

A COMPARISON OF COTTON PRODUCTION IN MISSISSIPPI AND KANSAS

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Most people don't think of Kansas as a cotton producing state. While the cotton production there is limited, there are three counties that do grow some cotton. However, is cotton a viable crop for Kansas? Profitability is certainly an important factor but producers might also want to consider the profitability relative to other states. If prices for lint remain low or input costs increase, production will become limited to those states where it is profitable to grow cotton.

This study compares the variable production costs and the revenue from growing cotton in the states of Mississippi and Kansas to determine if Kansas cotton production is a viable long-term crop. If net returns are positive and don't vary much from Mississippi production, then Kansas cotton production may not increase or decrease any faster than Mississippi production. If Kansas cotton production is at a profit disadvantage, then it is likely cotton acres will decrease quicker in Kansas relative to Mississippi.

Data

Data for this study comes from the Kansas Farm Management Association (KFMA) association and the Agricultural Economics Department at Mississippi State University. Both sets of data represent actual farm data. The cotton in Kansas is all dryland production while the cotton in Mississippi is a combination of Irrigated and non-irrigated cotton for the entire state.

Actual state level yields were used but the cotton prices were standardized to the national lint price. If the national price was below the marketing loan rate, then the marketing loan rate was used. Seed values and other government payments were not included.

Results

Results from the comparisons are shown in the figures below. Figure 1 shows the yield in pounds per acre from 2005 through 2012 for both Mississippi and Kansas. As might be expected, yields are much better in Mississippi than in Kansas. In some years like 2012, the difference can be quite dramatic. However, as 2009 indicates, Kansas cotton production does have some good years.

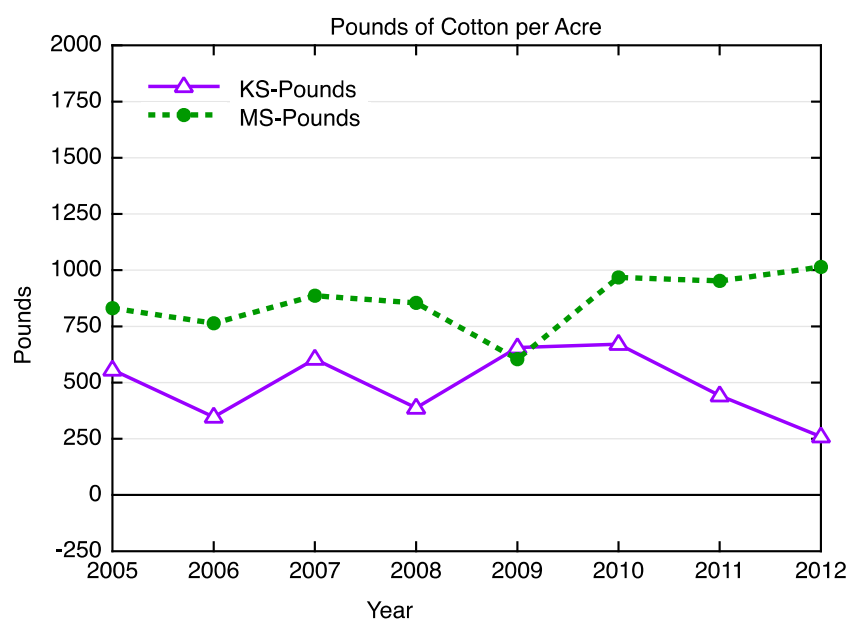


Figure 1. Pounds of Cotton per Acre for MS and KS from 2005-2012

Figure 2 shows the fertilizer cost per acre for Mississippi and Kansas cotton production. As might be expected, fertilizer costs are higher per acre given the greater yield in Mississippi. Generally, the cost per acre in Mississippi is twice what it is in Kansas.

