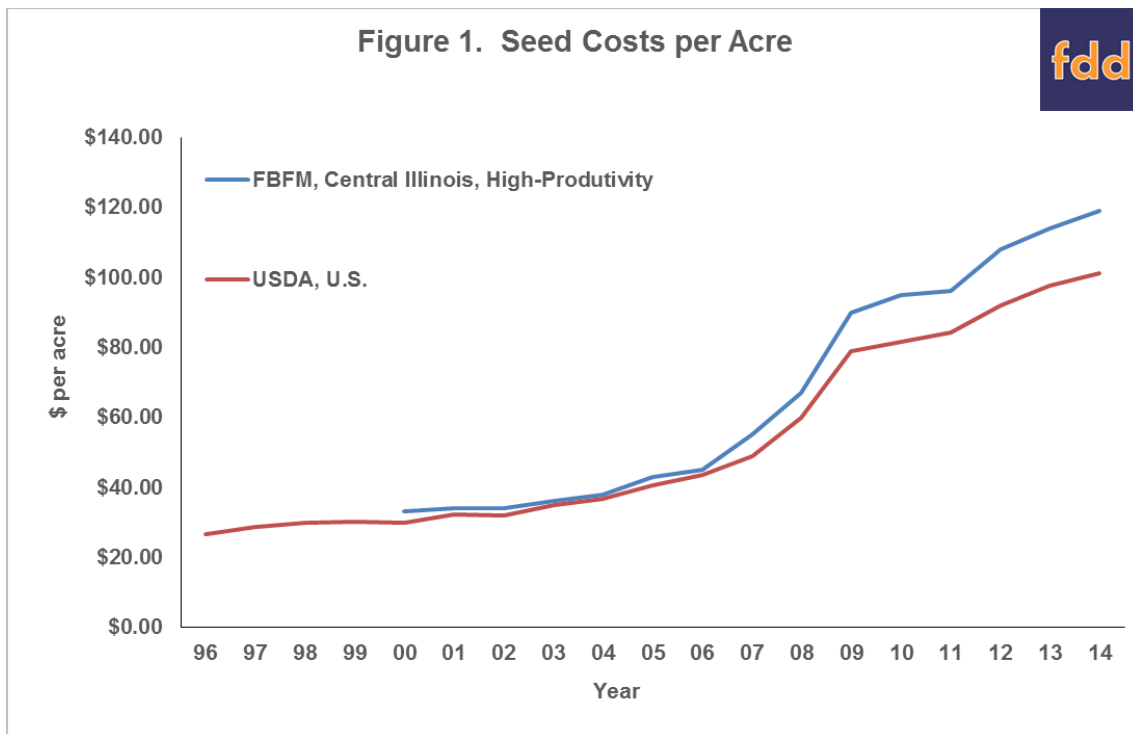
1. FBFM, Central Illinois, High-productivity Farmland – This is data summarized from grain farms enrolled in Illinois Farm Business Farm Management (FBFM). Figure 1 shows a summary of per acre seed costs for central Illinois farms having high-productivity farmland. Expected yields on these farms average over 190 bushels per acre.
2. USDA, US – This data is from the Economic Reporting Service, an agency of the U.S. Department of Agriculture. This data represents an average of U.S. farms. Expected yields for this aggregation of farms is over 160 bushels per acre.

These costs come from two independent sources having different data collection methods. As can be seen in Figure 1, per acre seed costs from FBFM and USDA follow each other closely. The correlation coefficient between the two series is .99.

Seed costs increased in most years, with a distinct break in cost increases occurring in 2006. From 1995 to 2006, per acre seed costs from USDA increased an average of 5% per year. For the next three years, double-digit seed cost increases occurred. Seed costs increased 12% between 2006 and 2007, 22% between 2007 and 2008, and 31% between 2008 and 2009. After 2009, rate increases returned to the 1995 – 2005 level of 5% per year.

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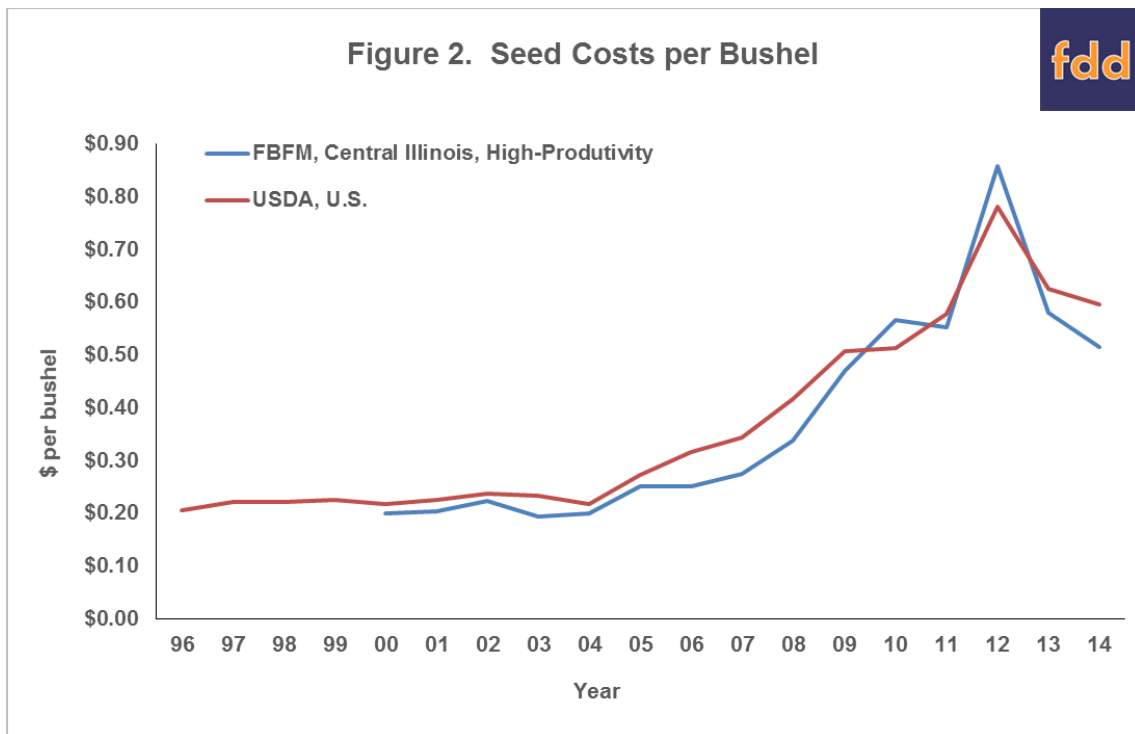


The period of double-digit seed cost increases corresponds to an increase in the long-run average level of corn prices. From the mid-1970s to the mid-2000s, corn prices average about \$2.40 per bushel. In the mid-2000s, corn use in producing ethanol increased, resulting in an overall corn price increase. While \$2.40 per bushel was the average before 2006, a more reasonable estimate of the long-run price after 2006 is \$4.60 per bushel. Of course, there has been and will continue to be variability around those long-run prices (*farmdoc daily* [February 27, 2013](#)).