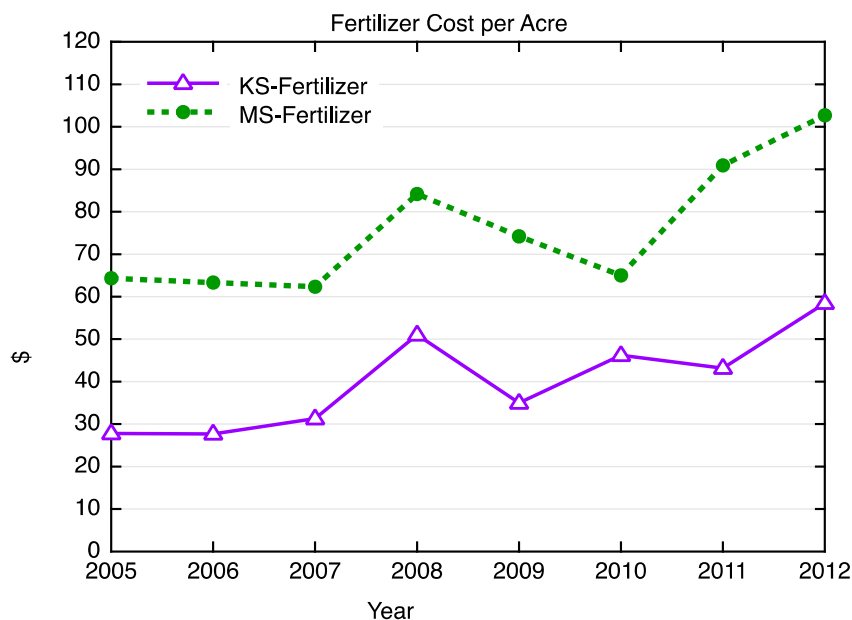


Figure 2. Fertilizer Cost per Acre for MS and KS from 2005-2012

Figure 3 shows the seed cost per acre for Mississippi and Kansas cotton production. Like the fertilizer costs, seed costs are about double in Mississippi compared to Kansas. The difference has narrowed some over time, however.

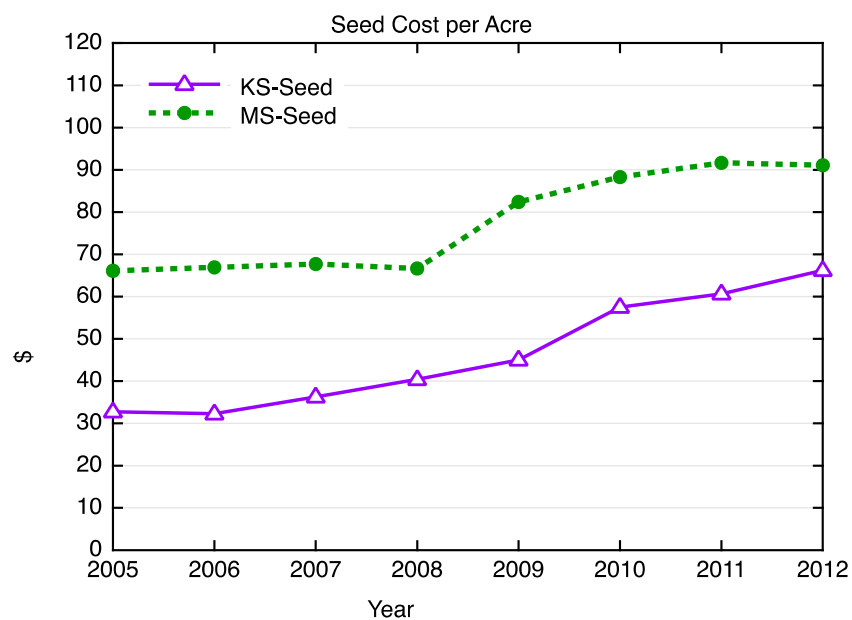


Figure 3. Seed Cost per Acre for MS and KS from 2005-2012

Figure 4 shows the herbicide costs for Mississippi and Kansas cotton production. Like the other expenses, there used to be a two times cost difference. However 2011 and 2012 do not reflect the same cost differential. Herbicide cost

increased substantially in 2011 in Kansas while the costs decreased in Mississippi. In 2012, costs for herbicides increased similarly in both states.

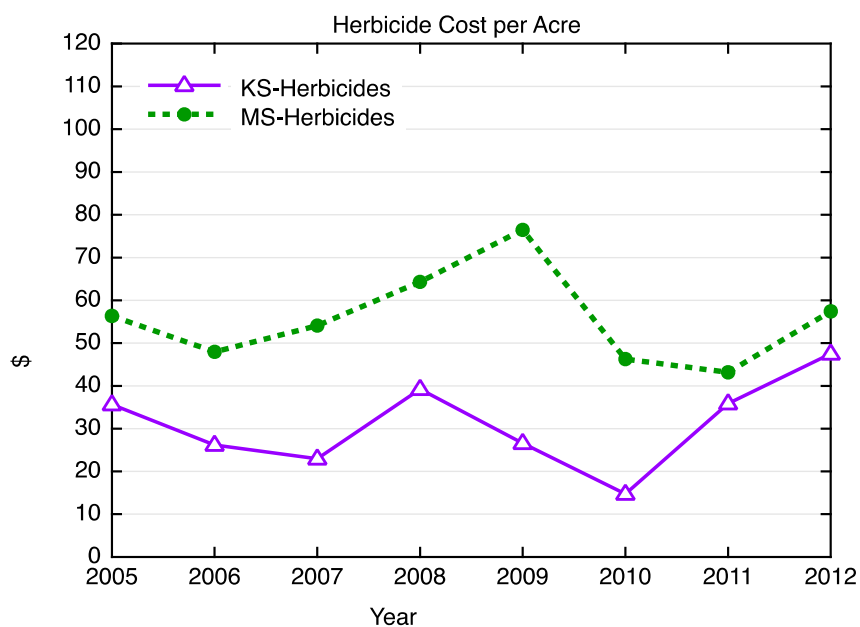


Figure 4. Herbicide Cost per Acre for MS and KS from 2005-2012

Figure 5 shows the total variable costs per acre for the two states. Variable costs typically run \$200 per acre higher in Mississippi compared to Kansas. The cost difference gap narrowed in 2009 and 2010 but resumed its \$200 difference in 2011 and 2012.