### Seed Costs per Bushel Produced

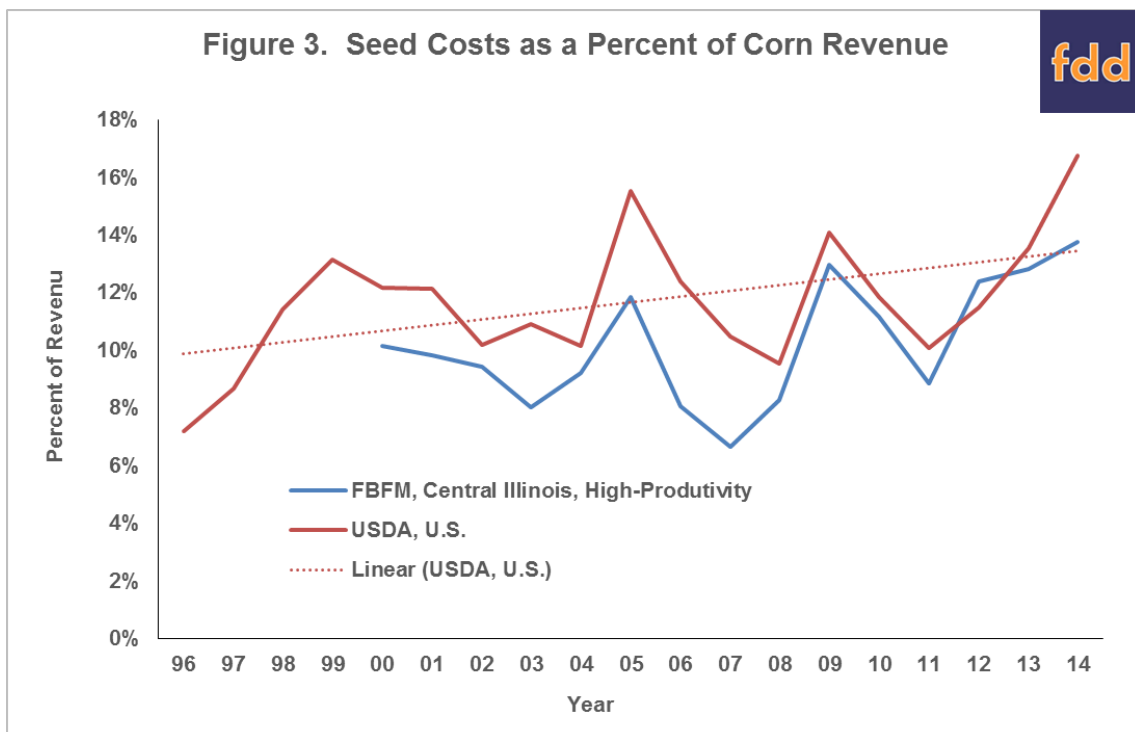
As a result of these cost increases, seed costs per bushel has increased. Figure 2 shows seed costs per acre divided by yield per acre. For the USDA series, seed costs per bushel were in the low \$.20 per bushel in the late 1990s. Seed costs per bushel then reached a high of \$.86 per bushel in 2012. Part of the reason for this high were low yield caused by the 2012 drought. Seed costs per bushel were \$.58 per bushel in 2013 and \$.52 per bushel in 2014.

Overall, the increases in seed costs per bushel indicate the proportional increases in seed costs have been higher than proportional increases in yields. Stated alternatively, the increase in yields did not keep pace with the increase in seed costs. For example, seed costs per bushel would have remained the same had seed costs per acre increased five percent per year and yield per acre had increased by five percent per year. On a percentage basis, seed costs increased more between 1995 and 2015 than did yields per acre.



### Seed Costs as a Percent of Corn Revenue

A different perspective results from seed costs as a percent of corn revenue, as is shown in Figure 3. As can be seen in Figure 3, seed costs as a percent of corn revenue have a less pronounced trend than does seed costs per bushel produced. However, a trend still exists. The red dotted line shows a linear trend fit through the USDA series. On a trend basis, seed costs as a percent of corn revenue were below 10% in 1996 through 1998. This trend percentage increased to 14% in 2016.



## Commentary

Overall, seed costs have increased on a per acre basis, on a per bushel produced basis, and on a percent of corn revenue basis. As the need to reduce non-land costs continues, seed costs is one area requiring examination (*farmdoc daily* [September 1, 2015](#); [August 4, 2015](#)). Moreover, seed cost control becomes more important as the percent of corn revenue devoted to seed increases. Means of reducing seed costs within farmers' management discretion are somewhat limited. Farmers can purchase lower priced hybrids, with the concern that lower yields will result. Farmers can also potentially reduce seeding populations. However, large seed costs reductions are not possible without one or more seed company significantly reducing seed prices.

While the seed costs shown in the above figures represent costs to farmers, these seed expenditures are revenues to seed companies. Seed cost increases, along with more acres devoted to corn, resulted in growing revenues to seed companies in the past decade. Investors in publically traded companies tend to desire companies that have revenue growth prospects. Rates of seed costs increases have slowed, leading to prospects of more modest revenue growth for the next several years. Lower growth may be one factor leading to the merger and acquisition discussions between major seed technology companies within the past several months, with mergers potentially leading to growth for the combined company. As this time point, this appears to be the major strategy being contemplated for continuing seed revenue growth. A strategy of lowering seed prices to attract more seed sales does not appear to be being attempted.

## References

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