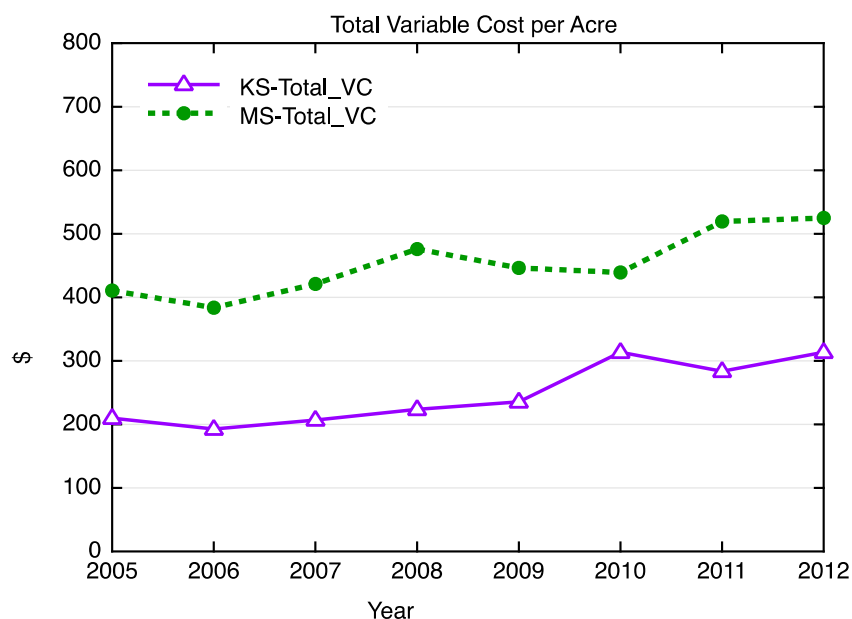


Figure 5. Total Variable Cost per Acre for MS and KS from 2005-2012

Figure 6 shows the returns above variable costs for cotton production in Kansas and Mississippi. From 2005 through 2008 both states earned nearly the same amount per acre after covering variable costs. In 2009, Kansas earned more but in years 2010, 2011, and 2012 Mississippi earned more.

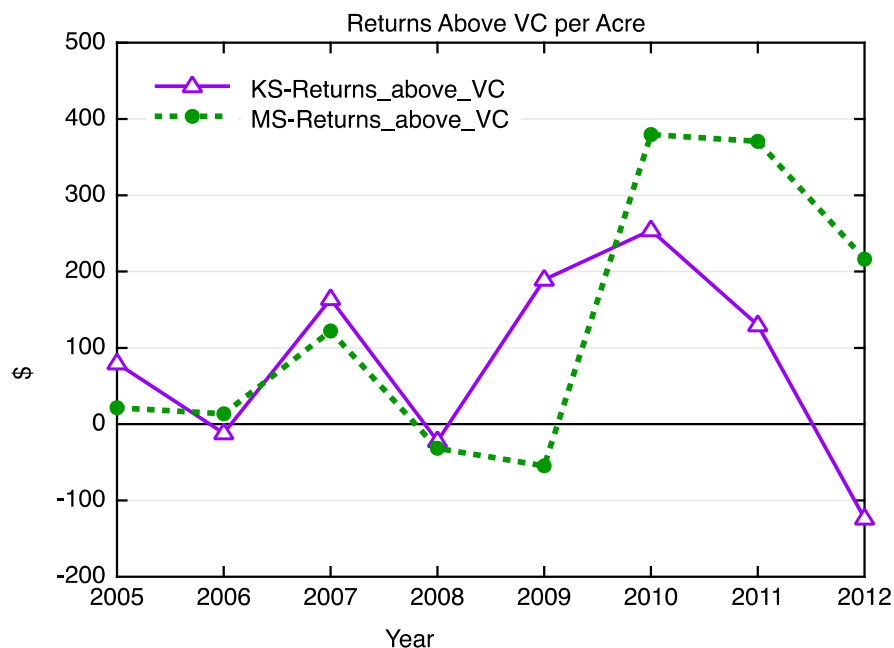


Figure 6. Returns Above Variable Costs for MS and KS from 2005-2012

Discussion

On average, cotton producers in Kansas made \$50 less per acre after covering variable costs. The variability of net returns is also greater as several years, Kansas cotton growers did as well as Mississippi growers. The last three years though have had Kansas cotton growers at a disadvantage. Ultimately, cotton acres will be decided on profitability and the profitability relative to other crops. However, the profitability relative to other states can help indicate where cotton acres end up being grown. Cotton can be a profitable crop in Kansas but Kansas is at a slight disadvantage in profitability.